# What professional knowledge do student geography teachers need to know?

J C BAYNHAM

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JOANNA CLAIRE BAYNHAM

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## Abstract

This thesis focuses on the professional knowledge needed by student geography teachers in England. The research began in 2017, when there was much discussion about the future of teacher education in England, particularly with regard to required knowledge. In 2019, the Department for Education published the Core Content Framework, which set out what students need to know in England. The rapidly changing landscape of teacher education means that this research is significant to the understanding of how student geography teachers navigate learning to teach.

The project relies upon Shulman's theory of pedagogical content knowledge to look at how student geography teachers make sense of the knowledge needed for teaching geography. It explores their geography subject knowledge and how they develop this, alongside their pedagogical knowledge, to develop their pedagogical content knowledge and to investigate if different types of knowledge are more or less important at pivotal moments. A case series of four students is presented to bring together their lived experiences and to investigate how they navigate their PGCE programme, through a Bakhtinian lens of authoritative and internally persuasive discourses. Qualitative data is developed through semi-structured interviews with students, their subject mentors and university tutors. Identified themes are explored in a detailed cross-case analysis.

The conclusions drawn from the data demonstrate that training to teach is a complex process and there is no singular model for success. The case series describes these complexities and explores how the students' own context and their experience both prior to and whilst on the PGCE programme affect the way in which they learn to teach. Shulman's domains of knowledge provide a useful structure to the interviews, but the conclusions drawn go beyond the tangible knowledge. Training to teach geography is more than simple knowledge of what and how to teach; it is about how the student teacher views themselves and the context they are working in - their sense of self. It is also about their ability to reflect on what is happening in the classroom and how they can manage that situation. For some geography student teachers, this can be a smooth path and for others it can take much longer and requires different support approaches.

The conclusions drawn from this research will be used as preparations for the new PGCE programmes as they are finalised under the DfE reforms for 2024 where there is more prescription of what student teachers need to know.

# Contents

## List of Abbreviations and Terminology

| | |
|---|---|
| A-Level | Advanced Level |
| BTEC | Business and Technology Education Council – Specialist work related courses which can be taken at level 3 and are equivalent to two or three A-Levels depending on the exact course. |
| CCF | Core Content Framework |
| CPD | Continuing Professional Development |
| DfE | Department for Education |
| EAL | English as an Additional Language |
| EBacc | English Baccalaureate – This is a set of subjects at GCSE that is designed to keep pupils' options open for further study and future careers. It consists of: English language and literature, maths, the sciences, geography or history and a language.  It is used as a success measure for schools in England. |
| ECT | Early Career Teacher |
| ECF | Early Career Framework |
| GA | Geographical Association |
| GIS | Geographical Information Systems |
| GCSE | General Certificate of Secondary Education |
| HEI | Higher Education Institution |
| ITaP | Intensive Training and Practice |
| ITE | Initial Teacher Education |
| ITT | Initial Teacher Training |
| JCQ | Joint Council for Qualifications |
| MAT | Multi-Academy Trust |
| MMU | Manchester Metropolitan University |
| NQT | Newly Qualified Teacher |
| Ofsted | Office for Standards in Education, Children's Services and Skills |
| PCK | Pedagogical Content Knowledge (Shulman, 1986) |
| PGCE | Post Graduate Certificate in Education |
| Professional mentor (PM) | Each student teacher has a professional mentor who oversees all of the student teachers in the school setting.  This mentor is usually a more experienced teacher perhaps an assistant headteacher, or deputy headteacher.  They will observe the student teacher once a term, meet with them weekly to provide whole school professional development and support the subject mentor in making assessment decisions about their placement outcomes. |
| Pupils | For the purpose of this thesis this is referring to children in school |
| QCA | Qualification and Curriculum Authority |
| QTS | Qualified Teacher Status |
| RGS | Royal Geographical Society |
| RQT | Recently Qualified Teacher (teachers who have been working for three years or less) |
| SCITT | School Centred Initial Teacher Training |
| SD | School's Direct |
| SKE | Subject Knowledge Enhancement course – Funded by the Department for Education.  The Geography SKE ran from 2016 to 2020. |

| Students | For the purpose of this thesis this is referring to the student teachers as students learning to teach and full-time university students. |
|---|---|
| Subject mentor (SM) | Every student teacher is assigned a school based subject mentor. This person is responsible for day-to-day support for the student. They will create a timetable, observe their lessons, set targets for improvement and alongside a Professional Mentor will assess the student teacher during and at the end of each placement. |
| Student teacher (ST) | For the purpose of this thesis, I am taking this to refer to those students who are training to be a teacher. I have decided on this term because this is how we refer to our students. |
| University tutor (UT) | Each student teacher is assignment a personal tutor. This tutor met with them regularly, observed them teach in both placement schools, marked their academic assignments and ultimately ensured they had met all the conditions needed to gain Qualified Teacher Status. |

## List of Figures

## List of Tables

## Acknowledgements

# Chapter 1 Introduction and Context

## 1.1 Introduction

I started working at large Higher Education Institute (HEI) in the North-West of England in September 2013, having taught geography in a secondary school in the South-East of England for fifteen years. The move from teaching in school to university was a steep learning curve and I can reflect back now on how my own knowledge and understanding of how you learn to teach has changed over time. I now see myself as a teacher educator, but it has taken me a long time to admit I am no longer a geography teacher in a school when someone asks me what I do. This is important as throughout the process of doing this thesis I have also learnt a lot about myself and how I position myself within education.

My role as a geography teacher educator is to lead the Post Graduate Certificate in Education (PGCE). This is a one-year full time programme leading to Qualified Teacher Status (QTS) which is the qualification needed to teach in state schools in England.

Within teacher education there are many terms for training to teach and there are many routes into teaching. I will discuss some of these later in this chapter but for the purpose of this thesis I want to set out the terminology I am going to use. There is much debate about the nuances between the terminology that I will not discuss here but working in an HEI I feel that education is a more appropriate term as the students complete an academic qualification at Masters' level. I will therefore use Initial Teacher Education (ITE) to describe the process of learning to teach; however the Department for Education (DfE) uses Initial Teacher Training (ITT) in its documentation. I am going to see these terms as interchangeable when referring to official DfE documents. The debate around whether we are educating or training is a long running one, but I have also chosen to use the term student teacher (ST) to refer to the students training to be geography teachers. This is what we call them in my institution, and this is the terminology I am used to. Some institutions would refer to them as beginning teachers, trainee teachers or associate teachers but in line with them being students at the university I am using student teacher as the terminology here. Again, I will use these terms interchangeably if I am referring to official documentation.

My main interest is in what STs need to know to become a geography teacher. I can remember my first day teaching a group of eighteen new STs and really having to consider my own practice. What did they need to know, and how could I 'teach' them? As an experienced teacher educator, I now know what STs need to know but do they have the same view and do all of the different groups of people involved in the STs' development have the same view?

This research draws on the sociology of professional knowledge advanced by Schwab (1978), Shulman (1986) and Young (2011). Teaching requires sound subject knowledge but also knowledge of effective pedagogy: there are different ways of interpreting this professional knowledge. Schwab (1978) focussed on what he referred to as 'substantive structures' and 'syntactic structures' of knowledge: a 'grammar' for the subject. Shulman (1986) suggests seven types of knowledge as a minimum are needed for effective teaching. For STs, subject content knowledge, the general pedagogic knowledge and the pedagogical content knowledge (PCK) are the most important. The dynamic nature of geographical knowledge can be even more challenging to define, both as an academic discipline and as a school subject. The school curriculum has been subject to increased political influences recently, favouring specific subject knowledge over subject pedagogical knowledge. According to Young (2011:267), the current national curriculum is 'trapped in its own elitist past and is no basis for a future curriculum'. This discussion around knowledge is important. We use the term 'knowledge' as a concept that is used in everyday language but defining what is meant by knowledge has been debated for centuries. However, this debate is part of the process of knowing and understanding what knowledge is and drawing conclusions based on what others have stated.

## 1.2 Context in England

This thesis focuses on the context in England where ITE has seen a long period of change driven by the government of the day. Since 2011 there has been a shift in emphasis on teacher education in England as the DfE pushed for more of the training to be school-led rather than the traditional university-led approach. When I started working in ITE there was confusion over the many different routes into teaching. I have summarised these routes into Appendix A. This, along with reforms to the curriculum in schools and

issues with recruitment into teaching, means that there has been rapid change (Beauchamp et al., 2016; Ellis, 2024).

It is also worth noting that geography as a school subject has also had a challenging history with numbers of pupils studying GCSE Geography falling in the 2000s and then increasing in the 2010s.  This can initially be attributed to the removal of geography (and history) as a compulsory subject in 1998 and then with changes to the National Curriculum in 2007 the Geographical Association (GA) and the Royal Geographical Society (RGS) launched the Action Plan for Geography (2011) and had several projects to make geography more relevant to pupils. The GA also launched its 2009 Manifesto, A Different View (2009), to encourage pupils to appreciate the relevance of geography.

The position of geography as a school subject discipline has been strengthened by more recent changes to the curriculum in England.  The English Baccalaureate (EBacc) was first introduced in 2010 (Department for Education, 2017) as a way of encouraging schools to enter students for more 'academic' subjects.  Since its inception, the EBacc has been a way of measuring schools' performance.  From a geography perspective, this was seen as positive step in identifying geography as a key subject that all children should have access to learning.  The GA (2016) responded positively to the government changes in making GCSE Geography a robust qualification to have.   In 2010 there were 169,000 entries and in 2023 there were 293,319 (Joint Council for Qualifications, 2023).  The last five years have seen an increase by 10.6% (FFT Education Datalab, 2023).  This is also at a time when the birth rate for this age group has decreased.

Whilst the inclusion of geography in the EBacc continued to strengthen the subject, it also exacerbated the issue of teacher recruitment, with the shortage of geography teachers increasing over several years.  The DfE responded to this by increasing the bursary amount for those starting geography ITE courses, which did have an impact on numbers.  In September 2016, for the first time in several years, geography ITE numbers were above target. This increase in numbers followed the introduction of bursaries of £15,000, which were then increased to £25,000 for September 2017 (House of Commons Education Committee, 2017).  In addition to the increased bursary, the DfE also attempted to widen the pool of potential geography teachers by removing the need

for a degree in geography (or geography related degrees) and a funded Subject Knowledge Enhancement (SKE) course was introduced.

Appendix B shows the bursary amounts over time, and when there was a SKE available. I've also included the number of STs we had in each cohort. Whilst the numbers of students fluctuate over time, there is no guarantee that these STs go on to take up teaching posts and stay in teaching.

The most recent figures for ITE geography recruitment show that geography has been particularly challenging to recruit in the 2022-2023 academic year (School Teachers' Review Body, 2023). Only 69% of the target was met. The targets are based on the work force model produced by DfE based on how many teachers they need per age phase and subject (Department for Education, 2023b). Whilst raising the bursary amount incentivised more STs, a large bursary brings with it a more diverse cohort which poses challenges in itself.

Over the last ten years, there has been significant change in the requirements of the PGCE to widen the potential pool of prospective geography teachers. In 2013, a prospective candidate was accepted onto the PGCE if they had a 2:1, or above. In exceptional circumstances, those with a 2:2 might be offered a place without a bursary. However, at the present moment, any degree is eligible if the candidate can prove an interest in geography. There is also no longer a requirement to have school experience prior to starting a PGCE. These changes in addition to large bursaries have had implications for those applying for the PGCE. In some cases, they are mature entrants (over 25) to the profession or career changers. We also have a significant number of students who are attracted by the bursary but do not really appreciate the challenges the PGCE, and being a teacher, hold.

The politicised nature of ITE in England means there is a constant ebb and flow in what is emphasised as important when learning to teach. Between 2011 and 2019 the DfE favoured a craft-based model (Wallace, 1991) of teacher training and attempted to move more of the training to be school-led rather than the more traditional university-led approach. This has resulted in ITE being more school-based and competency driven.

The craft-based model suggests that you learn to teach through watching and imitating experienced teachers.

Alongside this, the expansion of the academisation policy since 2010 (Academies Act 2010), which removed the requirement for teachers in academies and free schools to have QTS was seen by some as an expression of 'anti-intellectualism'.  The term was coined by Lambert and Jones (2013:12) to describe this change in policy towards a more practical route into teaching and the movement away from a training programme designed to develop students' critical thinking and understanding of a range of theoretical frameworks.

Both nationally and internationally, there is much debate surrounding the training of teachers. The Carter Review (2015) of the content of the ITE curriculum in England sought to recalibrate the balance between pedagogy and content knowledge in learning to teach.  This reflects an enduring debate over the content, location and control of ITE. The dual poles of this debate are models of 'research-informed clinical practice' and craft apprenticeship models of teacher development (Loughran and Hamilton, 2016).

As a result of the Carter Review, there has been a shift in emphasis from subject specific pedagogy to subject knowledge, as well as an emphasis on partnership between the different stakeholders in training the STs. The 'practicum turn' (the setting for training) will be important in this study as I research what stakeholders believe is 'good practice', how it is constituted and, in many ways, 'who has the authority to judge?' (Mattsson et al., 2012:2).

The Carter Review (2015) set out some recommendations for changes to ITE with a particular focus on subject knowledge and subject specific pedagogy.  There have been several subsequent publications that attempt to quantify and frame the knowledge needed for teaching geography but there was still no real consensus when I began this research (Geographical Association, 2014; Mutton et al., 2016). However, the publication of the Core Content Framework (2019a) has now set out what the DfE sees as the body of knowledge STs need to know.

In England, all teachers must meet a threshold set of Teachers' Standards set out by government (Department for Education, 2011a). These are generic and apply to all teachers and all stages in their career. They are end point assessments and an ST must meet all the Teachers' Standards to gain qualified teacher status. In other countries, such as Australia and the United States of America, each subject had a set of standards that specify the unique nature of the subject.

## 1.3 Rationale

As a geography specialist, the fluctuations in numbers of STs and the quality of their geography knowledge, especially without a degree in geography, has concerned me and made me question what the role of the teacher is. At the same time the DfE was telling us what they thought STs should know which back in 2017 seemed to be in contrast to the changes to the school curriculum which was focussed on a more academic knowledge based. I will discuss these issues in more detail in Chapter 2.

The mixed messages made me want to find out more about what different groups involved in ITE thought STs needed to know.

The challenges ITE has faced in the time I have been working in the sector has made me really consider what it takes to be a teacher.

## 1.4 Significance of the study

This study is particularly significant with the current climate of teacher education in England. This research began in 2017 and there have been considerable changes to the requirements for ITE in England since then. These will be discussed in later chapters, but this study remains significant as the question over what knowledge STs need remains in 2024. All ITE providers have had to apply for reaccreditation and will be teaching a highly prescriptive curriculum that has been set out by the DfE in the form of the CCF (2019a) and the statutory requirements for Intensive Training and Placement (ITaP) (Department for Education, 2023c) and mentoring of STs (Department for Education, 2023d).

Geography as an academic discipline also faces challenges in terms of the body of knowledge needed for teaching in a secondary school and this will be discussed in Chapter 3.

## 1.5 Overview of the study and research questions

This research aims to investigate the contested knowledge base of geography teacher education and how STs develop different types of knowledge in the field of practice. It compares the views of different stakeholders: the students, subject mentors in schools, university tutors as well as the GA and the DfE and will examine what professional knowledge is needed by student geography teachers.

My interest is in what STs need to know in order to be a successful geography teacher. I want to investigate how STs develop their professional knowledge, and also to find out what role different types of knowledge play in them becoming and being a teacher. In addition to this I want to know what knowledge subject mentors (SMs), the university tutors (UTs) and the STs themselves think about the professional knowledge needed for teaching. As this study is looking at the lived experiences of the STs I will use a case series methodology to research the professional knowledge STs need to know.

This study will employ a qualitative methodology though a social constructivist paradigm. An in-depth investigation is presented as a case series. Four students, from a large university provider of ITE in the north-west of England who were completing their PGCE course, in 2017/2018 were invited to participate to allow for robust data collection and tracking. The case series also involves those supporting their professional preparation during the PGCE year: their university personal tutors and their school subject mentors. The triads involved in the case series are an important part of this qualitative methodology. Each case study will be reported and then a cross-case analysis will be offered to draw out the identified themes.

Conflicting notions of knowledge about teaching are explored through a social constructivist perspective and drawing on the theoretical resources of Bakhtin's authoritative discourse and internally persuasive discourse (Bakhtin, 1981; 1984; 1986). In this context discourse is taken to mean a way of communication and how language is used in a given context (Flick, 2018) . The identification of a dominant discourse of

'government fiat' has utility in examining how teachers, students and university tutors position themselves regarding the school geography curriculum and the knowledge base of STs. Examining the micro-practices through which professionals engage in self-regulation, and the ability to understand their actions and reactions, will allow a detailed investigation of the power relationships between students and their mentors, as well stakeholders beliefs about the knowledge base of STs, including the school mentors, the STs themselves and the university tutors.

Therefore my research questions are:

1. What professional knowledge do student geography teachers need to know?
2. Who decides what a student geography teacher needs to know?
3. How do student geography teachers acquire and develop professional knowledge and skills?

## 1.6 Organisation of the thesis

This thesis is organised into eight chapters. The first chapter provides the contextual discussion and my reasons for focussing on the professional knowledge of geography STs. Chapter 2 sets out the current policy regarding ITE and broader knowledge perception in England through the curriculum and policy surrounding this. The study then moves on to review the literature around knowledge in geography and learning to teach in Chapter 3. In particular, I use the work of Shulman (1986; 1987a; 1987b; 2004; 2005) to explore his notion of Pedagogical Content Knowledge (PCK) to build a framework for investigating professional knowledge. Chapter 4 focusses on the theoretical perspective using Bakhtin's authoritative discourse and internally persuasive discourse. Chapter 5 will outline my research design, methodology and selection of STs. This leads into Chapter 6 which takes each the four cases in turn to draw out their experiences. Chapter 7 is the cross-case analysis where the themes from the case series have been drawn out to draw conclusions and answer my research questions. Chapter 8 outlines the overall conclusions as well evaluating the limitations of the student and the implications for future practice.

# Chapter 2 Education Policy and the English Context

## 2.1 Introduction

Education in England is highly politicised.  This means that the government of the day decides on what education looks like at all levels of education.  The General Election on 6 May 2010 resulted in a hung parliament.  The coalition government was formed between the Conservatives and the Liberal Democrats.  The education white paper published in 2010 (Department for Education, 2010) outlined the government's proposals to reform the education system in England.  Since 2010, there has been a rapid and sustained change in English education.  Curricula changes from the Early Years Foundation Stage to Key Stage One, Two and Three, reforms to GCSE and A-Levels examinations and specifications results in a turbulent time for both pupils and educators.  As I reflect on this time now and what I was doing at that time, I realise that my own experience is important to the story that I want to tell.

In 2010, I was teaching geography at a secondary school in Hertfordshire.  I started teaching in 1998 and had, therefore, only worked under a Labour government.  Whilst there were still changes to policy in that time, I did not know any different and the push on education just seemed normal.  However, in the lead up to the General Election in 2010 there seemed to be an increased emphasis on education.  At the time, Michael Gove was the Conservative MP for Surrey Heath and the Shadow Secretary of State for Children, Schools and Families.  When the new government was formed, he became the Secretary of State for Education. His political views and manifestos were discussed in detail in school, and concerns were raised about the potential changes to the school curricula.

In September 2013, I left school teaching to join the university, and teacher education. As I made this transition, I was not aware of the equally significant policy changes afoot in teacher education.  It is only as I started doing my Doctorate that my naivety became apparent to me.  My own knowledge and understanding of the policy was skewed and this was significant when deciding on a focus for my research.

This chapter looks more broadly at the policies for both teacher education and the school curricula to enable me to both understand the policy at the time, and how it

shapes the current policy. I am also keen to explore the contradictions, and to discuss the impacts of these on my research and the wider context in which this research takes place. This chapter provides the context for the thesis.

## 2.2 Policy in Initial Teacher Education in England

The policy shift in English education has not only focussed on the school curricula but also on ITE. Before reviewing the policy around becoming a teacher, I want to look at the terminology. As mentioned in Chapter 1, the term ITE is problematic as the DfE use ITT in most of their documentation, but they do also make some references to ITE. The debate about whether learning to be a teacher is training or education is an interesting one as there is no set definition and often the terms are used interchangeably. However, there is a difference. Within the university sector of teacher education there is a feeling of the erosion of 'teacher education' as the policy drives to move the 'training' into schools.

In English education policy, teaching is seen as a skill that can be gained through practice (ITT based in schools) whereas in Scotland there has been more discussion around teaching as a profession that needs education as well as practice (ITE based in university) (Biesta, 2015). However, in both models there is a need for both practice-based learning and the theory underpinning that practice. This chapter will look at the current policy and how it has changed over the duration of this research. What comes across is a muddiness of policy that actually begins to see the need for education as well as training but is still referred to as ITT. As a university teacher educator, I firmly believe that we are educating our students in learning to be a teacher and therefore have chosen to use the terms ITE and ST.

As Biesta (2015) suggests, the attention from the DfE could be seen as a positive as the aim of improving the quality of education is what is important. However, it can also be seen negatively as governments have established a hold over schools through 'curriculum prescription, testing, inspection, measurements and league tables' (Biesta, 2015:121) that they now want to do the same with teacher education with the aim to have control over the whole education system.

Although the two models are different, there is also a view that whilst the policy might differ there is a move towards the discourse converging with the concept of competence being common to both.

There are many definitions of what is meant by competence but Mulder et al. (2007) describe three traditions: the behaviourist, the generic and the cognitive. Behaviourist is about the importance of observing experts in their field, generic being about identifying the common abilities that highlight variations in performance and cognitive being the mental resources or intelligence of the individuals to become proficient in tasks and knowledge.  There are other definitions such as 'the ability to perform the tasks and roles required to the expected standards' from Eraut (2003, as cited in Mulder et al., 2007:72) and Deakin Crick's definition as

> a complex combination of knowledge, skills, understanding, values, attitudes and desire which lead to effective, embodied human action in the world, in a particular domain (2008:313).

Neither of these definitions are helpful as they are so broad, but this is part of the challenge in deciding what makes a good teacher and how you get there.  The danger is that becoming a teacher turns into a list of competencies that can be ticked off.  This leads to a standard's discourse which we have in England (Atkinson, 2004) and can be seen in the Teachers' Standards (Department for Education, 2011a) and will be discussed later in this chapter.

England's ITE is a highly regulated, centralised system which has been subject to a variety of frequent and directive policy interventions, even more so than other parts of the UK (Menter et al., 2003).  Understanding the policy around teacher education, and the prescribed knowledge base of STs in England from 2017 onwards is a significant part of this study.   It gives the context in which STs in England were, and are, experiencing learning how to teach. However, according to Childs and Menter (2013), ITE in England has been 'subject to many interventions by central government' since 1984.  They suggest that the neo-liberal and neo-conservative attitudes of the last three decades of government has moved teacher education into a marketised system. Both neo-liberal and neo-conservative policy favour a free market capitalised economy, and this appears to follow through into education. In the case of education and the coalition government

of 2010 to 2015, this was seen in the Academies Act (2010) and schools taking themselves away from local authority control and effectively becoming independent schools, funded by the state.  Childs and Menter (2013:93) also suggest that there

> is currently a very serious threat to the quality of teaching in England because of the destabilisation of teacher education provision and the undermining of the contribution of universities.

This has continued at pace since 2013.  However, within the policy itself, there are significant contradictions.  For example, the focus on knowledge is confusing, as on one hand it is suggested that there is no specific knowledge needed to teach, and on the other, there is an extensive body of research that needs to be learnt and understood. This contradiction is at the heart of what I want to research.


To understand what is happening in teacher education today, it is important to return to 2010 when the Conservatives and the Liberal Democrats formed a coalition government. The new Secretary of State for Education, Michael Gove and the new Schools Minister, Nick Gibb (previously the Shadow Minister for Schools) set out their intention to reform the education system in England.   Gove (2010:online) went on to tell the National College Annual Conference

> Teaching is a craft, and it is best learnt as an apprentice observing a master craftsman or woman.  Watching others and being rigorously observed yourself as you develop is the best route to acquiring mastery in the classroom.

This 'school-based apprenticeship model' can be seen in both neo-liberal and neo-conservative policy and that there is an agreement that 'higher education-based [teacher] training is at best of secondary importance, at worst it is positively harmful' (Furlong et al., 2000:11).  Gove's ideas regarding teacher education were in line with this policy.  This was in contrast with what was being discussed around the school curricula at the time which was focussed on the need for 'knowledge' which was laid out in the 2010 Education White Paper (Department for Education, 2010).  It set the need for an agreed core knowledge that all pupils should know.  It also stated that there was a need for 'teachers to deepen their subject knowledge' (Department for Education, 2010:24). By 2011 the plan to shift teacher education to be school-based and school-led was laid out with Schools Direct (SD) being first announced as a route into teaching that would

allow schools to recruit and select the trainees they want with the expectations that they will go on to work within the school or group of schools in which they were trained (Department for Education, 2011b).

Teaching Schools, which would lead the SD route, were required to work with HEIs but they were not seen as having a significant role in this route into teaching. Teaching Schools were schools that were seen as high performing schools that could support the training of teachers. One of the key issues with SD route into teaching was capacity. To meet the needs of school recruitment, between 30,000 and 40,000 new teachers are needed each year and schools alone do not have the capacity to train these teachers. The policy, however, still wanted teachers completing post-graduate study in an academic subject and there was a commitment for funding to be available to teachers for their continuing professional development (CPD) (Gibb, 2011). This is where further disparity in policy appears. On one hand, we are told there is a need for this craft-based apprentice model where you can learn to teach through observing others and on the other hand that there is a need for subject based post-graduate training, and the beginning of the discussion around knowledge.

These contradictions continued in July 2012, when the DfE announced that academies and free schools in England could recruit untrained teachers (Department for Education, 2012). At the time of this announcement, I was teaching in school and whilst we often struggled to recruit teachers in the South-East of England, there was concern about how this would affect the profession. Gilbert (2012) referred to it as de-professionalising teaching as it implies that anyone can teach. It also challenged other priorities, for example in the frequent comparison with high-ranking OECD Programme for International Student Assessment (PISA) countries such as Finland and Singapore. In Finland, teachers train to teach in university for five years and there are different pathways depending on the age and/or subject you are training to teach (Suomen Opettajaksi Opiskelevien Liitto, 2023). Many other European countries have taken a similar route e.g. the Republic of Ireland where they have a two-year Professional Masters of Education for all teachers (Department of Education, 2020).

Whilst the neo-liberalist policies appeared to be giving more freedom of choice for schools and ITE, at the same time there was a narrowing of what was deemed

acceptable pedagogy being delivered.  For example, systematic synthetic phonics being a required pedagogy for teaching reading.  There was a feeling that university based ITE providers did not do enough to stop the systematic break down of university-based routes into teaching and the changes were accepted as a 'fait accompli'. Childs and Menter (2013:112) conclude that

> the failure of universities … to resist these policies demonstrates more than anything a failure by them to demonstrate to the wider community that the quality of teaching is dependent on well-structured and theoretically informed programmes of professional learning.

I do not think it as simple as this, as university-led providers had to make quick decisions about how to proceed with courses or close them entirely.  My own institution tried to embrace the new programmes whilst also keeping the university-led route a priority. This persistent shift of emphasis from university-led teacher education to school-led teacher education has led to confusion and uncertainty for both those working in ITE and potential STs, as they do not know which route to take to become a teacher or the nuances between them.  The school-led route was intended to allow schools to have more of an impact on teacher education and to moved away from what Gove called the conspiracy of

> The Blob – the network of educational gurus in and around our universities who praised each other's research, sat on committees that drafted politically correct curricula, drew gifted young teachers away from their vocation and instead directed them towards ideologically driven theory (Gove, 2013:online).

The policy documentation that followed has not clarified what exactly is meant by this, but Gove's plan was to undermine university-led teacher education and the new SD courses commenced in September 2013.

What started out seemingly as Gove's own agenda for educational change rapidly became government policy.  In his tenure as Secretary of State for Education between 2010 and 2014, he led the changes in the types of schools, the curriculum reform etc.  A 2019 biography of Michael Gove entitled 'A Man in a Hurry' (O. Bennett, 2019) sums up his legacy in education; there was almost a frenzy to getting policy through as quickly as possible.  The impact he had in the four years he was Secretary of State for Education was profound and whilst he has been succeeded by nine Secretaries of State for Education, they have not had the same impact.  His tenure as Secretary of State for

Education set in motion the future of ITE in England, beginning with the Carter Review (Carter, 2015).

## 2.3 The Carter Review

In April 2014 Sir Andrew Carter OBE was commissioned by then Secretary of State for Education, Michael Gove, to undertake a review of ITE.  There was controversy at the time of Carter's appointment to lead the review as few members of the panel had any experience of ITE.  Carter was then headteacher in a junior school, one of the first schools to become an academy in 2011 and leader of the School Centred Initial Teacher Training (SCITT) as part of his school's Teaching School status. He was also the ITE lead on the Teaching Schools Council (Farnham Herald, 2016).  Teaching Schools were introduced in 2011 to provide training and support school improvement in their local area.  The school had to be graded good or outstanding by Ofsted and one of their remits was to provide school-based initial teacher training (Clarke, 2017).  Ofsted is the Office for Standards in Education, Children's Services and Skills.  It inspects schools and regulates services involved in caring for children and young people, this includes all ITE providers (Ofsted, 2024a).  At the time university education departments felt Carter leading this review was part of the DfE's agenda to marginalise university-routes into teaching.

The aim of this review was to identify key elements of training programmes to establish the core knowledge and skills required to become outstanding teachers (Carter, 2015). The Carter Review refers to the need for subject knowledge development and subject specific pedagogy but there is little reference to what exactly is meant or understood by these terms, apart from needing to know more about the specific subject and how to teach it to children.  The summary of the Carter Review highlights the main recommendations for ITE in England.  This was the start of the discussion for a national curriculum for training teachers and what has since become the CCF (Department for Education, 2019a). The overall recommendations of the Carter Review can be found in Appendix C.  The recommendations advise what student teachers need to know and must be able to do.  There is a focus on knowledge – about subject, about pedagogy and about the professionalism of teaching but there is little guidance on what this means.

The GA (2014) submitted their response to the Carter Review and a call for evidence by highlighting their concerns over the fragmentation of ITE. They wanted assurance that geography STs were given the opportunities to work with expert geography teachers to learn the nuances of teaching and learning geography specifically. What came through strongly was the need for the geography element of both subject knowledge, subject pedagogy and professional knowledge, including fieldwork.

## 2.4 The Munday Report

The Carter Review was followed by 'A framework of core content for initial teacher training (ITT)' (Munday, 2016). Stephen Munday was asked to chair an independent group of experts, with the task of developing a core content for ITT in England. At the time, Munday was the Executive Principal of Comberton Village College and Cambourne Village College in Cambridgeshire and the Chief Executive of the Comberton Academy Trust. This has now grown to become the Cam Academy Trust, a group of primary and secondary academies mainly based in Cambridgeshire. He is also currently the President of the Chartered College of Teaching (Munday, 2023). The group was made up of twelve educators with various specialisms. Two of the group were from universities: Dina Lewis, Dean of Education at Hull University and Professor Anthony O'Hear, Professor of Philosophy at University of Buckingham. O'Hear was a controversial appointment as he was a special adviser to the government for ten years when Margaret Thatcher and John Major were Prime Ministers. The remit of the Munday report was to use the recommendations from the Carter Review to 'inform the development of the [core content] framework' (Munday, 2016:5). It states that

> The fundamental aim of the framework of core content is to ensure that ITT programmes enable trainees to meet the Teachers' Standards (Department for Education, 2011a) in full at the level appropriate to the end of a period of initial teacher training. The framework of core content therefore sets out clearly what all providers of ITT must require of their trainees before the can be deemed to be meeting the Teachers' Standards (Munday, 2016:6).

Therefore, according to the Munday Report, the framework should be seen as the underpinning of the Teachers' Standards. This was the first time the Teachers' Standards were seen as an end point assessment and the beginning of a prescribed curriculum to be followed in order to reach the required standard. This caused much debate in ITE around the high level of prescription in both what the Teachers' Standards meant, how STs are assessed during the PGCE and the concern that ITE would become

a tick list of things STs would be required to do. Atkinson (2004:380) describes this as the Standards discourse in a way that is an 'idealisation of teaching' and whilst there are merits to this approach it is too far removed from the reality of learning to teach which needs to take account of the 'conscious actions, unconscious processes, interactions and conversations, impulses and responses, planned activities, disruptions and unexpected events and situations'.

Data was gathered from a range of stakeholders including: headteachers, newly qualified teachers, subject associations (including the GA and the RGS), ITE providers and others. It is possible to see the beginnings of the confusion between the Teachers' Standards and the Core Content. The language is similar but different. This will be discussed later in the chapter. Munday states that the framework should set out

> the key knowledge, practice and behaviour that providers must ensure trainees are demonstrating in order to satisfy themselves that the Standards are being met'.

> (Munday, 2016:6)

When reading the recommendations of the Munday report I do not disagree with the initial principles. Fundamentally, we want good outcomes for the pupils, and this means we need a supply of good quality teachers. I was surprised when I started teaching in ITE that there was not a National Curriculum for ITE, so a common framework is a positive step forward in some ways. However, the danger is that we are restricted in what we can and cannot teach, and if it is highly prescriptive how can we ensure that the needs of our students are met.

My particular interest is around knowledge and the Munday report does refer to the Teachers' Standards (2011a), and Standard 3 in particular, which state that trainees should 'demonstrate good subject and curriculum knowledge'. This is then explained and clarifies what a trainee teacher needs to be able to do and says that

> ***Trainees should*** *be conversant with a range of effective subject-specific pedagogical approaches and know how to address common pupil misconceptions in their subject(s). They should understand how students are expected to make progress within different subjects across each relevant Key Stage… By the end of their training, trainees should be able to teach a knowledge-rich curriculum to a depth beyond what is required of pupils.*

> (Munday, 2016:15, original italics)

There is no definition of knowledge here but there is mention of it related to being about to teach a 'knowledge-rich curriculum'. The CCF then went on to set out in details what exactly STs need to know and do.

## 2.5 Core Content Framework

As a result of the Carter Review and the Munday Report, the CCF (Department for Education, 2019a) became statutory from September 2019. All providers must cover the CCF as a minimum entitlement for their STs. Whilst this has been implemented after I collected my data, it is important to include it here as it shapes how I am interpreting the data, and it makes this research even more pertinent. How teacher educators interpret this document affects what and how STs are taught and supported.

The CCF was written by another advisory group consisting of teacher educators from different settings (the only university representatives were Sam Twiselton from Sheffield Hallam, Becky Francis from the University College London and James Noble-Rogers from the Universities Council for the Education of Teachers). The CCF sets out the minimum entitlement for STs. It is designed to link to the Teachers' Standards (Department for Education, 2011a) and sets out five core areas: behaviour management, pedagogy, curriculum, assessment and professional behaviours. It sets out, for each of the Teachers' Standards, an ST should 'learn that….' and 'learn how to…' (Department for Education, 2019a). These statements are very specific, even stating what research is suggested. This 'authoritative discourse' (Bakhtin, 1981; 1984; 1986) has therefore shaped everything we do as teacher educators since 2019. It adds a layer of confusion as the Teachers' Standards are similar but different, the language also similar yet different. I have included an example of what the CCF says about Teachers' Standard 3 in Appendix D as this focuses on subject and curriculum knowledge. It still does not explain exactly what is meant by knowledge in this context.

The RGS responded to the CCF and was pleased to note the inclusion of subject knowledge as a feature of this and the Teachers' Standards. They go on to argue that a subject focus is important in ITE and should:

- Refine and develop (as needed) their subject knowledge to the requirements of the curriculum

- Be able to contextualise the (subject) curriculum content and skills into the wider framework of the discipline, and understand the progression of subject knowledge and skills through the Key Stages
- Refine and develop (as needed) their subject-specific skills (in the case of geography, their map and GIS skills, fieldwork skills and data skills) and how those skills can be embedded in, and add value to, the subject content knowledge
- Develop their subject specialist pedagogical knowledge and skills
- Understand that knowledge continually develops and thus there is a need for continuing subject specific professional development to keep up to date; and appreciate the benefits of being part of a subject based community

In this way, their subject expertise and its teaching is developed appropriately to the needs of the classroom, the curriculum and their pupils, now and into the future

(Royal Geographical Society, 2015:online)

Reflecting on these documents again, in 2024, prompts me to consider what this means for student geography teachers now, and what it meant in 2017 when I started collecting my data. In 2017, we were just at the very start of this process of change in teacher education. There was no set curriculum that STs needed to know, and teacher training providers had total autonomy to teach what they felt was relevant to their STs. The body of knowledge for STs is now set out in the CCF so this is what the DfE sees as the necessary body of knowledge. As English teacher educators, we are held to account through Ofsted inspections as the focus on the ST curriculum and how the curriculum is delivered is the focus under the current Ofsted inspection framework (Ofsted, 2024b).

## 2.6 The Teachers' Standards

The Teachers' Standards were introduced and made statutory on 1 September 2012 (Department for Education, 2011a). These replaced the previous the existing 'standards for qualified teacher status' and the 'core professional standards' (Training and Development Agency for Schools, 2008). The new standards were introduced as a baseline for all teachers to follow and to streamline the existing standards so that teachers at all levels of their career adhered to the same standards even though their context would be different. In ITE this means that STs must meet these standards in order to be awarded qualified teacher status (QTS) and again when they come to the end of their induction period which was one year up until 2021 and is now two years as part of the Early Career Framework (ECF). This is a framework to support the development of new teachers and what they 'are entitled to learn about and learn how

to do when they start their careers' (Department for Education, 2019b). This is part of the Conservative government's plans to tighten the quality of teacher education which is not directly relevant here but is something that fits into this policy context that continues to evolve.

The new Teachers' Standards became the focus for assessing for STs.  During the period of this study, the Teachers' Standards were used to assess the performance of STs throughout the PGCE programme.  STs had to show evidence of how they had met these standards at six points during the year before being awarded QTS at the end of the programme.  How this was assessed can be seen in Appendix E.  I have only included the information for Standard 3 as this is the one focussing on subject knowledge. It shows the progress indicators and how STs can collect evidence of how they have met these. STs were graded at each review point using this matrix. When the CCF was introduced the DfE stated that the Teachers' Standards are end point assessments and therefore should only be 'used by initial teacher training (ITT) providers to assess when STs can be recommended for qualified teacher status' (Department for Education, 2011a).  This has shifted how we assess STs on the PGCE and whilst it is not directly relevant to this research it is part of the bigger picture.

## 2.7 School Curricula Policy Changes

At the same time as reform in ITE, the DfE set out their plans for the new curricula at all levels of school education.  Being a classroom teacher in 2010, it felt like the planned reforms were Michael Gove's own passion project.  However, whilst he clearly influenced the Coalition government's first white paper on the 'The Importance of Teaching' (Department for Education, 2010:8) on reflection it is not just one person's reform it is the DfE reforms.  It states

> what is needed most of all is decisive action to free our teachers from constraint and improve their professional status and authority, raise the standards set by our curriculum and qualifications to match the best in the world and, having freed schools from external control, hold them effectively to account for the results they achieve.

As a teacher, I did not feel like I was constrained in what I was teaching but I was worried about the changes that were likely to be introduced by the Coalition government possibly narrowing what I was able to teach, or that I would have to teach it in a certain

way. There was a lot of anxiety and tension in schools at the time as teachers worried about what this would mean and equally pupils and parents worried what it meant for their GCSEs and A-Levels. Teaching in a school in this period felt like there was a lot of uncertainty and with reforms afoot, it was challenging to work out how to make the changes to support the students – exactly the opposite to what Gove had said they were doing. As a department, we tried to look ahead and consider what the A-Level Geography might look like and work backwards to what we needed to teach our Year 7s. The focus on a 'knowledge-rich' curriculum was confusing as we did not know what this meant and in particular for geography. For geography, the debate around climate change being omitted from the initial version of the geography curriculum was contested by many climate activists and lobbyists including Ed Davey (Secretary of State for Energy and Climate Change 2012-2015) (Department for Education, 2013a). This is a highly political body of knowledge and caused much discussion in parliament at the time. A press release stated that there were opportunities to teach climate change in both the Geography and Science National Curriculum (Department for Education, 2013a). Climate change was only going to appear in the science curriculum and there were fears that this would diminish the importance. The actual national curriculum published in 2013 does make reference to 'weather and climate, including the change in climate from the Ice Age to the present' (Department for Education, 2013a) but there is no specific mention of 'climate change'. In 2024 this now seems even more concerning and the debate in considering who decides what knowledge is important. This will be discussed further in Chapter 3.

Whilst the government made it clear that from their perspective change was needed, there was uncertainty felt in schools about what exactly this meant. On one hand there was talk about the National Curriculum being too prescriptive and teachers needing more freedom to teach what they felt was appropriate. On the other, radical reforms to GCSE and A-Level examinations were set out which wanted the move from modules, which could be taken several times, to a linear examination system with an examination at the end of it. This was seen as more rigorous, more academic and enabled English students to compete in the international market for jobs. The English Baccalaureate (EBacc) was introduced to 'encourage schools to offer a broad set of academic subjects to age 16' (Department for Education, 2010:44). This is still used as a measure of school

performance but has not had the intended outcomes for the DfE, as schools have either opted not to enter pupils for the EBacc subjects, particularly if they will not get a Grade 4 or above in those subjects, or that they feel it narrows the curriculum and the pupils benefit from having a wider curriculum which includes more creative subjects such as music, art, and drama (Hagger-Vaughan, 2019; Maguire et al., 2019; Neumann et al., 2020).

Gove's plans were seen as a process of 'cultural restoration', a term coined by Ball (2011:6) and the reinvention of tradition, in this case wanting the curriculum to look like it did when he was taught at school 35 years ago. Ball suggests that cultural restoration in itself is not a new phenomenon but is a way of 'exerting discipline in and over education' (Ball, 2011:24). As part of the curriculum reforms, Gove stated that 'history and geography should emphasise the learning of facts and equip children with essential knowledge' (Vasagar and Shepherd, 2011:online). There was no clarity of what is meant by essential knowledge, and this leaves some debate on the body of geographical knowledge. This will be discussed further in the Chapter 3.

## 2.8 E.D. Hirsch and the Knowledge Rich Curriculum

This chapter is about the policy context in England so it might seem strange to mention a specific person, but E.D. Hirsch has had a profound impact on the English curriculum. Nick Gibb first read Hirsch's 'The Schools We Need and Why We Don't Have Them' (Hirsch Jr., 1987a) in 2005. In his essay 'How E.D. Hirsch Came to Shape UK Government Policy' (2015) Gibb recalls the impact Hirsch's work had on him and how it formed his view on what education should look like. Therefore, it was no real surprise that with the school curriculum much of what the conservatives set out to do was based on the work of E.D. Hirsch.

In a speech to the Social Market Foundation panel event on raising school standards Nick Gibb reviewed the changes to the curriculum and how the new curriculum was designed to raise standards. He applies the work of E.D. Hirsch (1987a; 1987b; 2006; 2007; 2016) who researched the different knowledge bases of university and community college students. He found that disadvantaged students lacked the basic knowledge that enabled them to access higher levels of comprehension and believes

that a 'knowledge-rich curriculum' is persuasive to all as it infers that it is about the 'compelling social justice case' (Gibb, 2015:14) as it tries to close the gap and give access to a body of knowledge enabling students to live and work in society.  Gibb went on to say that 'teaching a knowledge-rich curriculum is essential to the task of spreading opportunity and levelling up' (Gibb, 2021).

Hirsch, having set up the Charter School system in the United States, emphasised the need for a 'knowledge-rich curriculum'.  Hirsch believes that all children have an equal right to knowledge and that there should be a common knowledge base set to close the gap between different social groups (Hirsch Jr., 2016). He makes a clear case for the need for very young children to have this common core to set them up for the rest of their school life and beyond.  He says that every child needs the 'enabling knowledge' possessed by the most successful adults (Hirsch Jr., 2016:7).  Whilst I cannot disagree with the principles here, it might be argued that the English National Curriculum and most recent public examination reforms have taken this too far, and that knowledge can be seen as the most important aspect of the school curriculum at the expense of any skills to use the knowledge gained.  This is pertinent in geography where the focus on application and skills is seen as important, for example in decision making and fieldwork investigations.   This is a rather simplistic view of knowledge as well as the specific knowledge needed in geography.

Hirsch's ideology is his own.  The fact that Gove and Gibb have taken it as face value is problematic and whilst knowledge is seen as a series of facts, there is no mention of pedagogy and how children learn (Yandell, 2017). However, this now does appear in the CCF, but a very specific theoretical underpinning is used for example how children learn in the context of cognitive science and how this has been interpreted by others for example Baddeley (2003), Clark et al. (2006), Deans for Impact (2015) and Sweller (2016).   These are all included in the reference list for the CCF (Department for Education, 2019a:34)

## 2.9 Summary
The English education policy context is important in setting the scene for this research. Since 2010 there has been rapid and sustained change in the education policy both

within schools and ITE providers. There is an ongoing debate about what teachers need to know and whilst at the start of the Coalition government in 2010 there seemed to be a disparity between the reform in schools and ITE providers in terms of 'knowledge' there has been more assimilation in the language used by the DfE there is still much concern and anxiety about what and how we learn to be a teacher.

In the next chapter I will look more closely at the literature around knowledge and knowledge needed for teaching.  I will then go on to look at how using a Bakhtinian lens can support understanding the lived experiences of learning to teach geography in Chapter 4.

# Chapter 3 Literature Review

## 3.1 Introduction

This thesis considers the knowledge acquisition of student geography teachers; what they need to know, who has the authority to decide what they need to know and how they acquire and develop this professional knowledge and skills.  It is therefore important to understand different types of knowledge and how STs learn how to use them.

This research is set in the English context of educating teachers and as illustrated in the previous chapter, this is a highly politicised setting with constant changes to what is emphasised as the appropriate knowledge base for teachers.  This chapter will review the literature around knowledge for teaching and how this affects student geography teachers.  It will also consider geographical knowledge and the specific nature of this body of knowledge and how this affects the knowledge base of beginning geography teachers.

Whilst there is extensive literature around knowledge, knowing and knowledge construction, this chapter will focus on forms of knowledge in the context of geography teaching and how these impact on learning to teach.  There is relatively little research on the professional knowledge required by geography STs specifically, so I am drawing on a range of literature about both geography and knowledge and try to make the links between the two. Models put forwards by Shulman (1986; 1987a; 1987b; 2005), Shulman and Shulman (2004), Turner-Bisset (1999; 2001), Brooks (2010; 2015), and Reitano and Harte (2016) all help to give me a framework that I can use to research the professional knowledge geography STs need and how they acquire this knowledge.

I will focus this chapter around the following areas:

- What is meant by knowledge and knowing?
- Professional knowledge
- Geography knowledge and geographical knowledge
- Shulman's theory of knowledge and alternatives
- Geography teacher knowledge

This will then lead onto how this can be linked to learning to teach geography which is the focus of the study.

These areas are not entirely exclusive, but they do enable the distinction to be made between the types of knowledge needed for teaching geography.

As discussed in the previous chapter, there is also a highly political debate in teacher training in England which has continued throughout this research project.  It is worth noting again that whilst this research began prior to the implementation of the CCF (Department for Education, 2019a) it must now be considered as an important part of this project.

## 3.2 What is meant by knowledge and knowing?

Theories of knowledge have been debated for many years by philosophers in the field of epistemology.  Michael Polanyi (2003) argues the relevance of 'knowledge how' and 'knowledge that' when trying to distinguish between different forms of knowledge.  He uses riding a bike as an example whereby the knowledge needed to understand how to balance and how to move the bike cannot replace the need to know how to ride the bike.  This analogy is how I have come to view the knowledge needed by teachers. Teachers need to know both what and how to teach.  The debate comes from what this means.  What is most important? How do we distinguish between different types of knowledge and if some types of knowledge more important than others?

Before looking at types of knowledge, it is worth discussing the different perspectives on knowledge.  Looking at knowledge through two different paradigms is helpful.  Social realism and constructivism give interpretations which are important to consider.

Social realism emphasises the normativity of knowledge that is based, at least partially, on how the world is.  Knowledge is therefore fallible and revisable in the light of new evidence (Wheelahan, 2010:11).  Social realism's commitment to the existence of an objective reality and thus to an objective knowledge is the basis for its arguments about the curriculum and pedagogy.  Morrow (2007) argues the need for a realist approach to the theorisation of knowledge but does not go on to say what this might actually look like.

The constructivist perspective has older philosophical roots (von Glasersfeld, 1988; Piaget, 1953). Lerman (1989) makes two assertions about constructivist knowledge; knowledge is actively created by the knower and not passively received in an unmodified form from the environments; and the process of knowledge and learning does not reveal an increasingly accurate objective, or true understanding of *an' independent, pre-existing world outside the mind of the knower'* (Lerman, 1989:211).

Constructivism stresses the cultural basis of skills, tasks and practices and how knowledge is formed because of those practices. At its core, constructivist epistemology assumes that the formation of knowledge is socially dependent because all knowledge is socially constructed (Boghossian, 2005). The different forms of constructivism share three basic premises about knowledge:

1. Knowledge is a product of social practices
2. Different kinds of knowledge can be reduced to different kinds of practices
3. The social practice of knowledge producers and other kinds of social actors are commensurable so that the knowledge produced by the former has no special 'authority' compared to that of the latter

(Wheelahan, 2010:115)

There are various forms of constructivism within education; the literature emphasises how teaching is conceived less in terms of direct instruction and more in terms of indirect facilitation. This radical constructivism focuses on the individual construction of knowledge, on how learners and individuals impose intellectual structure on their world, whereas social constructivism views knowledge as primarily a cultural product and is concerned with how knowledge is constructed through interaction with others (Firth, 2015).

The constructivist view of knowledge brings notions of meaning, interpretation and social context and gives a contextual nature of knowledge. Constructivism brings with it the idea that students and teachers bring their own experiences into the classroom which is important in geography. This is seen as a more progressive form of knowledge development and that having a core knowledge base for all students is problematic as they all have a different starting point.

I would argue that both conceptualisations of knowledge are relevant for geography education as geographers see things from a realist perspective but then add to that knowledge through individual interactions with others and bringing distinctive contexts and prior experience. The constructivist approach allows individuals to make their own meaning of the knowledge.

Constructivism acknowledges ideas of meaning making, interpretation and social practices in the debate about knowledge. Knowledge is contested rather than absolute. It must be understood in relation to the knowers, whether through the individual, knowing subject, or collective, epistemic or disciplinary communities. It may be seen as prone to reducing knowledge claims to power relations amongst the socially positioned actors. This is what Young (2008) has called 'knowledge growth'.

This debate about knowledge is an important one that continues in every aspect of education. The different interpretations depend on who is stating what knowledge is and also the context in which knowledge is being discussed.

According to Bolisani and Bratianu (2018:2, italics in original) most accept that 'knowledge is a *justified true belief*' but there are differences in how the justification of the belief is reached. The two main perspectives are rationalism and empiricism. From a rationalism view, and from the work of Plato, worthy knowledge is a result of a reasoning process, and our senses play no part in it. Bertrand Russell (2012) outlines this perspective by exemplifying that from this view 2+2=4 is genuine knowledge whereas the snow is white is ambiguous and cannot therefore necessarily be true.

In contrast, the empiricists such as Aristotle suggested that idea and forms cannot be separated from physical objects and sensory information. Knowledge is created though our sensory interface with the real world and it is processed by our mind. Russell goes on to consider the definition of knowledge put forward by Theaetetus

> It seems to me that one who knows something is perceiving the thing that he knows, and, so far as I can see at present, knowledge is nothing but perception.
>
> (Russell, 2012:148)

Socrates also said that 'man is the measure of all things' and any given thing 'is to me such as it appears to me, and is to you as such as it appears to you' (Russell, 2012:149). It is the perception of what is true that is infallible.

This debate surrounding defining knowledge is ongoing and does not make for an easy start to this thesis and the dynamic changes in policy also add a layer on complication but defining what is meant by knowledge regarding teacher education must start with the different types of knowledge involved when training to be a geography teacher.

## 3.3 Professional Knowledge

It is important to explore professional knowledge early in this chapter as the focus is on the knowledge needed for teaching geography.  There are many different aspects to professional knowledge.  In the case of STs, one of the early distinctions is around their knowledge of their subject, geography, and what knowledge they need to teach geography.  In much of the policy documentation, these are not seen as distinct. Establishing what the literature says about this is therefore an important part of this literature review.

Research around professional knowledge draws on the sociology of professional knowledge advanced by Schwab (1978), Shulman (1986) and Young (2011).  Teaching requires sound subject knowledge but also knowledge of effective pedagogy:  there are different ways of interpreting this professional knowledge.  Schwab (1978) focusses on what he refers to as 'substantive structures' i.e. the way the concepts are organised with the subject and 'syntactic structures' of knowledge: a 'grammar' for the subject, how the knowledge is created and the language that is used.

Shulman (1986) suggests seven types of knowledge as a minimum are needed for effective teaching. For STs, subject content knowledge, the general pedagogic knowledge and the pedagogical content knowledge (PCK) are the most important. Geographical knowledge can be even more challenging to define as it is constantly changing, both as an academic discipline and as a school subject.

In this research, conflicting notions of knowledge and teaching are explored through a social constructivist perspective and drawing on the theoretical resources of Bakhtin

which will be discussed in Chapter 4. The identification of a dominant discourse of 'government fiat' has particular utility in examining how teachers, STs and university tutors position themselves regarding the school geography curriculum and the knowledge base of STs. Examining the micro-practices through which professionals engage in self-regulation will allow a detailed investigation of the power relationships between STs and their mentors, as well stakeholders' beliefs about the knowledge base of STs.

However, I am interested in knowledge and the professional knowledge needed by student geography teachers, but this research needs to have a narrower focus and therefore cannot delve more deeply into the philosophical debate surrounding knowledge. My research questions are focussed on what student geography teachers need to know, and who has the authority to decide what they should be able to know.

As discussed in Chapter 2, the education of teachers in England is highly politicised and what is required of STs and experienced teachers in schools changes according to who is in government. This makes the professional knowledge base contested and dynamic. This is seen in the current policy whereby knowledge is perceived as important but only certain types of professional knowledge are included as exemplified in the CCF (Department for Education, 2019a). This follows on from an earlier study undertaken by Menter et al (2006:283) which was based on the ITE policy in England and Scotland in 2002-2004. They concluded there was a need 'to be precise about what it is that teachers are required to know and to be able to do'. Much of what they discuss in their study is still being debated today and makes this thesis relevant to the current situation in England with the introduction of the CCF (Department for Education, 2019a). As discussed in Chapter 2, the CCF sets out what the Department for Education sees as the body of professional knowledge that all STs need to know. As a teacher educator, I know that it is not that simple, and the dynamic nature of geography itself also has to play a part in what knowledge students need to know and do.

## 3.4 Geography and geographical knowledge
As an academic discipline, geography has a dynamic knowledge base and changes according to what is happening in the world at any given moment. The knowledge

required to learn and teach geography is constantly changing and seemingly endless. All student geography teachers should have an appreciation of the structures of geography knowledge construction but exactly what this looks like will depend on the level at which they studied geography and how recently that study was. Geography degrees vary widely and there is no set body of knowledge that they need to know so this poses a challenge.

At the start of a teacher training course, there is an assumption is that all students have some expert knowledge of their subject. However, geography degrees are all different and have different titles. A geography degree can be a BSc or a BA. There will be common units to both, but a BSc will have more elements of physical geography, and a BA will have a greater number of human geography units. In addition to this, a BSc in Physical Geography or a BA in Human Geography will be more narrowly focussed on either physical or human geography. One of the main ways of structuring geography knowledge is to distinguish physical geography as focussing on the study of the natural environment and with human geography focussing on the human activity and how it interacts with the environment. In addition to this there are 'new geographies' such as the geography of citizenship and social justice, political geography, visual and sonic geographies and the use of geographical information systems studied at university level are not usually found on the secondary geography curriculum. A student geography teacher needs to go from expert geographer to student geography teacher in a short space of time; what knowledge is needed both from a geographical perspective and a pedagogical one is vast. The debate about different forms of knowledge is important here as it is not as simple as learning the geography.

Geographical knowledge can be viewed from a social realist and a constructivist perspective. The core argument of social realism is that disciplinary knowledge is the key purpose that distinguishes education from all other activities. Geography knowledge acquired in school is essentially more powerful than the knowledge gained from everyday life because of its explanatory power (Moore, 2007; Young, 2008).

Geography has a dynamic knowledge base and changes according to what is happening in the world and as such the knowledge required to learn and teach geography is

constantly changing and seemingly endless. All student geography teachers should have an appreciation of the structures of geography knowledge construction but exactly what this looks like will depend on the level at which they studied geography and how recently that study was. As mentioned previously there is no set body of knowledge that they need to know so this poses a challenge. It is not enough to know the structures of geography as an academic discipline.

The geography taught in schools is significant in the geographical knowledge STs need to know. How this plays out over time is also important as depending on when a student studied geography at school will depend on how it was taught and what knowledge they gained. For example, when I was teaching A-Level geography, the changes to the A-Level specifications over the years altered how much physical geography was in the curriculum. In the 2010 specifications, there seemed to be more emphasis on the human influence on the natural environment rather than processes that cause them. The latest specification which was first examined in 2018 has a more balanced approach to human and physical geography, but some teachers struggled at first with the physical geography as they were learning it for the first time.

According to Firth (2015:55) there has been a significant weakening of the concept of knowledge and what is taught in schools. There are others who criticise this oversimplification of constructivism which can prevent what Morrow (2007) calls the 'epistemological access to knowledge in the modern world' (Lotz-Sisitka, 2009:57). Epistemological access refers to the sophisticated approaches to mediating between disciplinary knowledge represented in abstract form and everyday knowledge. In geography, this is important as in the past geography has sold itself in that 'geography is everywhere' and an assumption that geographical knowledge was something everyone already had. To really appreciate the geographical knowledge required, the ST needs to be aware of the substantive and procedural knowledge and how geographical knowledge is structured.

This issue around knowledge has been much debated within the geography education community. More recently, Young's (2008) work around bringing knowledge back in

challenges the 'what and how of teaching geography' (Firth, 2018), and the impact on the students learning geography.

According to Professor John Morgan, who is now based at University of Auckland and University College London and has written extensively about the importance of geography education, the nature of the subject of geography means that there are two epistemological theories of knowledge relating to geography.  The first is objectivism and the second social constructivism.  He states that

> Much teaching in schools proceeds from the position that there is an objective 'real world' which is studied by geographers to produce 'knowledge' which is then transmitted in schools.  However, since at least the early 1970s, and influenced by research in the 'sociology of knowledge', it has become possible to argue that geographical knowledge does not innocently reflect the 'real world' but instead reflects the subject interest of geographers.  Thus, is to point out that geographical knowledge is 'socially constructed' (Morgan, 2013:274)

He argues that much of the geography we teach in school is socially constructed and we need to make a distinction between the two conceptualisations of knowledge. The traditional which is objective, certain, neutral and independent of the socio-historical context in which it is developed. The current National Curriculum (Department for Education, 2013b) seems to return to this authoritarian view of knowledge.  The geography education community has debated this as not fit for a 21$^{st}$ century curriculum as it suggests there is only one objective reality whereas knowledge is 'fallible and revisable in light of new evidence ' (Wheelahan, 2010:11).  This is part of why geography is a challenging subject and why some pupils find the knowledge acquisition in geography frustrating.  They want a definitive answer to a problem, but the real world does not always give that to them.  The critical thinking required to be successful in geography needs to also be taught and learned so that pupils are prepared to interpret the theoretical knowledge and the real-world examples.  The student geography teachers also need to be prepared for this.  The challenge here is preparing for things you do not yet know about.

As part of geographical knowledge, the importance of curricular knowledge is intertwined.  When the Geographical Association reviewed the National Curriculum as

part of the consultation the GA gathered evidence from teachers about disciplinary knowledge. The GA (2011a:2) subsequently suggested three types of knowledge:

- Core knowledge: the extensive world knowledge of geography
- Content knowledge: the main content of the geography curriculum – its key concepts, ideas and generalisations (what Schwab (1978) calls substantive knowledge)
- Procedural knowledge: what is described as 'thinking geographically'…the teacher can model this by example, but it is also learnt through exposure to, and direct experience of, high quality geographical enquiry which might include decision making or problem solving.

There are two arguments around knowledge which encourage teachers to consider their own pedagogic assumptions. The first is an epistemological argument about the conceptualisation of knowledge and the second is an education argument about the importance of disciplinary knowledge and epistemological access. They are complexly woven together where the need for a stronger conception of knowledge enables the disciplined nature of knowledge to be emphasised whilst also seeing students as co-constructors of that knowledge (Firth, 2015).

If geographical knowledge is seen as only socially constructed, then this could be problematic. According to Wheelahan (2010), if knowledge is reduced to only being the experiences and interests of a particular group then the difference between disciplinary and everyday knowledge is narrowed as both are as a result of social practice. This also means that there is no existing reality, and all knowledge is of equal value. There is no objectivity. I think school geography has taken this approach in the past. When I started teaching, there were posters all over the classrooms with 'Geography is everywhere'. This is how we sold the subject at GCSE. Geography is a good subject to take as it is 'just' general knowledge. I have concluded that this view is problematic for the reasons already outlined but it is also problematic for the STs and their pupils. If we do not 'sell' the discipline of geography as an academic subject with an agreed body of knowledge, then what is geographical knowledge? It also poses challenges for STs when the body of everyday knowledge of their pupils is in contrast to their own. They must ensure their pupils are making progress in their geographical knowledge and taking them from their everyday knowledge (the vernacular knowledge) to the technical.

The complexity in distinguishing what geographical knowledge is makes it challenging for STs to appreciate what they need to know, and for those involved in their training to know how best to support them.

In addition to the subject knowledge student geography teachers require, they also need to know what and how to teach it.  When they begin their placement, they observe expert teachers teaching geography and they can feel overwhelmed by the scale of what they need to learn. An ST cannot know everything before they start teaching so how do we prepare them, what do they need to know and when do they need to know it? As a geography teacher educator, my interest lies in what this body of knowledge is – can we, and how do we, define it, then how do we share this with STs and their mentors and do all stakeholders have the same view of what is important?

In making the transition from an expert geographer to an expert geography teacher, Shulman's theory of knowledge supports the different types of professional knowledge.

## 3.5 Shulman's Theory of Knowledge

In reading about the knowledge base of a teacher, Lee Shulman has written extensively about different types of knowledge related to teaching.  This theory is not new and is widely used as a way of classifying types of knowledge needed by teachers in the classroom.  This is pertinent to my student geography teachers and supports the way in which the nuances of the professional knowledge base play out.  Shulman (1987b:8) organises the knowledge base into:

- Content knowledge;
- General pedagogical knowledge, with special reference to those broad principles and strategies of classroom management and organization that appear to transcend subject matter;
- Curriculum knowledge, with particular grasp of the materials and programs that serve as 'tools of the trade' for teachers;
- PCK, that special amalgam of content and pedagogy that is uniquely the province of teachers, their own special form of professional understanding;
- Knowledge of learners and their characteristics;
- Knowledge of educational contexts, ranging from the workings of the group to classroom, the governance and financing of school districts, to the character of communities and cultures; and
- Knowledge of educational ends, purposes, and values, and their philosophical and historical grounds

I will discuss each of these areas of knowledge and how these fit with current policy and learning to be a geography teacher.

### 3.5.1 Content Knowledge

Content knowledge and subject knowledge are inter-changeable. This refers to what you need to know or teach about your subject. Subject knowledge has become a real focus in recent policy documentation as previous discussed and is mentioned in the current Teachers' Standards (Department for Education, 2011a), the CCF (Department for Education, 2019a) and the current Ofsted framework (Ofsted, 2020). The focus on subject knowledge is welcomed in some ways but it also problematic as the only real reference to what is meant by subject knowledge is what is needed to deliver the Geography National Curriculum (Department for Education, 2013b) and the relevant GCSE and A-Level Specifications. This is further challenged by how schools then in turn interpret what they are going to deliver to their pupils.

Shulman breaks content knowledge down into three main domains of knowledge: 1. Subject matter content knowledge, 2. Pedagogical Content Knowledge and 3. Curricular knowledge (Shulman, 1986:9).

We have several ways to represent content knowledge. Schwab's (1978) distinction between substantive and syntactic structures of knowledge is useful when considering geography and fits in with the Geographical Association's (2011a) core, content and procedural knowledge. A teacher of a specific subject must therefore be able to tell a student why something is important and valid within the subject. A specialist teacher will know how to organise theory in their subject discipline and the same teacher will understand the syntax of the subject. It would be expected that this teacher would have the same understanding as geographers who are not teachers. The difference between a teacher and another geographer is that they also need to understand why something is true and the circumstances for that belief. This is certainly relevant for the teaching of geography. We often refer to the language and literacy of geography: the terminology, words and phrases that are specific to the subject. My interest is when and how a student knows this. Is it something they learn because of teaching, or do they know it as a result of teaching geography?

The most recent Geography Ofsted Research Report (2021:11) breaks geographical knowledge down into the following areas: substantive knowledge and disciplinary knowledge and then locational, place, environmental, physical and human geography and finally geographical skills and fieldwork.



Figure 1: Substantive knowledge and the relationships between them in geography

(Ofsted, 2021:11)

Figure 1 shows this clear structure of geographical knowledge and brings together several theories about knowledge allowing student geography teachers to consider the geography knowledge they need for teaching.

### 3.5.2 General Pedagogical Knowledge

Shulman (1986) then goes on to consider general pedagogical knowledge. This is knowledge about teaching. This area of knowledge is the hardest to quantify and code. Shulman refers to it as broad principles and strategies of classroom management and organisation that appear to transcend subject matter. It is difficult to really define as the knowledge is very much context specific and what works well in one context may not in another. Students find it difficult to understand what is meant by pedagogical knowledge as they do not always see the distinction as what and how to teach a particular topic at the start of learning to teach. In my experience as a teacher educator,

this is the most challenging type of knowledge as it cannot be learnt from a book or copying an experienced teacher. STs can learn about different pedagogical approaches to behaviour or creativity in the classroom but ultimately, they must make decisions based on their individual context: the school they find themselves placed in and the school's policies, the pupils they are teaching and their own identity as a student geography teacher. What is seen as a good pedagogical knowledge in one setting may not be valued in another and then the student can feel confused as to what is right and wrong. Getting student geography teachers to really consider the most appropriate pedagogy to teach a particular part of geographical knowledge is part of the challenge of learning to teach. This has become increasingly difficult in the highly prescriptive education system we now have in England; however, it means it is even more important to get student geography teachers to consider the choices they make when teaching geography.

### 3.5.3 Curriculum Knowledge

Curriculum knowledge was referred to as 'tools' of the trade by Shulman (1986). The conception of curriculum knowledge goes beyond any curricula and programmes of study that are available. Knowing what to teach is as important as knowing the geography knowledge. Being able to plan a curriculum is an area of knowledge that students find challenging. In my experience, the students start small, with a part of lesson, then build to a whole lesson and then to a series of lessons. When they are training, they are in two schools and the curriculum can differ widely from the topics being taught, the order they are taught in and what aspects of the topic are being delivered and what is being excluded. This is a real challenge for an ST. To begin with, an ST might rely on their mentor to help and tell them what to include in a lesson. They gain independence throughout the PGCE programme but knowing the curriculum is an important area of knowledge that is difficult to acquire quickly.

An experienced teacher will know the range of curricula to be able to teach a specific topic ensuring the pupils can understand it and at the right level. They will be aware of alternative texts, software etc. and they will also be aware of the bigger picture of how any specific topic might fit in with other aspects of the geography curriculum, or science or history for example.

The teacher has to know what the pupils have learnt before and what they will learn in the future. They need to see the bigger picture. Curricular knowledge is particularly pertinent to geography as there are so many overlaps with other humanities subjects as well as science and mathematics. In order to really understand the curriculum and what a pupil requires to know, pupils and teachers must see the bigger picture and how the learning fits together. There is also the need to know how a student progresses their knowledge in their subject. What have they learnt before, what will they learn in the future and how this affects what they are learning now.

### 3.5.4 Pedagogical Content Knowledge

The pedagogical content knowledge (PCK) acknowledges that there is a distinct knowledge base that teachers need. This PCK brings together both content knowledge and pedagogical knowledge. According to Shulman 'teaching is, essentially, a learned profession' (1987b:9). Teachers must be able to decide what the important ideas and skills are in their subjects, as well as how new ideas are gained, and old ones dropped by those who produce knowledge in this area. This is what Schwab calls substantive and syntactic structures (Schwab, 1978).

This goes beyond the subject content itself and considers the subject knowledge needed for teaching. This is where a teacher is expected to know not only the common content knowledge needed to teach the subject but also the usual representations of that knowledge and the best way to teach it. The teacher will need to have to hand a variety of different methods to be able to choose the most appropriate way of representing a concept, either through research or through experience. Student geography teachers often struggle with how to get across the content in a way that makes sense to their students. Shulman (1987b:8) describes PCK as 'that special amalgam of content and pedagogy that is uniquely the province of teachers, their own special form of professional understanding'. PCK also takes into account an understanding of what makes learning a particular topic easy or difficult, the conceptions and preconceptions at different ages and the backgrounds that children bring with them (Shulman, 1987b:9-10).

The term PCK is of special interest when considering STs as it is the blending of content and pedagogy. A student is required to demonstrate that they understand how to represent the content whilst considering the pedagogy of a particular topic or concept, and how they adapt this to the context in which and with whom they are working.

Other studies have shown that teachers' subject knowledge and PCK affect classroom practice and are modified and influenced by that practice (Turner-Bisset, 1999:42). For example, Cochran et al. (1993) refer to this as 'knowing in action', an active process rather than a set of knowledge bases in combinations. Their view is based on a constructivist view of learning and its application to teaching and teacher education. McNamara (1991) and McEwan and Bull (1991) argue that it is not possible to justify a difference between content and pedagogic knowledge in a similar way to Bennett and Turner-Bissett (2002) who suggested that all knowledge is presented pedagogically. Whilst these studies were completed thirty years ago, the debate and discussion around knowledge and PCK has continued. I would argue that this is still something that is still worth exploring, although much of the recent research has been around Mathematics and Science education (Loughran et al., 2012; Matteson et al., 2017; Winzell, 2018; Ulferts and Organisation for Economic Cooperation and Development (OECD)(France), 2019; Lehmann, 2020; Wahyuni et al., 2021).

### 3.5.5 Knowledge of Learners and their Characteristics

Turner-Bisset (1999) extended the knowledge bases that Shulman had created. She believed that this category was complex and consisted of two key different elements: empirical or social knowledge of learners (knowledge of what children of a particular age range are like; how they behave; their interests and pre-occupations) and cognitive knowledge of learners consisting of two elements. Firstly, there is knowledge of child development, which informs practice, and secondly, knowledge that is context-bound to a particular group of learners. This kind of knowledge develops as the teacher gets to know the child, or children, and is linked to Shulman's idea of *adaptation* (Shulman 1987b:17 original emphasis) where material is adapted and represented in a way that the specific child can interpret and understand.

In education in England, we have referred to this as *differentiation*, although now we would use the phrase *adaptive teaching* as stated in the CCF (Department for Education, 2019a). This is something that STs find particularly challenging as they have to get to know pupils quickly in order to be able to adapt the material for their specific needs. This does not need to be on an individual basis but can also refer to knowing the needs of the whole class.

### 3.5.6 Knowledge of Educational Contexts

Knowledge of educational contexts indicates knowledge of schools, classrooms and all settings where learning takes place (Shulman, 1986).  When studying STs, Turner-Bisset (1999) found that different contexts had different impacts of teaching performance. This could be the size and location of the school, the quality of the support, the amount of feedback STs received or even the quality of communication and relationships in the school as well as the expectations from senior leaders.  She found that the most successful students were those who had experienced a range of educational contexts and classrooms before the training.  This poses a challenge for many students currently training in England, as the Department for Education states that they no longer need school experience before commencing a teacher training course and that a 'lack of school experience should not be a reason for rejecting an otherwise suitable candidate' (Department for Education and National College for Teaching & Leadership, 2018:online).  It can also be difficult for an ST if their placement school is different from their own experience or their expectations of school.  This could be the type of school or if the student has been educated overseas.

### 3.5.7 Knowledge of Educational End, Purposes and Values

In many studies, the knowledge of educational end, purposes and values is a type of knowledge which appears to be implicit rather than explicit and is therefore harder to capture but under Turner-Bisset's model (1999), it has been retained as teaching is a purposeful activity, both in the sense of short term goals for a lesson, or long term goals in a series of lessons.  Sockett (1987) criticised Shulman's portrayal of expert teaching for the absence of any moral dimension but Shulman's response (1987a) to this was that there is a socio-moral quality to teaching, but it is only one of many essential features.

Whilst the 'moral purpose' is not obvious in the Teachers' Standards in England, it is more explicit in the different standards or competences for teaching in other parts of the United Kingdom. Of particular note is the reform in Wales that has put an emphasis on this moral purpose of education to ensure that teachers and pupils are encouraged to consider the greater purpose of education. According to Hopkins (2016) teachers have this moral purpose at the heart of what they do. Therefore, the strategies in the new Welsh curriculum centre around building pupils learning capacity and giving pupils a voice in their own learning supports this. In Northern Ireland, the General Teaching Council for Northern Ireland sets out the code of values focussing on commitment to all aspects of teaching and learning. The moral purpose of education comes through strongly (General Teaching Council for Northern Ireland, 2018).

### 3.5.8 Additional types of knowledge
*Knowledge of self*
This is not included in Shulman's original list but the work of others such as Elbaz (1983) and Kagan (1992) suggest that teachers must have a sense of self as a teacher. Kagan (1992:147) said, 'without a strong image of self as teacher, a novice may be doomed to flounder'. When a student starts to teach, they often do not think of themselves as a teacher. Sometimes they still see themselves as a student, or if they have come from another career, they have changed their identity; this can take time. I believe this knowledge of self can therefore play an important role as an ST develops their own sense of self during the training year. This can be particularly challenging for them if the relationships they have with their peers, and support systems, have different beliefs about this knowledge of self and who they should be. Students go through a rapid period of change and some cope better than others. My role as a teacher educator is to support students through their training. If the students' expectations of placement and teaching are not met, then they may experience 'practice shock'. This can be a traumatic process as their identity shifts or is challenged by their experiences in school. (Hobson et al., 2009; Meijer et al., 2011; Delamarter, 2015). It is usually a negative experience that relates to feelings of uncertainty or lack of control and for many STs is linked to classroom management and not feeling in control of the classroom situation (Veenman, 1984).

Lee Shulman's constructivist approach fits well with the subject specificity of the geography curriculum. However, Judith Shulman's approach pays less attention to subject specificity and more on the reflective nature of individual teachers, and how this can be used to support their development (Shulman and Shulman, 2004). They talk about the shifting perspective of training teachers, and this also resonates with the situation in England today. Figure 2 summarises what Shulman and Shulman call 'capital'.
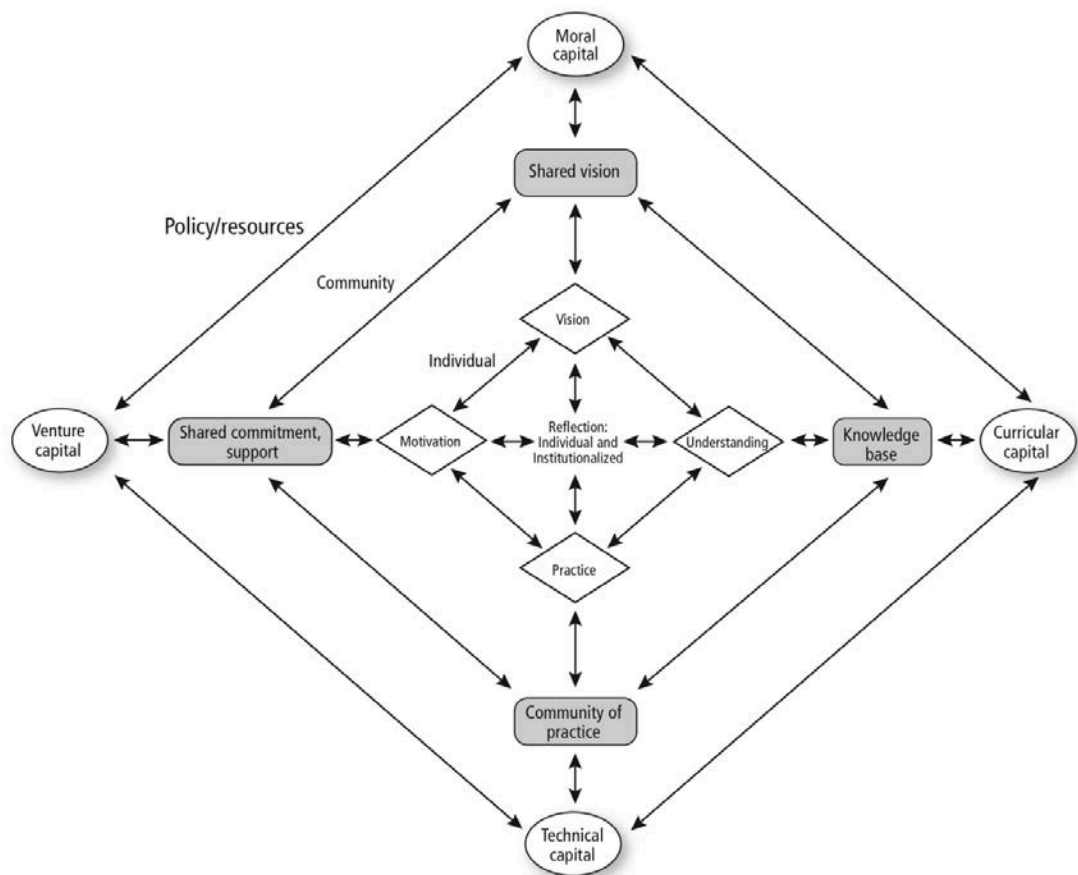


Figure 2: Levels of analysis: individual, community, and policy
(Shulman and Shulman, 2004:268)

With the recent changes to the way initial teacher training is organised in England, this is quite pertinent as we move towards 2024. The focus on the reflection and the notion of capital can conflict with personal capital which is not directly mentioned here.

## 3.6 Alternatives to Shulman's Model

One of the main issues around this concept of PCK is whether it is possible to distinguish between subject knowledge and pedagogic content knowledge, and if this is possible, is there an argument that PCK has a distinctive contribution in the training of teachers?

Bennett and Turner-Bissett (2002) found that it was impossible to distinguish between content knowledge and PCK, as in the act of teaching all knowledge is presented pedagogically in some way. Content and pedagogy are already interrelated, and effective teaching is an outcome of recognising the relationship between the two (Segall, 2004). This does not necessarily go totally against Shulman's theory as a teacher needs to spend time considering the subject knowledge and how children learn. In doing this they begin to have an appreciation of contemporary social views of knowledge. In geography STs, this can take a lot of their time to really understand the nuances, the pedagogy and the content and therefore PCK is worth spending time on. It is the transformation of the knowledge which is construed as a pedagogical task in terms of transforming the subject matter of an academic discipline into pedagogical forms which I see as PCK. Firth (2011:153) suggests that it is the role of geography educators to support STs and teachers in school to 'take ownership of reform' and enable them to engage with the debate around knowledge, how it is produced and how it is interpreted by pupils in the classroom.

PCK may appear to be an incontestable construct according to much of the literature surrounding it, but there is also an argument that Shulman's PCK does not allow for a variety of teaching models and that it is only relevant when the teaching is didactic, and teacher led. There does not appear to be an opportunity to have

> alternative views of teaching which, for instance, conceive of learners as autonomous agents constructing or re-constructing their own understanding of subject matter through collaborative group work and investigative activities.
>
> (Meredith, 1995:176)

Whilst I can appreciate the argument Meredith is making; I do not believe this is still true twenty-five years later. Most teachers embrace a wide range of teaching and learning styles, and a skilled teacher needs to know the PCK of their subject so that they can select the most appropriate method for that specific concept. However, on reflection during the time I have undertaken this research I am increasingly seeing more didactic teaching in schools as the only model to fit with the current agenda around cognitive load and retrieval practice. Whilst this was not the case when I collected my data, it is something to consider in any future research.

Cochran et al.'s (1993) model differs from Shulman's as it includes four components of understanding – pedagogy, subject matter, students and the environmental context. Meredith (1995) also suggests a constructivist model of PCK. In her model, she looks wider to accept that any representation of subject matter could contribute to students' misconceptions, and that students' ideas are seen as alternative ways of making, rather than deficit versions of 'proper' subject knowledge.

Banks et al. (1996) suggests that STs have to relate their subject knowledge to the 'communities of practice' found in schools: particular versions of school schemes of work, textbooks etc. Just considering Shulman's theory of knowledge in isolation then is rather simplistic but is a good basis on which to begin. It needs to be developed further to be more useful as a tool for investigating the knowledge base of STs.

All the models mentioned above view the knowledge needed for teaching as wide ranging and hard to pin down, but they do have elements in common around subject knowledge, content knowledge and pedagogical knowledge. In this study, this will prove useful when focussing on geography STs in their training year.

## 3.7 Pedagogical Content Knowing: An integrative model for teacher preparation

Cochran *et al.* (1993:263) used Shulman's work and adapted it using a constructivist view of teaching. The emphasis being on the knowing and understanding being an active process and the simultaneous development of all aspects of learning to teach.

> PCK differentiates *expert teacher in a subject* from *subject area experts*. PCK concerns the manner in which teachers relate their subject matter knowledge (what they know about what they teach) to their pedagogical knowledge (what they know about teaching) and how subject matter knowledge is a part of the process of pedagogical reasoning.
>
> (Cochran et al., 1993:263)

Gudmundsdottir (1990) described this transformational process as a continual restructuring of subject matter knowledge for the purpose of teaching; Buchmann (1982) discussed the idea that good teachers must maintain a fluid control or *flexible understanding* of their subject knowledge (Cochran et al., 1993:264)

PCK brings together the content and the pedagogy as a framework for understanding. One way of describing PCK is that it is 'a particular amalgam of pedagogy and content [that] makes teachers different from those from [scholars] in the field…' (Gudmundsdottir, 1987:4) who might be classed as 'content specialists' (Reitano and Harte, 2016) or as Berliner (1986) distinguished them as subject matter knowers from subject matter teachers. The combination that makes up PCK is

> The most regularly taught topics in one's subject area, the most useful forms of representations of those ideas, the most powerful analogies, illustrations, examples, explanations and demonstrations.
>
> (Shulman, 1986:9)

According to Reitano and Harte (2016:281, original italics)

> Teachers do not tell students what they know about the subject matter, but they transform it in ways that are understood by learners. The transformation of *preparation, representation, selection, adaptation* and *tailoring* to student characteristics require combinations or ordering of these processes.

Shulman (1987b:16) states that these forms of transformations

> are the essence in the act of pedagogical reasoning, of teaching as thinking, and of planning – whether explicitly or implicitly – the performance of teaching.

This notion of a model for teacher preparation is challenging as there are so many elements to cover. Drawing together the research surrounding this supports my findings. Turner-Bisset (1999; 2001) begins to do this using both Shulman's 'Categories of Knowledge Base' (Shulman, 1987b) together with Dunne and Harvard's 'Dimensions of teaching'(1992) in the model shown in Table 1. This is what she used when analysing data from her own study focussing on postgraduate primary ST learning to teach.

| | | Codes |
|---|---|---|
| Content knowledge or subject matter knowledge | Substantive subject knowledge | SUB |
| | Syntactic subject knowledge | SYN |
| | Beliefs about the curriculum | BEL |
| | | |
| | Curriculum knowledge | CUR |
| More generic types of knowledge that are not directly related to the subject | General pedagogical knowledge | GPK |
| | Knowledge /models of teaching | MOD |
| | Knowledge of learners: cognitive | L-COG |
| | Knowledge of learners: empirical | L-EMP |
| | Knowledge of self | SELF |
| | Knowledge of educational contexts | CON |
| | Knowledge of educational ends | ENDS |
| | | |
| Bringing it altogether | *Pedagogical content knowledge* | *PCK* |

Table 1: Adapted from knowledge bases for teaching

Schwab's substantive and syntactic knowledge is similar to Ryle's (1949) '*knowing that and knowing how'*.

> For our teachers, their 'knowledge' of the subject matter was as much a product of their beliefs as it was an accumulation of facts and interpretation.
>
> (Wilson and Wineburg, 1988:557)

Beliefs about the subject matter can therefore be as important as substantive and syntactic knowledge. This is important in geography as there is sometimes an assumption that geography is everywhere in that it involves everyday concepts. The academic discipline of geography has struggled to clearly defined what geography is, so it is even harder for non-specialists.

Turner-Bissett's model (1999) of knowledge bases for teaching represents the knowledge as sets. This is a useful way to consider the knowledge bases for this research. It encompasses more than just PCK; PCK is the set which contains all the others sets. For STs, Turner-Bissett suggests only some of the knowledge bases are combined. This will be a valuable starting point to assess the knowledge bases of geography STs in their training year.

Meredith (1995:178) interviewed Terry, a PGCE Mathematics ST, and assessed these indicators of pedagogical reasoning in Terry's PCK which can be seen in Table 2.

1. Critical comprehensions: critical understanding of content and the relationships between ideas.
2. Critical interpretations: reviewing instructional materials in the light of one's own understanding.
3. Representation: the use of analogies, metaphors, illustrations, activities, assignments and examples to transform content for instruction.
4. Adaptation: fitting the transformation into the characteristics of the pupils in general, including prior knowledge.
5. Tailoring: adapting materials to the specific pupils on one class.

Table 2: Indicators of pedagogical reasoning in Terry's PCK

(adapted from Meredith, 1995:178)

Terry is just one example of an ST and although his specialism is mathematics, there are many similarities between him and my group of geography STs. He is a highly skilled mathematician with a good background in mathematical education (A-Level Maths and A-Level Further Maths) and then a BSc in Mathematics. In the interviews, he talks about his love of mathematical theory but when it comes to teaching mathematics, Terry will have to reconceptualise what he believes mathematics is if he is to engage with the children he teaches in order to 'realise the pedagogical implications of this view of mathematics' (Meredith, 1995).

## 3.8 What knowledge do student geography teachers need?

This idea of different ways in which knowledge is constructed is important when considering the different perceptions of knowledge needed by student geography teachers. Recent English policy documents such as the National Curriculum for Geography (Department for Education, 2013b) and more recently the introduction of the CCF (Department for Education, 2019a) suggest a realist approach to knowledge in both teaching and learning, but most teachers would consider that a constructivist approach to knowledge is more representative of how teachers teach and how children learn, particularly in geography where we want pupils to have opportunities to make sense of the content they are learning. STs need to be aware of both as knowledge can be constructed in different ways, depending on what is being learnt or taught and increasingly, the setting they teach in will guide them in different ways. This thesis cannot cover all aspects of the changes in how knowledge is delivered in schools in England, but the political stance is an important point and will be relevant when considering the data. As mentioned previously, the rapidly changing policy has had an impact.

## 3.9 Constructing geography student teacher knowledge

The current statutory guidance regarding entry to a teacher training course states you need to hold a first degree. It goes on to say that

> there is no statutory requirement for …secondary student teachers to have a degree in a specified subject, as long as they meet all of the Teachers' Standards, including those that relate to subject and curriculum knowledge.
>
> (Department for Education and National College for Teaching & Leadership, 2018:online)

Therefore, by doing a degree in any subject, it is assumed you will have or be able to acquire good subject knowledge as you have studied at a higher level. Studying at degree level assumes a skill set but does it mean that students have the capacity to acquire subject specialist knowledge? As discussed earlier, geography degrees vary greatly and if you do not need to have a geography degree with an initial knowledge base, the knowledge will be even more diverse. This raises many questions about knowledge and teaching. Is teaching solely about being a good subject specialist? From my own experience as a classroom geography teacher, I would suggest that this is not the case, and that it is a complex mixture of many different types of knowledge and skills. This is complicated further for those who do not have a geography degree; the knowledge they bring with them is even more diverse so how do they then learn what is required to teach geography?

This study focuses on geography STs and therefore geography as a subject discipline. Defining what geography is in itself is problematic, as the academic discipline is so broad and does not always match with what is perceived as school geography. This also makes it a challenging subject to teach. It is a dynamic subject, ever changing depending on what is happening in the world. In fact, Alistair Bonnett has written a book entitled 'What is Geography?' of which the outcome is 'what geographers want it to be' (2008:6). By its very nature, geography is constantly changing so what one learns in their own schooling and university degree will not necessarily be relevant in the future, or when theories change; for example, climate change and global warming. In the twenty years since I began teaching, our understanding of what this is and what this means for the planet has completely changed. There is also a dichotomy between the academic discipline of geography in higher education and that of school geography. I think this is both helpful and unhelpful. It helps to widen the scope of what geography is but as geography changes at university level, it can take decades for this to feed through to school, so the school curriculum is narrow compared to the academic discipline. This is narrowed even further when we consider the national curriculum and the political debate about what is included and what is excluded. Unwin (1992) noted that the academic discipline of geography is influenced by societal pressure as well as influences outside of the discipline. This again can take many years to be seen in the geography taught in schools. When considering this alongside what we actually mean by knowledge

then there is a complexity that needs to be investigated. This does nothing to help student geography teachers when preparing to teach geography in school. I often get asked what they can be doing for their subject knowledge over the summer prior to commencing their training programme; this is a difficult question as it is so dependent on which school they end up working in. The contextual knowledge which Shulman (1986; 1987b; 2004; 2005) and Turner-Bissett (1999; 2001) refer to is an important component of what student geography teachers need to know.

There are, however, common threads within the discipline of geography that an expert geographer can use to support their knowledge of geography, but the ST needs help to be able to do this. The current National Curriculum programme of study is a good starting point (Department for Education, 2013b) This sets out what students should learn at key stage 3. It gives broad headings of what they should know, and the skills they should be able to demonstrate.

The debate surrounding what makes good subject knowledge is also played out in academic literature. Clare Brooks (2010) has written extensively about student geography teachers, remarking that research is yet to really define the role of geography teachers' subject expertise and the influence it can have on practice. However, other studies have shown that inadequacies in the disciplinary knowledge can lead to teachers teaching their students incorrect information and processes. The studies undertaken by both Hoz, Tomer and Tamir (1990) and Tambayah (2006) found that there were inadequacies in the disciplinary knowledge of the geography teachers they were studying. This was with both experienced teachers and STs. This leads me to wonder about the students I work with, and their mentors. What knowledge do they have, where do they get it from, and how do they know it is correct? Tambayah (2006) concludes that the scope of geography as a subject was part of the reason for this and as a result, teachers can lack confidence in the knowledge of specific topics. Brooks (2006; 2010) has researched the subject expertise of geography teachers and how this is used in the classroom. This research was not focussing on content knowledge but on the relationships that geography teachers have with their subject discipline, and ultimately how this relationship influences the decisions they make as teachers and decision makers in the classroom. Whilst my research is not focussing on experienced

teachers, this is relevant as the relationships students have with geography as an academic discipline can change how they approach teaching school geography.

In order to attempt to make sense of the knowledge needed to teach geography, a framework is needed. Reitano and Harte (2016) used Shulman's (1986; 1987a; 1987b) PCK to explore the development of PCK in pre-service teachers in Australia. This was a small study but links well with what I am trying to explore with student geography teachers in the United Kingdom. Lambert (2009:1) states 'pupils cannot be taught to simply think. They must have something to think about'. A teacher is therefore expected to have a range of different knowledge that combines the specific content of the subject but also how best to put that across to the students in front of them. This requires a skill set that must be taught and learnt in a short space of time. The PGCE programme is only actually ten months in duration.

Theoretical considerations about the epistemological nature of knowledge have also been recurrent in some disciplinary subjects of the school curriculum, especially mathematics and science (Firth, 2011; Loughran et al., 2012; Brooks, 2015; Urhahne and Kremer, 2023). In these subjects, it is widely accepted that an understanding of the epistemic nature of the subject is a vital aspect of student learning. This is not the case in geography where there are fewer studies in this area and the epistemic nature of the discipline has never been an explicit aim of the curriculum. The GA has argued for a 'core knowledge curriculum' and suggested it would be helpful to distinguish between three types of knowledge as mentioned previously in this chapter: Core knowledge, content knowledge and procedural knowledge. The GA has suggested that when selecting what to teach all three are important and should be treated together.

According to Brooks (2015), we can assert a geography teacher needs knowledge in these areas as a minimum requirement:
- Their subject area – both as an academic discipline and a school subject
- Their knowledge of their students
- Their knowledge of pedagogy

The act of teaching requires the teacher to use all three areas throughout their practice. The choices teachers make are what to include and what not to include is key. The decisions teachers make can be down to any of these areas of knowledge, but it is likely it will be at the boundary of all three. Without knowledge in all these areas the teacher will be operating at a deficit and not teach very well. This can be seen in Figure 3.
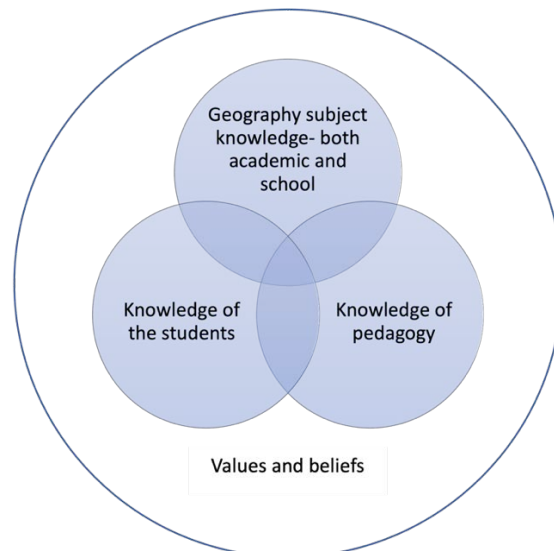


Figure 3: Diagram to show types of knowledge

From Brooks (2015)

If I combine this with Shulman's model of knowledge (1986; 1987a; 1987b), and take into account the adaptations made by Turner-Bisset (1999; 2001) and Reitano and Harte (2016), I have the beginning of a framework which will allow me to collect data and research what knowledge is needed as a student geography teacher. This is shown in figure 4.
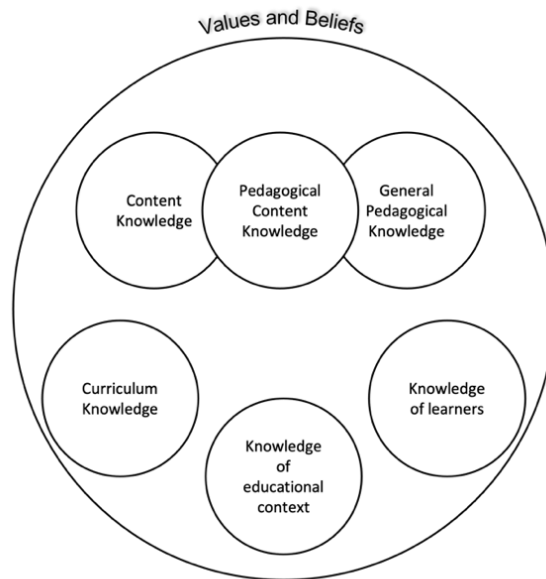
Figure 4:Model of types of knowledge

based on (Shulman, 1986; 1987b; Shulman and Shulman, 2004; Turner-Bisset, 1999; Turner-Bisset, 2001; Cochran et al., 1993; Meredith, 1995; Brooks, 2006; 2010; 2015; Banks et al., 1996; 2005; Geographical Association, 2011; Reitano and Harte, 2016)

## 3.10 Summary

Reviewing what the literature says about knowledge and student geography teachers brings into focus the need to investigate exactly what it is students need to know and who decides on this. It also supports the need to view the training year and the PGCE programme through the eyes of different students and stakeholders to see if patterns emerge that can further support their development.

This chapter has helped to gather the literature around professional knowledge and teaching and allowed me to consider how to make sense of what is happening during the PGCE. This also gives me the beginnings of a methodology to collect data and a framework for analysis. The next chapter will focus on the theoretical framework with which I will view the data.

# Chapter 4 Theoretical Framework

## 4.1 Introduction

This chapter introduces my chosen theoretical framework.  Having reviewed the policy and literature around ITE it made me consider **who** is deciding what the student geography teachers need to know and the range of voices that are telling them what they need to know.  The idea of 'authority' led to me looking at Bakhtin's notion of authoritative discourse.  In a rapidly changing political stance, this seems highly appropriate and enables me to consider who these authorities are.  The DfE is one authority but are there others, and who are they? However, Bakhtin's research is not just about authoritative discourse; it is about how the use of language and words in order to make sense of what is happening in the world.  As you learn to teach, you encounter many forms or language and therefore, I am using a Bakhtinian lens to view my research.  The student geography teachers are being subjected to a range of authoritative discourses from several different directions; I am interested in how they navigate these and in what ways they are using them to develop their own internally persuasive discourses. This chapter sets out the main terminology used by Bakhtin and how this will be used in this thesis.

## 4.2 Authoritative and internally persuasive discourse

The world of learning to teach can be seen as navigating a well-trodden but challenging road.  On the whole, students know it will be a challenge, but they do not really know in what way until they come across something blocking their way.  Bakhtin's (1981) notions of 'authoritative' and 'internally persuasive' discourses offer a way of considering how the different words used by different voices during the PGCE programme may alter and affect the lived experiences of the students.

Bakhtin says authoritative discourses and internally persuasive discourses are part of everyday occurrences and language lies between the individual and the other person. In other words

> The word in language is half someone else's.  It becomes "one's own" only when the speaker populates it with his own intention, his own accent, when he appropriates the word, adapting it to his own semantic and expressive intention.  Prior to this moment of appropriation, the word does not exist in a neutral and impersonal language (it is not after all, out of a dictionary that the speaker gets his

words!), but rather it exists in other people's mouths, in other people's contexts, serving other people's intentions….

<div align="right">(Bakhtin, 1981:293-294)</div>

This quote made me think about students I have worked with who either can, or cannot, make sense of the words they hear on placement.  The students have to find ways to navigate this tension.  Bakhtin suggests that when someone else's ideological discourse is internally persuasive for us, and acknowledged by us, different possibilities open up.  This discourse is significant in the evolution of an individual consciousness, but students are likely to be unaware of this and the impact it may have.

### 4.2.1 Authoritative discourse

When we are told what to do by someone else, we have a choice of what we do with the instruction or information; we can either accept it or reject it.  The idea of an authoritative discourse suggests that someone or something has authority to say what they are saying.  In the case of STs there are many people involved in their training and learning to be a teacher; as Bakhtin states

> It is indissolubly fused with its authority -with political power, an institution, a person-and it stands or falls together with that authority.

<div align="right">(Bakhtin, 1981:343)</div>

Within education there are many 'authorities' with slightly different discourses.  The DfE, Ofsted, the University, the placement schools and within those schools there will be further different authorities.  These authorities may be giving different authoritative discourses, and the student must work out what they think, believe and act on.  The authoritative word demands that we

> acknowledge it, that we make it our own; it binds us, quite independent of any power it might have to persuade us internally; we encounter it with its authority already fused to it

<div align="right">(Bakhtin, 1981:342).</div>

The other way to look at authoritative discourse is as the opposite.  There is a language defined by some form of social authority, which can be relatively closed.  I would argue that both are true in education.  The language used is confusing and can have different meanings in different contexts.  STs need to navigate this.

All initial teacher educator providers in England have recently had to apply for re-accreditation for September 2024 because of a market review of teacher training in England (Department for Education, 2022).  This caused much anxiety within our community and the rigid boundaries for the ITE curriculum.  There was a sense of being de-professionalised.  However, the way my institution viewed this was very much this was what we need to do, and this was how we believe it should be done.  That positive authoritative discourse certainly changed the way I viewed it, and this again made me think about my student geography teachers and how and who decides what they need to know.  The Bakhtinian lens is therefore a useful way of interpreting the utterances of the stakeholders involved in the training of these teachers and will set the methods which I will undertake and analyse my research.

Authoritative discourse comes into play here as an ST must decide who has the authority.  When they start teaching, who is the authority, who has the right to decide what and how they teach? Does this change at different points in the course?  On the other hand, there are the internally persuasive utterances which might allow an ST to work with the authoritative discourse and navigate these opposing worlds separately.

### 4.2.2 Internally persuasive discourse

Over time, as someone is exposed to authoritative discourses their own discourse is

> gradually and slowly wrought out of others' words that have been acknowledged and assimilated, and the boundaries between the two are at first scarcely perceptible.
>
> (Bakhtin, 1981:345)

That assimilation of the authoritative discourse in into one's own belief is what Bakhtin (1981) called the 'internally persuasive discourse'.   He sees it as dialogic and that the internally persuasive discourse is

> half-ours and half-someone else's…. It enters into an intense interaction, a *struggle* with the other internally persuasive discourses…The semantic structure of an internally persuasive discourse is not *finite*, it is *open*; in each of the new contexts that dialogize it, this discourse is able to reveal ever newer *ways to mean*.
>
> (Bakhtin, 1981:345-346)

According to Matusov and von Dyke (2010) those words of Bakhtin's have been interpreted by educators as the words we say were once someone else's and through

appropriation have become our own. They see this as a negative interpretation. They see their interpretation as different and that in an 'internally persuasive discourse **we are aware** of someone else's voices shaping our words' (Matusov and von Dyke, 2010:178 emphasis added). Therefore, internally persuasive discourse is in the present and we are aware it is being defined by at least two voices; our own and someone else's. I do not think students are aware of this assimilation of multiple voices into their own as that would suggest they are making conscious decisions about what they accept and reject. However, I think this is something that supports learning to be a teaching and knowing what to accept and reject.

Bakhtin (1984) referred to 'double-voicedness' as the point at which internal dialogue can be either with imaginary others or in direct contact with real others. Matusov and von Dyke (2010) suggest that teaching in a dialogic internally persuasive discourse approach means that

> the student's learning emerges through their guided engagement in historically and topically valuable internally persuasive discourses where the students become familiar with historically, culturally, and socially important voices, and learn how to address these voices, and to develop responsible replies to them.
>
> (Matusov and von Dyke, 2010:179)

Wertsch (2002) takes a different view and distinguishes between a student's mastery of discourse from a student's appropriation of discourses. He uses Estonian and Russian students learning about Russian history and that whilst the Estonian students could master the official Soviet discourse without believing any of it, the Russian students not only mastered the official Soviet history but also believed in it. Both of these scenarios are true in STs. There may be some authoritative discourses that you believe in and others that you can master without truly believing in it. Being able to navigate, and be conscious of it, is part of being successful in teaching.

Internally persuasive discourse can therefore be seen as either internal to the individual or as authorship. If internally persuasive discourse is only individual it relies on the truth being both personally and ontologically endorsed as 'a more truthful idea and is better than the alternatives provided by others' (Matusov and von Dyke, 2010:177). This individual internally persuasive discourse can also lead to the accepting of extreme

nationalism, prejudices, racism etc which, particularly in an education setting, must be challenged.

Authorship allows an ST to become an active and recognised member of a 'community of practice' (Wenger, 1999).  Wenger suggests that it can be problematic if the teacher (or in a student's case - their mentor) helps the students socialise into a targeted discourse practice to become accepted by a community of practice as an active insider whose authorship is recognised by the community.  With an ST this is problematic as they do not know what that community of practice is at the start of the placement and may never be able to join it, but it does mean that if we are aware of it, we can help them to become part of that community of practice, or others.  If we only suggest that internally persuasive discourse  is about authorship, are we denying STs the opportunity to have their own ideas and their own embodied voices?

For me, the internally persuasive discourse must take account of both of these ideas.  It is how the students take their current truth and begin to appropriate the many voices they hear during their PGCE.  Internally persuasive discourses can also be developed critically by the STs as they accept some elements of the authoritative discourse and critically reject others.  These discourses may be in tension with each other and being able to navigate through this is part of the challenge.

## 4.3 Utterances
Bakhtin (1986) uses the term 'utterances' to describe the mode of speech that one uses at any given moment.  Whether that utterance has credibility depends on who might say it, when and how it is viewed by others, which in turn become the internal utterances we have.  When I first read this, it really struck me how this is true of education in particular. We have numerous terms that are only meaningful to those within the education community, and we have acronyms that can mean different things depending on which sector and place of education you currently sit.  This can make it challenging for students to navigate the meaning and nuances of what they are being told by different people at different times.

Bakhtin goes on to say that dictionary meanings of words in any language ensure that everyone speaking that language has a common understanding, but how one uses these words is always individual and down to context. He explains that

> one can say that any word exists for the speaker in three aspects; as a neutral word of a language, belonging to nobody; as an *other's* word, which belongs to another person and is filled with echoes of the other's utterance; and finally, as *my word*, for since I am dealing with it in a particular situation, with a particular speech plan, it is already imbued with my expression.

<div align="right">(Bakhtin, 1986:88)</div>

The meaning of the word or 'utterance' therefore comes from the point of contact with the word and reality. The real-life situation brings an element of evaluation from the position of the person using the word or 'utterance'. In this way the authority of the 'utterance' can change. For student geography teachers, making sense of who is saying what and when is important, and how they accept, dismiss or react to all of the 'utterances' will have an impact on their success.

Within every social group there are always authoritative 'utterances' that set the tone. They become important situations where certain language is used and must be followed. This is particularly seen in education where there is an overall set of authoritative utterances set by the DfE which is then taken and interpreted by individual schools, headteachers and ultimately by individual teachers. How each individual internalises those utterances is dependent so many factors but context, values etc. play an important part. For an ST navigating these utterances can be the greatest challenge they face. According to Bakhtin (1986) how words and speech adapt over time by the continuous interaction with others' individual utterances is a form of 'assimilation'. 'Otherness' and 'our-own-ness' in terms of utterances support our understanding of situations as we continually evaluate, re-evaluate and re-work our own utterances. This is what we are asking of an ST throughout their time on the PGCE programme and will continue throughout their teaching careers. Teachers are highly reflective, and STs learn this as they begin to teach. Making the utterances they hear their own can make them successful, or make things more challenging, depending on their interpretations in any given context. This is what makes the training year so challenging. Each ST is placed in two contrasting placement schools. For some STs they find that this is not a place where

they feel comfortable or would choose to work; this can cause stress as they make sense of the different discourses and the internal dialogue they have.

Bakhtin goes on to discuss the nature of 'utterances' in terms of dialogic overtones, intonations etc. Whilst this is an important aspect of this work, and it is relevant when considering student geography teachers, I am not going to focus on this aspect. I want to reflect on the authoritative and internally persuasive discourses formed through these 'utterances'. However, Bakhtin's dialogism is worth mentioning here. He saw everything as having meaning and being part of a bigger picture. All the interactions of words, language, contexts etc have the potential to change others and ultimately this means that there is no monologue, and every word affects each other.

## 4.4 Self authoring

Bakhtin's self-authoring links to identify formation in student geography teachers. Bakhtin's biographer, Holquist (1990:47) explains this idea as:

> So long as I am in existence, I am in a particular place, and must respond to all these stimuli either by ignoring them or in a response that takes the form of making sense, of producing – for it a form of work - *meaning* out of such utterances.

This is what we are asking of our students; they take the utterances they hear and try to make sense of them, internalising them. This is not without problems, but Bakhtin's concepts allow us to consider internal dialogue that might be happening and how this might change the professional and sometime personal identities of the students.

The reflective nature of teaching can be challenging for STs as they being to teach and reflect on their own and others' behaviour. If we can see ourselves from another perspective, we can then assume a position of what Bakhtin calls 'outsideness' or 'transgredience' (Bakhtin, 1981; 1986). However, this can make us uncomfortable and there is a tendency to compare ourselves with others. This is often a problem for students on a PGCE. They want to compare themselves to others and this is not always possible. However, the guidance from the DfE would suggest that students do learn and develop in a similar way, so the conflict is there for them from the beginning. Being able to see how others view you is difficult and can take time. Reflective practice for STs needs to be taught explicitly and developed.

In order to make ourselves visible to others we may try to 'cast ourselves in terms of others' then we do that by seeing ourselves from the outside. (Holland et al., 2001). This is something students find unnatural when they first start teaching as they can only see things from their perspective.

## 4.5 Summary

According to Bakhtin (1981:342)

> Both the authority of discourse and its internal persuasiveness may be united in a single word – one that is *simultaneously* authoritative and internally persuasive – despite the profound difference between these two categories of alien discourse.

He went on to say that finding this unity is rare but what is more common is that as someone begins to hear authoritative discourses, they meet the internally persuasive discourses. The 'interrelationship of these categories of ideological discourse are what usually determines the history of an individual ideological consciousness' (1981:342). For STs this means that they may have an inner dialogue to make sense of the various discourses at play, or this may evolve naturally over time.

This theoretical framework will support the analysis of my data as I try to make sense of the lived experiences of the students. I am interested in the relationship between what the various authoritative discourses are telling them they need to know and how their internally persuasive discourses about this have developed over the PGCE programme.

# Chapter 5 Research Design and Methodology

## 5.1. Introduction

This chapter sets out the research design and methodology used to research the acquisition and development of professional knowledge by student geography teachers during their training year. I employed a qualitative methodology through a social constructivist paradigm: this study will be an in-depth investigation presented as a case series. Four students from a large university provider of ITE in the north-west of England who were completing a PGCE course were invited to participate to allow for robust data collection and tracking. The case series also involved those supporting their professional preparation during the PGCE year: their university personal tutor and their school subject mentor. The triads involved in the case series were an important part of this qualitative methodology.

The university personal tutors were lecturers in geography education and were based at the university. They supported the ST throughout the programme. For this study, three tutors were involved; one employed full time by the university and the other two on a part time basis. They visited the ST in school once on Placement A and once on Placement B as well as having three personal tutor sessions during the programme, prior to Placement A, prior to placement B and at the end of the programme. The SMs were geography teachers in the placement schools. They supported the student geography teachers on a daily basis. They observed the student teach and gave formal feedback once a week in addition to having a weekly mentor meeting where they set targets.

### 5.1.1 Research questions generated from the literature

The review of the literature in Chapter 3 suggested there was tension between the policy in ITE, the lived experiences of the student geography teachers and those supporting them during their PGCE (the SMs and university tutors). Every geography ST found themselves in a different context and had different pressures imposed on them during the PGCE which added to the tension. Having a greater understanding of what knowledge and how student geography teachers get this knowledge supported my work with student geography teachers in a rapidly changing political landscape. These research questions were investigated in this thesis:

1. What professional knowledge do student geography teachers need to know?

2. Who decides what a student geography teacher needs to know?

3. How do student geography teachers acquire and develop professional knowledge and skills?

### 5.1.2 Becoming a qualitative researcher

As I considered the methodology used in this study, I reflected on how challenging it had been.  Part of this was the overwhelming nature of a large study and when trying to make sense of all of the data, the task seemed so daunting (Patton, 2015).  As I went through the process, I realised how I had to change my mindset around data.  As a geographer, I was used to using quantitative data and using statistical methods to draw graphs and answer hypotheses.  However, whilst I could have gone down that route the richness of the data I collected might be lost by doing so.  As I attempted to turn qualitative data into quantitative data, a conversation with a colleague about her own thesis and how she had a similar challenge made me realise that feeling uncomfortable was part of the process and that perhaps that this discomfort meant I could view the data in a more open way. Boler and Zembylas (2003) calls this a pedagogy of discomfort and believes that it results in a deeper type of learning.  In her thesis Bermingham (2014:97) refers to it as 'coming to terms with qualitative research' and goes on to say

> As a teacher education tutor working in an outcomes-focused, evidenced based profession that values 'hard facts', and a background in a discipline (geography) that trained me as an undergraduate to value statistics, the shift towards an interpretative, qualitative methodology provided periods of anxiety as I rejected prior ways of working and understanding the world

I found this quote helpful in realising I was not alone in struggling with the analysis of this wealth of data.

### 5.1.3 Research design and structure

In order to answer the research questions, I used a qualitative methodology within a constructivist epistemological framework.  This chapter sets out the research design and the structure. This included the epistemological framework, the use of a case series and how I collected the data.  I also established what I meant by an individual case and the ethical considerations around this. Finally, I set out the methods of data analysis.

## 5.2 Epistemological Framework

According to Merriam 'reality is not an objective entity; rather there are multiple interpretations of reality' (1998:22) as qualitative researchers are '*interested in understanding the meaning people have constructed*' (Merriam, 1998:6, original italics). Denscombe (2010:132) concurs that a qualitative methodology is primarily concerned with 'the way in which people shape the world'. It highlights the ways in which studying human activity can create human agency. My study was around STs, their mentors and their university tutors. It was important to study what was happening during their PGCE year to be able to better support them. This messiness of the social world made research challenging but a qualitative study uses data in the form of words, text and images to gain a better, and deeper, understanding of the phenomena being studied.

Qualitative research has rich descriptions that may or may not lead to explanations and most qualitative researchers will acknowledge that it is not possible to be completely objective about their own position in the research. In my case, I was the course leader and therefore my positionality was important. However, when trying to create meaning, qualitative researchers will try to see it from the point of view of those being researched. The different parts of the triad would have different views, and this was something that a qualitative study would allow me to explore. I wanted to know more about the knowledge that student geography teachers had, and how this developed over the course of the training year. I also wanted to know how the mentors involved in their training, both in school and university, understood what was happening with a view to better understanding how to support the students as they went through their PGCE. Effectively, I wanted to explore the lived realities of the students.

It was these lived realities that I believed required further study to really understand what was happening during the PGCE. Cohen et al. (2018:23) suggest that in a constructivist enquiry 'people actively and agentically seek out, select and construct their own views, worlds and learning'. They go on to say that the processes are established within the contexts and interactions with other people.

Constructivism embraces the unique experience of individuals and suggests that we all have our own way of making sense of the world that is as valid and worthy of respect as

any other.  This was why I used a constructivist epistemology as I wanted to understand more about the individual and their experiences.

A constructivist perspective sees knowledge as being created around the social interaction a person has rather than there being any genetic influence (Jupp, 2006:38). Moreover, it could be said that we make sense of reality in different ways depending on the influences around us (Crotty, 1998:42).  This means that we will always have an opinion that one interpretation is more meaningful than another so meaning cannot be described as objective or subjective.  The objectivity and subjectivity of reality needed to be dealt with together in order to decide on the ultimate meaning of the data. This was particularly pertinent when focussing on the knowledge base of student geography teachers.  As discussed in Chapter 3, the knowledge needed for teaching was contested and the STs, their mentors, university tutors and the DfE had different views on what was important.  As Bakhtin (1981; 1984; 1986) noted these 'utterances' made by others were only half one's own and there was a suggestion that these utterances reflected the socially developed beliefs.  The dialogical nature of beliefs and knowledge meant each individual might have a different view of the reality.  By using a triad of actors in the data, I hoped to be able to see the situation from different perspectives.  One of the challenges the student geography teachers could face was the seemingly different expectations from different parties involved in their training.

In a similar way Schwandt (2007) breaks constructivism into two strands.  The first, radical or psychological constructivism, concentrates more on the individual being the knower and therefore knowledge cannot be inaccurate as it is dependent on the experiences of the individual.  The second strand is known as social constructivism and focuses more on social process and interaction. This was where I saw my research lying. If one was immersed into a culture or a social situation then the knowledge created was part of the situation and was therefore subjective.  Social constructivism was first used by Peter Berger and Thomas Luckmann in their book *The Social Construction of Reality* (Berger and Luckmann, 1967).  According to Gergen (1985:267) 'the terms by which the world is understood are social artefacts products of historically situated interchanges among people'.  This interested me in education as we all have past experiences of our

own education, and this might influence how a student approaches their professional knowledge.

My research was investigating the professional knowledge needed by student geography teachers. Each of the students would have a different lived reality based on their own past experiences, the context they lived in, the schools they were placed in and the relationships they built with people and pupils around them. The researcher was fundamentally part of the research they were doing and therefore they could not be detached from the subject they are studying. For me acknowledging this was really important.

## 5.3 Data Quality

When considering the quality of the research there can be an assumption that quantitative research methods do not need the philosophical underpinning laid out in the same way as qualitative research (King et al., 2019). The epistemological integrity is laid out in the 'status of 'facts' supported by measurement and observations' (King et al., 2019:15) and remain implicit within the methods of data collection used. Therefore, when engaging in qualitative research it is important

> to be concerned about the process we have engaged in; we need to lay that process out for the scrutiny of the observer; we need to defend that process as a form of human inquiry that should be taken seriously.
>
> (Crotty, 1998:13)

Within qualitative research, there are different philosophical stances, and it is important to set out our epistemological and ontological position so that we make the connection between the nature of the research, our methodology, data collection and data analysis. This chapter set out to do this and ensured the trustworthiness of the data was considered. The four dimensions of trustworthiness suggested by Lincoln and Guba (1985); credibility, transferability, dependability and confirmability were used to assess the validity of the data. I considered each one as I conducted my research.

The credibility of this research, whilst it was small scale came from the triangulation of the data from the case series. As a qualitative study, the aim was to generate patterns and construct themes using the data to better understand the knowledge needed by geography STs as they become geography teachers. The data collected through

interviews in particular enabled triangulation of data both through the individual case analysis and the cross-case analysis (Stahl and King, 2020). In my research the truth was in the lived experiences of the STs, their SMs and their UTs.

Whilst this research was based on a small number of cases, the rich descriptions in the data allowed for transferability and it made it applicable in other contexts.  This study focussed on geography STs training to teach on a university led programme.  The data and conclusions drawn can be used in other contexts, different subjects and different age phases.

Dependability is the third perspective suggested by Lincoln and Guba (1985).  This posed an issue for my research as the sample size was small.  However, the aim of the research was not to be able to replicate it but to draw conclusions about the complexity of learning to teach geography that would support the development of a knowledge base for geography STs.

Finally, confirmability or neutrality. Qualitative research cannot claim to be entirely neutral, particularly when using interviews as part of the research.  Mitigating against my own influence as far as possible was an important part of my methodological approach but as I taught the STs and worked with the SMs and the UTs, there was already a prior relationship that cannot be denied. (Stahl and King, 2020). The next section on reflectivity goes into this in more detail.

## 5.4 Methodology of this study
### 5.4.1 Case study methodology
Case study methodology is often seen as the study of an example or of an individual (Nisbet and Watt, 1984; Creswell, 2014).  Yin (2014) argues that the boundary line between the phenomenon being studied and its context is blurred, as a case study is a case in a real-world context and it is therefore important to set the case within its context.  A case can be both tightly bound and other times less so.   A case study methodology is therefore a descriptive study design.

This approach to research allows the emphasis to be on the depth of the study. There is some debate about whether the researcher can actually give an absolute account of the case in question as the boundaries of what constitutes depth can also be difficult to define. A case study approach does allow for more of a focus on the social construction of the case, the site of the social/educational encounter and the nature of the case as realised in social action (Chadderton and Torrance, 2011).

This meant that the STs could be studied in terms of their own context and how they responded to the context they were working within. The biographies of all of the actors within the case study were important. Their own context was relevant as each student would have had prior experience of education from their own schooling and any experience since, perhaps through working in a school. In addition to this, their own personality and how they cope with new situations and resilience might also affect how they experienced their PGCE year. It could also allow us to look at different perspectives within the case study. Within my research, I wanted to understand the different perspectives that the STs, SMs and UTs had on how knowledge was constructed, and the type of knowledge needed during training. Triangulating the views of all actors in the case allowed me to look for similarities and differences and try to unpick what was happening.

There are three approaches to case study methodology that aim to ensure that the phenomena being studied is well explored but they do this in different ways (Stake, 1995; Merriam, 1998; Yin, 2014). Coming from a social constructivist perspective, I found my views aligned to those of Stake (1995) and Merriam (1998). They believe that knowledge is 'constructed rather than discovered' within qualitative research. Stake also believes that 'there are multiple perspectives or views of the case that need to be represented, but there is no way to establish, beyond contention, the best view' (Stake, 1995:108). This made me consider the STs and their different experiences whilst on placement. Different situations would be experienced differently by different STs, and all views were relevant. What I wanted to draw together in this research was the different perspectives and how we could support the STs through their PGCE. Merriam's views are closely aligned to those of Stake. She believes that the key philosophical

assumption upon which all types of qualitative research are based is the view that reality is constructed by individuals interacting with their social worlds  (Merriam, 1998).

In my own research, I gathered information about how STs experienced their PGCE year but also how it was viewed by other stakeholders in terms of knowledge construction, so this perspective was aligned with my own views.  Merriam notes that

> The researcher thus brings a construction of reality to the research situation, which interacts with other people's constructions or interpretations of the phenomenon being studied.  The final product of this type of study is yet another interpretation by the researcher of others' views filtered through his or her own.
>
> (Merriam, 1998:22).

Both Merriam and Stake's research is based on a constructivist paradigm where 'truth is relative and that it is dependent on one's perspective' (Baxter and Jack, 2008:545). According to Crabtree and Miller (1999:10) this paradigm 'recognises the importance of the subjective human creation of meaning, but it does not reject outright some notion of objectivity'. This approach enables the researcher to hear the participants' views on reality and therefore better understand their actions which is the aim of this research (Baxter and Jack, 2008).

Contrary to these views is that of Yin (2014).  He takes a positivist stance when discussing case study methodology, aiming to ensure that case studies are seen as a 'valid' research method.   He puts emphasis on the validity of the data collected, its objectivity and its generalisability.   Whilst I could appreciate his viewpoint, my reason for choosing a case study method was to allow the participants to tell their own stories about the subject in question.  I had a small sample size and so I was more concerned with the triangulation of the data I collected from different sources.  This triangulation allowed for improving the validity and reliability of the research.  Triangulation can mean different things in different types of research.  For my study, I was using it as a way of drawing together different views from different sources.    However, Richardson and St Pierre (2005) suggest *'crystallisation'* as a more appropriate metaphor.  This offers a limitless variety of shapes. It can allow for different multidimensionalities and angles of approach that can then allow for a multifaceted understanding of the topic (Varpio et al., 2017).

### 5.4.2 What is a case?

When defining what a case is, there were many different ways to do this. Part of how a case is defined is what object is being studied. In my research, I found my views aligned to those of Merriam. She suggests that a case is 'a thing, a single entity, a unit around which there are boundaries' (Merriam, 1998:27). Her view is strongly influenced by what Miles and Huberman refer to as 'the *case* as a phenomenon of some sort occurring in a bounded context' (1994:25, original italics). They refer to the boundary as the setting, concepts and sampling, and the focus as the heart of the study. In my own study, I saw the ST, SM and UT as the heart of each case and the boundary bought the school context, their background and past experiences, including geographical experiences. This can be seen in Figure 5. The dotted line separates the students from the SM and university tutor, but they are still at the centre of the case.

School context, background, past experiences, geographical experiences

Subject mentor

Student Teacher

University tutor
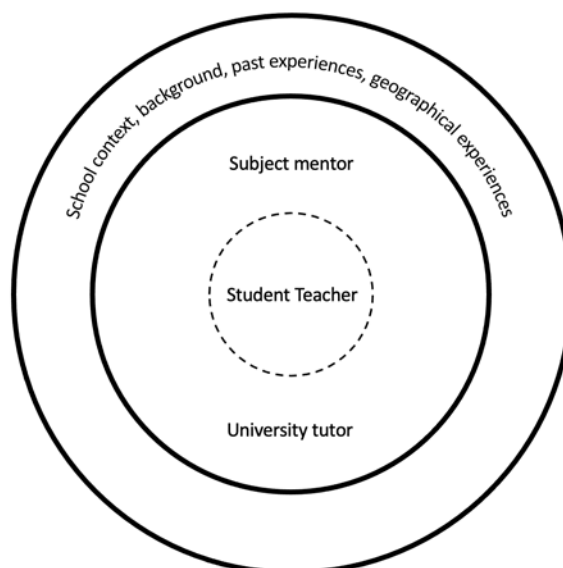
Figure 5: Diagram of case used in the study

based on Miles and Huberman (1994)

This definition allowed for much flexibility in the use of case study methodology and fits with how Merriam (1998) defines a case study methodology. Both Merriam and Yin have slightly different definitions but they both agree that through multiple sources of evidence and triangulation (or crystallisation) a case study methodology can produce data that allows for different views to come through. In my study, I used multiple case studies to allow for all this to be considered.

### 5.4.3 Case series methodology

Using more than one case study would enable a more comparative study. Yin (2014) identifies two types of multiple case design. He suggests that there are many advantages of using multiple cases over a single one. In his opinion, the data is seen as more robust as there are more cases, but they can be time consuming as more data is collected from a range of cases.

The first type of multiple case studies is replication. Each case is chosen because it can either predict similar results or it predicts contrasting results and for each case the research is replicated. This allows for comparisons to be made between the cases. The second is holistic or embedded multiple case studies. This is where there are multiple cases that are linked and some of the data collected might be shared across the cases (Yin, 2014). A multi-case study can be used to 'examine how the program or phenomenon performs in different environments' (Stake, 1995:23). At the outset of a multi-case design, the phenomenon must be identified and the cases are the way of exploring it.

In my own research, I used an embedded multiple-case study as the students, their SMs and their university tutors were my cases. The data gathered from university tutors was used in more than one case as they might have been a tutor to more than one student. For my research, I called this a case series as I wanted to view it as a series of cases and to allow me to analyse the data both at case and a cross-case level. I scrutinised the series of individuals who experienced the same training year but experienced that in different ways (Mathes and Pieper, 2017) through a Bakhtinian lens. In that way, I looked for both similarities and differences but also put the students' own context into the mix. With this in mind, I added the case series to Figure 6 to try to illustrate how I used my 'cases'.
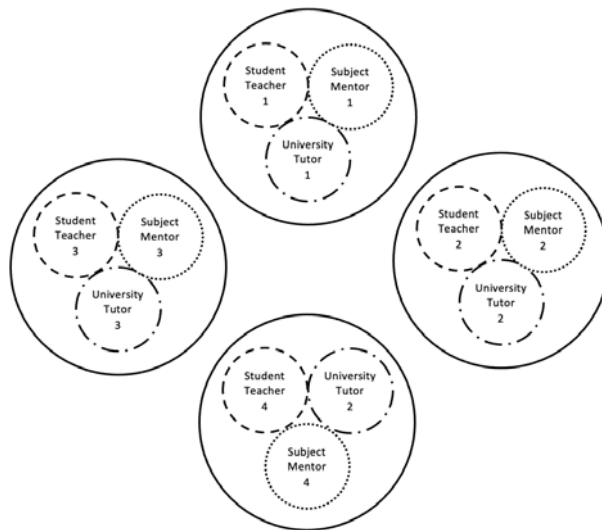
Figure 6: Case series with actors at the centre of the cases

Therefore, each case was the triad of the ST, the SM and the UT.  This enabled me to take each case in turn and analyse the individual case and subsequently use the thematic analysis resulting from this to answer the research questions in the cross-case analysis in Chapter 7.

### 5.4.4 Advantages and Disadvantages of case study methodology

There is a lot of research into the advantages and disadvantages of using a case study methodology (Nisbet and Watt, 1984; Hitchcock and Hughes, 1995; Stronach and MacLure, 1997; Yin, 2014; Shaughnessy et al., 2015).  Many of the strengths discussed centre around the ability to provide a richness of description about a particular situation which might be dynamic.  The richness of the data allows for the reality of the situation to be explored on a scale that would not be possible, or viable in a large-scale study.  However, the weaknesses can be that the data is too specific to an individual and it can be difficult to draw out generalisations.

When studying a small group of students, the rich descriptions they brought of their own contexts were really important and the ability to study this in depth was crucial.  Being able to ask, 'What is going on here?' (Chadderton and Torrance, 2011:53) was particularly beneficial when trying to unpick exactly what happened to a student as they trained to be a teacher.

Hitchcock and Hughes (1995:322) suggest that the case study approach is particularly valuable when the researcher has little control over the events that occur.  This was

particularly true of the PGCE year where I could not control what happened to each of the students, whether in their professional or personal lives.

Case studies strive to build the lived experiences of the participants in a given situation. Whilst they have a narrow focus, the rich descriptions that come out of the data can be used to understand the phenomena taking place, but it is also important to ensure that the data collected is rigorous and systematic. Nisbet and Watt (1984:91) suggest that researchers avoid a journalistic approach as this can be anecdotal. This was something to consider as I knew the participants well and I needed to stick to the data collected.

One of the issues to be resolved was the boundaries that the research stayed within. The rich descriptions that could arise from data collection could make it difficult to know what to include and what to exclude. This needed to be considered when first analysing the data collected.

## 5.5 Data Collection

A range of data was collected during the study. The main primary data collection took the form of interviews with all participants. A mentoring conversation was also recorded during the year. In addition to this, there was a range of artefacts collected to support the analysis of each case.

### 5.5.1 Interviews

Data from STs, SMs and UTs was collected through semi-structured interviews. Interviews have been used extensively in education research to allow the interviewer and interviewee to produce data together. Interviews allow the interviewer to actively follow up on the subjects' answers and to clarify and extend the interview statements. The interview is a professional interaction and therefore goes beyond everyday conversation and allows for substantial new knowledge to be created (Kvale, 2007). It can also be defined as one person trying to stimulate information, opinion or belief from another person (Maccoby and Maccoby, 1954; Brinkmann, 2018). Richard Rorty (1980:171) believes that the conversation has a primary role.

> If we see knowledge as matter of conversation and social practice, rather than as an attempt to mirror nature the conception of knowledge as re-presenting an objective world is discarded. We may then regard the '…*conversation* as the

ultimate context within which knowledge is understood'.

Interviews can take many forms and different people have differing views on the procedures for conducting an interview. Parker (2005) suggests that you cannot have a totally structured interview as the interviewee is always potentially going to talk about things that interviews had not predicted. These additional comments are often very important to the interviewer as they allow the interviewers to understand more about the answers being given.  At the other end of the spectrum, you cannot truly have a totally unstructured interview as the interviewer needs to frame even one question to elicit relevant information.   In between these two extremes of types of interviews sits the semi-structured interview which allows more scope for developing the questions, and answers as the interview proceeds.  They can make

> better use of the knowledge-producing potentials of dialogues by allowing much more leeway for following up on whatever angles are deemed important by the interviewee, and the interviewer has a greater chance of becoming visible as a knowledge-producing participant in the process itself, rather than hiding behind a preset interview guide.
>
> (Brinkmann, 2018: 579)

A semi-structured interview can be defined as

> an interview with the purpose of obtaining descriptions of the life world of the interviewee in order to interpret the meaning of the described phenomena
>
> (Brinkmann and Kvale, 2005:6)

The interviewer also has more say on which parts of the interview to follow depending on the research questions.

Taking a constructivist approach to interviews sees the interview as a socially situated encounter in which both the interviewer and interviewee play an active role (Roulston, 2011b).   Holstein and Gubrium (1995)  have taken this notion and contributed to the conceptualisation of the 'active interview'. The interviewer and interviewee co-construct data in unstructured and semi-structured interviews, generating situated accounts and possible ways of talking about research topics by the interviewer and interviewee.

In semi-structured interviews there is an element of this is in trying to construct the interview around the interviewee and their knowledge whilst also being aware of the

need to have parity between the questions so that comparisons can be made (Roulston, 2010). In this way the interviewer defines the interview in different ways. The interviewer starts the interview and determines the topic and questions to be asked. The interviewer has a vested interested in both the interview and the outcome of the interview and so the interview cannot therefore be 'dominance-free' (Brinkmann, 2018:588). Interviewing requires a certain set of skills that have to be developed in order to ensure that the conversation has purpose. A skilled interviewer can explore the 'lived world' of the participant to understand how they see their own experiences (Kvale, 2007:10-11).

The power relationship between interviewer and interviewee is consequently an asymmetrical one, and one that I was very aware of in my research. I interviewed STs, SMs and UTs. The relationship I had with each of them was significant when it came to interviewing. I considered how I could make the interviewees comfortable. I made sure they chose the location of the interview. For some, they chose to do this in their school settings, others preferred university and with my colleagues I also completed an interview in their own home. I made it clear that I was not testing them in any way and wanted to find out their thoughts on what I was researching. The timing of the interviews was also important. Originally, I wanted to interview the students in each placement, but it became apparent that this was not appropriate as the pressure of the course was too great. I went with what they could do and worked around their needs. The timeline of my interview data collection can be seen in Appendix G. The ethical considerations for this research are discussed further in Section 5.6 - Ethical considerations.

The role of the interview is to probe; therefore, the interviewer cannot be totally detached and must give something of themselves. According to Kvale (2007:10) 'the craft consists in calibrating social distance without making the subject feel like an insect under the microscope'. You want the interviewer to make the subjects feel comfortable enough to answer the questions freely.

### 5.5.2 Design of interview employed in this study

Based on the literature, I decided that semi-structured interviews were most appropriate for my study. I wanted the focus to be on knowledge and the different types of knowledge coming out of the literature. A semi-structured interview allows for the points made by the interviewee to be discussed in more depth as appropriate. This also means that as the interviewer I can attempt to interpret the meaning from the interviewees' lived worlds. This means that there is structure, but it is not confined to one line of thinking. According to Brinkmann (2018) semi-structured interviews are commonly used in social science research and can enable the interviewer and the interviewee to develop the potential of the dialogue. The interviewer has more scope to follow up on a line of thought that they would be not if they were sticking to a rigid set of questions. I also wanted to make the interviewee feel comfortable in the interview and not feel like they were being tested on their knowledge of professional knowledge.

Firstly, I wanted to find out what their experiences were in teaching and education more generally. This was important as it established their own context. It was also important to know what the interviewees had done before, their degree and work experience as this set the boundary for the case.

I then wanted to know what they thought about the professional knowledge STs needed to know so this was an open question. I gave the interviewees a copy of our lecture planner, which can be seen in Appendix H to remind them what university sessions had entailed in September. For the students, this allowed me to consider the sessions they found most useful and for the SMs and university tutors, it reminded them of what we were doing in university at different times of the year. This gave me an idea of the sessions in which they felt they learned most and the type of knowledge that they were focussing on in those early sessions.

Based on the literature I engaged with in Chapter 3, I focussed the interviews on nine areas of knowledge that emerged, and that I felt would enable me to examine each case and subsequently across the cases (Schwab, 1978; Shulman, 1986; 1987a; 1987b; N. Bennett and Turner-Bisset, 2002; Shulman and Shulman, 2004; Brooks, 2006; Reitano

and Harte, 2016). These nine areas gave a structure to the discussion and support to the interviews in answering some of the more open-ended questions around the research. I also anticipated that this would support a thematic analysis of the data.

I used a diamond nine card sorting activity which is common in the geography classroom. The cards used can be seen in Figure 7. I also provided the participants with blank cards so they could add any other types of knowledge they thought were important. This was intended to give a focus to the interview so that there was a starting point and to make the interviewee feel comfortable.

| Practising teaching | Geography subject knowledge | Observing teachers |
|---|---|---|
| Talking to other people about teaching geography | Knowing what to teach in geography | General pedagogical knowledge |
| Knowing the geography curriculum | Knowing how to teach geography | Reading about how to teach geography |

Figure 7: Sorting cards used for interviews

The participants were then asked to rank these cards in terms of 'importance at the start of the course, and then change it at points they thought were important. I guided them into thinking about the beginning and end of their placements, the time they spent in university and how as we moved from one phase of the course into the next. I asked them to reflect on what were the pivotal moments and how their view of how the different types of knowledge changed over time. Finally, I asked them who supported them with that knowledge development.

The interviews for the students, SMs and university tutors had slight variances in the questions, but the structure remained the same. The topic guides can be seen in Appendices I, J and K. With the SMs and UTs the emphasis was on them considering the professional knowledge the students needed whereas with the STs it was a more reflective activity.

### 5.5.3 Artefacts from the field

In addition to interviews, artefacts from the field were used to support the data collected during the interview. Artefacts are often used in education research. I collected a wealth of material during the year. There were three main strands to the artefact data I collected. This can be seen in Figure 8.

| Document Artefacts | |
|---|---|
| **University Programme** | **Department for Education Documents** |
| • Assessments – 6 reviews<br>• Inclusive Learning Assignment<br>• Curriculum Development Assignment<br>  Knowledge audit | • Teachers' Standards<br>• Carter Report Review of Initial Teacher Training<br>• A framework for core content for initial teacher training |

Figure 8: Artefact data collected

All of these documents were important as they set the scene for current initial teacher training in England. The Teachers' Standards (Department for Education, 2011a), the Carter Report (2015) and the core framework work for ITT (Munday, 2016) are all documents that we use as part of our PGCE to set our courses so they are in line with what the Department for Education states they must do, including statutory guidance.

The university documents provided evidence of what the students achieved during their training and were a record of their progress on the PGCE. I used these to supplement the data collected for interviews and to add context as necessary in the individual cases. I did not end up using as much of this data as I anticipated as the interview data was so rich.

### 5.6 Data collection procedures

Before commencing data collection, I was granted ethical approval for my study. This is discussed in further detail in the next section -5.6 Ethical considerations.

To select my cases, I asked the cohort of PGCE students for volunteers to take part in my research. There were 51 students in the cohort; however, I stipulated that none of my personal tutees could be in the study. This limited the possible participants to 24. Initially, several students were interested but I also needed to get their mentors to agree to take part in the study, so my final group consisted of six students. This was

subsequently reduced to five when one of the students decided to withdraw from the programme.  I later reduced this to four cases to ensure depth of analysis.  Four cases still gave a wealth of data to work with.  The four cases included four STs, four SMs and three UTs and this enabled me to collect the fine-grained detail I needed.  According to Bryman (2012) there is no consensus on how big the sample size should.  Where interviews are used, then sample size is likely to be smaller as the resulting thick descriptions are developed (Geertz, 1973).   These thick descriptions support what Yin (2014) calls analytical generalisations. He suggests that case study research can allow the researcher to compare, or generalise, the case study data.  I wanted to keep to a small sample, with STs who felt they had the capacity to take this on in addition to the other demands of the programme and was a realistic use of my resources as I collected the data myself.  One empirical study using a small sample size is Cohen's (2009) study of pre-school children's heteroglossic play using a Bakhtinian framework closely analysing three vignettes of dyadic dialogic interaction.  These vignettes are rich in the data they provide and the analysis that follows.

I then discussed with the STs, SMs and UTs the most appropriate time for conducting the interviews. In my first correspondence with all participants, it was felt that the end of the first term would be suitable.  However, when December arrived, this proved to be a very difficult time in the year for all participants. The students found this time of year very challenging as they took on more teaching and we all felt that it would be better to conduct the interview in the summer term and allow all concerned to reflect on the year. This meant that everyone felt comfortable when being interviewed; the assessment period had ended so there was less pressure on the students at the time of year.

## 5.7 Ethical Considerations and notions of power

There are distinctive challenges for qualitative researchers when using interviews as a methodology. Brinkmann and Kvale (2017) suggest that there has been a tendency to assume that qualitative research is naturally ethical (or more ethical that quantitative research). However, they go on to say that what Hammersley (1999) called a qualitative ethicism

> Can distract researchers' attention away from (A) the unanticipated consequences of a qualitative research project, (B) the inevitable power plays inherent in

qualitative research, and (C) the cultural context in which the research is carried out.

(Brinkmann and Kvale, 2017:167)

Creswell (2014) describes my type of research as backyard research as I had a vested interest in the participants. This posed challenges that needed to be explored to ensure that the research was robust, and my participants did not fear any penalty by taking part. This was particularly important with the STs as they might see me as someone who made judgements on their practice.

In making sure that my research methods were appropriate, I considered why backyard research was important to me. As I was doing a Doctor of Education programme, my research was based on my own practice and was part of my role in the university. The recent policy changes around knowledge in ITE made this even more pertinent to not only the training of geography STs but teachers across the board as we continued to face shortages in recruitment. There was also an issue around teacher retention, so it was important to research how students experience their training year. It was imperative that as the researcher, I considered and reflected on any conflicts of interest. Engaging in self-reflection regarding any potential bias made me aware of where the challenges were and helped to ensure that the participants felt comfortable being part of the research.

As Kvale states 'Ethical issues permeate interview research' (2007:10) which was exacerbated by researching my own students. When applying for ethical approval for my study, this was raised, and it made me reflect on the power relationships in my research and the ethics surrounding this. Ethical approval was granted as I am aware of the ethical issues raised by studying my own students and that I can mitigate against this as far as possible. Whilst I was conscious of the possible problems, it was difficult to foresee all of the potential pitfalls as so much was dependent on the individual, both the participant and the interviewer and how they viewed themselves in relation to the other person. For example, I did not particularly see myself as being in position of power but of course the STs might not agree. Participants constructed their own notion of power depending on how they viewed the relationship. Wider cultural views saw the course leader in a position of power, and this influenced the way I was seen by the participants. This was also true for the other participants. The SMs were different as in

my own eyes they had the power in our relationship as I was reliant on them hosting our STs, but this was also individual as some of them were my old STs where they might view me as having more power. UTs also posed a complication as, depending on the association, I had very different relationships with each of them. I could not change these dynamics, but I could try to ensure that they did not affect the quality of the interview (King et al., 2019). I also made sure I set the boundaries for the purpose of the interview and made it clear that this was about my research and not about the wider PGCE programme. This certainly made all participants appear more at ease. Interviewees can be nervous as they want to say the right thing so building a rapport was crucial. As I already had a relationship with all the participants in some capacity, this was made easier, and the participants readily talked about the knowledge needed for teaching.

Remembering that the research interview was not an open dialogue amongst equal partners was crucial as there was an inevitable asymmetry to that power. This could be due to the teacher student relationship to the work colleague relationship, where one person is perceived as more senior. This needed to be considered and explained to the participants; I did not want the interviewee to feel they needed to tell me what I wanted to hear (Kvale, 2007).

> Trust is the foundation for acquiring the fullest, most accurate disclosure a respondent is able to make ... In an effective interview, both researcher and respondent feel good, rewarded and satisfied by the process and the outcomes. The warm and caring researcher is on the way to achieving such effectiveness
> (Glesne and Peshkin, 1992:87).

Confidentiality is crucial in any research but was particularly important here as I was dealing with small numbers of participants and anonymity would be used as far as was possible. I had made my sample size clear to the participants and had made this explicit in the consent form. As I already knew most of my participants, I needed to set out exactly what my role was in this so that this was clear from the beginning of the interview. I had set this out in the topic guides and consent forms in Appendices I to N.

Throughout this study it was important that the participants had informed consent and knew they had a right to withdraw without any prejudice. It was also important that as the researcher, I assessed any risk to the participants. During the PGCE, the students

could feel vulnerable, and it was therefore crucial that when I collected my data, they were able to reflect and speak freely (King et al., 2019). For this reason, I conducted the interviews towards the end of the academic year so that all participants could reflect on the training year at a time when they were under less pressure. I decided that conducting interviews during placements would not be appropriate as the STs were not robust enough to have an additional pressure placed on them. The interviewees chose the location for the interview to take place. This was either at the university or school in a location in which they felt comfortable and able to talk freely. I aimed for the interviews to last for approximately half an hour and the themes identified from the literature around different types of knowledge were discussed, and when and if the different types of knowledge needed changes.

By ensuring that the participants felt comfortable in where and when the interviews took place, I successfully conducted the interviews. I was able to build a rapport with them that meant they were open and honest about their views on the professional knowledge needed by student geography teachers at different points in the PGCE.

## 5.8 Data Analysis Methodology

Prior to collecting the data, it was important to consider how it would be analysed, as part of the research design. I chose to use a thematic analysis approach as it allowed for themes and patterns to be identified within the data. It was essential to be aware of the assumptions the researcher makes in their analysis in order to be able to compare it to others. Therefore, before stating the analysis process it was important to decide on a method. Insufficient detail is sometimes given to reporting the process of analysis and I did not want to fall into this trap (Attride-Stirling, 2001).

There is much written about themes 'emerging' from the literature which can be seen as passive i.e. the themes are already there to be discovered and not so much time given to considering the active role that the researcher takes when identifying patterns and themes in the data. Braun and Clarke (2006) use the terminology of data being generated or identified as more appropriate. The themes I identified from the literature were used in the interviews to elicit the participants' thoughts on different types of knowledge. These were listed in Figure 7 in the card sort used in the interviews. I would not call these passive themes; they were what I expected the interviews to focus around

as they were relevant to the research questions, but they certainly were not the only themes identified.

As a practitioner researcher I might see themes that perhaps others would not but this was part of the process and being aware and explicit about it was important from the beginning (Braun and Clarke, 2006). I chose themes that I believed were important and wanted to explore further. These themes emerged from the interviews and developed as I scrutinised the data. By doing this, I was creating links and making sense of them (Ely et al., 1997). This is what Harding (2019) calls conceptual coding: a broader type of coding that opens up the data to different possibilities.

Part of the analysis was to then to interpret and analyse those themes to see if there were patterns. It was imperative that our own theoretical positions and values were clearly stated in relation to the research. Braun and Clarke (2006) do not agree that qualitative research is a way of 'giving voice' to the participants, which could be seen as a realist view as even the notion of 'giving voice' involves a selection of data and the accompanying narratives that we use to argue our point (Fine, 2002). They go on to say that the most important thing is that the

> theoretical framework and methods match what the researcher wants to know, that they acknowledge these decisions, and recognise them *as* decisions.
>
> (Braun and Clarke, 2006:80, original italics).

Thematic analysis can be used to report the 'experiences, meanings and the reality of the participants. It can be either a realist method, or a constructionist method, which

> examines the ways in which events, realities, meanings, experiences and so on are the effects of a range of discourses operating in society.
>
> (Braun and Clarke, 2006:81).

This fitted with my research questions as I was looking at several different data sets and how each of the participants experiences teacher training (their reality of it). This allowed me to make my constructionist stance clear from the beginning and the impact this had on my interpretation of the data.

> Any theoretical framework carries with it a number of assumptions about the nature of data, what they represent in terms of 'the world', 'reality', and so forth. A good thematic analysis will make this transparent
>
> (Braun and Clarke, 2006:81).

My first level of analysis was the 'realist' approach. I reported on the lived experiences of the STs across the PGCE. I took each ST in turn, discussing the themes identified from their experiences including their own particular context and how this supported their framing of the development of their professional knowledge. This was then brought together in the cross-case analysis in chapter 7 where I drew together the themes.

### 5.8.1 What is a theme?

According to Braun and Clarke (2006) a theme captures something important about the data in relation to the research question and characterises a 'patterned' response or meaning within the data set. They go on to ask the questions: what counts as a pattern/theme, or what 'size' does the theme need to be? They refer to this in terms of prevalence across the entire data set and space within each data item. More instances themselves do not necessarily mean it is more important. A theme might be given a lot of space in some data sets but not mentioned in others and that is acceptable as this is part of the analysis taking place: what is important for one set of participants may not be for another. Therefore, the researcher needs to allow for flexibility in the analysis and setting of themes.

It is also worth noting that the importance of a theme may not be directly linked to its frequency but more that is relevant to the research questions. The research question can therefore set the way the prevalence of themes is measured in the data. This was an important point to note in my own research. In the interviews, I used the literature around professional knowledge of teachers to inform the discussion. This immediately posed a problem when looking at themes and the prevalence of those themes. Initially I used the headings from my card sort as my themes and wanted to look at frequency, but this did not allow for the nuances in what the participants were saying. I realised I needed to do both. My research questions were important here as they focussed on HOW student geography teachers acquire professional knowledge, did this change over the training year, HOW did it change and what were the pivotal moments? Therefore, it was not enough to just look at what each participant found important; it was about how they articulated this in their own context. A thematic analysis was important here to be able to look at patterns both within individual data and across the data sets.

Before starting the analysis, it was important to decide the type of analysis required. Boyatzis (1998) describes a theoretical thematic analysis which was where I believed my research sat. Theoretical thematic analysis is where the analysis is aligned more with the theory and the research questions rather than focussing only specific themes emerging from the data.  He suggests that in this top-down approach, the theory surrounding the research gives a basis for these themes used.  In my case, those themes were based around Shulman's work and this typology of knowledge and the themes I set out in the card sort in Figure 7.  However, I found that this was only the first stage and if I had only looked at these expected themes, I would have missed some of the nuances that a more inductive analysis would give.  An inductive analysis allowed for a focus on more unexpected themes to be generated from the data. I needed to listen to the data and not be afraid use elements of both types of thematic analysis.   Taking an inductive approach to analysing interview data allows the researcher to move from the particular to the more general (Harding, 2019).

Another decision to be made is whether the analysis will be at a semantic, explicit level or a latent, interpretative level (Boyatzis, 1998).  I saw my research as delving into a more latent approach. Whilst not actually being a thematic discourse analysis, I sought to develop the themes based on the literature as it would involve interpretation of the data collected.  This form of analysis also sits within the social constructionist paradigm. This means that meaning and experience are socially produced and reproduced. Therefore

> thematic analysis conducted within a constructionist framework cannot and does not seek to focus on motivation or individual psychologies, but instead seeks to theorize the socio-cultural contexts, and structural conditions, that enable the individual accounts that are provided.
>
> (Braun and Clarke, 2006:85)

Thematic analysis involves the searching *across* a data set to find repeated patterns of meaning.  I did this in Chapter 7 in the cross-case analysis where I followed up on the themes from the individual cases and if these are found across all cases, or not  (Patton, 1990; Burr, 1996).

### 5.8.2 Developing themes and analysing the data

In order to develop my themes for analysis I followed the generally accepted rules of thematic analysis suggested by Miles and Huberman (1994), Braun and Clarke (2006), Langdridge and Hagger-Johnson (2013) and King et al. (2019). Braun and Clarke (2006) suggest six phases for the creating and subsequent analysis of the data. I found this particularly helpful and can be seen in Table 3.

| Phase | Description of the process |
|---|---|
| 1. Familiarising yourself with your data: | Transcribing data (if necessary), reading and re-reading the data, noting down initial ideas. |
| 2. Generating initial codes: | Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code. |
| 3. Searching for themes: | Collating codes into potential themes, gathering all data relevant to each potential theme. |
| 4. Reviewing themes: | Checking if the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic 'map' of the analysis. |
| 5. Defining and naming themes: | Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells, generating clear definitions and names for each theme. |
| 6. Producing the report: | The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis. |

Table 3: Stages of thematic analysis

according to Braun and Clarke (2006:87)

More detail about how I analysed my data is in Appendix F. Transcribing the interviews is the first stage; checking this for accuracy and becoming familiar with the data. The transcription must retain all of the relevant information. For me, it was about the meaning of what was being said rather than how it was said. I was not as interested in the minutiae of the way the interviewee spoke. This early stage of analysis did give me some indication of what the themes might be and the problems that giving a card sort to the interviewees posed as I delved more deeply into exactly what they were saying. At this stage I looked for patterns in what was said and wrote down my initial thoughts about what the data said. A list of potential codes came through at this point based around the areas of knowledge in the card sort: practising teaching, geography subject knowledge, observing teachers, talking to others about teaching geography, knowing what to teach in geography, general pedagogical knowledge, knowing the geography curriculum, knowing how to teach geography and reading about how to teach

geography.  By focussing on these initial themes, there was a danger that I only looked for these themes as I analysed the data. This became quite clear in my first attempts at generating the codes.  I needed to go back and look for what else was coming through in the data and in particular using a Bakhtian lens to consider the lived experiences of the STs in relation to professional knowledge acquisition.

In order to do this, I used a constant comparison method. This method was first advocated by Glaser and Strauss (1968) as a grounded theory approach but more recently has been seen as a way of analysing all qualitative data as the researcher relies on comparing and contrasting the data (Harding, 2019).  In this way I was able to systematically take each interview and keep going through the data to look for similarities and differences. It is particularly useful when there is a small number of cases in the dataset.  After summarising each of the interviews, I was able to then compare each one in turn and then to identify the findings once all the cases have been included. This was what I did resulting in a chapter focussing on the individual cases (Chapter 6) and then the cross-case analysis (Chapter 7).

As I developed the cross-case analysis, my codes continued to develop as I went through the process of constant comparison.  My first level coding was based around Shulman's domains of knowledge, my card sort and additional areas of knowledge the participants added: behaviour management, general pedagogical knowledge, geography subject knowledge, how children learn, knowing how to teach the geography curriculum, knowing what to teach in geography, observing teachers and planning.  After the initial coding, I also added in the different authoritative discourses mentioned in the interview. For this I used context of the school, curriculum, news, own context and values, peers, pupils, social media, subject mentor, theory and university.  From these codes I was able to draw out the identified themes to form my thematic analysis which will be addressed in Chapter 7.

## 5.9 Analysis of documentary evidence

In addition to the interview data, I was also using documentary data.  Originally this was in the form of policy documents as well as documents the student geography teachers generate during the year as described in Figure 8 which shows the artefacts being

collected. However, since starting this research education policy surrounding ITE has changed so rapidly that this had been used in Chapter 2 which focusses on education policy. Nevertheless, I did want to include the analysis of documentary evidence here as it was still useful as the use of documentary evidence could be useful in triangulating interview data Bowen states that

> The rationale for document analysis lies in its role in the methodological and data triangulation, the immense value of documents in case study research, and its usefulness as a standalone method for specialised forms of qualitative research.
>
> (Bowen, 2009:29)

The documents, in this case the policy documents, supported the research questions as I questioned what I was reading. The policy was therefore shaping the research. The first stage of analysis is to skim, read and interpret the document which combines the elements of content and thematic analysis. Content analysis is the process of organising information into categories related to the central question of the research. Bowen recommends excluding the quantification of terms for example but rather looking for meaningful parts of text. The research then identifies the pertinent aspects of the information and the thematic analysis is a form of pattern recognition within the data as identified themes becoming categories for analysis (Corbin and Strauss, 2015; Fereday and Muir-Cochrane, 2006).

## 5.10 Reflexivity

Finally, in this chapter I want to focus on reflexivity. As previous discussed, the students I was studying were part of a cohort of students that I taught. With this in mind, it was vital that I took a reflexive approach to this research in order to become a critically reflective practitioner and researcher. According to Bassot (2016:77) reflexivity

> refers to the high level of self-awareness needed to practise in an anti-discriminatory way. It involves becoming aware of our values and assumptions, which are culturally situated.

Fook (2007) suggests that this awareness stresses the need to look inwards and outwards, acknowledging that every part of ourselves, including our context, affects how we practise. Whilst I led the PGCE course, the participants needed to see me as both a tutor and as a researcher. In my everyday teaching, I found that sharing my

research interests had helped build a rapport with students; I hoped this would also happen in the interviews.  I needed to be very mindful of my role in the research throughout.  Researching my own students and colleagues meant I needed to be aware of the challenges of being the objective researcher.  According to Hitchcock and Hughes (1995:45), 'the 'insider' doing research is not immune from these issues; in fact, they can be more difficult to reconcile because of the simple fact that one is part of the situation one is investigating'.  There has been much debate over the possibility of objectivity in social science research.  Much of this derives from the world of scientific research whereby claims of objectivity and lack of bias were seen as an essential feature of any research.  Social science research has attempted to emulate this but when research is based on 'values' rather than 'facts' this can be difficult.

Any research involving values, opinions, beliefs and attitudes can be influenced by the values of the researcher at any point (Hitchcock and Hughes, 1995).  Whilst I was aware of the value judgements I could make, I also wanted to make it clear to the participants that in this research I was attempting to be the outsider, in the sense that I was not making judgements about them, I was not assessing them.  I was trying to discover their lived experiences.  I was looking at this research through an interpretivist lens and therefore I wanted to find out about how the participants saw their own reality. Hitchcock and Hughes (1995:55) suggest that qualitative researchers suggest there is an inevitability that the researcher is involved in the social world and that 'in such research complete objectivity is unobtainable and that value-free knowledge does not exist as such'.  Gouldner (1973) suggested that the only way is for the researcher to express their views openly.  The topic guides for participants can be seen in Appendices H, I and J.  I made it clear here, and verbally, what and why I am asking these questions.

There was a danger in using my students and colleagues that I could step into the 'Romantic vision' of the social actor (Whitaker and Atkinson, 2019) and write up the interviews as if the actor's views and memories were unproblematic.  The Romantic vision also tries to seek the authentic voice by building a rapport with the participants in order to generate revealing conversations. It is acknowledged that the interview invites the participant to produce a narrative that is often biographical but the analytical perspective the researcher takes therefore needs to be faithful to the phenomenon by

reflecting its performative nature and the work it performs (Roulston, 2011a). This rang true in my research as I asked all participants to reflect on the knowledge needed to teach geography. There were varying accounts of the 'biographical' nature of the narrative but part of what I wanted all participants to do was reflect on their own experiences. The analysis of the interview data was where I was able to draw out any commonalities, and also anomalies.

## 5.11 Summary

This chapter has set out my methodology. Using a case series enabled themes to be drawn out to investigate the lived experiences of student geography teachers and how they viewed their acquisition of knowledge, and how this compared to their SMs' and university tutors'. The case series methodology incorporated '…moving from the empirical trenches to a more conceptual view of the landscape' (Miles and Huberman, 1994:261). This was a challenge when I was so closely linked to the research, but it was something I needed to aim for if I was to use this to support my future practice in supporting geography STs and more broadly across our ITE programmes.

# Chapter 6 Case Studies

## 6.1 Introduction

This chapter will take each ST in turn and use the data collected to build a case study. Each ST will be discussed, and themes drawn out of the data that can then be compared in the cross-case analysis in Chapter 7.

The interviews with STs all took place in the summer term towards the end of the PGCE programme. All STs had one visit from their university personal tutor to observe their teaching during each placement. The recordings of the feedback were made during Placement B, and all took place after the Easter break between March and May. In addition to this I interviewed the three UTs. These interviews took place in June and July. A more detailed timeline can be seen in Appendix G.

The interviews I conducted with the STs were focussed on the main research question of what professional knowledge do you need to be a geography teacher? Shulman's (1986) typology of knowledge suggests there are several different types of knowledge needed to be a teacher. Other researchers have added to this: Cochran et al. (1993), Meredith (1995), Banks et al. (1996; 2005), Turner-Bisset (1999; 2001), Shulman and Shulman (2004), Brooks (2010; 2015), Geographical Association (2011a) and Reitano and Harte (2016). The diagram in Figure 9 is a reminder of the overview of these types of knowledge.
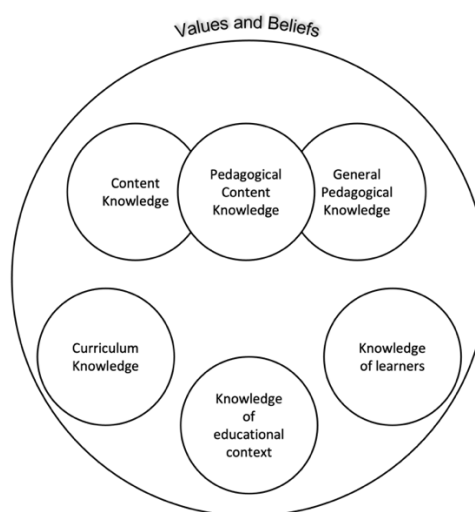


Figure 9: Model of types of knowledge

based on Shulman (1986; 1987b),Turner-Bisset (1999; 2001), Cochran et al. (1993), Meredith (1995), Shulman and Shulman (2004), Brooks (2010; 2015), Banks et al. (1996; 2005), Geographical Association (2011a), Reitano and Harte (2016).

Using all of this research, I decided that using specific types of knowledge was useful to get the STs talking about what they have learnt or needed to learn at different key points in the PGCE programme. I added additional types of knowledge (breaking down some of the larger types) to give me nine types of knowledge an ST needs.  This can be seen in Figure 10 and is discussed in more detail in Chapter 3.  In the interviews, I gave the STs, SMs and UTs a set of cards.  These cards had the areas of knowledge I found in the literature on them, based on Shulman and others (Shulman, 1986; 1987a; 1987b; 2004; 2005; Turner-Bisset, 1999; 2001).   During the interview I asked the STs, the SMs and the UTs to complete a 'diamond nine' at key points during the PGCE - the start of Placement A, the end of Placement A, start of Placement B and end of Placement B. This helped to guide the discussion around how the knowledge needed changed throughout the PGCE programme. However, the interviews were all very different which is significant and adds to the complexity of what professional knowledge you need to be a geography teacher.

| Practising teaching | Geography subject knowledge | Observing teachers |
|---|---|---|
| Talking to other people about teaching geography | Knowing what to teach in geography | General pedagogical knowledge |
| Knowing the geography curriculum | Knowing how to teach geography | Reading about how to teach geography |

Figure 10: Sort cards used in the interviews.

I am looking at this data through a Bakhtinian lens to attempt to make sense of how an ST geography teacher navigates the challenges of training to be a geography teacher and how both the authoritative discourses and internally persuasive discourses play a part in their development.

## 6.2 Student Teacher 1

Student Teacher 1 (ST1) was a high achieving ST who achieved an A in A-level geography and a first in her geography degree from a Russell Group University.  She graduated in 2017 prior to starting the PGCE programme and went through school and university with no gaps in her education.  She had completed a week's experience in a school prior to

starting the PGCE where she supported small groups. It is significant that both her parents are teachers. She felt it was a good career, although she was aware it would be hard work. During the PGCE, ST1 shared a flat with another ST doing their teacher training at another local university. ST1 did her two placements in contrasting schools. Placement A was an independent boy's school in Manchester and Placement B, a large mixed comprehensive school south of Manchester. Both schools, therefore, had quite different priorities that this ST found challenging. University tutor 1 (UT1) was the personal tutor for this ST.

The interview with ST1 took place in June and the lesson observation feedback was recorded in May. These interviews are towards the end of the PGCE programme which finished at the end of June. The card sorts for ST1 can be seen in Figures 11 to 14.

The most significant outcome of the interview with ST1 was her focus on behaviour and how this had shaped her entire PGCE programme. As the course tutor, I was aware that ST1 was a quiet member of the group who had not developed the strong friendship bonds that others had, but until this moment, I had not had the opportunity to really consider her actual lived experiences on the PGCE. At the same time, it struck me as highly important that she had kept all these feelings and concerns to herself and had not discussed with any of her mentors throughout the programme how she felt. ST1 was determined to finish and to pass but had no intention of teaching once qualified. She may go back to teaching at some point in the future as she knew a PGCE was a good qualification to have but at that moment in time, she did not want to be in a school.

When listening to this ST talk about her experience and how she did not want to go into teaching, it made me question how she had ended up at this point. ST1 said that in the first placement the behaviour was good, so there were no issues in her lessons. The focus on that placement was on subject knowledge and being able to impart the knowledge needed for the boys to succeed. At the beginning of the second placement, behaviour became more of an issue. The ST also described how, in her view, she found that because behaviour had been better on the first placement, she did not have to plan her lessons in as much detail. On the second placement, she then felt she was not

prepared enough for the level of work needed to plan appropriate lessons for the new context.

ST1 explained that she had missed the initial lecture on lesson planning in September and because the way lessons were planned in Placement A, she had never really got to grips with it.   This became a significant issue for this ST as even though she was taught how to plan on both placements, and in the preceding university sessions, the feeling of missing that session made her feel like she was at a disadvantage.  I'm not sure I have considered that before, like a child missing a lesson in school, do you ever catch up? Despite extra support and further sessions in university, the initial session being missed seems to be the reason why it never clicked in the mind of ST1.

As Placement B progressed, ST1 did not seem to be able to get past the issues of behaviour management as this was the focus for everything.   This became more important than anything else and despite support on offer, ultimately it meant ST1 did not go into teaching.
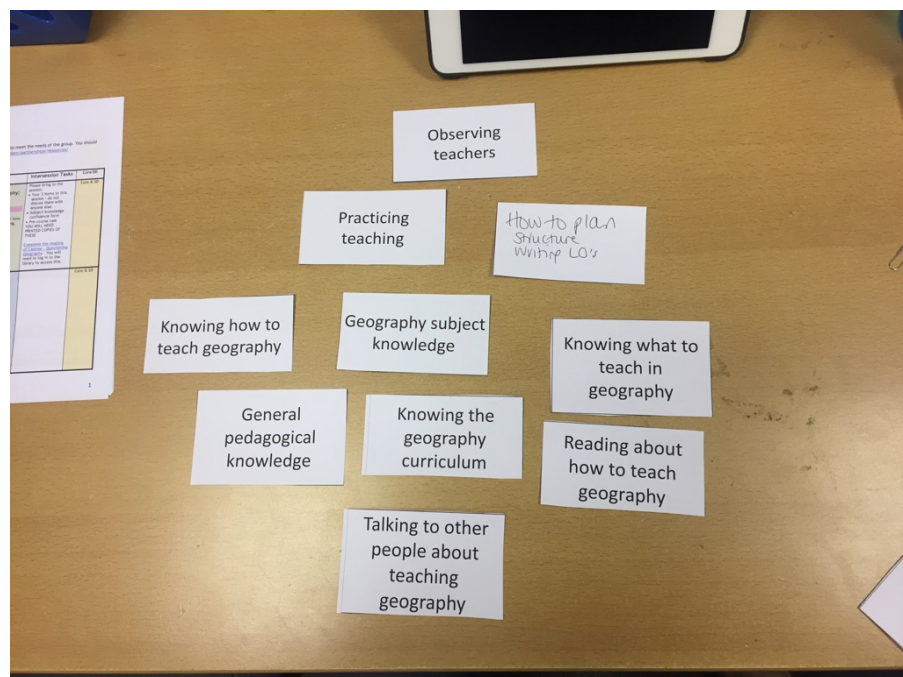


Figure 11: ST1 Card Sort 1

As part of the interview, I asked ST1 to consider the knowledge needed for teaching at different points in the course.  The first card sort can be seen in Figure 11.  I asked if there were any additional areas of knowledge she thought were important.  ST1 said that learning to plan, structure and write learning objectives is one of the most

important aspects of knowledge needed as they started Placement A. This is slightly less important than observing teachers but as important as practising teaching.

I find this particularly interesting as having listened to all of the interview with this ST many times, it is clear that she is hesitant in her ability. She saw observing other teachers as important in the early weeks of the first placement but also acknowledged that she could not emulate those more experienced teachers. Gender also plays a part in this. ST1 is female and the department she worked in was male dominated.

> ….it was like when my subject mentor last block [Placement A] was talking to me about presence and stuff and I was like, "But you're 6'4" and a male". I was almost, like, how am I supposed to…? So that kind of thing. So, I think observing younger female teachers will be a bit more useful".
>
> (ST1 interview)

UT1 also mentioned ST1 feeling intimidated by the all-male teaching staff presence in Placement A but UT1 acknowledged that the feeling of not being good enough did not go away.

It is also pertinent to consider who and what ST1 considers the authoritative discourse in her training in these early stages of her PGCE. She referred to observing teachers as being important but then not being able to be like the teachers she observed. The authoritative discourse of the other teachers has become a negative on ST1. She was not able, at this stage, to navigate those "utterances" made by multiple teachers about how she should teach. She was not able to develop her internally persuasive discourse, and she seemed to feel she was too far away from where she needed to be and so retreated. This is quite common at the beginning of the PGCE. As Placement A progressed, ST1 did seem to acknowledge that she could not mimic the other teachers, and her focus moved on to subject knowledge and how to teach geography. The first placement was in an independent boys' grammar school and high academic achievement was important here. Being able to keep on top of the subject knowledge she needed to teach and what knowledge the pupils needed to pass the exams was crucial to her. ST1 mentioned feeling "panicked" after observing experienced teachers where pupils "were firing questions at them and stuff". The idea that you needed to know more than the pupils in terms of subject knowledge came across strongly. She found it difficult to make the links between what had been taught in university and what

she was seeing in school.  For example, in the first few weeks of Placement A, she was asked to teach a starter and a plenary to a class, but she had not seen any examples of this in her observations.  The observations then became less important as a source of knowledge as the placement proceeded.  ST1 found this tension difficult to navigate.  As Placement A progressed, the authoritative discourse started to come less from the teachers in school and more from the pupils themselves as they were demanding a lot from her in terms of subject knowledge and the knowledge of the assessments.  I find this particularly interesting as ST1 does not really talk about her Placement A SM in this interview but more about the department as a whole. However, she was listening to the pupils and seemed more able to understand why she needed to do things because of their needs (See Figure 12).
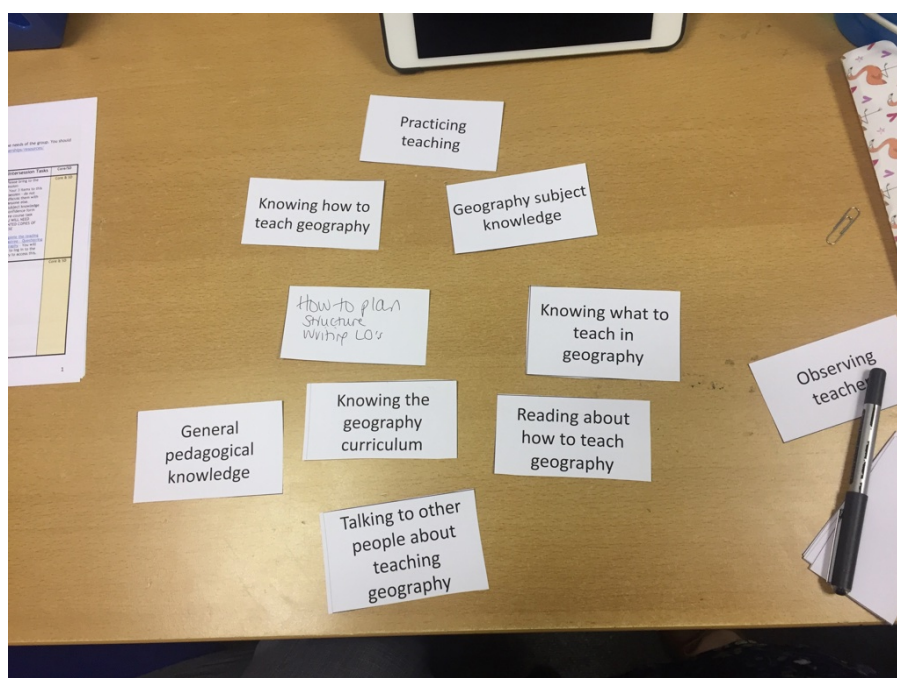


Figure 12: ST1 Card Sort 2

ST1 had a successful Placement A and on reflection found that in this particular school, the pedagogical content knowledge needed for teaching was different to other schools. Geography subject knowledge was the biggest focus as the placement continued and being able to keep a step ahead of the pupils.  ST1 felt that knowledge could be gained through practising teaching geography.  By the end of the first placement, she felt she had grasped this but was aware that this was a specific context.

After the Christmas break, ST1 found that the university sessions supported the development of the knowledge needed for teaching as she was more conscious of what teaching actually involved. ST1 talks about being more aware of the holistic approaches that are needed such as expectations for pupils, using data to support seating plans etc. She was able to see the links more clearly between university and placement. She appreciated that the context of Placement A had given her a different experience to others on the programme and to where she would go for Placement B. At this point, ST1 is beginning to reflect and internalise what happened on Placement A. She did not really see the university as a dominating factor (or authoritative discourse), but she did see how the curriculum supported her learning in becoming a teacher. She could articulate what she needed to know and what was important to her. This was still very much about practising teaching and geography subject knowledge. ST1's internally persuasive discourse was developing as her identity as a teacher was developing.

In ST1's case, the utterances that her SM, the pupils and her university tutor are all starting to come together to make meaning. Holquist (1990) refers to Bakhtin's work around self-authoring. ST1 is beginning to consider the "I" and being able to reflect on her own ability to teach and make progress. If we can see ourselves from another perspective, we can then assume a position of what Bakhtin calls 'outsideness' or 'transgredience' (Bakhtin, 1981; 1986). However, this can make us uncomfortable and there is a tendency to compare ourselves with others which may well be the case for ST1 and is why she did not see the value in talking about teaching geography with others as is apparent in all of the card sorts she did. This always came as the least important, right at the very bottom for Placement A, and the second row from bottom on Placement B where observing teachers came at the very bottom.

When ST1 started Placement B, she found the difference quite stark. This school was a large mixed comprehensive school south of Manchester. Knowing how to plan lessons was the biggest change she needed to know. ST1 said "I'd gotten so far without really thinking about lesson plans". However, in Placement B, the SM expected the lesson plans to be submitted forty-eight hours before the lesson and if it was not deemed good enough, the ST was not allowed to teach the lesson.

ST1 explained

> It [Placement B] started off fine here. It was more structured. I really enjoyed that. I was less stressed because I wasn't planning lessons last minute. I was showing them to [SM1] in advance and things like that. But then it got to a point where I reached like a block. It was mainly just to do with behaviour management, because then there was something like…at first it was fine. Because I supposed I was new, the kids are quite nice, you know, but then it got to a point where it didn't really matter how much I was planning.
>
> (ST1 interview)

The interview then focussed more on this idea that knowing about behaviour management was crucial to ST1 succeeding on this placement. She went on to say

> [SM1] was like, "Oh, you just shout at them," and I was like, "I don't think I can actually shout." It was just one of those things where I was like… [SM1] told me exactly what to do and I had good advice about what to do. Then, for some reason, when I got in there I just couldn't… even giving behaviour points, I was just like… for some reason, I just couldn't do it.
>
> (ST1 interview)

ST1 used the term "block" when it came to behaviour management. ST1 was able to explain that a lack of confidence and/or knowledge of how to manage a classroom ultimately meant they decided teaching was not for them. However, this is not a simple explanation of what happened to this ST on the PGCE. The many different authoritative discourses she was hearing did not sit comfortably and she was not able to internalise this, especially when the messages she received were so different to those on Placement A. This (lack of) self-belief had become ingrained in ST1 that she felt there was no way to overcome the issue of managing behaviour in the classroom. This also fits with Bakhtin's (1981) notion of 'authoring the self' which is cited in Holland et al. (2001:173). Holquist (1990) explains this as if one cannot visualise an event and 'the place I occupy in it' then, ST1 in this case, will struggle to make sense of all of the different voices she is hearing. Bakhtin also used the term 'ideological becoming…is the process of selectively assimilating the words of others' (1981:341). Bakhtin allows for self-authoring to be dynamic, but someone's position can be 'sedimented; by hearing repeated negative voices, which can be external, or internal.' ST1 has not heard anything that makes her feel any different about her position both within the school, or within teaching as a whole.

ST1 described how the class teachers in Placement B influenced the behaviour of the classes.  She said

> They had a school policy and stuff, but I didn't do it at the start because there was always a teacher in there, so the kids were behaving.  Obviously, they were just behaving for their teacher who was still in the classroom, I think.  Then, once that changed, once they started going out and stuff, that's when it started to go a little wrong.
>
> (ST1 interview)

This is quite a common issue faced by STs, depending on who the class teacher is and the relationship they have with the class.   However, ST1 seemed to assume that behaviour did not need to be addressed when there were no apparent issues.  She went on to say

> It was maybe a couple of weeks before Easter.  It was mainly just Year 9 that started to get a bit hectic.  Yes, it was pretty much just year 9, because the year 8 and year 12 were fine.  There was one year 7 class which were a bit mad, but they weren't really bad.  They were just a bit year 7-ie. It was just year 9 that I struggled with.
>
> (ST1 interview)

At this point, ST1 decided she was not going to go into teaching.

> It got a lot worse because I was like, "No".  I think I was a bit like, "I can't be doing this", and then that's when it got even worse.
>
> (ST1 Interview)

The card sorts ST1 completed for Placement B show this emphasis on behaviour and planning really clearly.  See Figure 13 and Figure 14.
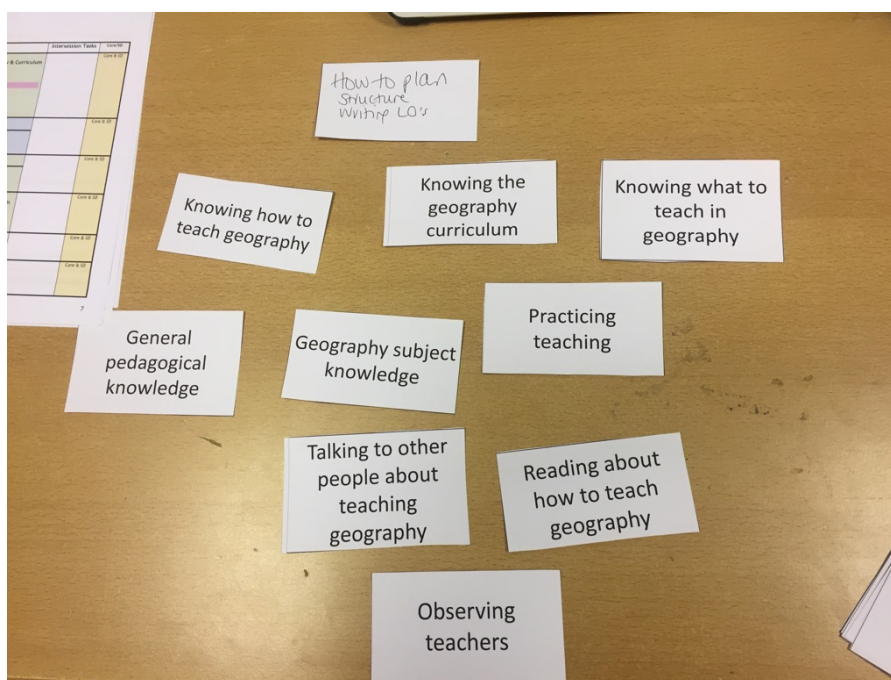


Figure 13: ST1 Card Sort 3
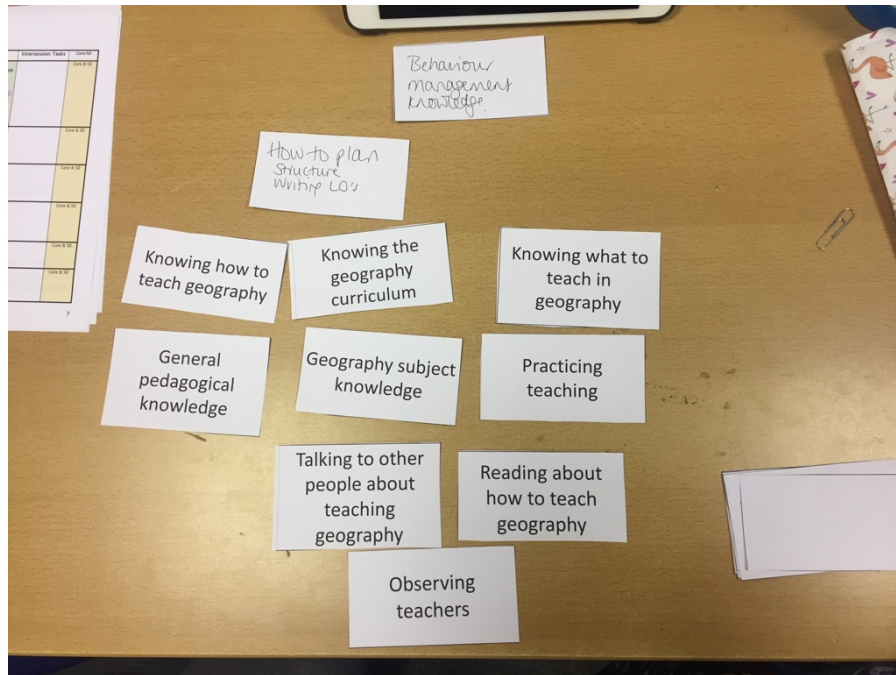
Figure 14: ST1 Card Sort 4

ST1 felt like she was not going to get better at it so why try.  It became all-encompassing and she could not get past it.  It appears that at this point ST1 felt defeated and could not make any further progress.  The relationship between ST1 and SM1 became rather strained, and it is apparent in both interviews how frustrating they both found this.

At this point SM1 had been teaching for four years, having completed their PGCE in the same HEI. She had worked in two schools, and this was the first time being a SM for Placement B.  This SM had clear ideas about what an ST needed to be able to do and what they needed to know at this stage of the programme.

For SM1 being able to plan a lesson was the most fundamental knowledge needed by an ST.  It sounds simplistic, but this statement encompasses so many different aspects of knowledge an ST needs: behaviour management, how to engage pupils, how to structure the lesson, subject knowledge.  All of this comes back to the lesson plan.  SM1 was very clear in her belief that you need the same knowledge for Placements A and B and that the subject knowledge should already be there.  The difference for the second placement is that you should also be able to assess and challenge the pupils.  SM1 did say

> You could have someone with a first-class degree but could be the worst teacher in the classroom because they don't know how to deliver it.

(SM1 Interview)

110

This delivery is important as that is the point at which a teacher makes those professional decisions in transforming the knowledge and is what Shulman (1986) refers to as pedagogical content knowledge. There is more to teaching that just knowing the geography.

In the card sorts, SM1 put observing teachers at the top as most important for the start of Placement B, see Figure 15. ST1 put this at the bottom, see Figure 13. This is the first real evidence of this divide between what the SM and ST think. As described earlier, ST1 found observing teachers daunting and was not able to see herself reflected in what she was seeing. However, SM1 said "Still today, I learn so much by observing teachers and observing subject mentors" (SM1 interview).

> That's why I put knowledge of geography specifically at the bottom because I've sent [ST1] to go and watch some of our outstanding trainees that were in English. We send the trainees all around the school to see different teachers, different learning styles.
>
> (SM1 interview)
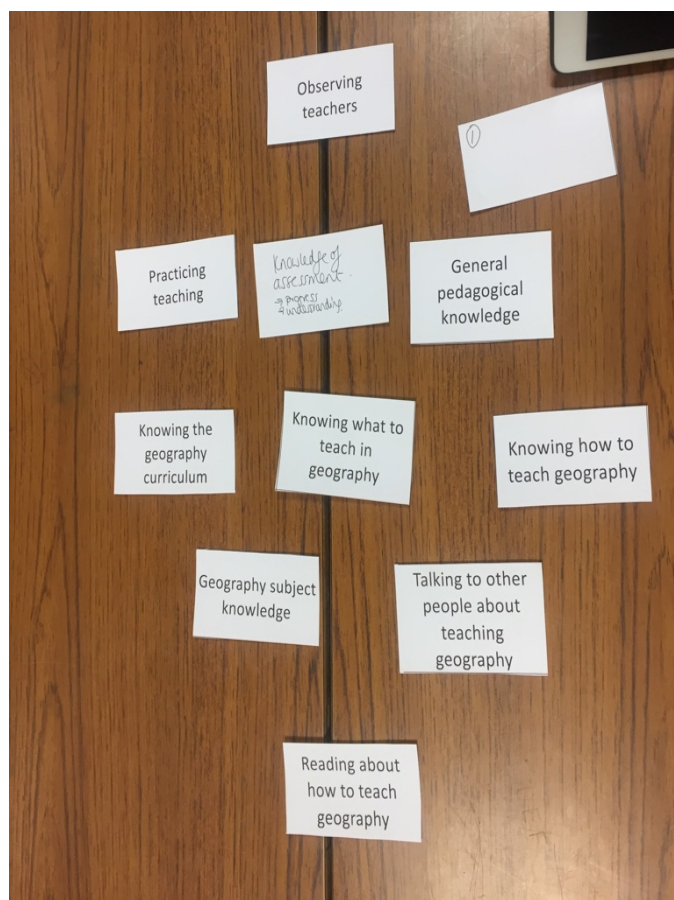


Figure 15: SM1 Card Sort 1

This is putting ST1 in direct comparison with the other STs on placement in this school. This is something ST1 has also struggled with in terms of self-belief. ST1 compares herself to her flat mate. She described her as being hard working, achieving an 'outstanding' outcome in their first placement. ST1 said they helped each other through. ST1 did not really make friends with others on their programme, so this has been her only direct peer support.

ST1 said

> Most of the teachers I watched were really good. So, I wasn't thinking about, "Oh, how can I be like them?" kind of thing, because I was, "Oh my God." They obviously all had really good relationships with the students and stuff, and it wasn't a style that I thought I'm going to be able to recreate.
>
> (ST1 Interview)

The sense of self is crucial for the ST, who is developing themselves as a teacher and, as such, is enmeshed in observations (of and by others) and reflections (of and by self). Whilst this is an important part of becoming a teacher, it can also lead to unhelpful comparisons, which confuses the self by the introducing the 'big Other' (Lacan, 2001; Bibby, 2011) and the fear of being watched. There is so much complexity within this 'Other' as it is not a single person but more of a philosophy which is professionally, culturally and historically located. The judgement of that 'Other' can be based on so many different things and therefore difficult for an ST to deal with.

By the time I conducted the interviews, the relationship between the SM and ST had broken down. In both interviews, ST1 and SM1 remained professional. However, the following extract from SM1's interview shows some of the underlying frustration.

> SM1:   I don't think [ST1] took anything from observing teachers.
> JB:   Right, okay. Why do you think that might be?
> SM1:   Because she doesn't have any passion for teaching. She wasn't interested. Even when we gave her activities to do whilst observing like, writing a lesson plan, or I gave her the printout of the PowerPoint and asked her to make amendments to make it more challenging whilst watching me. I sent her to see outstanding trainees and then I popped into the lesson to see what notes she was taking. She wasn't taking any notes.
>
> (SM1 interview)

SM1 was learning how to support an ST who did not know how to improve. During the interview, SM1 reflected on this. She had used really good ideas for supporting the knowledge and understanding of STs and maintained that observing was an important skill. Other STs in other subjects watched the SM teach and then they fed back afterwards. Other STs found this useful. As SM1 went through the activities they had planned to help STs, she realised how individualised all of these successful activities were, and whilst in an expert's view (i.e. the SM) they may benefit all STs, if the STs did not understand how it would benefit them, then the task was not as successful. The STs all needed individualised foci at different times.

The interview then moves onto the relationship between SM1 and ST1. The SM felt that if they had been more honest with each other, they might have built a better relationship and therefore the programme and the mentoring might have been more successful. As I am going back through this data and thinking about the relationship between the SM and the ST, the theories around belonging and sense of self re-emerge. I am not going to go into detail here, but this is certainly something into which I will extend this research. It would include the theoretical frameworks around 'communities of practice' (Wenger, 1999; 2002) and also the circle of courage based on native American philosophies around belonging, skills, independence and generosity (Brendtro et al., 2010; 2013; 2014; Espiner and Guild, 2014). In a post-Covid world, this would be a good extension to this project as this is certainly another theme to emerge from this data that is worth exploring further.

I also recorded the lesson feedback when UT1 went into Placement B to observe ST1 teach with SM1 and then give feedback on the lesson. This was recorded in May of the programme.

When listening to the feedback, ST1 seemed unsure how to respond to the feedback. The lesson was a Year 7 lesson on the four-figure grid references and describing the physical features of Nigeria. When UT1 asked, "Did they learn what you wanted them to learn?" ST1 said yes at first but then goes on to say that they could not see the map properly. UT1 then asked ST1 to consider the context of this particular class and really consider what geography was being taught and learnt and to justify why and how ST1 is

doing this.  This conversation was very one sided where UT1 dominates but was trying to be supportive and to get ST1 to really consider what was happening in the classroom and how this impacted on pupil progress.

UT1 went on to talk about the positives of the lesson and how ST1 was able to demonstrate more of a presence in the classroom than on Placement A

> Your voice was stronger, and I thought you had that attention to behaviour for learning. You know, you were really trying hard not to let them talk over you, and you were counting your 3-2-1s, and you were telling them not to talk over you. I thought that was more effective as well.
>
> (ST1 lesson feedback)

Even though there is no specific focus on behaviour management, there were a lot of questions asked about the role of ST1 in the classroom.  For example, SM1 asked

> …you were circulating around the rooms, but what impact did you have when you were doing that, do you think?
>
> (ST1 lesson feedback)

ST1 did not understand the links between this and behaviour management which was a key outcome here.  ST1 struggled with behaviour management but had a narrow view of what was meant by behaviour management and her own impact on how a class behave.  There are other examples of this in the lesson feedback.  SM1 went on to say that they wanted ST1 to be more aware of the progress pupils were making.  They emphasised the importance of clarity of instruction.  This again linked to managing the classroom.

The conversation then went on to develop some understanding around what happened at different points of the lesson.  It is interesting to note the use of language.  Rather than asking ST1 what they might do, they are told by SM1, who used a "yes?" at the end of the sentence.  There was no discussion as to what the ST might want to do themself.  This authoritative discourse of the SM having the final word is problematic in this case, as the ST was not on the same page.   ST1 felt that the main thing blocking her progress on the PGCE and learning to teach was behaviour management but that is an all-encompassing term and in this case is about all aspects of behaviour.  Bakhtin (1981) refers to 'orchestrating voices' and in this case it clear that ST1 is having to really try to navigate the demands of the SM, the pupils, subject knowledge and even in the later

part of the course, they have not managed to find a way through this. Her own internally persuasive discourse is not formed and leaves her confused and defeated.

When I started this case study, I was not expecting the main focus of knowledge to be around behaviour management. This was not something I had considered as a type of knowledge, rather that it comes into all aspects of pedagogical knowledge. However, on reflection for an ST who is struggling to manage their classroom their narrow view of what is meant by behaviour management has a profound impact on their progress. This thesis is focussed on what knowledge ST geography teachers need but from this first case analysis the complexity is apparent. In ST1 the knowledge she felt she lacked was not about geography but about behaviour. These broad themes of knowledge are important, and I will discuss this further in Chapter 7.

The UTs were also interviewed as part of my research. UT1 talked about ST1's experience on placement. ST1 said she did not have many opportunities to observe teachers on Placement A. She had good subject knowledge, but she did not have good pedagogical knowledge, and she could not really "get to grips with it". UT1's view was that being able to command attention from a class was the missing piece from the beginning, and as ST1 found this difficult she was not able to add in the other elements as she could not get past that. UT1 felt that ST1 had a better experience in Placement B, but she still felt a sense of intimidation and she could not get beyond that. The interview went on to discuss whether we could have provided any additional support for ST1. UT1 felt that it was all about presence in the classroom, as opposed to behaviour management as ST1 described it herself. She did not believe she could do it and she did not. UT1 went on to say it was not just about ST1 there were others in the cohort who felt the same. That sense of the SM knowing so much and the ST feeling like could never live up to their expectations. She said, "You've got to have confidence haven't you, that you know what you're teaching?". As experienced teachers you have a whole host of knowledge, pedagogical ideas but as an ST you have not got that yet, so our expectations have to align and sometimes they do not; either from the ST themself, or the mentor.

## 6.3 Student Teacher 2

Student Teacher 2 (ST2) got an E in A-Level Geography and went on to study for a geography degree at a Post-1992 university, gaining a first-class honours.  ST2 was awarded the RGS Scholarship which not only gave him additional money (£27000 – other STs received a £25000 bursary) but also the support of the RGS throughout their year of training (Royal Geographical Society, 2018).  This involved additional mentoring and training days.  The process of application was rigorous and was designed to encourage our most able geographers to be geography teachers. Prior to starting the PGCE Programme ST2 has volunteered at their old high school for two days a week for six months.  He undertook two contrasting placements in Greater Manchester: Placement A was in a mixed comprehensive school north of Manchester and Placement B a Jewish school in Manchester.   ST2 was supported by University Tutor 3 (UT3) as their personal tutor.

ST2 was very clear about why he had chosen a university-led route into teaching.  He wanted a group of peers in the same situation as him to go through the experience of learning to teach.  It was interesting to hear him speak so clearly about why he felt this was a positive from the beginning. It was very clear ST2 saw his peers as important throughout the programme. He enjoyed getting to know everyone in the first few weeks of the course and saw them as a support network whilst remote from them and on placement.  However, this authoritative discourse of his peers also hindered his progress at times as they influenced how he viewed his second placement, where another ST had not had a positive first experience, and ST2 allowed this to affect his view on his second placement.

ST2 recalled receiving the name of his Placement B school.

> ...when you read out the results that I was coming to this school, basically, my whole world fell... and 'I was like, "Are you actually kidding?"  I remember you reading it out.  I just remember the [other]ST turning around looking.  I could see his eyes.  I made no contact with him because he knew how much I knew about this school, because of what he had told me.
>
> (ST2 Interview)

ST2 had a naïve view on this and took the word of the other ST.  ST2 was not aware of what else had happened with this ST on placement.  As a tutor on the programme, I

knew that the ST at this school for Placement A had struggled with taking criticism and feedback and therefore his opinion was skewed by his very personal experiences. ST2 went on to say

> … So, I kind of felt like if, literally, if I tripped up over a stone on the way in I would have been like, "Do you know what? I'm out". I was on a very, very short fuse when I came in, just because I was …almost stopping. I was like, "I don't want to be here. This is not what I wanted".  Basically, I'd convinced myself previously that I didn't want to be here from what I had heard from other people, and a lot of the people from the course, as well.  It wasn't just you that sat me down and talked about it. I had to basically clear that cloud of smoke.
>
> <div align="right">(ST2 Interview)</div>

I find the choice of words here really interesting as the notion of authoritative discourse and his own internally persuasive discourse are almost fighting against one another as if battling it out in his mind which is the most important.  ST2 went almost instantaneously from a confident practitioner to an ST who was really upset and tearful when he found out his second placement.  This influence of his peers, both positive and negative had a real impact on him but the key factor for ST2 was that he was able to work through the challenge and turn it into a positive.  ST2 also said that he trusted us (the university) in knowing what he needed and when.  His 'trust' in authority is what he saw as important.  However, the reality of the placement was very different.  ST2 spoke positively about his first impressions of the placement school, the staff and the pupils.

> Then I came in, and everyone here was just so lovely, and I was…straightaway, a big boost.  I was put at an advantage that my mentor is basically deputy head of the school, and head of department, and the person running the course is the other geography teacher.  So, I had a nice little influx of geography with the hierarchy that I'm serving under.
>
> <div align="right">(ST2 interview)</div>

How this changed during the programme was also crucial to his training.  He was able to make sense of the different voices and utterances despite finding things a challenge, and he was determined to be successful.  He was very articulate about this.  It was useful for ST2 to be reflective as he navigated his way through his thoughts and feelings, and he was able to really have his own internal dialogue about how he could succeed.  When he found he did not know what to do he knew who to ask, be it his peers, his university tutors or his mentors in school.  This is in contrast to other cases I have looked at.

ST2 recalled how he felt going from a school which had felt familiar, a mixed comprehensive school, not too dissimilar from his own high school to a school with a religious focus that catered for a particular community in North Manchester. He admitted feeling nervous about starting Placement B because of the religious nature of the school and because it was a religion he knew little about. He was honest in his view that had it been a more familiar religion he would not have felt so apprehensive because the familiarity would have been there. However, what was interesting was ST2's passion for needing to know more. He wanted to understand more about the community surrounding the school and whilst he did find it intimidating to start with, he came to enjoy and celebrate the differences. He explained

> Before you get to the school, you hit the community, and when you hit the community it's vastly different. So, you definitely associate yourself with a new area, and then you keep going in further into the community. This school is right at the heart of the community. So, you have to go right into the middle to come this school.
>
> Again, because of the community ... there's a lot of security in place should this school be put under pressure because of their religious outlook.
>
> Again, very different the idea that... they're here to learn, but they're also here to practise their religion.
>
> I've learnt this school is a real hub for producing the community, and keeping this community going, with the idea that these kids are the future of their community. Everyone here knows everyone, very much so. It took me a while to get used to the idea of clocking in, and clocking out of the community every day, and that's what I had to do.
>
> … Every day, you come in amongst the community. You're sort of made to feel like an outsider because you are an outsider.
>
> So, especially with my Year 10s, these guys… Like, it's weird. They know each other's shoe sizes, they know each other's… They've grown up with each other all their lives, they've had that same class all… They know everything.
>
> So, when you come in as a new person, you're not coming into 30 children, you're coming into a group, and you have to lead them.
>
> (ST2 Interview)

This extract from the interview with ST2 gave me a real insight into how an ST experiences their placement when it is different from their own prior experience. Their own circumstance and the context of the placement can cause challenges that we are not aware of unless we talk about them. ST2 put his trust in the university and was able

to navigate the initial discomfort and turn it into a positive experience. He was able to look beyond the immediate experience and think about his overall development, which is a mature outlook for an ST.

Whilst he spoke highly about his experience on Placement B, he also talked about feeling like "a bit of an outcast" on Placement A as it was an all-female department and Placement B was all male, so he felt more comfortable. Even though he initially felt like an outsider, he felt more supported by Placement B than Placement A. He felt he was able, and allowed, to make mistakes and learn from them rather than worrying about what his Placement A SM would say. He said the greatest thing he had learnt on Placement B was "that it's the department that makes the job". The sense of belonging is strong here and in complete contrast to how he had felt at the start of the placement whilst this is a different type of belonging it is linked to the experience of ST1. As ST2 grew in confidence regarding his own teaching ability he was able to navigate this, and his internally persuasive discourse became stronger, i.e. that he knew what he was doing, and was confident he was making the right decisions for his pupils and himself based on the different voices he was hearing.

When discussing what knowledge is needed for teaching geography, ST2 is aware of the context of his placement and is aware of how this affected what he needed to know. He was clear about the different stakeholders who were involved in his training, and he valued all of those voices. When reflecting on the initial weeks in university he said

> …I think it was quite clever; you said, "We'll drip feed you, as and when you need it, the information, what you need," and it was quite good.
>
> (ST2 interview)

He was reassured by the university tutors saying that they had adapted the course based on feedback from the previous cohort and he liked the transparency of this.
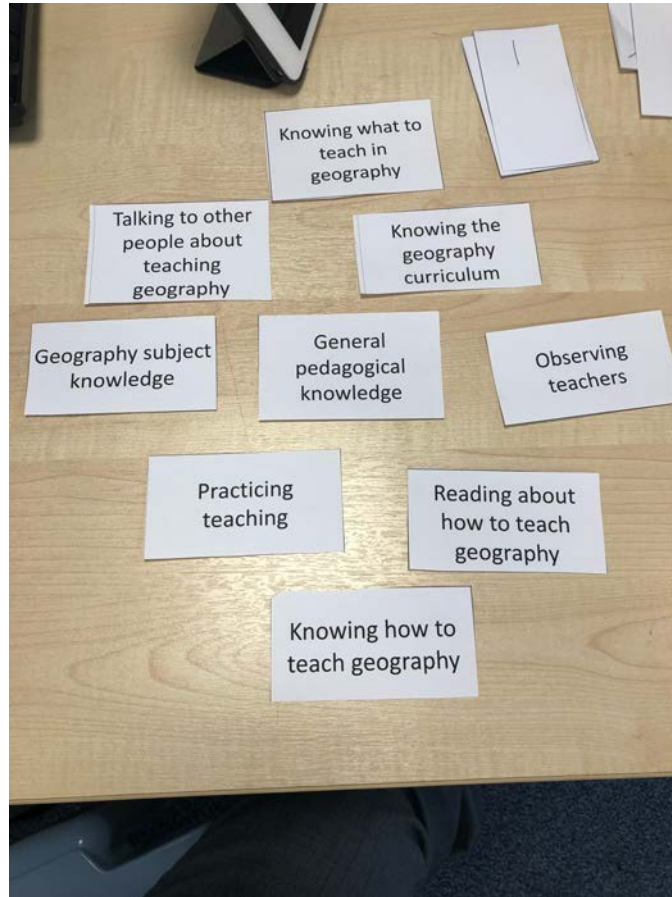
Figure 16: ST2 Card Sort 1

ST2's initial thoughts about what he needed to know can be seen in Figure 16. In the first few weeks of Placement A, he needed to know about what geography to teach. ST2 linked this to knowing the geography curriculum and also geography subject knowledge which he saw as all directly intertwined. When he explained why this was the case, he focussed on his SM and how the placement school were dealing with the changes to the curriculum.

When this data was collected in June 2018, the Year 11 cohort was the first to go through the new curriculum from Key Stage 3 which has been introduced in September 2014 (Department for Education, 2013b) through to the new Geography GCSE which was taught from September 2016 (Department for Education, 2014a). The school had seen a long period of reform that had an effect on all aspects of the geography curriculum and ST2 was really aware of it in this placement. ST2 said

> we came in just after the whole fluff up with the curriculum, and it's all in the air at the moment, I'm kind of waiting for it to settle because then once everything's settled, I then feel that, as a practitioner, I can start altering and moving it around.
> (ST2 interview)

The use of the term "fluff up" would suggest that he viewed curriculum reform as not planned well and not necessary. ST2 referred to this as a challenge, which it was, for this cohort as schools were unsure about the new curriculum and there had been a period of change which was onerous for all involved. The word 'fluff' though suggests that it is a mistake.

ST2 found that Placement A had not got the curriculum in place to share with him and therefore he was not sure what he was teaching from one lesson to the next and he wanted to know where they were starting from and where they were going to. This was a frustration many experienced teachers felt during the reforms between 2014 and 2018, so it is not surprising that this came across to ST2. This seemed to add to his view of the overall curriculum reforms being unnecessary.

There are a variety of authoritative discourses at play here. ST2 believes the DfE has not provided what he wanted in terms of exactly what needed to be taught. As this was not provided, he sought it from his SM who was not in a position to give it to him either. The DfE's authoritative discourse was not internally persuasive to him, and he was not able to assimilate the discourses he was hearing. ST2 wrangled with his needs and wants and did not place blame on anyone as he developed his internally persuasive discourses. He listened to the utterances he was hearing from others and whilst he was frustrated, he took each day as it came.

ST2 recalls his Placement A Head of Department planning her lessons two weeks in advance and trying to keep up. This meant ST2 also did not know what he was teaching very far in advance. When asked how he tried to overcome this, ST2 talked about asking as many people for help as possible. He saw himself as having no experience and therefore everyone else had more experience, and he took that to help him. He accepted the advice he was given, even if he did not really know what he thought about it.

In the second card sort, Figure 17, there was a change as the focus moved on to teaching. Knowing how to teach geography becomes more important, and then geography subject knowledge, reading about how to teach and practising teaching were all linked together to support his development at this stage at the end of Placement A. ST2 was highly reflective and in the interview talks about how he used literature to support his teaching and planning of his geography lessons. He wanted to grow his resource bank as he found it frustrating that he did not yet have it but is very aware this comes with time.
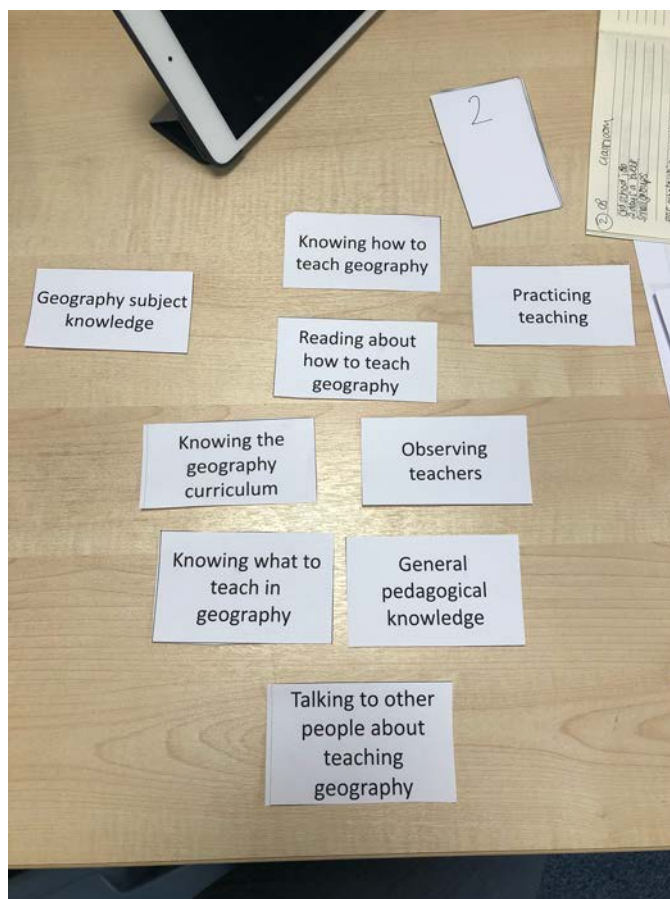


Figure 17: ST2 Card Sort 2

However, in Placement B, his mentors – both professional and subject - were in a position of authority and power as the Head of Lower school, and an assistant Head Teacher. The professional mentor is also a geographer. ST2 saw this as a positive as he felt they knew what he needed to know and would guide him accurately and effectively. He also mentioned that his university tutors put a positive spin on the changes to the curriculum and that it was a good thing to be training at a time of change. ST2 responds well to these authoritative voices as he saw them as supportive, through these interactions he is developing his internally persuasive discourse.

As ST2 started Placement B, the knowledge he felt he needed moved on to knowing how to teach geography, see Figure 19. He felt that from his experience in Placement B that the *how* was now most important. He compared his two placement experiences. He was able to reflect on the influence his mentors had had on his progress in teaching geography and how at the end of Placement B he understood what his Placement A mentor had been showing him

> … it wasn't so much as what she was teaching, she had a real emphasis on how she taught it … She's had ten years of resources; she can come up with ideas in two seconds.

> Her PowerPoints were absolutely unparalleled. They were top, top, top, top-class. They were brilliant. The lessons were fantastic.

(ST2 interview)
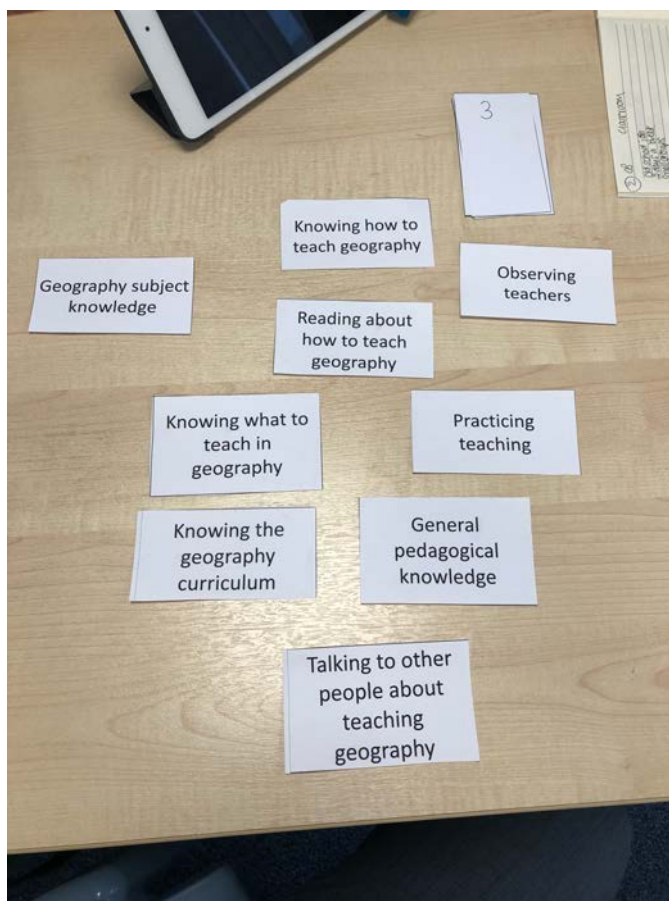


Figure 18: ST2 Card Sort 3

However, he went on to say that he felt "inferior or uncomfortable" when he tried to plan lessons as he would feel that he was not going to do as good a job as she did. This is where he found reading about teaching geography useful. It enabled him the opportunity to reflect on what he was seeing and hearing.

> because knowing how to teach geography was what my mentor was trying to teach me, and I would watch her do it... She was fantastic at what she does.

(ST2 interview)

ST2 explained that he found the reading he did around knowing how to teach allowed him to reflect on the different approaches to the pedagogical choices he could make, and this meant he felt more at ease and realised that he did not have to mimic his Placement A SM. He went on to say that it took him until the end of Placement A to realise that he had his own style of teaching which was different to his mentor's. After reading the literature his internally persuasive discourse allowed him to feel comfortable with this. ST2 uses the word "soothing" when he described reading about teaching geography. I like the idea that he is soothed by him coming to terms and developing his own beliefs about teaching geography. I find this particularly useful as often ST teachers are different from their mentors and we do not want them to copy what they do, so thinking about how we can get around that is useful. Figure 17 shows this clearly. This is what Bakhtin (1981) referred to as 'self-authoring'. ST2 was beginning to make sense of the utterances he heard and read and started to decide who was as a teacher. This also supports that idea of forming an identity and a sense of self which comes through in different cases. I will explore this further in Chapter 7.

ST2 talked about his Placement B school and how he welcomed observing teachers with very different teaching styles. He was able to see the same lessons being taught by different people and this made him realise he did not have to be like them, but he could be himself. By the end of Placement B, ST2 felt he had got a good grasp of how to teach geography and for him the focus was on really developing his geographical subject knowledge and understanding the geography curriculum, see Figure 19. This shows a mature attitude and again suggests that he was aware he was still learning and would continue to learn. In terms of his internally persuasive discourse ST2 is able to take all of the authoritative discourses he has heard and either accept or reject them. He is able to make sense of what was being asked to do and knew what he had to do and where he could push the boundaries of that discourse as he made it his own.
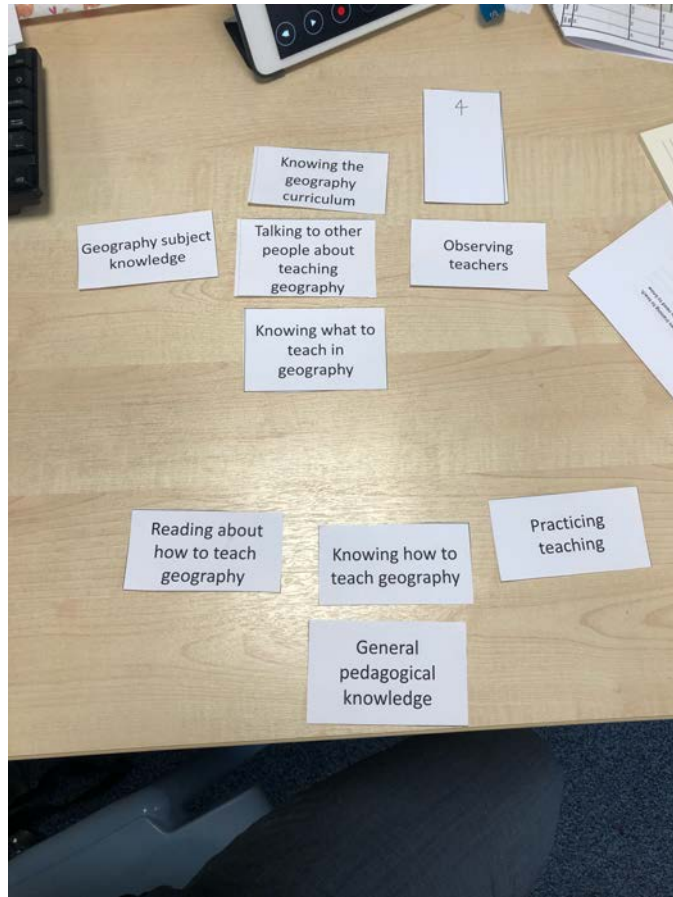
Figure 19: ST2 Card Sort 4

Subject Mentor 2 (SM2) has been teaching for nine years at Placement B and is now the Head of Lower School. ST2 saw this as a real positive as he liked the fact his SM had a leadership role as it meant he knew what he was talking about. I think it is also significant that when talking about the knowledge ST teachers need when learning to teaching geography that SM2 focussed very much of the holistic nature of teaching. When analysing the interview with SM2, he reflected on his own experiences as a PGCE student and compared himself to ST2. He was really impressed with how reflective and open to feedback ST2 was, and how this enabled him to move forward in developing his teaching practice. However, when I tried to get SM2 to talk about the knowledge needed, he found this really difficult. It was the only interview I conducted where he was not able to do the task as I intended, and it resulted in only one image of the card sort, see Figure 20. SM2 arranged the cards into two groups. He felt that observing teachers and practising teaching were most important and then general pedagogical knowledge, geography subject knowledge and knowing how to teach geography were all important. He felt that knowing the geography curriculum, knowing what to teach in geography, reading and talking about teaching geography were not significant as they

would happen anyway. This is really interesting as a Head of Lower School, SM2 was involved in whole school staff development and therefore inevitably would take a broader view on general pedagogical knowledge. In this case, he talked about behaviour management being important and in particular developing routines in the classroom to support teacher expectations. This is most probably influenced by his role in school and also the meeting he had to miss in order to take part in the interview!
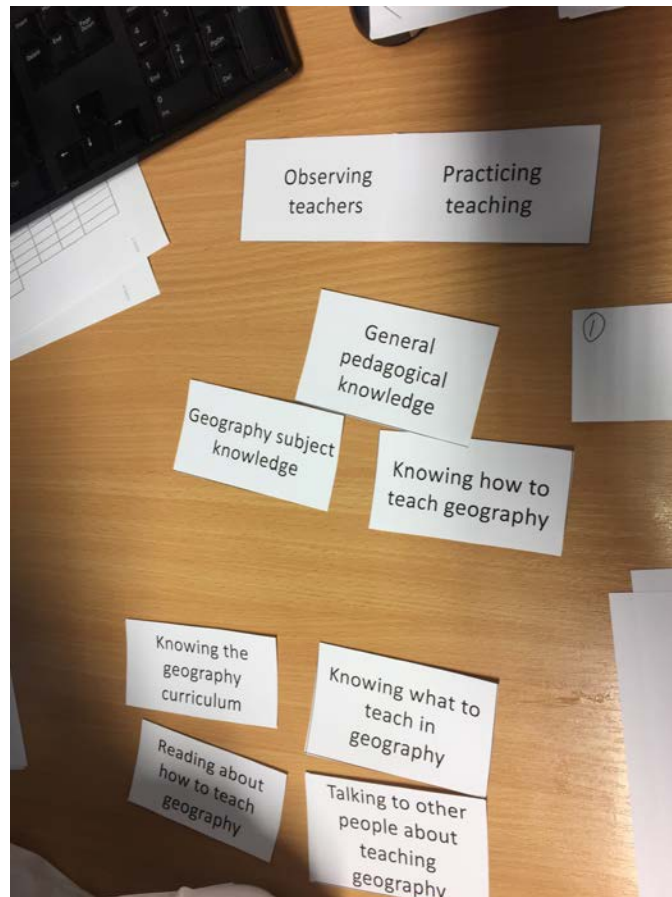

Figure 20: SM2 Card Sort 1

When discussing research about geography education, he thought it was more important to know your classes and be able to adapt your lessons to their needs. He described teaching as a tapestry that weaves all the elements together. This is not dissimilar the Bakhtin's orchestrating voices (1981; 1986). ST2 was able to weave those voices together. SM2 believed that there are some people who just have the ability to teach, and others do not. ST2 had the ability, their previous ST did not. SM2 found it harder to describe why ST2 was successful. This is often the case where a mentor is unable to breakdown practice to really consider why some things work and others do not.

SM2 did clarify that subject knowledge is important and did not want to underestimate that. He felt that ST2 has excellent subject knowledge and that pupils at Placement B wanted to test their teacher's knowledge they were teaching, that you knew your stuff. If you could answer their questions then you were fine, if you did not then they would be "hell in the classroom". ST2 prepared thoroughly for lessons, and this was obvious to both the class teachers and the pupils and therefore built relationships quickly with the pupils.

SM2 was really positive about ST2. This also came across in the recording of the lesson which UT3 observed. There is an energy to this feedback that is not felt anywhere else, and this certainly comes from ST2. ST2 wanted to know how to improve and actually asked them for their feedback. His enthusiasm and desire to succeed is evident every time he speaks. The lesson on super volcanoes was clearly engaging for the pupils, who became so involved that they started to be fearful of the future but evidently ST2 dealt well with this.

In this feedback, the strong bond between SM2 and ST2 is evident, and it is UT3 who starts to give more critical feedback. SM2 defends the choices that ST2 has made, and UT3 acknowledged that it was a really successful lesson. This idea that the SM and ST are a team and worked well together comes across strongly and that UT3 is more of an outsider is challenging but also important. The university tutor was there to make sure that the ST is being set appropriate targets. In this case, ST2 is highly reflective and did this himself.

ST2 was highly successful on the PGCE. He was able to overcome the challenges he faced through reflection and talking to his peers, whether they were STs or other teachers. He was very aware that he did not, and could not, know everything and this allowed him to be comfortable with making mistakes and learning from all the experiences he had. ST2 got a job in his old high school, and this spurred him throughout the latter half of the PGCE as his desire to do well was linked to getting his first teaching post.

What is significant for ST2 was his ability to orchestrate a range of voices. His ideological becoming has selectively assimilated the words of others to build an internally persuasive discourse about his role and identity as a teacher. He is authoring himself positively and has maintained his awareness of his identity as being dynamic, open to change and growth.

## 6.4 Student Teacher 3

Student Teacher 3 (ST3) got a B in A Level Geography before completing her Geography degree at a Russell Group University where she achieved a 2:1. She went on to do a master's degree in journalism and worked in journalism and personal relations for a few years before starting her PGCE. For this case study, it was not possible to interview the SM, but ST3 adds a significant dimension to understanding the knowledge needed for teaching geography. I did record the lesson feedback between ST3, Subject Mentor 3 (SM3) and University Tutor 2 (UT2). ST3 was supported by UT2.

ST3 undertook two placements in contrasting schools. Placement A was a Church of England school in a town north of Manchester and Placement B was a boy's inner city comprehensive school in Manchester. She spoke positively about her experiences on teaching practice during her PGCE and confidently described what was important to her in terms of different types of knowledge she needed and how this changed over time. She was able to articulate what she learnt throughout the programme and was aware of how this changed at different points in the course. When describing her experiences, she was very clear about the moments that enabled her to make sense of what she needed to know and do as a geography teacher. When looking at this interview through a Bakhtinian lens, ST3 was clearly led and influenced through a range of authoritative discourses which she tried to understand and appreciate throughout her training, as she became more aware of her own values and beliefs she developed her own internally persuasive discourses.

When asked what knowledge is important at different points of the course ST3 saw knowledge in different ways. As part of the interview, I asked ST3 to do a diamond nine of what knowledge she found important at the beginning and end of Placement A and then again at the beginning and end of Placement B. ST3 talked about knowledge

confidently.  She saw subject knowledge as more than just knowledge of the subject but about the curriculum, about theories of learning and all of the things you need to know to be a teacher.  She was able to see the holistic view of knowledge but then was also able to break it down and decide what she needed at each stage.  She could articulate how her own understanding changed throughout the placement, influenced by those around her: SMs, university tutors and her peers. She was not aware of how unusual this is for an ST.

The most significant aspect of this interview was how ST3 referred to the 'news'. She talked about needing to know the news of the pupils in order to be able to teach them geography.    This   was   particularly   important   on   Placement   B   where   she   felt understanding the context of the school and the pupils was crucial.  This also linked to her own context and background.   Having worked in journalism and the news in particular, she was hyper aware of how the 'news' affects everyday life, and she was able to articulate this with regards to how the pupils might learn geography.   In geographical term, we often talk about making geography relevant.   The Geographical Association ran a project between 2006 and 2011 focussing on making geography relevant to young people (Geographical Association, 2009; 2011b).   In my opinion, this ability to understand the complexity of this is highly skilled.

Figure 21 shows ST3's first card sort.  She talked about the geography being the most important aspect of learning to teach.  She had not studied geography for three years and felt she needed to make sure she was aware of the knowledge needed for teaching; she talked about getting this knowledge from a variety of sources.  For example, reading about teaching, observing other teachers, and talking about teaching geography. She also mentioned the importance of social media.
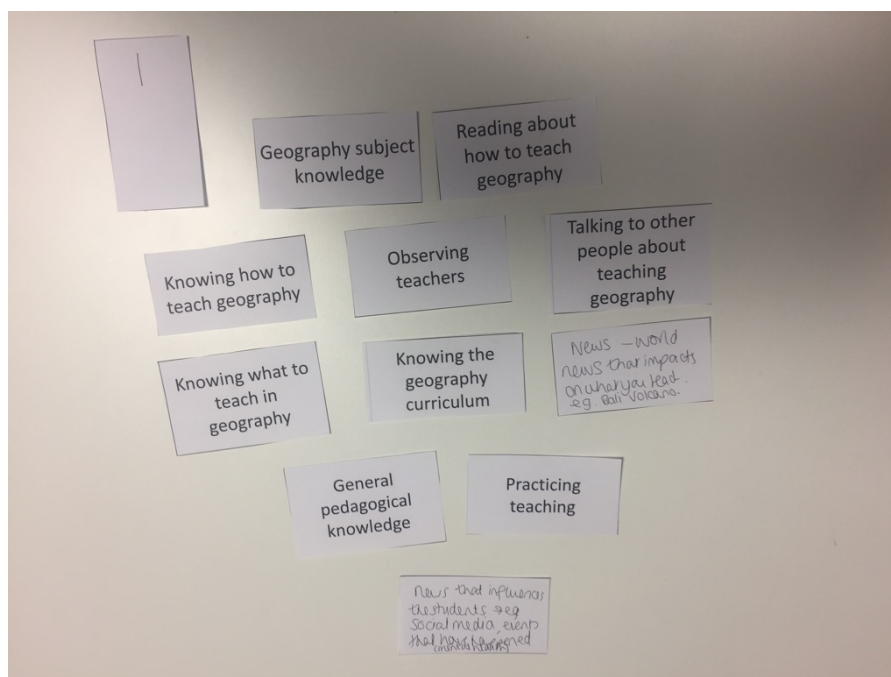
Figure 21: ST3 Card Sort 1

In the interview with ST3, she spoke about how she initially sought support from social media, in particular Twitter. ST3 used Twitter to find out about what to expect on the PGCE, to search for ideas for lessons and where to go to get the knowledge needed to teach geography. This was something we encouraged at the start of the course as this was a way of students finding a like-minded group. STs were asked to create a professional account and start to follow at least ten geographers. Not all students did it but those who did found it useful as ST3 mentioned:

> We like Twitter because it tells us about this [geography]… it was telling us where to find our knowledge from.

(ST3 interview)

Whilst it might not seem obvious at first, I see social media as a form of authoritative discourse. Twitter in particular is seen as a way of finding out about the latest ways to do things in the classroom and there are debates about different pedagogies and methodologies. For some this is then taken as the only way to do things. It can be a powerful tool if used with a bit of caution. It can be minefield of different authoritative discourses and can help, or hinder, finding your own internally persuasive discourse. Many ST teachers use social media as a way of supporting their learning and finding more experienced teachers, but many also find it intimidating and overwhelming. ST3 could recognise that Twitter was not always positive, but it allowed her to find current

ideas from other teachers and for her this was an important community as she was able to reflect on what she was reading to develop her own internally persuasive discourse.
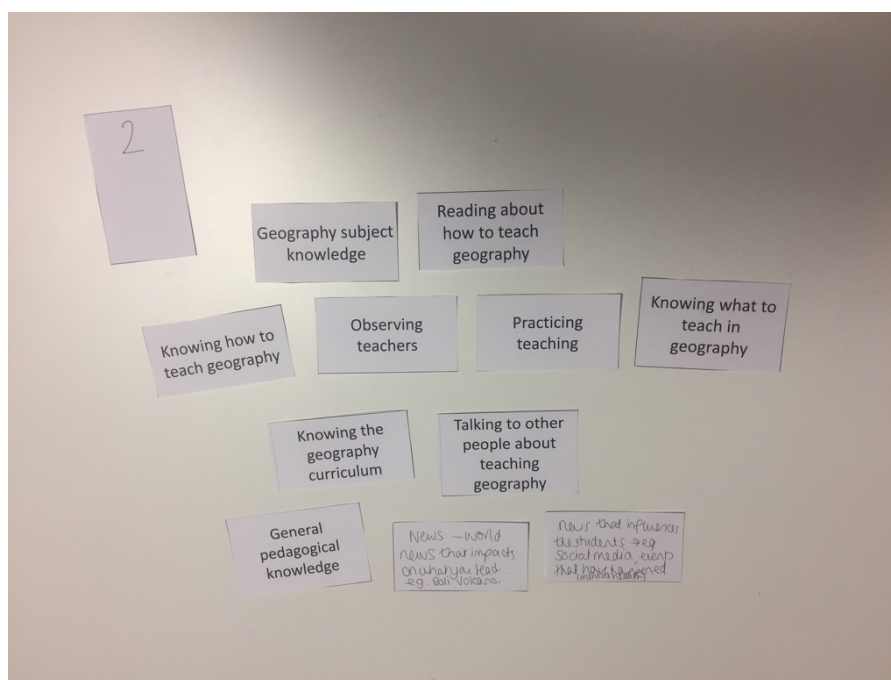


Figure 22: ST3 Card Sort 2

What was also significant is that whilst ST3 mentioned the news as being important at the start of Placement A, she placed that at the bottom of the ranking as she did not feel it was as relevant in that school.  ST3 added two cards with types of knowledge she felt were important.  They say, "world news that impacts on what you teach" and "news that influences the students e.g. social media, events that have happened, mental health". This was because she felt she knew what this 'news' was to these pupils as they were from a similar background to her.  As Placement A progressed, geographical knowledge was still really important and now practising teaching was also a feature. ST3's reference to the 'news' as being what the pupils found relevant in the world referred to international, national and local news which can then be related to the curriculum, and what was being taught whilst keeping it relevant to the students (see Figure 22). As an experienced teacher educator this is significant because ST3 was seeing beyond the curriculum she is being asked to teach.  She was not seeing the curriculum as a restrictive authoritative discourse, rather as a starting point for developing the pupils' knowledge and understanding of world issues and how this affected or will affect their lives.  ST3, very early in her teaching career, appears to be able to navigate these authoritative discourses and adapt to the needs to her pupils with a strong internally persuasive discourse.

As ST3 started Placement B, there was a shift in her thinking around knowledge. ST3 then focussed on the pupils themselves. She did not necessarily see them as an authoritative figure, but they were important to her, and their views and opinions were crucial to her experiences. ST3's background in journalism, as well as geography, had an impact on the way she developed her own internally persuasive discourse. She talked about geographical knowledge but also about the context of this knowledge. Being aware of what the pupils' needs are is an important part of learning to teach and ST3 understood this. The card sort in Figure 23 shows how ST3s ideas of the important of different types of knowledge have changed.
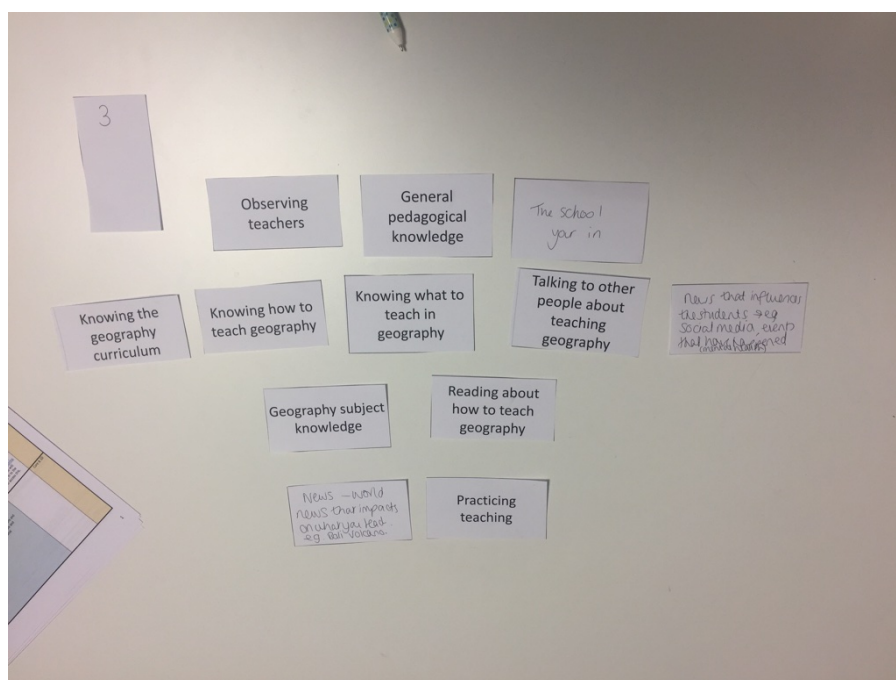


Figure 23: ST3 Card Sort 3

ST3 navigates this discourse as she gets to know the pupils. This was particularly relevant to her in the second placement which was in a boys' school where fewer than 5% of pupils are white and over 38 different languages were spoken. This took her out of her comfort zone, and she felt she needed to know what captured the imagination of these pupils became important to her. ST3 articulated this well as she described it as the 'news' that the pupils find interesting but on examining this further she was also describing their culture, interests, music etc. By understanding the pupils, she was then able to plan her lessons and the geographical knowledge with this in mind. This made her more aware of their needs and seemed to make her more successful. She also described how she was daunted by the prospect at the beginning and felt like an

outsider going into a community to which she did not belong.  This is similar to ST2 and will be explored further in Chapter 7.

It is also clear in ST3's interview the importance she placed on building relationships with others.  Whilst I do not consider this to be an authoritative discourse as such, the different relationships she discusses are for example: her UT, SM, her peers on the PGCE and her peers in school are significant in influencing her in making sense of the different voices she heard. She is able to consider

> One's own discourse and one's own voice, although born of another or dynamically stimulated by another, will sooner or later begin to liberate themselves from the authority of the other's discourses.
>
> (Bakhtin, 1981:348)

This is what Holquist (1990) calls 'dialogism' in action.  The process is complex as there are a variety of unfamiliar voices influencing the ST in this case.

In the interview with UT2, we discussed the challenges ST3 had faced on placement.  A period of illness at the start of Placement B meant that ST3 felt under pressure.  She did not like taking time off school and felt she was not making as much progress as needed.  She also felt she was taking up too much time from her mentor.  When ST3 experienced this, she turned to her university tutor for support.  The role of the university tutor can be difficult.  As a university tutor myself, I am aware that the role is often to mediate between the ST and the school mentors.  In this case, ST3 sought advice from UT2.  ST3 talked about her university tutor and the support from the university being important, especially when things happened in school, and she was not sure how to deal with it.  In Placement A, her SM had to have time off school for a few weeks and there was no one to mentor her in the department so UT2 was able to step in and support.  In Placement B, being ill for two weeks was something ST3 had never had to deal with before and UT2 was able to reassure and support, particularly because the period of ill health had come at the start of the placement and so she had not had time to establish herself within the department.  ST3 said

> The teachers there started to become so important. I changed how I was thinking about things entirely after I came back from being poorly. In a way I was kind of glad I was poorly because it made me think about things very differently. I literally can remember thinking to myself, "Stop being a mard." [Laughter] Not because I was poorly, but because of how I was previously in school and being so worried. I

was like, "Just stop it. You are a teacher. You need to be able to be a teacher in this school."

Part of ST3's concerns were also about the context of the Placement B school. For ST3, the context of her Placement B school had more of an impact than Placement A. Placement A was a Church of England school. Most of the pupils are from a similar background to the ST and so she felt comfortable that she understood where the pupils were coming from and therefore that context was not as important to her. However, on Placement B, ST3 felt that the context of the school, and the background of the pupils was very different to her own and that without understanding the pupils' needs she felt like an outsider.

> "Oh no, the boys are going to be really horrible to me". It's because I have literally never been in this setting before, can I relate to them? I can remember I was talking to my partner, and I was like "I have nothing to relate to these students. I am a white, middle class, posh woman and I have nothing to relate to these children".
>
> (ST3 interview)

ST3 was very honest about her initial concerns about teaching in a setting where she did not know very much about the background of the pupils. She then set about making sure she asked questions and built relationships with them. She talked about getting to know their interests and their 'news'. Because of ST3's background in journalism, this notion of news is not something I had previously considered. However, that relating to pupils is really important and is another authoritative discourse that shapes the geography that is taught in this school to these pupils. ST3 thought about the wider picture as well as the geography and so found out what music they listened to, what they did in their spare time etc, and the religious aspect of their lives and how this influenced their beliefs. She was able to use this to make her lessons more relatable and therefore build the trust and understanding with pupils. By the end of the placement, she felt comfortable in this setting as she had built a mutual respect with the pupils.

When asked about the knowledge she needed at the start of Placement B, ST3 added 'the school you are in'. She was really clear that understanding the context of the school was crucial for both her to succeed and the pupils. The context of Placement B has

several layers that needed to be understood. It was a boys' school. ST3 needed to know how or if she needed to use different pedagogies in her teaching. This meant she put observing and general pedagogical knowledge as the most important. She wanted to understand the context in order to know how to teach. For ST3 the pupils were at the heart of what she wanted to know, and this is where the 'news' is important.

Figure 24 shows the final card sort. ST3 put observing teachers, knowing how to teach geography, talking to others about teaching geography and the pupils' 'news' at the top. This indicates that she was still highly reflective at the end of Placement B which also fits with what SM3, and UT2 indicated in their interview and the assessment documents.
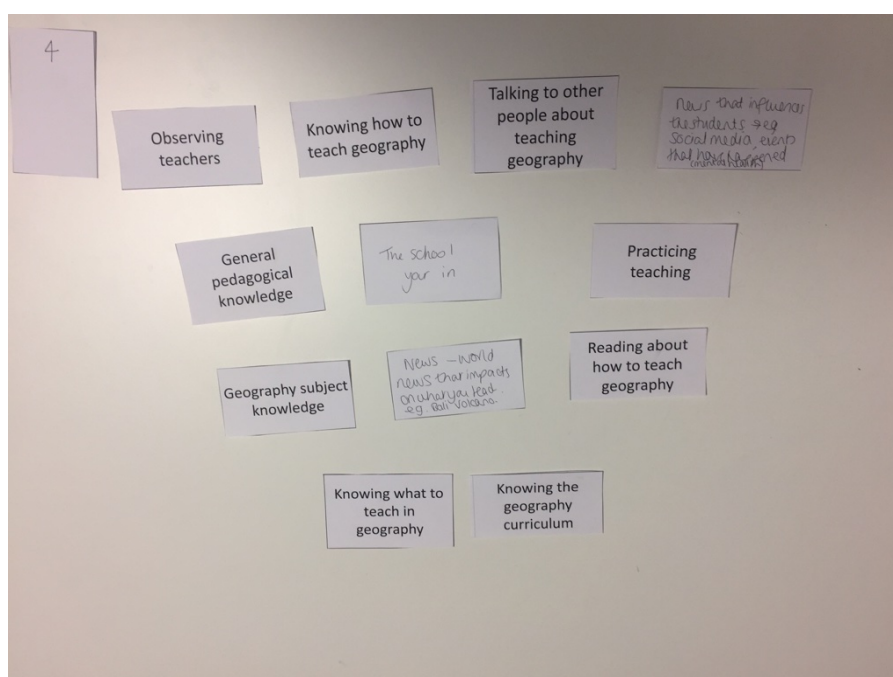


Figure 24: ST3 Card Sort 4

I was not able to interview SM3, but I was able to record the lesson observation feedback which was given along with UT2. I have also viewed ST3's final assessment report from the school which gives me an insight into how SM3 felt about her progress.

> [ST3] is a very professional colleague who has integrated well into the faculty and always displays excellent professional conduct. She responds very well to feedback given and is very resilient when things do not go to plan; always keen to improve.
>
> (SM3 – Extract from Review 5 document)

Her professional mentor commented that ST3 had

> approached all elements of her Block B teaching practice with a strong sense of professionalism and capacity to learn. She asks intelligent questions about how to improve her practice and ensures that her lessons are well planned and delivered

in a calm manner. [ST3] is a strong addition to the teaching profession, and we wish her well for her future teaching career.

<p align="right">(Professional Mentor comment in ST3's Review 5 document)</p>

The positive relationship ST3 had built with SM3 is apparent through the documentation and in the lesson feedback. ST3 is clearly able to reflect on her teaching and most importantly on her impact on the pupils. In the recording of the lesson feedback, this came across as SM3 defending the choices ST3 has made, in a similar way to ST2 and his mentor. There is a feeling that they need to explain why the class is as it is, why behaviour is as it is etc. This does not happen in all cases. The following extract from the lesson feedback shows the ongoing dialogue between the ST and the SM.

SM3:      The actual task itself was fine, like, it was a good task getting them to think causes, consequences. It was great you said, "Well, what's a consequence?" which we'd talked about before, giving them specific examples.

ST3:      Getting them to think of those examples, yes.

SM3:      Yes. So, no, that's great, saying, "Well, if you said what's the consequence of you being late for class?" you know, giving them real life examples, things we've talked about before. The actual task was good, it was just- so, one of the trickiest things when you're learning is language. It does become though, once you've practised it and once you make yourself do it, it quite quickly becomes second nature to be able to take that and- or take that, that's a good one. "Stress on the local land which can degrade." You will be able, in the not so distance future, to take that and straightaway-

ST3:      People- yes.

SM3:      Change it into, "The local land is whatever." So, now I've put myself on the spot. I'm not doing a very good job of it.

ST3:      I know what you mean, yes.

SM3:      You will. It's something that comes, but you do have to, at the beginning-

ST3:      Be really conscious, yes.

SM3:      Teach yourself to do it and be really conscious of it.

ST3:      Yes, absolutely.

SM3:       Even now, textbooks that are made- [XXXX] and I were looking at Key Stage 3 textbooks that have been released just recently and the sample material, I was like, "We can get a master copy to give us ideas, but there's no point ordering these. They're too…" I don't know if you've seen the new Hodder ones. They're really difficult for some of our kids to access. So, we constantly are working with language.

ST3:       Yes, absolutely. I know it's really big to be able to help them understand exactly what they're doing to be able to do the task in the first place, so, yes.

(Extract from ST3 Lesson Feedback)

The feedback goes on to then discuss further strategies for supporting language development with these pupils, two-thirds of whom have English as an Additional Language (EAL). It was a really supportive meeting and ST3 is able to use her internally persuasive discourse to appreciate all the advice she is being given.

ST3 had a very well-developed idea of what geographical knowledge was both to her and her pupils.  Whilst the interview focussed on this idea of 'news' and making the geography relevant there is a lot more going on than could be seen in the surface.  As an ST, being able to appreciate the nuances of different groups of pupils and the need to teach them differently shows a highly skilled teacher.  ST3 was able to orchestrate those voices and realised that she needed to adapt and develop her understanding of pedagogy and geography as well as who she was a teacher.  She was self-authoring her practice as she continued to reflect on all of the utterances she heard.

UT2 was personal tutor to ST3.  She talked about the background of ST3 and how she was not sure to begin with if she could work within children from a challenging background.  She has created a ceiling for herself – UT2 felt that ST3 felt she could only work in schools where she felt comfortable as it fitted into her expectation of teaching, as it was similar to her own.  UT2 felt it was part of the role of the university to help the ST break through the ceiling and placing her in an unfamiliar setting helped her in the end to realise that she could do.  I am not sure ST3 saw it like that at the time but on reflection she was able to see that it pushed her boundaries, and she was a better teacher because of it.  ST3 mentioned feeling like "a posh white woman" and this has obviously come up in conversation with UT2 as well as UT2 said that ST3 thought could only work in certain schools because of this.  This was part of her identity and UT2's

response to this was to place her in a school, with an experienced mentor, who could make her see that she could do it.

## 6.5 Student Teacher 4

Student Teacher 4 completed a degree in Performance and Media, achieving a 2:1. I remember interviewing ST4 for the PGCE with UT2. Her application was quite unusual in that she had a GCSE in Geography, but not an A Level. However, she had worked as a Teaching Assistant for two years in two different schools. One of which was a secondary school, working mostly with the Head of Geography. This led her to start to study A Level Geography but she did not complete it as the A Level specification changed and so she did not sit the examination. ST4 was a high achieving student who loved performing and so was advised to do a BTEC in Performing Arts. This meant she had limited choices on what to do next. I can distinctly remember speaking to UT2 and our feeling was that she had received poor advice and that we should take a chance on her. After the BTEC ST4 also did a Professional Acting Diploma. When ST4 undertook her PGCE she was able to complete a face-to-face subject knowledge enhancement course (SKE) prior to the start of the PGCE. This was run by a range of geography university lecturers and geography teacher educators in our HEI. It was an 8-week course that tried to cover as much of the geography A Level curriculum as we could in the time. This was funded by the DfE, and students got a bursary of £200 per week to take part. The geography SKE funding ended in 2020.

ST4 completed Placement A in a large 11-18 Church of England school near Bolton and Placement B in an 11-16 comprehensive school on the outskirts of Huddersfield. ST4 applied for both schools' direct routes and university led routes in to teaching. She felt that the university route would give her more support in her subject knowledge. She described support as being from not on the university but her peers - the Fridays back in university. She said

> Being together as a group and talking to each other both things that were going well and things that were stressing us out. That support was invaluable I feel for a lot of us.
>
> (ST4 interview)

ST4 was supported by UT3.

At the start of the interview, ST4 explained that the taught university sessions she found most useful in September were those based around subject knowledge. The fieldtrip for example gave her practical ideas for occupying pupils and keeping them safe whilst away from school and the session on Digimaps and Geographical Information Systems (GIS). She explained that she had not really understood GIS on the SKE, and this helped her as she had never heard of GIS prior to start the programme.

I asked ST4 about whether she felt the SKE had prepared her for teaching geography.

> I felt like a lot of the SKE I sort of – because it's pretty intense, wasn't it? Up until about two o'clock in the afternoon I had filled two notepads. I was writing so many notes and then I kind of got information overload and I had to rein it in a little bit.
>
> Then when we went away and did our own work, those four weeks where we were doing our own tasks, that's when I was sort of able to catch back up on the bits. Like the last hour of the day when my brain wasn't absorbing anymore. I learned loads on that, but I think I probably had the most to learn out of everybody in that group. That really helped me.
>
> Do you know what? I've come back to some of those tasks since and pulled them out. I know you said that "If you want to do a PowerPoint rather a report do it, and you might be able to teach it." I've not used them, but I've kind of adapted it that I made in the summer when it was all fresh and I knew what I was talking about. That's been really interesting.
>
> (ST4 Interview)

The interview then moved on to the importance of different types of knowledge. ST4 found it easy to decide what she thought was most important but harder to decide on what was least important as she felt they all had relevance. The card sort can be seen in Figure 25. ST4 felt that observing teachers was the most important, followed by geography subject knowledge and practising teaching. Subject knowledge was interesting here as I expected ST4 to put this at the top. In terms of Shulman's (1986) typology of knowledge, he suggests that content (subject) knowledge and pedagogical knowledge are important and link together to form this pedagogical content knowledge. This is certainly worth exploring further in Chapter 7 as this was the initial aim of this research.
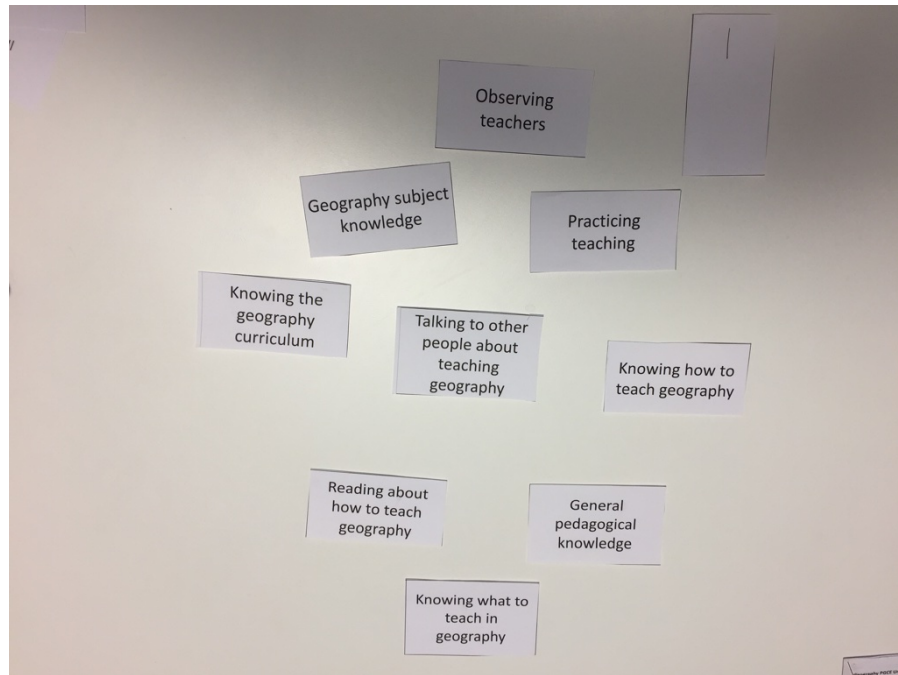
Figure 25: ST4 Card Sort 1

ST4 went on to say when she first went into Placement A she was concerned about her subject knowledge.

> For example, I was teaching year eight hazards [which] was the first thing that I physically taught myself. All I was concerned about, was knowing hazards inside out…I was like, "I've not got to think about that today. I've got to think about hazards." Knowing my stuff.
>
> Yes, I'd say maybe the subject knowledge of the lesson that I was teaching was really important to me because my first few lessons that I picked up were year eights and they asked tonnes of questions. Like crazy questions that you wouldn't even think of. I was like, "I cannot not know the answer." I was obsessed with knowing everything there was to know.
>
> That kind of paid off a little bit because my subject mentor right from the get-go in my observations she was like, "You wouldn't know that you didn't have a geography degree. You know your stuff." I was thinking, "I know my stuff about this, but I don't know it about everything else." I was trying to keep that up.
>
> (ST4 interview)

ST4 referred to this idea of keeping one step ahead of the pupils and it is not dissimilar to the other cases where the STs have had to learn geography in a different way. The difference here is ST4's starting point. She was starting from the very beginning and whilst you can spend this amount of time preparing for one, or maybe two lessons sustaining it over a longer period of time may be more of a challenge.

In the initial part of Placement A, ST4 progressed well and her planning and teaching improved.  This meant that the knowledge she needed moved beyond just knowing the subject knowledge to what to teach and the pedagogy needed to teach it.  As the amount of planning increased the knowing the curriculum also became more important. In the second sorting activity (Figure 26) ST4 could not really put them into a diamond nine as there were almost two groups.  She found that the general pedagogical knowledge, knowing the geography curriculum and knowing what to teach in geography came alongside practising teaching and observing teachers as well as geography subject knowledge.
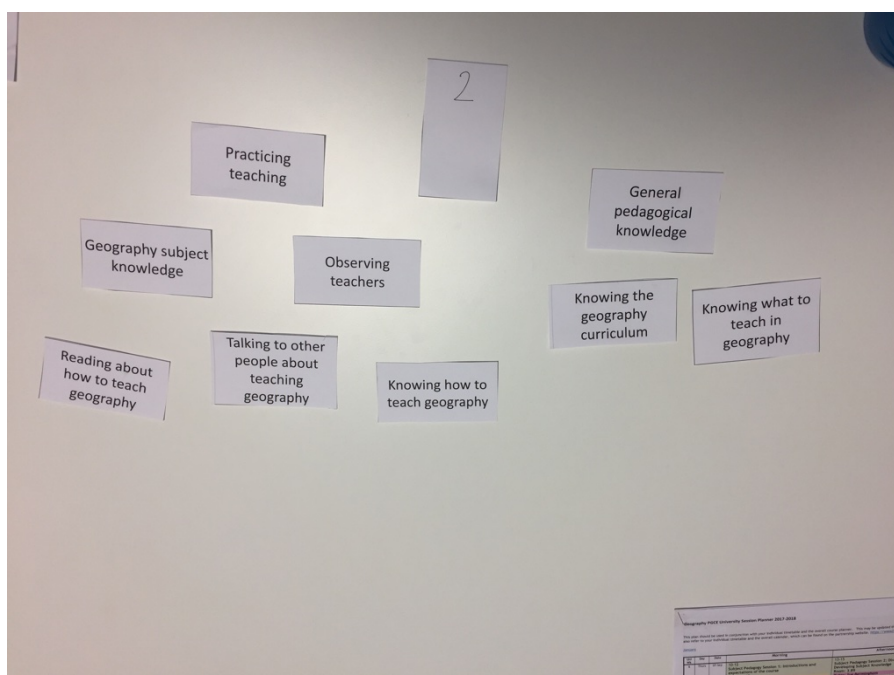

Figure 26: ST4 Card Sort 2

What is also useful to consider here is that with ST4's background in performance she still found it daunting teaching her first lesson. She described herself as a confident person, but she said she found her first lesson as "terrifying" but once she had done it was fine.

On her Placement A ST4 was given a lot of autonomy over what she taught, and she also had experience of teaching A Level Geography.  The school was supportive, and she worked extremely hard to overcome her lack of geography knowledge.  ST4 was also very reflective and was able to use everything she was learning both from her mentors in school and the university sessions to develop her practice.

As ST4 began Placement B she found that she needed the same knowledge but that she did more reading as there was a university assignment due. She found that in her second placement there was less reliance on textbooks and the lessons were more engaging and "more animated". For example, when teaching erosion.

> How boring is erosion? Yet they were rattling stones and making dust and all this. The way the teacher explained it was fantastic. It was right at the start when I was observing. I was sitting there scribbling down, "This is how I am teaching erosion for ever." It was so good.
>
> (ST4 interview)

The card sort for the start of Placement B is in Figure 27. The two groups of cards have become even more distinct as ST4 thought of general pedagogical knowledge, knowing the geography curriculum and knowing what to teach in geography as a distinct group that were constant throughout the programme. ST4 felt this remained the same for Placement B as the two distinct groups apparent.
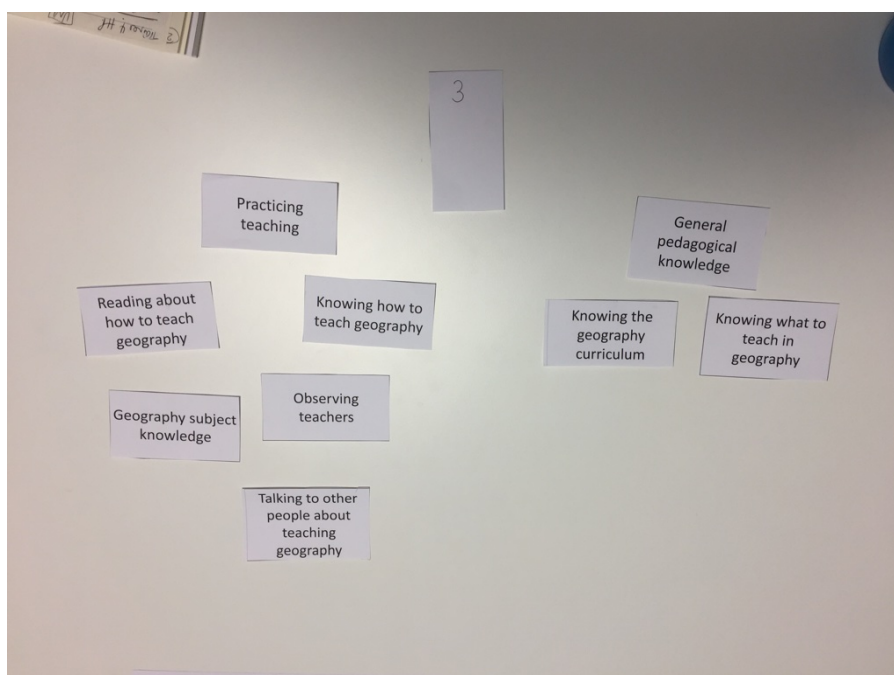


Figure 27: ST4 Card Sort 3

Reading about geography and how this became more important because of the assignment being due was something I found interesting. When the programme was designed the university assignments are planned to fit in with where the ST is at that point in the course. ST4 explained that she did her assignment about cross-curricular teaching.

> When I started to read about it and research it…It was just like really obvious. I kind of understood why I was doing things a little bit more. Rather than, "I've been

told to teach this. This is what I'm going to teach." I kind of made a few more links. I found it more interesting then and then I was able to be more creative in lessons.

(ST4 interview)

This is a useful example of ST4 developing her internally persuasive discourse. She could see all the utterances coming together and make sense for her as she progressed through the PGCE.

ST4 was really clear that the type of knowledge she needed continued in this way. All aspects of knowledge were important, and she knew she needed to continue working on them, even as she continued as a Newly Qualified Teacher (NQT) and beyond. She explained that she would need to focus on different aspects of professional knowledge on different days depending on what her priority was.

> Anything to do with GCSE you've really got to know, not the curriculum, but the exam spec[ification]. They're preparing. They're doing last minute revision lessons and preparing for their exams. It's reminding them like, "Right, these are what these command words mean. This is what you're being asked to do." You're probably teaching them more about the exam spec and technique than you are about subject knowledge, do you know what I mean? The content is there, you just need to remind them how to answer questions. I'd say that that then escalates that one.

(ST4 interview)

The issues surrounding geography subject knowledge need exploring further. ST4 is aware that this is going to continue to be an aspect of her practice she will need to work on. She was also aware that it would be down to her to convince people – professionals – that she had what it took to be a geography teacher. She said

> I think the more I learn, the more I realise I didn't know before, but I have to say that because I was aware that the geography knowledge was probably my short falling at the start, I knew that was going to be the hardest thing for me, I felt like a little bit of an underdog. I had in the back of my head, "I can't let that be my defining feature."
>
> I got graded outstanding in block A for my subject knowledge. That carried all the way through to block B. That was just something that I was like, "I can't let this slip. I can't let anybody know that I am not historically a geographer. I need to keep up that front almost."

(ST4 interview)

ST4 being graded as outstanding for subject knowledge is an interesting one, especially as we no longer grade in this way. It is so dependent on what you are teaching and to whom but in the case of ST4 she saw this as positive encouragement that she was doing

well, and this made her more determined. She was aware that this was a challenge. However, my concerns remain in terms of how someone knows if they are teaching the right geography. I am not able to really explore this here, but this is another way this research could be extended as we have an increasing shortage of geography teachers.

For this research what became increasingly apparent was ST4's performance background and how developing her identity and beginning that journey of self-authoring supported her in the PGCE. The following extract from the interview demonstrated this passion, confidence and drive in what she was doing. ST4 was one of the first STs of this cohort to get a job. She was offered a job in a high achieving mixed comprehensive school.

> JB:                  Your performance background; do you think that has an impact? Or not?
>
> ST4:                 I think so. Yes, that's how I got my job. I went in and one of the first questions they asked me was, "So, you've got a degree in performance and media, what makes you think you're going to be a successful geography teacher?" I was just like – you know when it's one of your first questions? I had in the back of my head you and Sue saying at the start of the year, "I don't know if you're going to struggle to take a job. Do we take this risk or not?" I was like, "I need to get a job."
>
> I just said, "Do you know what actually, I'm quite animated and I feel I can keep people interested." I don't learn by reading and then writing answers so that's not how I teach. If I can get someone to remember something, it doesn't really matter how I've got them to remember something. It's something that they've learned and whatever. They seemed to like that.
>
> I think I got that job kind of on a personality basis. Me going like, "I've done this, and I've done that. This is the feedback I've got." They only saw me teach for 20 minutes but they were happy with my subject knowledge.
>
> (ST4 interview)

When asked who had had the biggest impact on her during the year, she immediately said SM4. SM4 was in her second year of teaching, having completed her PGCE in the same HEI. This was the first time SM4 has mentored an ST. The Head of Department was supporting SM4 in mentoring and had attended the training as well. This was part of the support put in place to help SM4 in her role in mentoring. SM4 also did not have

a full geography degree.  Her degree was a joint honours in Geography and History. When she first started teaching, she had some history classes as well as geography. ST4 found this both helpful and reassuring.  ST4 said

> we worked really well together.  She didn't have a geography degree and seeing how good a geography teacher she was and how much she knew about the subject.
>
> (ST4 Interview)

ST4 saw her SM as the authoritative discourse.  She saw her as successful in her role and she had succeeded at what ST4 wanted to achieve i.e. to have enough subject knowledge to be a geography teacher.  I can remember discussing with colleagues at the time whether it was a good idea for ST4 to have a mentor who did not have a geography degree, but we decided that it could be a positive as that mentor would know exactly what the ST was experiencing.  SM4 was able to give ST4 strategies for learning the geography prior to teaching.  SM4 commented on this in the interview.  When asked about being a Recently Qualified Teacher (RQT) and mentoring an ST SM4 said

> SM4:    I loved it because I'd been in [ST4's] position. I kind of drew upon everything that was told to me. Then even since, obviously I've still got lesson observations, things that [Head of Department] is telling me, I'm making sure I'm passing that forward.
>
> JB:      Did you think then it was a good thing that you've only been teaching two years? Do you think that was a positive?
>
> SM4:    Yes, I think it was because I'm aware of how [ST4] is feeling. I went to this lecture thing on – what do they call it – teacher amnesia. How the longer you teach, you forget what it's like to be a student teacher.
>
> (SM4 Interview)

We often hear, anecdotally, from STs that their mentors have said that they will be tough on them because they had it tough themselves on their PGCE.  SMs who are more empathetic tend to be more successful.  However, this is also a fine line as if you are too kind then the ST can also not make sufficient progress, but for different reasons.

SM4 had that empathy as she could remember how it felt to be overwhelmed when asked to do things.  She went on to explain how understanding that if you ask an ST to make a last-minute change to a lesson – something you could do yourself in ten minutes might take an ST four hours, or more.

SM4 set out what she felt an ST needed to know at the start of the placement. This was very much about the school policies, including behaviour. She felt this was important as the pupils will try to test any new teacher, and the ST needed to know what to do about this. Then, after this, a basic understanding of geography was important. I found this really interesting. SM4 went on to explain that she felt you did not, and could not, know everything but that as long as you had time to prepare then you could stay one step ahead of the pupils.

Figure 28 shows the first card sort. When SM4 thought about the different types of knowledge she wanted to add in "talking to the pupils". By this she meant knowing the pupils, their context, their background etc. This is similar to what ST3 referred to as the "news". Knowing the pupils you teach is an important part of the context of the school and links closely to the geography you need to know to be able to teach them.

> I found that talking to professionals like teachers about teaching geography, I think is good. But talking to the actual kids about what do they know, and what don't they know and how do they know that.
>
> (SM4 interview)
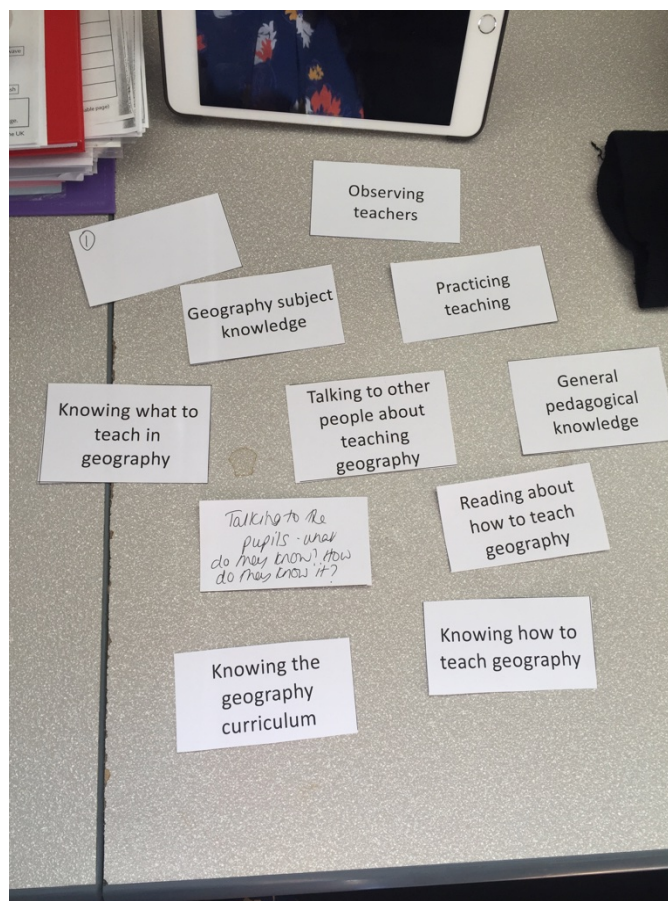

Figure 28: SM4 Card Sort 1

SM4 is using all the authoritative discourses she hears in her school and is able to make sense of what is being said and she has built her internally persuasive discourse and is then sharing this with ST4, who in turn is assimilating those ideas into her own.

SM4 put observing teachers is at the very top, followed by geography subject knowledge and practising teaching.  She recalled that on her PGCE

> That's where I got most of my understanding as well. Where I was weak in my geography, some of my best understanding was me actually sitting there, almost being in the class. Not just observing the teacher teach but observing the subject. That for me, and I still actually use some of the stuff that I've seen because it was good enough that it's still in my head two years later, so it must be good stuff.
>
> (SM4 interview)

This is very similar to what ST4 said

> This is why I keep coming back to observing. I think the more I see, like especially on block B, every teacher that I observed, they all had very different styles. They all knew a lot.
>
> (ST4 interview)

This gave me a strong indication of how well they were working together as even though the actual card sorts (Figures 27 and 28) were in a different order what they said was very similar and they placed importance on similar things.

What SM4 found most useful about observing others is the pedagogical ideas she picked up and could use in her own teaching.  She felt that practising teaching was also really important as the more you teach the better you get.  In this initial card sort it looks like there is almost a split between the practical and theoretical and most of the geography specific cards are at the bottom.

SM4 considered how when you first start teaching you need to be aware of the craft of teaching and how some things are learnt over a longer period of time, for example, presence in the classroom is not something you can instantly learn. She also said that if you do not have the presence in the classroom then your geographical knowledge is redundant because you will not be able to get it across to the pupils.  This is similar to SM1.

SM4 is clear that the knowledge you need changes as the placement progresses (See Figure29). Once you have a general understanding of the pupils and their needs then "talking to the pupils" is less important.
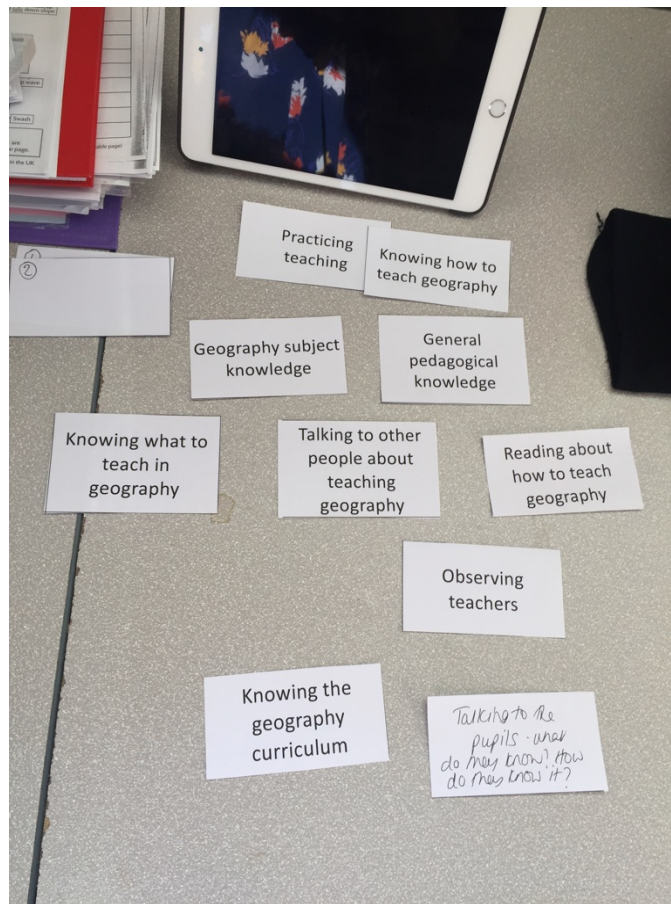


Figure 29: SM4 Card Sort 2

SM4 explained that practising teaching was more important as the placement progressed as the more experience of being in front of a class the more you practise and need your geography subject knowledge and need to know how to teach geography. She was also clear that you should know what geography to teach as that is part of the planning process. She felt that this was, and should be, already there alongside talking to others about teaching geography and reading about how to teach geography. In SM4's mind these are fundamental parts to being a geography teacher.

SM4's assumption is that by Placement B you know a lot of what and how to teach geography is interesting and is in contrast to some of the experiences of both STs and mentors in this research. She explained that you gain this knowledge through both taught sessions at university and placement and that the importance of reflecting on

your own practice.  She admitted that she did not see the purpose of reflection when she was an ST herself.

> I used to hate reflection.  I still hate it.  But it's that idea of you know, the kid didn't get that, and at the end there was still a misconception. I worked that out when I gave them the exam question. Right, what did I do wrong? Next time I have to teach that lesson – because I've got six year seven classes – I'm going to make sure that that's hit.
>
> (SM4 interview)

I find this interesting as all STs are encouraged to reflect and many find this a challenge but as experienced teachers there is no expectation to write reflections, as so much of this is done internally.  SM4 knew that she should see the value in reflecting on practice but perhaps still did not see why this is important, although she was doing it without realising in the interview.  This is where the authoritative discourse around the important of reflection in teaching came out.  SM4 accepted that this discourse had value but did not really know why but she was clear with ST4 of its importance.  So SM4 knew she had to play the game and is taking the elements of the authoritative discourse she sees as important.  In previous cases ST2 and 3 did this successfully, in ST4's case she did this with the support of her mentor in the way the mentoring occurred.

The interview then went on to discuss misconceptions and subject knowledge.  One of my concerns with STs not having a geography degree is how do they know if the geography subject knowledge they are teaching is correct and can you pre-empt pupils' misconceptions if you hold those misconceptions yourself?

SM4 admitted that

> A lot of the time it's too late. A lot of the times in the exam question when you're doing it as the end of the lesson. You're assessing what they know, and you read it and you go, "Oh wow." Then it's just about being secure in your own geography knowledge. I spent lots of time reading geography books.

What I find pertinent here is that there is no opportunity to do this prior to assessing the pupil's work.  Therefore, is this about the teacher's knowledge of the geography topic or is this about the how the pupils have interpreted it?  That said I have observed many lessons by STs, and teachers, with geography degree degrees who have taught content incorrectly.  In some ways, this comes with experience, but how do we ensure that pupils are getting what they need in terms of subject knowledge from their

teachers, and new teachers in particular. SM2 said the same thing about needing to know the subject or the pupils would be "hell in the classroom".

SM4 is aware that she cannot know everything and felt that she was still learning, I think all geography teachers would say this but for SM4 there are still topics she has never studied or taught. She was a GCSE examiner after her first year of teaching and she felt this supported her in not only knowing what knowledge pupils needed in the examination but also how it was examined and therefore what techniques to teach pupils. SM4 is aware of the dynamic nature of geography and always having to readjust subject knowledge as new case studies happen.

SM4's final comment made me consider the situation on the ground in schools. She acknowledged that ST4 had secure classroom presence, and her teaching ability was good but as she worried about subject knowledge, whereas a previous ST on Placement A had had excellent subject knowledge but lacked presence in the classroom. SM4 said

> It sounds really weird, getting them [STs] to realise that geography is not a priority in the school. I know it sounds really horrible.

(SM4 interview)

This sums up the feeling I get from listening to teachers and schools. Geography comes to bottom of the list in many cases as whole school priorities take over. For ST teachers this is a real challenge.

For ST4 I also looked at her review documents to see what comments had been made by the ST herself and her mentors about her subject knowledge in particular. In the interview, she mentioned being graded outstanding for her subject knowledge in Placement A. In this cohort the STs were assessed against the Teachers' Standards (Department for Education, 2011a). Teachers' Standard 3 is 'Demonstrate good subject and curriculum knowledge'. On both placements STs have a review of progress mid placement, and the end of the placement; review 2a in mid Placement A, Review 2b is final Placement A, review 4 mid Placement B and review 5 final Placement B. For the other STs there was nothing really of note in their reviews but for ST4 I thought this was a useful focus around subject knowledge.

At Review 2a and Review 2b, ST4 was graded as outstanding for Teachers' standard 3. When I look at the comments made by ST4 they are procedural and about the requirements of the GCSE examination specification. However, what is interesting is she said

> My subject mentor and I regularly discuss things we have read in our mentor meetings, both geography and education related which I find really aids my reflective practice. I am really pleased to hear that my subject mentor feels that my subject knowledge has been well demonstrated through my teaching, especially since this is something that she is particularly strong at herself. Geography is a subject that constantly offers something new to learn so I believe that this is a good habit to maintain throughout my career. In line with new curriculum, we are all learning!"
>
> (ST4 Review 2 document)

This demonstrates a good understanding of where she is in terms of her subject knowledge and that she is working hard to improve it. It also shows she is aware she cannot know everything and needs strategies to address this. She went on to say

> I'm still doing a lot of reading around what I am teaching to ensure I am prepared for any questions that the kids may fire at me. I've found that the more engaging lessons are the more questions the students tend to ask as they're interested and want to know more (especially about the Earth's structure and hazards). I am continually given feedback on the strength of my subject knowledge but after completing a subject knowledge audit as MMU have pinpointed areas that I feel less confident in and know that I need to target these next (mostly physical topics).
>
> (ST4 Review 2 document)

The Placement A SM's comments state she has 'sound geographical knowledge', but the focus is more about understanding the new curricula which was expected at that time.

In Review 4 there is a definite shift in understanding what is meant by subject knowledge and whilst there is still a focus on the curriculum needs ST4 can reflect on what she needs to continue to work on. ST made links to her university assignment.

> I would have said that my geography subject knowledge was of a high standard at the start of Placement B however in doing research for my curriculum development assignment I have vastly improved my knowledge of other subjects taught on the national curriculum. For this I explored the crossovers between Geography and a variety of different subjects (of which there are many) and evaluated that the experience has made me a more rounded and understanding teacher, with a much stronger ability to support literacy and numeracy, among other topics, within lessons.
>
> (ST4 Review 4 document)

SM4 mentioned in her comments that ST4 had attended the GA Conference which she has found useful in terms of developing her subject and pedagogic knowledge. All the comments give the impression of an ST who is enthusiastic and takes on board the advice she is given.  She listened and acted on the advice to make progress.

Overall ST4 was aware of the knowledge needed for teaching geography and acknowledged where her strengths and weakness were.  She used SM4 as her main source of authoritative discourse.  There was no conflict between them during Placement B and therefore the authoritative discourse became assimilating to her own as she began to self-author as a geography teacher.  Subject knowledge was an issue discussed with ST4 and SM4 and they developed strategies to improve.  By the end of the PGCE programme, ST4 had crafted her teacher identity, and she did not want her lack of geography degree to define her.

## 6.6 University Tutors

I also interview the three UTs as part of my data collection.  Whilst they form part of each ST case, I feel they need to be analysed on their own before moving into the cross-case analysis in Chapter 7. Each UT will be taken in turn to support the cross-case analysis.

### 6.6.1 University Tutor 1

University Tutor 1 (UT1) worked in a variety of schools in the north-west of England and mentored STs during her teaching career.  She is also involved with the Geographical Association both a national and local level.  UT1 joined my institution as an associate lecturer 2010 and has worked part time ever since.  UT1 has also set up a large School Centred Initial Teacher Training (SCITT) provider and been the geography tutor for those STs.

UT1 said the first thing a geography ST needs to know is how children learn.  Without knowing and understanding the way children learn, an ST cannot begin to start to structure or think about the geography of the pedagogy of how children learn.  Whilst doing this they also need to know the practicalities of teaching, which is more than just general pedagogy but things like using a whiteboard, where to stand etc.  This then

means they are learning how to have presence in the classroom. UT1 is easily able to list all of the things she believes an ST can do but what she believes is the most important is having a presence in the classroom, to command the attention of the pupils in front of her.

When I then asked how the STs acquired this knowledge UT1 said initially this was through observation. Observing expert teachers was important but it was also important to be aware that the STs realise

> you can't learn to teach by watching people, that doesn't happen. You can't learn to teach by copying, either. You've got to develop your own understanding of what's happening. So, you've got to be reflective. So, helping them be reflective. So, if you're going to observe then you have to, somehow, probably through what you're doing in university, or whatever, teach them to look at it and to pull it apart, and be reflective.
>
> <div align="right">(UT1 Interview)</div>

She went on to say that teaching is a "profession based on research". The ST geography teachers need to know that that be able to make the links between theory and practice and how this supports their reflection on both their own practice and what they are seeing when observing on placement.

The UTs were given the same card sort as the STs and the SMs. When asked if there were any cards missing from the card sort UT1 was very quick to suggest reflection was a key missing element. I found this interesting as I had not previously considered it as a form of knowledge, but we have an expectation that ST teachers reflect on all aspects of the programme, but do we teach them explicitly how to do this? At the time when I was collecting the data, the PGCE programme in addition to the two placements had two other units: professional practice and geography subject pedagogy. STs had to complete two academic assignments (at masters' level). Whilst this involved some reflective writing, it was not explicitly taught at that time.

UT1 went on to say

> I think that's part of the problem when you get to mentors because, actually, you can only be a good mentor if you can be reflective about your own teaching. That's what makes a good mentor. So, something about how to reflect on what you see. That might be from observation, or it might be through practising. You should be

able to look at yourself and say, "That went well," or "That didn't," or "Why didn't I ask that question?"

The interview then went on to discussing what is meant by general pedagogical knowledge and whether this included behaviour management. UT1 was the personal tutor of ST1 and so we discussed how ST1 focussed on behaviour management in the early stages of placement.

UT1 then considered what is important when starting to teach and said

I'm really quite obsessed about explaining, because I think if you don't explain well enough what you want them to do, and that might be around the geography of it, so that they've got the geography knowledge, but it might also be about the task, then what you do is once they've started, or you've set them on an exercise, because you've spent enough time explaining, or made it clear enough, then you spend your time going round, helping them start. Instead of going around, helping those that are good at it get even better at it.

UT1 used her experiences of observing teachers, and mentors here. She was thinking about specific lessons she has observed in the past where the pupils in the lessons had not understood the task the ST has set and therefore the classroom management became an issue, not because the geography knowledge was incorrect, but because the explanation of the task was poor. This meant that the pupils may have learnt new geographical knowledge, but they did not know how to demonstrate or consolidate it and therefore the lesson was not successful.

This is a different way of looking at exactly what it is ST teachers need. We know it is a complex process and everyone articulates it slightly differently, so UT1 said that there are different elements to it: being able to explain, observing teachers, knowing the geography curriculum, how to teach geography and then practising teaching are all important and are learnt through different methods. The initial sorting activity can be seen in Figure 30.
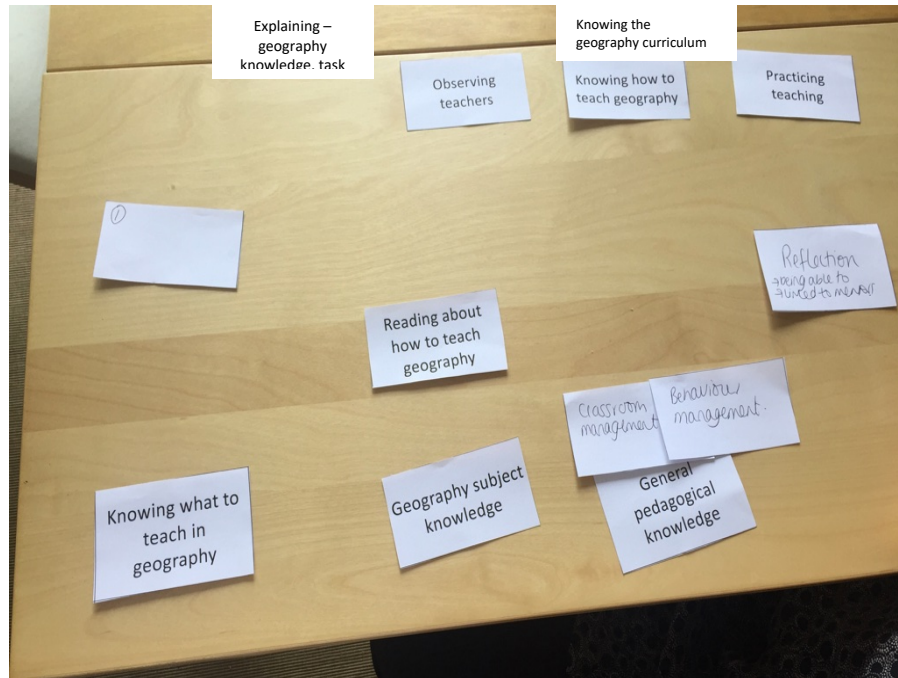
Figure 30: UT1 Card Sort 1

(Two cards added as they were not legible in the photograph)

UT1 was clear about the important of observing expert teachers but being aware that copying is not the purpose of observing.  This can prove difficult for some students and their SMs.  This will be discussed further in this chapter as students developing their own identity as a teacher and not trying to copy other teachers is a theme from this research.
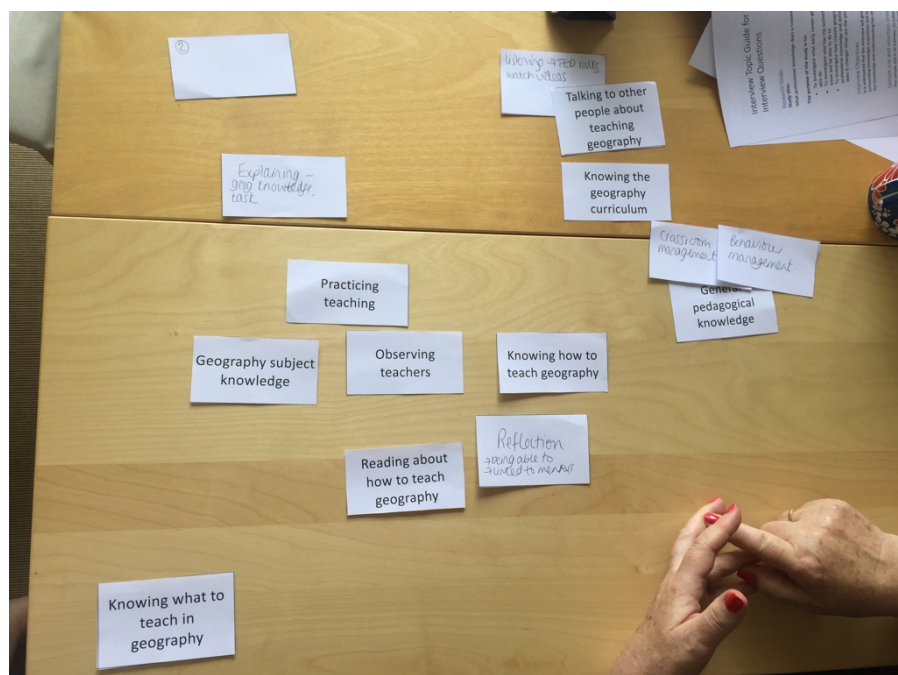


Figure 31: UT1 Card Sort 2

UT1 went on to say that for Placement B there should be much more emphasis on the learning that is taking place. The ST should be able to identify where and when geographical learning is happening. They should be at a stage where they know what they, as the teacher, need to be doing and the next step to ensure that all pupils are learning and making progress. The card sort can be seen in Figure 31.

UT1 saw the difference between Placement A and B as Placement A being about 'you in the classroom' and Placement B being more about knowing your learners and identifying the learning that is taking place.

UT1 also mentioned "unconscious competence" as something some ST teachers have. I like that way she put this. There are some STs (perhaps ST2, 3 and 4 to an extent) who have an innate ability to teach. Their mentors can find it difficult to set them targets as they just know what they are doing. This is perhaps an over simplistic view, but I do believe it is true that some STs start the PGCE with a set of unwritten skills that means they know what it means and what it takes to be a teacher. They do not need to be taught it and therefore they are at an advantage from the beginning. When you really try to unpick this then for UT1 it is about presence in the classroom and being able to build relationships with people quickly.

UT1 also saw mentoring as crucial. Whilst it is not a type of knowledge, without good mentoring STs will not progress. This will be dealt with in Chapter 7.

### 6.6.2 University Tutor 2
University Tutor 2 (UT2) has worked in initial teacher education full time since 1997. She worked in a variety of schools in different parts of the country before moving into ITE. When she worked in school, she mentored ST teachers and had led the PGCE programme as well as having different roles within the teacher education in a university setting. UT2 has also recently completed her PhD when I was collecting this data and so her own research, about ST geography teachers, was fresh in her mind. As we started the interview, UT2 reflected on the idea of professional knowledge. She noted that when STs start the course they enter this profession and this new role but there is no concrete, "This is a checklist, follow this. You now join into this professional community".

The boundaries of what it means to be a professional teacher are not written down as such, and it can be a challenge for some STs to know when they have gone beyond that invisible line. This is really dependent on the individual starting experience of the ST. If they have worked in a professional environment, they find it easier to understand that there are professional guidelines. UT2 made the point that

> It's one where the boundaries of it's clear to know when you've gone past the boundaries and you're not being professional rather than what it is to be professional.
>
> (UT2 Interview)

She went on further to explain that

> If they come in just as a student with this enthusiasm and this bumbling enthusiasm for charging forward, sometimes it's only when they hit the edges of what is a professional person, they suddenly realise, "Oh this is what the university is trying to instruct me." So the whole thing on professionalism is… must be a minefield of- it depends on the student's starting point.
>
> (UT2 Interview)

The other idea that UT2 focussed on is the notion of belonging, or not. UT2 is not referring directly here to the Bakhtinian (1981) notion of 'outsideness', as in viewing your own beliefs from another view. Rather, this idea that the discourses within education are hidden and it is only those who are inside (perhaps as those authoritative discourses become internally persuasive discourses) can they make sense of what the professional actually is. UT2 talked about the "hidden" aspects of the profession that STs often finding challenging to appreciate in that first placement. There is a whole host of "insider knowledge": acronyms, unique terminology etc. Sometimes words used in schools can be everyday words, but they have a different meaning. UT2 suggested that it can take your whole teaching career to understand exactly what the professional is actually about!

The interview then moved on to knowledge and what knowledge ST geography teachers need. UT2 said

> To be a teacher, to be a geography teacher, there's an expectation you've got a certain amount of knowledge before they arrive. So we can ignore the geography knowledge because if they haven't got the geography knowledge then we've gone past 'go'. Even if that geography knowledge needs an awful lot of work on.
>
> (UT2 Interview)

This is interesting as ST4 did not have a geography degree, and her only knowledge was teaching herself A Level Geography and the 8-week SKE course prior to starting the course. She went on to say

> So knowledge and understanding about children and the whole world of children, they need to- because they've been a child themselves and you can't look back and look back at your own life as a child because the world as we know has changed so much; technology, everything's changed.
>
> So we as adults have no idea what's going on in the head of a little child. So knowing more about children and how children understand the world is a bit of knowledge that they need opening up to.
>
> (UT2 Interview)

When asked specifically about the knowledge needed, UT2 went on to say that she felt the first thing STs needed was to understand the context they are working in. For example, they already have some knowledge of how schools operate from their own experience but there are unfamiliar aspects of this as well. If your placement school is very different from your own experience, then that unfamiliarity might pose an unexpected challenge for the ST. The second area that STs need to consider was around geography as a subject discipline. Those who have completed a geography degree will have spent three years, or more, at university studying geography so have an academic background in geography but there is a disparity between the academic field of geography and what is taught in schools. I discussed this more in Chapter 3, but this is something STs need to be aware of. New geographies can take a long time to filter down into school geography. However, these STs with this new knowledge can be an asset to school departments as they bring this new body of knowledge with them.

UT2 then completed the card sort which can be seen in Figure 32. She added cards saying, "knowledge of self, context, who shapes the knowledge?". UT2 saw the most important aspect of types of knowledge as talking to other people about teaching geography. UT2 also teaches on the PGCE programme, and it was her knowledge of the course to think about what and how the programme is sequenced to support the learning of the STs.
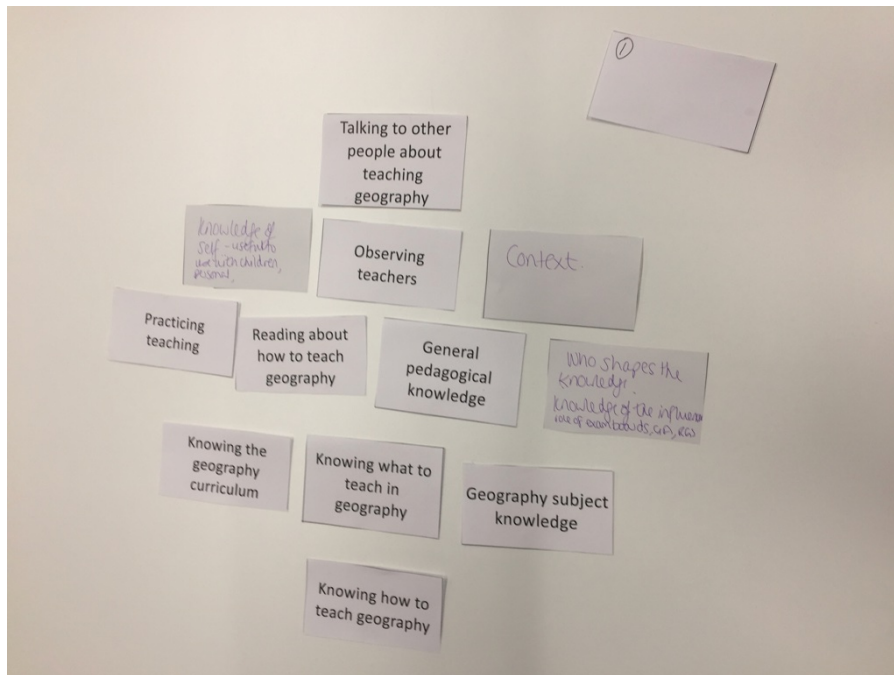
Figure 32: UT2 Card Sort 1

Knowledge about themselves is certainly a theme that is identified from the data.  UT2 went into more detail considering the STs need to be aware of the bigger picture.  She suggested that they need to consider "what time of day do I work best and how do I cope with constructive criticism".

What I find particularly interesting here is that UT2 is the only one who has added "Who shapes the knowledge?"  She went on to explain that she was referring the power of the examination boards.

When trying to do the first card sort, UT2 had a strong notion of the sequence of what STs needed to know and when.  She talked about the need for a spiral curriculum which is widely attributed to Bruner (1977).  This means that you do not just consider each type of knowledge once, you keep going back to it adding to the complexity of what is being taught and learnt.  For example, observing teachers:

> You can observe teachers, but if you're observing a very skilled teacher, it looks so easy. You don't know what you're looking for and you don't know what the questions are.  So it's almost like, you know, Bruner's spiral curriculum. You need to look at something and then come back to it and then come back to it again.

> Observing teachers before you actually teach something is, I think, a good idea because if you know you're going to teach something in the next two weeks, and you can observe somebody teaching it and getting some skills and ideas I think is

159

very useful. If you're observing for the sake of observing, that's, that's a twitchy area for me.

<div align="right">(UT2 Interview)</div>

UT2 explained how she felt it was not easy to rank the areas of knowledge as it was difficult to separate the different types of knowledge.  She explained that they were all important but depending on the context etc. some were more important than others. For example, reading about teaching geography

> You could read it as much as you want this ... But without a real context, a real child, it's just reading and it's reading and building up knowledge.

<div align="right">(UT2 Interview)</div>

As the PGCE programme progresses, UT2 deliberated over which areas of knowledge become more important and concluded that they are all important.  You need to keep doing them all the time in order to improve and understand the discourse you are now working in. This helps the ST to acknowledge the authoritative discourses they are hearing and make sense of all of those utterances.  The interview continued to reflect on this idea of different types of knowledge and their varying importance, but we started to discuss who has an influence and does this change.  The second card sort can be seen in Figure 33.  This has not changed significantly as the conversation turned to a more nuanced discussion about knowledge.
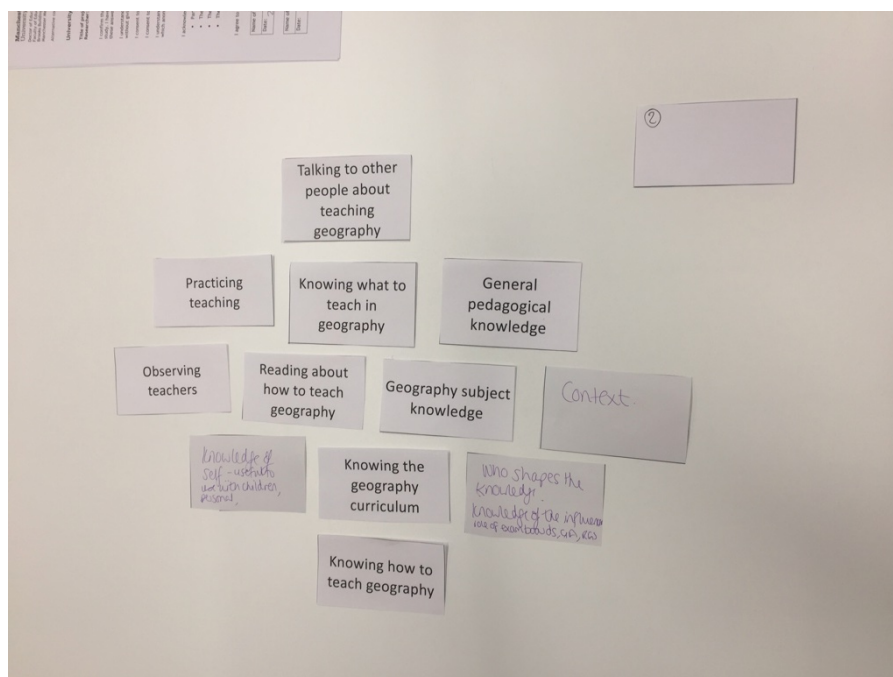


Figure 33: UT2 Card Sort 2

UT2 and I were the only geography tutors teaching on the PGCE programme in 2017-2018. Other teacher education staff from the university taught on the general professional practice unit but most of the STs' contact with academic tutors was with us. I have acknowledged in my methodology chapter that I do have an influence on the STs, but the STs used for case studies were not my personal tutees. However, UT2 makes a good point in that we have made decisions about what we think is important at different stages as our taught programme is based around our beliefs. This was not just created overnight but is the result of many years of experience from both UT2 and me. We are also influenced by others from the geography teacher educators' community and the education community beyond, as well as our own internal authoritative discourses from the university, programme leaders etc. The result of all of this knowledge is the programme as it stood in 2017/2018 and is show in Appendix H.

In the same way the UT1 mentioned mentoring so too does UT2. The importance of mentoring is paramount to a successful completion of the PGCE programme. According to UT2 the SM is the one who pulls everything together. They are the one person who sees the ST on a daily basis and can ensure that they fully understand the context they are in, the knowledge they need for teaching, what the curriculum looks like in this school's context.

UT2 was aware that their sense of self and self-authoring changes so rapidly throughout the PGCE. She said they start the course knowing quite a bit about themselves and then as they have peaks and troughs during the PGCE they learn more about themselves, their confidence, their self-esteem.

> So it's our role as well in supporting students going through - particularly reflective students because they will naturally worry so much if they're not getting immediate feedback. So you tend to get a lot more emails from students which can be a sign that they are growing. There really is a growth and it's a good thing. She just needed support along the way.
>
> (UT2 Interview)

### 6.6.3 University Tutor 3

University Tutor 3 (UT3) came into teaching later than UT1 and UT2, who both started teaching straight after university. He started teaching when he was 30. He taught for 28 years before retiring from teaching in school. He completed a master's degree not long after starting teaching as he felt he needed to catch up with some of his peers who

had been teaching longer. He recalls feeling confident in his geography subject knowledge but having to get to grips with the examination specifications and supporting pupils through their GCSEs and A Levels as being the biggest challenge.

When I collected the data for this research UT3 had been working as a personal tutor for the PGCE geography course for four years, he had previously mentored some social science students. As we started talking about the knowledge ST geography teachers need, UT3 moved on from geography subject knowledge to the need to know how to plan at different scales, lesson planning, medium term planning and then in the longer term in terms of programmes of study.

When we started talking about the different types of knowledge ST geography teachers need, UT3 placed the card sort into the order seen in Figure 34. I find it particularly interesting that UT3 is the least experienced UT and is therefore using both his recent experience of working in initial teacher education and his own experiences in school. He puts geography subject knowledge right at the top.
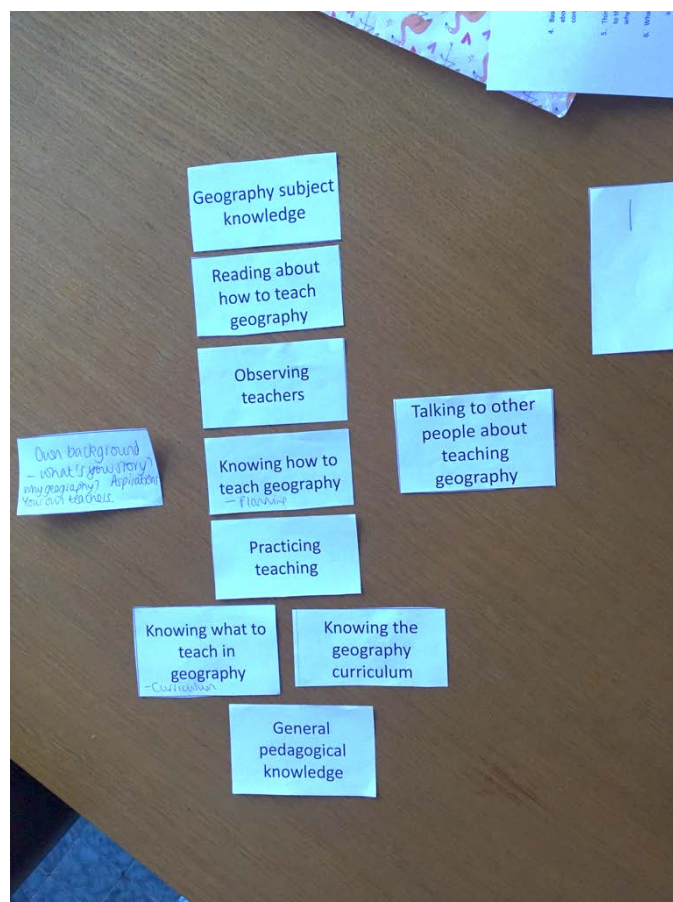


Figure 34: UT3 Card Sort 1

He adds in your own background which others have called context or your own experience. This is definitely something that is significant. UT3 finds that interesting. He went on to say that

> We all chose geography for a reason, didn't we? Whether it was because of people you've met, teachers you've loved, teachers you've hated. You know, they shape you as a teacher, don't they?
>
> Also when you see somebody who's really into and very knowledgeable, in-depth knowledge about something, you just aspire to be like that as well, don't you? So I suppose aspirations. You want to be the best teacher you possibly can, right up until the day you leave teaching.
>
> (UT3 Interview)

All of the UTs spoke about the idea of teacher identity and becoming a teacher but this idea of being inspired by someone and aspiring to be the same as that person can lead to a conflict if they find the ST cannot do that. There is a fine line. One of the first university sessions is looking at what a geography teacher looks like, and I get the STs to draw a geography teacher. Very few draw themselves but what they often draw is men, with beards carrying various geographical paraphernalia with them. The fact they do not see themselves as a geography teacher, or looking like a geography teacher, is something to be explored and revisited through the programme.

As I am going back through the interview and comparing it to the other UTs, UT3 mentions that he feels overwhelmed. He is the least experienced of the UTs and I think he found the task quite challenging. He has not been involved in any of the taught sessions, just the personal tutoring. This in itself is useful as it makes me realise the need to see the bigger picture, or someone needs to see it.

UT3 felt that there are themes that run through the whole programme in terms of knowledge and this builds during the programme. For example, your own context and experiences and talking to others about teaching geography. The other areas of knowledge are ranked and UT3 felt one fed into the next, and you almost learn one to move onto the other. This is in contrast to what UT1 and UT2 said where they had a much clearer idea of how all of these areas are interrelated.

Figure 35 shows the card sort towards the end of Placement A.  There are not too many differences, but the order has changed.  General pedagogical knowledge has moved to the top and subject knowledge has moved down.
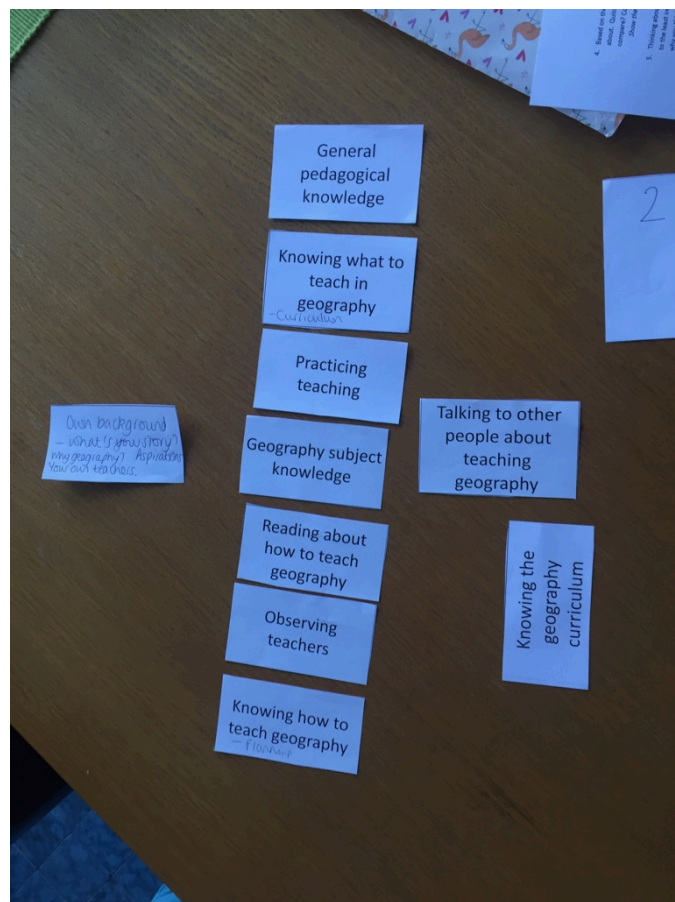


Figure 35: UT3 Card Sort 2

However, as we move onto talking about the second placement, the way UT3 sees the different types of knowledge alters slightly in that all of them are now nearly of equal importance (Figure 36).
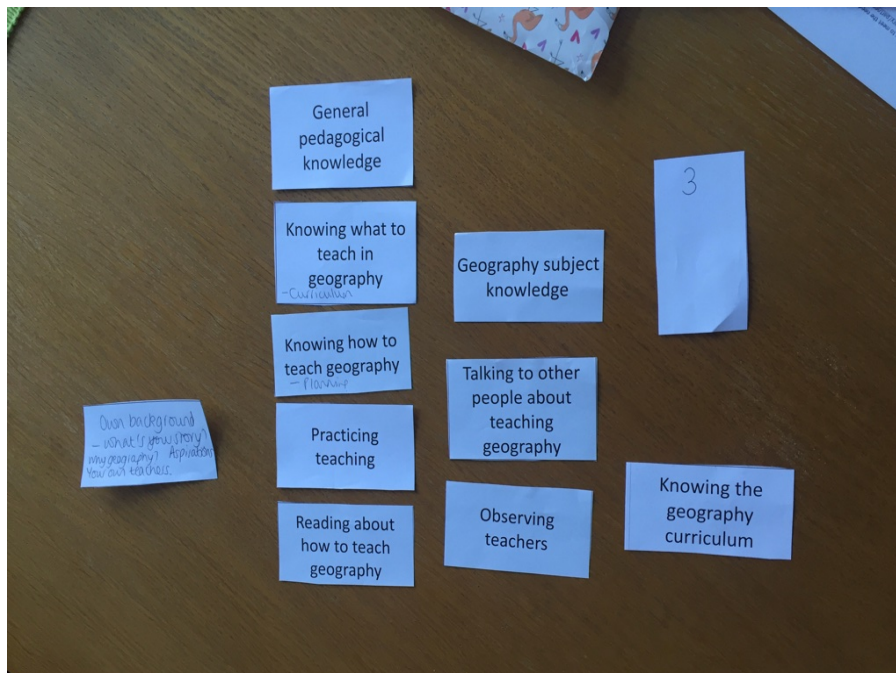
Figure 36: UT3 Card Sort 3

Significantly it is in the final card sort that UT3 adds in reflection as an additional area of knowledge (Figure 37).  UT1 and UT2 mention this being important all the way through but for UT3 it only comes at the end when

> You're teaching yourself and consolidating information that you've picked up through your own experience and you're embedding it, I think. That's the kind of thing that shapes you, fundamentally, as a teacher. As a professional.
>
> (UT3 interview)
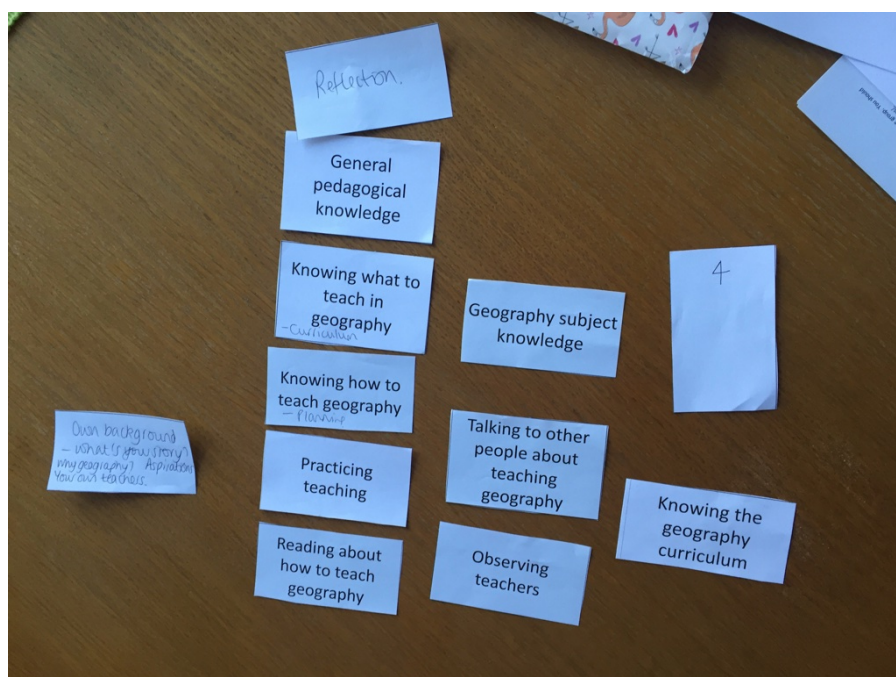

Figure 37: UT3 Card Sort 4

I disagree with reflection being a consolidation task.  I think if you cannot reflect on your own ability as a teacher then you do not make progress and ultimately you cannot have a positive influence on your pupils and their progress.  When I was collecting the data, I had been working in teacher education for a similar length of time to UT3.  However, I was working full-time and totally immersed in the university, as well as teaching on the programme.  This meant I had to break down my own professional practice.  What I am realising going back to this now was that UT3 was relying on his own experiences and was not aware of the wider perspective of learning to teach in 2017.

Regarding subject knowledge, UT3 had focussed on subject knowledge at the start of the interview and when he referred to ST4 he said

> I think with doing a degree that's different to the one you end up teaching, you do have to work that much harder, or you feel like you have to work that much harder. When what you're doing is you're flying above everybody else.
>
> (UT3 Interview)

When I asked about where all this knowledge comes from, he said that it was from a variety of places; the university but mainly the schools they are in.  He reflected on when the STs start

> It's a bit of a culture shock, I think. To a lot of them it's still quite a culture shock. They don't realise just how much work is involved and, obviously, they have to build that up. They have to develop that through the first teaching block.
>
> The university is there to scaffold them in terms of… well before starting the teaching thing they should have… I don't know what lectures they have. Do they get told about how to do the scheme of work and lesson plans? How to fill in all that properly for timings and all that? Behaviour management. That's a big one for them to start with, isn't it? Behaviour management.
>
> (UT3 Interview)

## 6.7 Summary

This case series of four STs has not given me the results I expected to find when I set out this research project.  I was interested in the different types of professional knowledge that ST geography teachers need to know.  What I have discovered is that the process of becoming a teacher is so much more complex.  It cannot just be about a list of types of knowledge.  Whilst the typologies of knowledge put forward by  Shulman (1986; 1987a; 1987b; 2005), Shulman and Shulman (2004), Turner-Bisset (1999; 2001) and

Brooks (2010; 2015) is important, this research has revealed multiple layers of knowledge that need to be explored.

Being able to triangulate the views of STs, SMs and UTs has proved both challenging and illuminating.  Each participant had a slightly different view of what is important and when, and this is dependent on so many other factors.  It is difficult to really quantify exactly what this means for supporting STs but in Chapter 7 I will put forward those identified themes and explore them in turn whilst referring back to my research questions.

Each case has enabled me to make sense of each ST's individual journey.  It has revealed how they responded to the authoritative discourses they were exposed to and how they orchestrated the various voices of SMs, UTs and their peers to develop their own internally persuasive discourses.

As I have taken each case in turn, it has raised bigger themes that will be discussed in Chapter 7.

# Chapter 7 Cross Case Analysis

## 7.1 Introduction

This research sets out to investigate what professional knowledge student geography teachers need to know.  The political nature of ITE in England has meant rapid change in what the DfE tells us STs need to know which has ultimately had an effect of the way I viewed the data.  The DfE as an authoritative discourse has had a profound effect on ITE since I began this research in 2017, and I need to acknowledge that as I wrangle with my own internally persuasive discourse.   The implementation of the CCF (Department for Education, 2019a) tells us what knowledge STs need to know by the end of their training year.  The case series shows a snapshot of four STs and their lived experiences.  In this chapter I will draw out the overall themes in a cross-case analysis.

As part of each interview the participants were given a card sort activity.  In order to analyse across the individual cases and to allow for constant comparison as I analysed by data, I have adapted the headings of the sorting activity to support the structure of this chapter (Glaser and Strauss, 1968; Harding, 2019).  I have grouped some cards and added to others.  This also supported the identified themes which I used for coding my data.  The codes are described in Chapter 5.

The codes were initially derived from the literature.  Firstly through the literature around knowledge and PCK Shulman (1986; 1987b); Shulman and Shulman (2004); Turner-Bisset (1999;2001) Cochran et al. (1993); Meredith (1995); Brooks (2006; 2010; 2015) Banks et al. (1996; 2005) Geographical Association (2011) Reitano and Harte (2016) and then by Bakhtin's (1981) authoritative discourses. These two deductive levels of analysis were the first stage of analysis (Saldaña, 2016).

| First level codes based on knowledge | Second level codes based on authoritative discourse |
|---|---|
| Behaviour management | Context of the school |
| General pedagogical knowledge | Curriculum |
| Geography Subject Knowledge | News |
| How children learn | Own context |
| Knowing how to teach geography | Peers |
| Knowing what to teach in geography | Pupils |
| Observing teachers | Social media |
| Planning | Subject mentor |
| Practising teaching | Theory |
| Reading about how to teach geography | University |

| | | |
|---|---|---|
| Reflection<br>Talking to others about teaching geography | | |

Table 4: First and second level codes

Using the literature and the identified themes I have seven themes. I have put these themes into Table 5 and attempt to explain each theme in turn.

| Themes | Sub-Theme and description | Examples within |
|---|---|---|
| *Theme 1 – Professional Knowledge* | **Geography subject knowledge** – This is the content knowledge of the subject. Sometimes this was about confidence as well as knowledge | "I was only a lesson ahead on what they were understanding because I only minored in geography at uni. …..I've never done glaciation" (SM4).<br><br>"I don't fully understand this. Can you explain it?" I think because I've kind of learned it on the job almost, I'll create little things to help me remember things and make sense of it and [UT3] said before that you can see that in the lesson. Like I almost give kids analogies on how to remember things because it's how I've used. It probably comes across quite passionate (ST4) |
| | **Knowing what to teach in geography** – This was about the geography that was being taught, this might be what was planned by the school but also how the ST could adapt it. | "they'll do different activities and stuff. It wasn't all, "Here's a textbook, write an answer." The lessons were really, really quite animated and quite active I suppose…." (SM4).<br><br>My head of department was quite literally planning her Year 11 lessons two weeks in advance. So, I was like, "What are you teaching your Year 11s?" and she was like, "Well, this is what I've got," and it was literally just a blank folder; and she was like, "That's the current situation, at the moment. I'm two weeks ahead of myself, and we're going through" (ST2). |
| | **General pedagogical knowledge** – This was anything to do with general knowledge and skills of teaching. In some cases, this was around planning, and in others it was about ways of delivering lessons or behaviour management. | "The thing that I struggled with was how exactly to plan. I didn't really do that, that much in the first block, because they weren't that bothered about lesson plans and stuff like that" (ST1).<br><br>"Then, for some reason, when I got in there I just couldn't… even giving behaviour points, I was just like… for some reason, I just couldn't do it" (ST1). |
| | **Knowing the geography curriculum** – This is about knowing the specifications for GCSE and A Level and how to prepare students. | "Right, these are what these command words mean. This is what you're being asked to do." You're probably teaching them more about the exam spec and technique than you are about subject knowledge, do you know what I mean? The content is there, you just need to remind them how to answer questions. I'd say that that then escalates that one" (SM4). |
| | **Knowing how to teach geography** – This was anything specifically related to teaching geography. This was about pedagogy but also things like explaining a geographical concept or task. | "You have to be able to explain all that to them, and they have to understand that. I just go back to you can't copy what someone else does, and I think that's a danger because that's what they think they need, and that's why, I think, some of that real background, academic, profession, that theoretical |

| Themes | Sub-Theme and description | Examples within |
|---|---|---|
| | | background has to come at the beginning, rather than just copying what a teacher does" (UT1). |
| | **Reading about how to teach geography** – In some cases this was about geographical knowledge and in others about teaching geography. | "I spent lots of time reading geography books. I've still got tonnes at home. I'll still go over some stuff" (SM4).<br>"I'll have to go and get my revision guides out and Google it. Then I'll go back in and I'll be like, "I think this is this. Is that right?" (ST4). |
| *Theme 2 – Observing Teachers* | **Observing teachers** - This was seen as an important way of acquiring knowledge. | "I think observing teachers will always be priority because no matter what context you're in, you'll need to know about how the school's teachers teach. Also, it develops you because you get to see lots of different people. I said this to a couple of people recently, no two teachers ever teach the same…. You've all brought your own personality. I can't even say like this year I've observed so many teachers and I can't be like, "Oh, he reminds me of my teacher back in school," or whatever. Like nothing. Everyone's different" (ST3). |
| *Theme 3 – Belonging* | **Talking to other people about teaching geography** – This came through in different ways. Sometimes it was about being part of a group – the school, peers in university and sometimes it was about being valued. | I was really, really supported by my friends who I've met on the PGCE. They were like, "Right, let's think about what you're doing next lesson." They were fantastic. If I had a struggle that wasn't necessarily school related, that was to do with planning or anything, because he [SM] wasn't necessarily there to be like, "How do I plan this?" I would talk to the department obviously, but because I wasn't so integrated with them in the way that I was with my subject mentor, they were really crucial to help me through that part.<br>(ST3) |
| *Theme 4 - Context* | **Context of the school and its pupils** – This was about the school and its pupils and how important that is when teaching. | Yes, I was nervous. I was worried. It wasn't because of like, "Oh no, the boys are going to be really horrible to me." It's because I've literally never been in this setting before, can I relate to them? I can remember I was talking to my partner, and I was like, "I have nothing to relate to these students. I am a white, middle class, posh woman and I have nothing to relate to these children" (ST3).<br><br>"As you start coming into the school, before you get to the school, you hit the community, and when you hit the community it's vastly different.<br>So, you definitely associate yourself with a new area, and then you keep going in further into the community. This school is right at the heart of the community" (ST2). |
| *Theme 5 Reflection* | **Reflection** – This was identified specifically the UTs but all the data has elements of reflection as an important theme. | "So it's our role as well in supporting students going through - particularly reflective students because they will naturally worry so much if they're not getting immediate feedback. So you tend to get a lot more emails from students which can be a sign that they are growing. There really is a growth and it's a good thing" (UT2).<br><br>"I think that's part of the problem when you get to mentors because, actually, you can only be a good |

| Themes | Sub-Theme and description | Examples within |
|--------|---------------------------|-----------------|
| | | mentor if you can be reflective about your own teaching. That's what makes a good mentor" (UT1). |
| *Theme 6 – Sense of self* | **Knowledge of self** – This was an important part for all participants.  Being aware of your sense of self, how that impacts on you becoming a teacher and the pupils you teach. | "Oh no, the boys are going to be really horrible to me." It's because I've literally never been in this setting before, can I relate to them? I can remember I was talking to my partner and I was like, "I have nothing to relate to these students. I am a white, middle class, posh woman and I have nothing to relate to these children" (ST3). |
| *Theme 7 – Who shapes the knowledge?* | This was about the authoritative discourses that shape the knowledge STs acquire. | They [STs] need to know about the power of exam boards. They also need to know, you know, who are the curriculum makers? Like, what are the influences on the knowledge and if it's not- if it's not marketable in an exam, does it count as knowledge?" (UT2). |

Table 5: Areas of knowledge based on literature review and thematic analysis from interviews with STs, SMs and UTs

(Using Ferry 2022:40)

## 7.2 Theme 1 – Professional Knowledge

The geography STs began their journeys as geography teachers in a geography bubble at university, bringing with them their own individual prior experiences and knowledge. They then go into their first placement and the rapid shift in their knowledge, understanding and beliefs begins to adapt and change.

The initial aim of this thesis was to identify the main types of professional knowledge student geography teachers need.  I based this on the work of Shulman (1986; 1987a; 1987b) and others such as Cochran *et al.* (1993), Meredith (1995), Banks *et al.* (1996; 2005), Turner-Bisset (1999; 2001), Brooks (2010; 2015), Geographical Association (2011a) and Reitano and Harte (2016).

Professional knowledge in itself is challenging to define but within my data I am using three main domains of knowledge: geography subject knowledge, what to teach in geography and how to teach geography in other words PCK (Shulman, 1986; 1987b; 2005).

### 7.2.1 Geography Subject Knowledge

I expected geography subject knowledge to be a key theme from all of the case studies but what I found surprising was that for most of the participants it was an assumed area of knowledge rather than something that needed to be learnt whilst studying to teach. None of the STs in this study came across problems with their subject knowledge whilst on placement and this is significant when discussing this with SMs and UTs.  ST4 was the

only case where there was a real focus on geographical knowledge which was expected as she is the only one without a geography degree.

Only the STs put subject knowledge in the top three in the card sorts and they felt that it was important at the start of Placement A but became less important as the placements continued. That is not to say it actually became less important, but it was less of a focus for the STs. Geographical knowledge is socially constructed and therefore being able to break this down into geographical knowledge for teaching within a social context was also important for the STs. This idea of belonging to a group will be discussed in more detail later in the chapter.

I find the notion of non-specialist geography teachers very difficult. In the case of ST4 she was successful in that she passed her PGCE, was awarded QTS and got her first teaching post. However, where and how a geography teacher gets their subject knowledge from is certainly worth further exploration in future research. Whilst there appeared to be no issues during her PGCE about subject knowledge how can she be sure her knowledge is good enough. She is clearly a strong teacher, with a well-established teacher persona; she saw herself as a teacher very quickly, perhaps down to her experience as a TA. However, in my opinion this cannot compensate for poor subject knowledge, and this is something I find difficult to assess.

It is difficult to take geography subject knowledge as a separate domain of knowledge as it is so intrinsically linked to pedagogical knowledge. Early in the PGCE programme we spent time in university getting the STs to consider their own geographical subject knowledge and how they needed to develop this ready for teaching. Breaking the knowledge down into the different syntactic structures and types of geographical language is important (Schwab, 1978). STs need to understand the need for pupils to be taken from the everyday vernacular language to the technical (Brooks, 2013). Being aware of the geographical concepts used in school geography can also help to draw this out.

The other significant issue that emerged from the data around geography subject knowledge was the context the STs were working in, and this is what makes training to

teach, and training to teach geography, particularly complex. As discussed in Chapter 3, there is not a set body of knowledge to be taught and learnt in a secondary geography classroom. The school, or MAT and ultimately the teachers themselves, is making decisions about what geographical knowledge the pupils will learn. For ST1, in an independent boys' grammar school, subject knowledge was extremely important. There was an expectation that the teachers imparted their knowledge of the topic to the pupils and high academic achievement was seen as the ultimate goal. Whereas for other STs, subject knowledge was important but it was also about making deliberate choices about what geographical knowledge the pupils would learn, to make it relevant to those pupils they were teaching. In the interviews with the STs any conversation about geographical knowledge quickly turned to the how to teach and what pedagogy to use. This was indicative of the timing of the interviews at the end of the PGCE, but it demonstrates that they were aware of PCK, and they had become the expert making those pedagogical choices. Young and Hirsch both refer to a core body of knowledge in order to enable pupils to take part in a democratic society (Young and Muller, 2010; Young et al., 2014; Hirsch Jr., 1987a; 1987b; 2016). This has then been interpreted as an entitlement for every young person to know a core knowledge base for each subject.

When considering geographical subject knowledge, it is worth referring to the framework for the school geography curriculum (Geographical Association, 2022). This allows STs to consider an overarching conceptual understanding of geography and the different levels within it. A summary of this framework can be seen in Figure 38.

| Disciplinary Knowledge | | |
|---|---|---|
| Features of the discipline significant for school geography | | |
| **Geographical key concepts** 'Knowing that' | **Geographical practice** 'Knowing how' | **Geographical application** 'Knowing how to apply' |
| How geographers think and know – thinking like a geographer | How geographers find out – working like a geographer | How geographers apply knowledge – making use of geography |
| **Substantive knowledge** | | |
| Lies behind and supports all disciplinary knowledge 'Knowing about' | | |
| The full range of contextual and specific knowledge of the world around us (often called world knowledge) including locational knowledge; tangible features such as rivers, mountains, cities, countries and landscapes; also more abstract features such as economic systems, community beliefs, everyday practices and imaginative place representations | | |

Figure 38: A framework for developing the school geography curriculum

(Geographical Association, 2022:4)

The distinction between substantive and disciplinary knowledge used here is helpful as it distinguishes between the disciplinary knowledge – the knowing that, knowing how and knowing how to apply the substantive knowledge.  It supports Schwab's (1978) syntactic structures and how to organise the knowledge, through the geographical concepts.

### 7.2.2 What to teach and how to teach geography

The GA's framework for developing the school curriculum leads on to considering what geography to teach and subsequently how to teach it.  There is a lot of overlap here with curriculum knowledge, reading about how to teach and then the general pedagogical knowledge.  ST3 summed this up nicely in the way she described the pupils she taught and how she needed to get to know them before she could really decide what and how she would teach them geography.  This is important as it shows how the context of who and where the learning is taking place is also crucial.  It is not possible to say what works in one setting can be easily transferred to another.  ST3 refers to this as getting to know the pupils' news; I would suggest this is more about personal geographies and the Young People's Geography Project which fits with the work of Biddulph in particular (2011). I will talk more about this in theme 4 – context.

UTs and STs felt knowing what to teach was not as important, especially at the beginning on Placement A. ST2 did have it at the very top but then moved this lower in subsequent card sorts.  This fits with his comments about the changes to the curriculum being a challenge on his first placement. What is interesting here is that the SMs all felt knowing what to teach was quite important, placing it around in the middle.  This forms an authoritative discourse I had not previously considered.  As UTs we expect the STs to be told what to teach and for it not to be until towards the end of placement B where they get more autonomy.  This is something I need to be aware of when supporting the STs and their SMs.  I need to talk to the SMs about my expectations; communication regarding our own expectation is crucial.  The differences in expectations also became apparent when talking about what and how to teach geography.  For some SMs the whole school policies around pedagogy were viewed above the geography PCK and we are seeing this increasingly in school today.  It was clear that SM1 and SM4 had quite a lot of autonomy over what and how they taught but perhaps less so for SM2 and SM3.

Knowing the geography curriculum is similar but considered slightly more important. This was seen as being school based and understanding the nuances of each placement was important. Interestingly knowing how to teach geography was seen as more important by most and this would be about the specifics of teaching a geography lesson and the pedagogy associated with it. This is Shulman's (1986:9) PCK and whilst Shulman breaks it down into three main domains of knowledge '(a) subject matter content knowledge, (b) pedagogical content knowledge, and (c) curricular knowledge', the experienced teachers are putting it all into one. As a geography teacher educator this is important to know so that I can pre-empt this understanding of subject knowledge and remind mentors that ST geography teachers will need to break it down in the way that Shulman does. Brooks (2015) adapted this to also include the knowledge of the STs which Shulman treated as a separate domain of knowledge.

Having looked at these card sorts and considered the discussion in the interviews, the main difference for me is the focus on geography. From a university perspective the UTs focussed on the geography first, and then the general pedagogy etc comes with it, however the SMs are less certain of that. For them the basic fundamentals of teaching are around managing the classroom. This can lead to confusion for the STs as they navigate all of these voices. I expected this to be the main outcome of my research but there were so many other themes coming out of the data that I will deal with each of those in turn. This is why it is important to consider Shulman's PCK and how it continues to be an important element of learning to be a teacher.

General pedagogical knowledge was discussed as important by all participants, and they could all see how it was directly linked to other types of knowledge. Each participant did have a slightly different interpretation of exactly what was meant by general pedagogical knowledge. Some interpreted it as behaviour or class management, others lesson planning. The general consensus was about the knowledge you need in the classroom to do with teaching. What was really pertinent was that ST1 saw behaviour as an entirely different domain of knowledge. As described in the Chapter 6 this was her main focus. Seeing behaviour as separate to what is done in the classroom is problematic as managing behaviour is woven into all aspects of teaching.

## 7.3 Theme 2 - Observing teachers

Observing teachers was important for everyone at the start of a placement. However, through the interviews it was apparent that observing teachers can have both positive and negative impacts. If STs try to mimic their mentors, then observing can hinder their progress. STs need to have a specific purpose to their observations.

For ST1 it became apparent quite early on that she would not be able to mimic the teachers in her school. In Placement A she found this particularly intimidating due to the all-male department, but this continued into Placement B. ST1 never quite felt like she was good enough. However, the other STs in this study, whilst they had similar doubts in the beginning, were able to overcome them. Some of this was down to the STs being able to make sense of the authoritative discourses they heard and decide upon their own internally persuasive discourses and what mattered most to them. They took on board the bits they saw purpose in and rejected those that they did not.

Bibby (2011) uses Lacan's (2001) mirror image analogy to consider how ST teachers might see themselves. For some STs, not being able to see your reflection in others can be a challenge when starting to teach. Observing lessons is daunting if you try to mimic other teachers so it is significant that ST1 saw this as a problem. ST1 saw observing as an important way of learning what was needed to teach but this posed problems when they could not copy the way the department taught. As the placement progressed, observing other teachers became even more daunting for ST1 as they felt

> "...it started to make me feel a bit like, "Oh God, I'm never going to be like them anyway" ...It started to make me feel worse once".
>
> (ST1 interview)

SM1 put observing teachers at the top of the card sort in Figure 15. She went on to say

> I think in general they [trainees] pick up our voice, our use of voice and how we focus pupils. Yes, how we focus them through our use of voice, I think that's the main thing that they pick up. Then I think they pick up different teaching ideas, what they could do. And how we sort out questioning, that's another thing I think they pick up, the questioning.
>
> (SM1 interview)

SM1 asked all the STs in her school to go and watch other teachers, and an 'outstanding' ST in English. She got frustrated that ST1 did not seem to gain anything from it. There is a gap here for both the SM and ST as they are not seeing the task with the same purpose.

SM1 went on to say

> If I had another trainee like [Trainee 1], I wouldn't make them go and observe teachers because I think it put her off even more. I think it made her realise "I really don't want to do this". She didn't want to do it first of all but then after watching other people, I think she realised even more she didn't want to do it... I'd just make them teach and teach.
>
> (SM1 interview)

At this point SM1 was very frustrated but it shows that the common purpose is lacking for me and that is something we need to make clear in our paperwork and preparation for placement. In the new programme for 2024 there is an Intensive Training and Practice (ITAP) (Department for Education, 2023c) element which will be statutory. Whilst there are many elements of the new guidance I do not agree with, this has potential to be really powerful as it will allow universities and schools to work together to support STs to really look at small-scale deliberate practice.

ST2 enjoyed watching other teachers and whilst he also felt that he could not be the same as those experienced teachers he accepted that he did not know as much as they did, but that he could learn from them over time. He was aware that he could not suddenly know everything about teaching, and he knew it would come with time, and experience. This is very similar to ST3 and ST4. They all felt they got a lot out of observing other teachers and that this was an important part of learning to teach. ST4 also made the point that

> Sometimes observing poor practice is as helpful as observing good practice because you think, "Oh god, I would not do that." Then you sort of see how a situation can escalate because of one thing. I'd never feed that back. I'd never have said anything to anybody, but that was actually quite useful.
>
> (ST4 interview)

She had made this comment at the very end of the programme when she had been to an international school in Cyprus as part of the enrichment phase of the PGCE. This was pertinent at this point in the programme. ST4 was able to see the consequences of

different actions and whilst this was at the end of the programme, it will help her going forward and she develops her identity as a teacher.  She is able to reflect and adjust her practice.

SM4 was also clear that observations formed an important part of the learning to teach. She recounted her own PGCE and how she saw observing others as an ongoing form of professional development. This was in turn reflected in how ST4 saw observations.  That mentoring relationship was coming through at this point.  They both saw it as a joint venture that they were doing together.  This is an important part of the mentoring relationship and is also apparent in ST2 and ST3.  However, much of this is dependent on both parties seeing this as important.

UT1 was clear that there needed to be an alignment of expectations and therefore the purpose of observation needs to be set out really clearly to all of those involved.  The shared expectation must be that you cannot copy what experienced teachers are doing. UT2 made similar comments that whilst observing expert teachers is good practice the ST must realise they cannot do exactly the same.  They need to keep observing teachers throughout their career for different purposes.

## 7.4 Theme 3 – Belonging

In this section I have included both the theme of talking to others and the notion of belonging.  These themes emerged in different ways, but I have called it belonging overall.  I find this particularly interesting as this data was collected before the Covid pandemic and since then the idea of social interaction and the need to belong has been a really important feature of our PGCE programme.  It also makes me consider Maslow's (1943) hierarchy of need as STs search for that sense of belonging and self-esteem. STs can find this in different ways; through talking to others about teaching geography or the sense of belonging in the wider context.

### 7.4.1 Talking to others about teaching geography

Talking to other people about teaching geography was seen quite differently by the different groups; the differences are as important as the similarities.  The UTs saw this as important, particularly when in university but felt that the conversations around

talking about teaching should be encouraged at all times. The SMs also thought it was important. They felt that this was encouraged at university but that there were opportunities on placement as well. For the STs, I think it depended on their personality and how they viewed talking about teaching geography. For example, ST1 has placed it as the least important through the whole course whereas the others felt it was important. They all had a peer group where they shared ideas and things they'd talked and read about. I think the wording of this domain is perhaps not helpful in the participants really deciding on whether it was important as many of them were doing it naturally as part of the other domains, for example in the mentoring conversations the STs were having with their SMs and their UTs.

I also include social media here as a way of building a community talking about teaching geography. ST3 used this a lot and saw Twitter, in particular, as a really good way to ask questions and hear about different ways of doing things. This links with how some of the STs were able to develop their own internally persuasive discourses. Those who want to hear lots of voices from a range of different people saw this as an outlet for them to develop their own voice within the geography education community. It also links to the sense of belonging which will be discussed later in the chapter.

Creating a community of practice might be a better way of thinking about this sense of talking about teaching geography, especially in a post-Covid world. This is something I feel needs further investigation and would be a good extension to this project. Wenger's work around communities of practice will be particularly pertinent here (Wenger, 1999; Wenger, 2002; Wenger, 2009).

### 7.4.2 Belonging
Whilst this is different to talking about teaching, in order for the geography STs to be able to make sense of all the authoritative discourses they are hearing, and for them to develop their own internally persuasive discourse, they need to feel like they belong.

Belonging was not something I had considered to be important but in all cases, this came across as crucial to their success. If the ST did not feel like they belonged in any of the groups they found themselves in then they did not feel comfortable, and everything

became too much.  For ST1 she never found where she belonged.  She did not build the strong relationships that others did, and she described feeling as if she did not belong. On her first placement this was because she felt "intimidated" by the experience of the department and on Placement B her relationship with her SM became quite strained and so she felt she could not live up to the expectations being put on her.  Whether this was in university or on placement in school she floundered and whilst she successfully completed the course, she ultimately did not go in to teaching.  ST2 and ST3 drew more similarities for me.  They were both placed in schools where they felt they did not belong to begin with but by spending time to understand the community and try to work on the differences, they found they did find they belonged to those communities, even if it was only when they were on placement.  This is a significant learning point for me.  I need to ensure that I am aware of the prior experience of the STs when placing them in their schools and where there are differences, we need to give the STs the opportunities to ask questions and find out about the communities they are going into.  For both ST2 and ST3 it shaped their PGCE and their future careers as they had to adapt quickly.  ST2 described feeling like an 'outcast' when he first arrived at his Placement B school but soon became part of a community that he entered and left each day. ST3 in particular had a really mature attitude towards making the pupils her focus and this helped her 'fit in' to the school setting.  ST4 did not mention a need to belong, but this seemed to happen naturally as both her placements were in school settings she was more familiar with.  Her personality and confidence meant she did not appear intimidated by her SM or her colleagues, she felt supported, so she has the sense of belonging within her.

ST2, ST3 and ST4 also spoke about their peers on the PGCE as a source of support and that sense of belonging to a group in a similar situation is also significant in my view. You need to be able to talk to people that understand what your experiences and those doing the same programme at the same time are invaluable.

There is limited research around belonging in teacher education but there is research around communities of practice in student teachers and their identity development (Flores and Day, 2006; Brown and Everson, 2019; Rushton et al., 2022).  Shulman (1987b) talks about teacher learning communities as a way of getting teachers to improve their practice through professional development, so it is not a new

phenomenon but one that I feel I need to revisit with STs. Finally, Brooks et al. (2023:8) remind us that 'teaching is a social act, and that relationships and context matter' and this is something I would like to pursue in further research.

## 7.5 Theme 4 – Context

Each ST brings with them a whole host of prior experience and knowledge. This has a profound effect on how the STs experience their placements and their reasons for wanting to teach. The context of their placement schools is also an important factor in understanding the lived experiences of the STs.

All four STs had been educated within the state system in England. They had been to local comprehensive schools and therefore that experience gave them a preconceived idea of what a school is. When their placement school was different to their expectations, they faced challenges they had not anticipated. For ST1 this was around subject knowledge in an independent boys' school. For ST2 it was a Jewish School and for ST3 it was an inner-city boys' school with multiple languages spoken. ST2 and ST3 saw this as a reason to get to know their context and viewed it as needing to belong. They were able to identify this and worked hard to get to know the context of their schools and to really understand the community in which they were working. ST2 talked about this as being 'news' but what she meant was needing to understand what was affecting the pupils that she taught in order to know what to teach them and how to build relationships with them. ST2 and ST3 were particularly successful at listening to all the authoritative discourses they heard within their schools and ensuring they understood the needs of their pupils in order to prepare to teach them.

They also listened to the different groups around them and saw the pupils and staff as an authoritative discourse. These authoritative discourses were not always aligned but the ST2 and ST3 were able to stand back and look at what they needed from the different groups in school and develop their own internally persuasive discourse. For ST2 it was about the religious community and seeing if and how he fitted into that. He quickly realised that it was about more than the specific religion but about building a community and geographical knowledge had a role to play in that. For ST3 it was more about understanding the pupils and their lived experiences. Personalising geography is

important so that it made sense to the pupils but at the same time widening their knowledge and understanding of the world was important to ST3 both in her personal development as a teacher and also in how she understood the pupils she taught. She referred to this as 'news' but I would call it the context of the pupils.   In the Young People's Geography Project, Biddulph acknowledges that young people bring their own experiences and beliefs into the classroom, as do the teachers.  We need to embrace this to support the development of geographical knowledge in the classroom.  This will be different in different contexts. (Jones, 2013; Biddulph and Adey, 2003; Biddulph, 2011).

## 7.6 Theme 5 - Reflection

All of the UTs felt that the ability to reflect was a key area of knowledge all STs needed to be able to do.  They all felt that without the ability to reflect on their own practice and the practice of others then they were not able to make progress in their teaching. For some STs they saw the process of teaching as being very individual.  They saw themselves as the central point and teaching was about them.  This is understandable when an ST starts teaching, as they are trying to think about all the elements that needs to come together to actually deliver a lesson to pupils in a classroom.  However, as their practice develops, we expect the STs to become more aware of the pupils' needs and see the teaching process as more about the learning as the teaching being linked to that. Some STs really struggle to see it is not about their own needs but the needs of others (the pupils).

The complexity of what is happening is challenging to unpick but those STs that are more reflective do this tend to be more successful.   In this case series ST1 struggles to reflect on her own practice and the practice of others. STs are asked to reflect on their individual lessons and their progress overall but in this data, it is possible to hear their reflective practice in the interviews and recordings of lesson feedback.

Reflective practice is difficult though, especially at the start of the PGCE when there are so many new concepts and ideas being introduced for the first time.  There is a danger that STs compare themselves to others, whether that is their peers or more experienced teachers.  Bakhtin's notion of 'outsideness' is useful here as the ST needs to be able to

see how they are viewed by other people (Bakhtin, 1981; 1984).  It's also what Lacan (2001) calls the 'mirror image'.

ST2 used reflection in different ways.  He talked about his lessons with other teachers and his peers and used these opportunities to learn different ways of doing things and try new things in new contexts. He was very self-aware and knew that he could not know everything and was willing to listen to others to improve his own practice.  UT3 refers to this as 'being open to mentoring' but it is also relevant here as it is more than just being mentoring it is about being able to take what others say and use that to change or improve your practice.  ST2 admitted he did not find it easy, but he knew he needed to listen.  He was also quite quick to realise that it was not just about him, and that the pupils were an important part of this development.  Understanding their needs was the focus of what he did.  ST3 was also a very reflective teacher.   Again, she did not find it easy, but she understood the purpose of it and why it was necessary.  ST4 was able to be self-reflective, particularly around her subject knowledge development but it was less explicit in her interviews.

What I did find interesting was that although all of the UTs mentioned reflection as being important, only SM4 mentioned it explicitly in her interview.  She is the mentor who completed her PGCE most recently and therefore it is still a process she is considering explicitly whereas perhaps the others will be reflecting internally.

The UTs' views of reflection, and the onus they placed on the importance of this, made me really stop and consider where reflection fits into the PGCE programme, and where it sits going forward.  I suggest that reflection is an overarching area of knowledge, and it needs to be taught rather than assumed that all STs can learn it as they go along. Whilst we encourage STs to reflect, it is an important part of learning to be a teacher and so needs to be a fundamental part of the programme.  Since this data was collected, we have included an academic unit called 'reflection on professional development'. STs reflect on an incident that has happened on placement and they use a reflective model such as Gibbs' cycle of reflection (1988) or Kolb's experiential learning (2015) and discuss how the situation affected their practice.  This has supported some STs, but they do not

all see the relevance at the time.  We need to consider how we can continue to make reflective practice an important and explicit part of the programme.

## 7.7 Theme 6 - Identity formation and sense of self

I feel the formation of an STs identify and their sense of self is the 'golden thread' running throughout all aspects of learning to teach geography.  It is worthy of research itself and whilst I did not want to research teacher identity directly, I have realised that it is difficult to research STs without touching on their identity formation. There are many studies around teacher identity and sense of self including some about geography STs.  For example, Brooks (2016) and more recently Rushton et al. (2022) have researched geography STs specifically.  It is a complicated and multi-layered process that continues throughout their careers, but I feel I must include it in this cross-case analysis as it is an important outcome of this research, and I intend to research this further in the future.

In this research three of the STs were able to develop their sense of self as they went through the process of becoming a teacher.  By the end of the programme, they could articulate the moments when they began to understand who they were and what sort of teacher they were becoming.  This did not happen easily, and they all had challenges along the way, but they were able to acknowledge and accept those challenges as part of their journey to becoming a teacher.  It is entwined in all the other outcomes I have mentioned in this cross-case analysis as in order to develop your own sense of self you need to be able to self-author and navigate all the utterances and different voices you are hearing around you.

For ST1 she never quite got there, and she was not able to get beyond the sense that she could not do it.  For her she never formed her identity as a teacher, and she never saw herself as a teacher. She felt she could never live up to the expectations of others around her, particularly her SMs, other geography teachers and, I believe, her peers.

ST2 certainly did not feel threatened in the same way that ST1 did. Although he faced similar challenges and he described feeling in awe of the knowledge his SM had on Placement A in terms of not feeling like he belonged, he did not see this as his problem;

he saw it as it not being the right place for him. He did not see it at the time but was able to reflect on this at the end of the PGCE and see that for him it was not the right school. He said that his confidence would continue to grow, and he would be where wanted to be as he gained more experience.

This confidence is important not only on placement but in university. When the STs returned to us in January, some felt threatened by the success or the failure of others. Giving opportunities to reflect on this and their own development is an important part of the programme, and we need to make sure we continue to allow these opportunities to discuss this. This constant comparison to others can be problematic. STs need an air of confidence to not feel intimidated by the progress others are making. ST2 is able to do this, even if he does feel anxious. ST1 is not confident and shies away from speaking to others. ST3 deals with her own anxiety internally but knows when to seek help from her UT who helps her work through her challenges. ST4 is very confident and so does not have an issue with comparing herself outwardly. Inwardly she talks about feeling anxious about her subject knowledge, but she did not want others to think this, so she worked even harder to counteract that. Her acting skills helped her in these situations.

When Bibby (2011) talks about STs developing their own identities, she uses Lacan's (2001) mirror image analogy to support this development. The STs need to see themselves from different perspectives in the different mirrors so they can begin to see who they are as a teacher. I've always found this analogy useful when talking to STs and I think this idea of mimicking mentors is something we need to spend time talking about on the PGCE, especially towards the end of the first placement where we want them to be starting to become more independent and not copy everything their mentor does. ST2 talked about reading about geography helping him realise he did not need to teach in the same way his mentor did. He realised this after his confidence in his own classroom practice had grown. This is in contrast to ST1 and SM1. In the interview with SM1, she alluded to wanting ST1 to teach like she did. For me this is a real danger area, but it can be difficult to unpick in a high-pressured environment in a school. We need to look at this in our mentor training to support mentors in knowing and understanding that teaching can look different, but this is also difficult in this highly prescriptive world schools find themselves in.

Holland et al. (2001:286) agree that forming identities takes time. It is not finite and how you perceive yourself is dynamic. They suggest that the

> Use of our identities — informed by these two dependent, but noncoincident processes, figuring and positionality — leads to another way of conceptualising personhood, culture and their distributions over social groups.

Being able to position yourself is also an important feature of appreciating your sense of self when teaching.

Holland et al. (2001:169) use Bakhtin to describe what they call "space of authoring" and "self-fashioning" to discuss identity formation and how the dialogistic nature of internal speech is where the active identities are formed. They also suggest that if one does not engage with a particular figured world, they may never form that identity. I believe this is the case for ST1. She never felt like she belonged to any particular group and so was not able to see herself fitting into any specific situation; therefore she did not manage to form her identify as a teacher. For future practice, giving STs time to learn and form their identities as geography STs is crucial to their development.

## 7.8 Theme 7- Who shapes the knowledge?

There are two areas of focus within this overall theme. There are many authoritative discourses at play here and many voices that the STs hear throughout their PGCE and beyond. The ST has to come to terms with this as they develop their own internally persuasive discourse. Being able to build relationships with others is key. I have broken this section down into two, the subject mentors and the university tutors.

### 7.8.1 Relationship with subject mentor and the importance of mentoring

The important of mentoring emerged as a really clear outcome of this research. It is interesting the hear from the different SMs and their experiences of mentoring these particular STs, and to be able to triangulate the data. The SM/ST relationship comes across strongly in all interviews. From my own experience, mentoring a strong ST can be easier than a weaker ST as the mentor feels the ST is working hard and listening to their advice. Setting targets for strong STs can be difficult though and with strong mentoring the ST can make even more rapid progress. However, if the SM is struggling or cannot breakdown their own practice then this can be problematic especially if their

ST does not understand their instructions. STs are entering a different world with very specific language and discourses; they have to learn quickly.

High quality mentoring is well established as an important part of the success of the ST (Stanulis and Bell, 2017; Rawlings Smith, 2022). Mentoring is a focus for the new ITE statutory guidance for 2024 (Department for Education, 2023d). SMs will need to undertake 20 hours of training before they can mentor an ST. There are a number of issues with this but fundamentally we know mentoring is important and teachers should be trained appropriately to support those ST teachers. However, the reality is different. In most cases the mentors volunteer and they do not get paid any additional money or time so to add another 20 hours to their workload is a lot. Then there is the question of what this will look like. At our university we have chosen to do this online so anyone can access it. Universities and other ITE providers are working together to allow other institutions' mentor training to count towards their own, but no one really knows exactly how this will work (Department for Education, 2023d). Bustin (2022) sees mentoring as a professional development opportunity and this is something we need to keep in mind as we move forward.

Aside from the practicalities though, it is good that mentoring is seen as important, and we have an opportunity to ensure that our mentors can best support our STs. This will include discussing mentoring of both weak and strong STs and how to support on a daily basis. It is clear from this research that we need to work with our mentors in understanding the experiences of STs, so they are not solely reliant on their own experiences. We need to tailor our mentor training to our STs and ensure that they appreciate the other challenges that they may not realise. For example, in more recent years the cost of living and impact of Covid has had a profound impact. In addition to this, the bursary and what this means for STs is also an important element for mentors to understand.

The SM role is a real challenge as there is a need to develop a working relationship that is supportive and encouraging whilst also setting clear targets. When that relationship is working, and both parties agree on ways to improve, then it results in positive progress forward. This was clearly seen in the recordings of the lesson observations for

ST2 and ST3 where it felt like SM2 and SM3 were defending the lessons the UT observed. They felt they were being watched in addition to the STs. Sometimes the mentors take the feedback personally and this is when the UTs have to be careful of how they react to this. However, when the lesson observation was observed and the interview with me took place, SM1 had reached a point that the relationship with ST1 had broken down and she did not know what else to do. This is where we need to support SMs the most. We need to support them in taking a step back and almost acting as an intermediary which is what UT1 tried to do in this case. As schools' curricula have become increasingly centralised within their multi-academy trust (MAT) or within the school itself, it can be a difficult place for STs who feel they are being pulled in many directions. There is a need for an external person to support both the ST and the mentor; the university has a role to play here. Within the data UT1 tries to do this, and there was a lot more support for both SM1 and ST1 that is not captured within the data presented in this thesis. Many conversations happen in different situations, via emails, phone calls and visits. In the lesson feedback, UT1 tries to alleviate some of the pressure felt by both parties and tries to look for the positives. Sometimes SMs need that external person to allow them the opportunity to see the bigger picture and that the PGCE is just the beginning of the STs' teaching careers.

There is also the opposite problem if an ST shows potential that the SM is not able to break down teaching practice enough to really support their development. In the case of ST3, the SM struggles to give clear targets for development as ST3 is doing well and fulfilling their expectations.

In many schools the role of SM is something given to you with no discussion or negotiation. You are just asked to do it and or told to do and then you get on with it. More training is given to mentors now than when I started being a mentor, but teachers' time is precious, and it is difficult for teachers to take time out of their busy schedule to dedicate to mentor training. UTs speak to mentors about their STs and as part of the visit are supported in their role but often this happens more when there is a problem.

### 7.8.2 Role of the University Tutors

The UTs have an important role to play in supporting the STs throughout the PGCE programme.  The three UTs who took part in this research had a variety of experiences and were not working in isolation.  They had clear ideas about what the role was and what they needed to do to support both the STs and the SMs.  It is a challenging role as you attempt to be everything to everyone but as experienced educators these UTs were able to navigate the authoritative discourses at play, in a variety of settings and have a well-developed internally persuasive discourse that allowed them to put support in place as appropriate.

UT2 was the only one who directly mentioned the consideration of *who* shapes the knowledge STs need to know.  She felt STs needed to know

> Who shapes the knowledge? The geography knowledge? Like they need to know about the power of exam boards. They also need to know, you know, who are the curriculum makers? Like, what are the influences on the knowledge and if it's not- if it's not marketable in an exam, does it count as knowledge?
>
> But there's some big drivers. What is the role of the QCA [Qualifications and Curriculum Authority] and people like that still exist. But there's all these knowledge people who have got their foot in the door of trying to control what is the geography subject knowledge. Like, the GA and RGS and people like that.
>
> (UT2 Interview)

This authoritative discourse around geography knowledge is really clear for UT2.  However, UT2 was a full-time member of the PGCE team and co-delivered the programme with me so it would be expected that she is more questioning of all aspects of what a geography ST needs to know and do and who shapes that knowledge.

UT2 listed and explained the different groups of people she felt influenced the geography ST.  This can be seen in Table 6. UT2 sees these as the different authoritative discourses influencing what, how and when the STs learn about aspects of professional knowledge needed for teaching. Many of these are the same as those STs, SMs and the other UTs described but UT2 had an immediate response to the question and was fluently able to articulate who these groups of people are.  I have listed them in the table below with a brief explanation paraphrasing what UT2 said in the interview.  These are all authoritative discourses that others have mentioned in the data, so the identified themes fit with all of those involved in this research.

| Level | Group | Influence |
|---|---|---|
| National | Department for Education | Statutory guidance for gaining Qualified Teacher Status (QTS). |
| | Examination boards | Putting forward the body of geography knowledge needed to pass exams at different levels |
| | Geography Teacher Educators | How all of the national policy is interpreted by other geography PGCE tutors |
| | Media | This could be at different levels, but the ST can be influenced by more traditional media and news as well as social media which can be at a national level. |
| Local | University | The people involved in planning the course, so it meets university regulations as well as enables the university to recommend STs be awarded QTS. The UTs also influence the programme in the way they talk and instruct mentors in school as, and the information they give to STs. |
| Individual | Own context and experience of STs | Prior experience of the STs to make sense of their own education, knowledge and what it means to be a teacher.<br>There is also the support the ST gets from family and friends. |
| | School Context | The context of the children they are teaching, the pupils past experiences and the way the leadership in the school have designed the curriculum as a whole and at micro level within the geography department. |
| | Teachers in school | In addition to the mentors the STs work closely with there will be other teachers that influence the way the ST thinks about teaching and learning. |

Table 6: Authoritative discourses as seen by UT2

This sums up all the different voices the STs are hearing and need to make sense of. There is no doubt that becoming a teacher is complex and having to orchestrate so many voices, understand those voices and make choices as to which voices to listen to and which to reject is part of the challenge.


## 7.9 Summary

Drawing out the themes from the data in the cross-case analysis gave unexpected results. When I set out to investigate the professional knowledge of teachers, I focussed on Shulman's work around PCK (Shulman, 1986; 1987a; 1987b; 2005). I knew that becoming a teacher was a complex process, but this analysis has made me consider the lived experiences of the STs through a different lens. Rather than just seeing geography as a body of knowledge STs need to know, it is about so much more. It is about how their own experiences affect them as an ST and as a teacher. It is about the relationships

they build on the way and the different groups that are involved in their professional life. All of those groups of people have a profound influence on them and the STs themselves need to be able to navigate those multiple voices in order to assimilate what they are hearing into their own internally persuasive discourse, or to reject it and decide that this is not what they want to hear. STs need to have the time and space to reflect on these different voices.

# Chapter 8 Conclusion

## 8.1 Introduction

This thesis has explored what professional knowledge student geography teachers need to know. In this final chapter, I will return to the research questions I initially set out in chapter 1 and summarise my findings. I will subsequently identify the implications of this study and give suggestions for future research before stating my overall conclusions.

## 8.2 Addressing the research questions

Prior to undertaking this research, I was aware that learning to be a teacher is a complex process. When I became a teacher educator, I had to really think about my own practice and the different aspects of teaching that the STs needed to know. I did not anticipate quite how complex the process of becoming a teacher is. ITE is highly politicised in England which adds another layer of complexity. In doing this research I not only have a better understanding of the lived experiences of the four student geography teachers in this case series, but also how their experiences can support my own future practice.

### 8.2.1 What professional knowledge do student geography teachers need to know?

A review of the content of the ITE curriculum in England sought to adjust the balance between pedagogy and content knowledge in learning to teach. Following the Carter Report (2015) and the Munday Report (2016) the CCF (Department for Education, 2019a) was published. This sets out exactly what the DfE considers to be the minimum body of professional knowledge STs need to know and be able to do. This is a huge list of statements of 'learn that' and 'learn how to'. An excerpt from the CCF is reproduced in Appendix D. This 'body of knowledge' is used to assess both the ST and the ITE providers in how well they are teaching the STs to teach which is noted in the Ofsted framework (Ofsted, 2024b). This makes answering this question difficult but as a professional I need to see beyond the authoritative discourse (Bakhtin, 1981) put forward by Ofsted and the DfE and look more holistically at what the STs need to know.

STs need a good grounding in their geographical knowledge. They need to be able to bring the world alive for their pupils, whatever context they are working in, and whatever context the STs have themselves. As Firth (2015) suggests prior to the change of the curricula in 2014 (Department for Education, 2013b; 2014a; 2014b) there was a weakening of the knowledge and the Coalition government and Michael Gove in

particular set about increasing the academic rigour in the curriculum. This was seen in the Schools White Paper (Department for Education, 2010). Hirsch (1987a; 1987b; 2006; 2016) especially has had a profound impact on the English curricula with his notion of a core curriculum as has Young's work on 'bringing knowledge back in' (Young, 2008). The GA's focus on geographical knowledge and the curriculum is also useful in giving a framework in which STs can set their subject knowledge. As mentioned in Chapter 7, the GA's framework for developing the school geography curriculum is helpful in distinguishing between the disciplinary knowledge and substantive knowledge. By following this, STs can then shape their own knowledge into the knowledge they need for teaching.

What became apparent through the data was that the professional knowledge STs need is vast and cannot be learned all at once. It must be seen as a process that builds over time. ST2 was aware of this and whilst he felt uncomfortable at times, he put his trust in his UTs and allowed himself to learn over time.

In addition to geographical subject knowledge, an ST must also be able to break this knowledge down in a way that pupils can learn and understand. This is about general pedagogical knowledge such as lesson planning and management behaviour but also about different ways to make learning happen in the classroom. The STs need to put this together with their subject knowledge and know the PCK needed for teaching geography. They need to be aware that geographical knowledge is socially constructed and how this might change the way they teach certain concepts in their lessons. Shulman's (1986) PCK is still relevant in 2024 and perhaps even more so now when we are seeing more prescription in what the STs are being told to teach. Others have added to this initial theory, but I think the original model is a useful tool to support STs in their development of PCK.

Nevertheless, I have attempted to create my own model which widens the professional knowledge base to include curriculum knowledge, which is currently particularly important in England. STs need to know what geography is, the actual geographical knowledge, and then make a pedagogical choice of how best to teach it. In addition to this, what has come out of the data is there is a body of professional knowledge that

encompasses the practical elements of being a teacher.  Firstly, the context of the STs themselves, the schools they work in and the pupils they teach is important, especially when that context is unexpected or alien to the ST.  ST2 and ST3 were particularly clear about this.  Secondly, being able to reflect on practice is crucial if STs are to succeed. They need to be aware of how others perceive them so they can make sense of the utterances they hear as they learn to be a teacher.  I also find Lacan's (2001) mirror image analogy really helpful to get STs to consider how they are viewed by different stakeholders involved in their training. They need to be able to compare the different voices they hear and develop their own internally persuasive discourse.

Finally, by having a large professional knowledge base that STs develop over time they need to feel like they belong.  Maslow's (1943) hierarchy of need is valuable here, as well as the research around communities of practice (Wenger, 1999; 2002).  This is not something I had considered to be as important as it was to the STs and is something I want to research in the future.

### 8.2.2 Who decides what a student geography teacher needs to know?

As I mentioned in the previous section, the DfE and Ofsted now tell us through the CCF (Department for Education, 2019a) what an ST should know as they train to be a teacher. However, whilst that is the biggest 'Other' (to coin Lacan's (2001) term) there are many other voices telling an ST what they need to do.

All the different authoritative discourses the STs come into contact with each day have a role to play in the professional knowledge geography STs need to know.  What is crucial though is that they have an awareness of their own experiences both past and present so that they can make sense of the authoritative discourses they hear and allow them time to develop their own internally persuasive discourse.  On a ten-month PGCE programme, this is fraught with tension as there is little time for reflection on a bigger scale, but we need to ensure that we build those opportunities for STs.

The STs have to navigate the authoritative discourses they hear when they are learning to teach.  They need time to make sense of the different voices and 'utterances' to form their own internally persuasive discourse. This can be challenging when the STs have

limited time to work out what they do accept as their own word, and what they reject. According to Bakhtin (1981) assimilating and acknowledging the words others say is an important part of belonging. This does not happen immediately but overtime the STs make sense of the authoritative discourses they hear and begin to make their own internally persuasive discourse. This can be a challenging process depending on their own situation and very dependent on the other themes drawn out in this chapter.

A Bakhtinian lens has been helpful in assessing who decides what an ST needs to know. From the data, there are different levels of authoritative discourse influential in the training of geography STs. At the top are the national bodies such as the DfE and Ofsted. They set out through the CCF what STs need to know and do (the 'learn that' and 'learn how to' statements). In addition to these statutory guidelines, there is a plethora of different groups: the placement school leaderships teams, the mentors (professional and subject) and the university and the UT. These groups can sometimes have conflicting ideas of what the ST should know, and certainly there might be clashes at certain points in the programme. There are also other groups like the pupils themselves, the STs' peers and social media or other groups to which the ST might belong – the GA, for example. Navigating these groups is the greatest challenge, on top of the professional knowledge mentioned earlier.

Using Bakhtin's theory of authoritative discourse and internally persuasive discourse has clarified who decides that they need to know. The STs are taking the utterances of those they hear around them and trying to make sense of them.

> For each word of the utterance that we are in the process of understanding, we, as it were, lay down a set of our own answering words. The greater their number and weight, the deeper and more substantial our understanding will be. Thus, each of the distinguishable significative elements of an utterance and the entire utterance as a whole entity is translated in our minds into another active and responsive context…Understanding strives to match the speaker's word with a *counter word.*
>
> (Voloshinov, 1986:102, original italics)

This quote sums up how the STs try to make sense of those utterances. It is not something they will immediately be able to articulate but as they go through their teaching careers, they will be able to make decisions about what is best for them. ST2 and ST3 were doing this sub-consciously throughout. They had the unconscious

competence that UT1 mentions.  They were listening to the authoritative discourse in different situations and taking from it what they believed was right.  When they did not agree with what they heard, they were able to stand back and reflect on the situation and what it meant for them.  They could see that on a placement this was short term, and when they applied for jobs, they applied to schools where they felt they did agree with the authoritative discourse being set out by the school leaders.  ST1 did not experience this as she was not able to make sense of her own internally persuasive discourse and could not make sense of the authoritative discourses she was hearing.

### 8.2.3 How do student geography teachers acquire and develop professional knowledge and skills?

The social construction of knowledge is important when considering learning to teach; teaching itself is a social profession.  We learn best when learning together. As Wheelahan (2010) says, knowledge is dynamic and can change in light of new evidence. This is true of education where what, and how, we learn and teach changes over time. The recent focus on cognitive load theory (Sweller, 2016) is an example of this.

If learning is socially constructed, then geography STs must be allowed to make mistakes, especially during their placements so they can learn from these situations. The UTs need to support the STs and the SMs in enabling this to happen.  The STs need to feel as if they belong to feel comfortable making these mistakes.  It is also important that STs have time to reflect on their teaching experiences and time away from teaching allows them to do this.  The university plays a crucial role here in giving a space for reflection where the STs can feel supported to be open about their experiences.

The STs used in this case series all had very different experiences during the PGCE.  They all had unique ways of dealing with the situations in which they found themselves. They all constructed their professional knowledge in distinctive ways depending on their prior experience and context.  This really plays out in the interviews for all the cases. Behaviour management was ST1's focus. She could not move on until she had mastered class management.  ST1 did not see the value in socially constructing knowledge and this left her isolated from her peers and her SM on placement.  On the other hand, ST2, ST3 and ST4 all thrived in a social environment and wanted to take as much from others as they could.  As they progressed through the course, they were able to be more

selective about their knowledge construction so that it benefitted them, and they formed clear internally persuasive discourses. Every ST learns at a different rate, and needs personalised support; a PGCE can give that, and I need to remember that in the future.

## 8.3 Originality of this thesis

This thesis makes a theoretical and methodological contribution to the field of progressional knowledge of geography student teachers. It adds to the existing research into the professional knowledge base of student teachers using Shulman (1986; 1987a; 1987b) as well as Shulman and Shulman (2004), Turner-Bisset (1999; 2001), Cochran et al. (1993), Meredith (1995), Brooks (2006; 2010; 2015), Banks et al (1996; 2005) Geographical Association (2011) and Reitano and Harte (2016) but adds to this body of knowledge viewing this knowledge base through the lens of Bakhtin's authoritative and internally persuasive discourses. By understanding the different discourses STs encounter whilst training to teach, this research has given a different perspective on what support the STs might need whilst on their PGCE programme.

## 8.4 Implications of this research

This research concluded at a time of further change and the implementation of the new statutory requirements for ITE (Department for Education, 2023d). This means the implications of this research are even more important.

### 8.4.1 Policy implications

Currently all STs are required to know and be able to demonstrate the statements set out in the CCF (Department for Education, 2019a). The new statutory guidance from September 2024 (Department for Education, 2023d) continues to make the CCF a key component of the ITE curriculum. What it does not do is allow for further challenges that STs and the individuality they bring to the profession. I hope that this research will enable STs in my institution the opportunity to consider their practice and their prior experiences to support how they navigate becoming a teacher. Whilst I have focussed on secondary geography, the challenges are similar for other subjects and age phases. With a change of government who want to encourage 6500 more teachers into the professional (The Labour Party, 2024) this research will be pertinent to examining ways of supporting STs.

### 8.4.2 Practice implications

This research has already had an impact on my own practice. As I reflect, I realise how my own identity and sense of self has changed during the process. When I started this research, I was still very much rooted in being a school geography teacher, that was my identity, and I found it hard to think of myself as anything else. Now I see myself as a university lecturer and geography teacher educator. I better understand the students I am supporting in becoming teachers.

There are also implications for wider practice in my institution and beyond. The complexity of becoming a teacher is even more apparent now than in 2017; Covid has had an impact on the whole population and this in turn has had an impact on the pupils in schools and also on the STs themselves. The DfE continues to put pressure on ITE providers to ensure we have a good supply of teachers but is not addressing the wider societal issues faced in England in 2024. From September 2024 all ITE providers in England will begin teaching a new ITE programme that sets out to ensure all students have the same minimum basic knowledge and understanding of teaching. The CCF (Department for Education, 2019a) sets out what STs should 'learn that…' and 'learn how to…'. As an ITE provider, we have to set out our curriculum and the students follow our curriculum. What this does not allow for is any difference. Not every student learns in the same way. We are training people to be teachers and their own experiences and the schools they are placed in have a profound effect on how they learn to teach. We can try to mitigate against some differences, but it is impossible to have everyone learn in the same way at the same time.

Doing this research has made the notion of teacher identity and sense of self, what Bakhtin calls 'self-authoring', become the real focus for me in how I can support my STs. Getting them to appreciate that it is okay to not be the same as their SM; that you can teach the same topic using different pedagogies, and ultimately it is the class teacher making the day-to-day decisions about the learning taking place in their own classroom. As teacher educators we need to instil a confidence in our students, so they know how to do that. As an educator you are learning all the time, and you need to have an appreciation of all of the knowledge domains to succeed as a teacher.

### 8.4.3 Research implications and limitations of the study

Since this research began in 2017 there has been a rapid shift in educational policy regarding ITE.  The shift in emphasis within policy on the practicum turn and the continual change in the most recent policy about the reaccreditation for 2024 (Department for Education, 2023d) made it harder to find focus.  However, researching the professional knowledge base of teachers is increasingly relevant with the policy change.  The data raised many issues I had not considered which was positive in many ways, but it left me wanting to delve deeper into areas I had not previously studied.  The data was collected before the pandemic and therefore the aftermath of Covid has thrown up further challenges for STs which has made things like belonging and sense of self even more pertinent in 2024.

In my original research plan, I wanted to do multiple interviews with the STs.  I was very conscious not to put additional pressure on them so only undertook one interview at the end of the programme.  I would like to consider how I could collect data in a less invasive way to get more details about the lived experiences of the STs throughout the PGCE rather than in a reflective way.

The semi-structured interviews helped me when comparing the interview data and supported my thematic analysis but using the card sorts did limit the interviews and did not allow the participants to talk as freely as perhaps they would have done if I had not given them a starting point.  However, establishing the domains of knowledge was important to ensure that I was able to interpret the participants' specific views.

### 8.5 Suggestions for future study

One of the most surprising outcomes from the data was around the need to belong.  This is something that really interests me and would make a good extension to this project, especially in a post-Covid world.  It would include the theoretical frameworks around 'communities of practice' (Wenger, 1999; 2002) and also the circle of courage based on native American philosophies around belonging, mastery, independence and generosity (Brendtro et al., 2010; 2013; 2014; Espiner and Guild, 2014).

Another aspect of research I would like to follow up on is around STs teacher identity and sense of self. I avoided doing this for my thesis, but the outcome of this research is that is really important. Allowing STs time to focus and reflect on the differences between their own experiences and the context of the school, as well as on the pupils they are working with might aid their development in understanding the tensions between them. Giving space for this to be part of learning to be a teacher enables the STs to adapt and come to terms with it (Flores and Day, 2006). This in turn helps the STs to come to terms with who they are, as a person and as a geography teacher.

## 8.6 Concluding points

This study contributes to the professional knowledge base of student geography teachers; what they need to know, who decides what they need to know and how the student geography teachers acquire and develop their professional knowledge and skills.

The key findings from this research are:

- Every geography ST's lived experience learning to teach is different and is complex.
- In addition to the professional knowledge required for teaching in England, geography STs have to navigate a range of authoritative discourses and develop their own internally persuasive discourse.
- The subject mentor and university tutor have crucial roles to play in the training of geography teachers; working together to appreciate the challenges STs face will benefit their progress over time.
- STs need to be able to reflect and develop their own teacher identity during the PGCE. In order to do this, they need to feel they belong.

This study demonstrates the highly complex way in which geography STs learn to teach. It has made me consider my own practice and how to include the findings in the new PGCE programme for 2024. Appreciating the complexity of learning to teach is only the beginning of truly understanding all the elements that must align for an ST to successfully complete the PGCE and begin their careers as teachers.

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# Appendices

## Appendix A - Routes into Teaching

At the time of writing there are seven main ways to enter into teaching in England. These are listed below and based on a diagram created by the Association of College and School Leaders (2015). There have been other campaigns to encourage career changers into teaching, for example Troops to Teachers, Researchers in Schools and most recently Engineers into Teaching Physics.

| Route | Qualification | Led by |
|---|---|---|
| School Centred Initial Teacher Training | Qualified Teacher Status (QTS), many also award a PGCE and master's credits (in a partnership with an HEI) | School or Higher Education Led |
| School Direct (Unsalaried) | | |
| School Direct (Salaried) | | |
| Teach First | QTS and PGCE awarded after the first year with an option of completed a two-year Masters beginning in the second year | |
| Assessment Only | Someone with substantial experience of teaching can gain QTs through a portfolio. QTS awarded by University or SCITT. | School led |
| Undergraduate route | Awarded degree and QTS | University Led |
| Postgraduate route (PGCE) | PGCE and QTS and some universities will offer credits towards a Masters. | |

## Appendix B – Bursary and Subject Knowledge Enhancement Information for Geography Student Teachers

Bursary Information for Geography Student Teachers over time and availability of funded Subject Knowledge Enhancement Course (SKE) (Department for Education, 2023a)

| Academic Year | Scholarship | 1st (or PhD) | 2:1 (or Masters) | 2:2 | Funded SKE Available | Number of STs |
|---|---|---|---|---|---|---|
| 2013-2014 | N/A | £9,000 | £4,000 | £0 | | 36 |
| 2014-2015 | N/A | £9,000 | | £0 | | 25 |
| 2015-2016 | N/A | £12,000 | £9,000 | £4,000 | | 26 |
| 2016-2017 | N/A | £15,000 | | | Yes | 35 |
| 2017-2018 | £27,500 | £25,000 | | | Yes | 42 |
| 2018-2019 | £28,000 | £26,000 | | | Yes | 48 |
| 2019-2020 | £28,000 | £26,000 | | | Yes | 30 |
| 2020-2021 | £17,000 | £15,000 | | | | 23 |
| 2021-2022 | N/A | £0 | | | | 10 |
| 2022-2023 | N/A | £15,000 | | | | 12 |
| 2023-2024 | N/A | £25,000 | | | | 22 |
| 2024-2025 | N/A | £25,000 | | | | ? |

**Recommendation 1:** DfE should commission a sector body (for example, the Teaching Schools Council, a future professional body (College of Teaching), or another sector body) to develop a framework of core content for ITT. We believe that a framework of the essential elements of core content would build a stronger shared understanding of good ITT content meaning that trainees will have a more consistent experience. We also feel it is critical that a framework is developed by the sector, rather than by central government. Though we have not aimed here to set out exactly what should be in the framework, we feel that the areas outlined in section 1 offer a good starting point (we have included this as an Annex in this report). We would like the framework to be informed by the areas for improvement we outline in this report, as highlighted in the following sub-recommendations:

1a: Subject knowledge development should be part of a future framework for ITT content.

1b: Issues in subject-specific pedagogy, such as pupil misconceptions, phases of progression in the subject as well as practical work, should be part of a framework for ITT content.

1c: Evidence-based teaching should be part of a framework for ITT content.

1d: Assessment, including the theory of assessment and technical aspects of assessment, should be part of a framework for ITT content.

1e: Child and adolescent development should be included within a framework of core ITT content.

1f: Managing pupil behaviour should be included in a framework for ITT content; with an emphasis on the importance of prioritising practical advice throughout programmes.

1g: Special educational needs and disabilities should be included in a framework for ITT content.

**Recommendation 2**: All ITT partnerships should:

i. rigorously audit, track and systematically improve subject knowledge throughout the programme

ii. ensure that changes to the curriculum and exam syllabi are embedded in ITT programmes

iii. ensure that trainees have access to high quality subject expertise

iv. ensure that trainees have opportunities to learn with others training in the same subject

**Recommendation 3:** Schools should include subject knowledge as an essential element of professional development.

**Recommendation 4:** DfE should make funded in-service subject knowledge enhancement courses available for new primary teachers to access as professional development.

**Recommendation 5:** Universities should explore offering 'bridge to ITT' modules in the final years of their subject degrees for students who are considering ITT programmes.

**Recommendation 6:** The Teachers' Standards should be amended to be more explicit about the importance of teachers taking an evidence-based approach.

**Recommendation 7:** A central portal of synthesised executive summaries, providing practical advice on research findings about effective teaching in different subjects and phases, should be developed. A future College of Teaching would be well placed to develop this.

**Recommendation 8:** There are many universities that are home to world-leading research and assessment organisations – yet in our experience it can be the case that these organisations are either not involved in ITT or are involved in a superficial way. ITT partnerships should make more systematic use of wider expertise outside university departments of education.

**Recommendation 9:** Alongside a central portal on evidence-based practice, a central repository of resources and guidance on assessment should be developed.

**Recommendation 10:** Wherever possible, all ITT partnerships should build in structured and assessed placements for trainees in special schools and mainstream schools with specialist resourced provision.

**Recommendation 11:** ITT partnerships should ensure all trainees experience effective mentoring by:
    i.  selecting and recruiting mentors who are excellent teachers, who are able to explain outstanding practice (as well as demonstrate it)
    ii.  providing rigorous training for mentors that goes beyond briefing about the structure and nature of the course, and focusses on how teachers learn and the skills of effective mentoring
    iii.  considering whether they are resourcing mentoring appropriately – the resource allocated to mentoring should reflect the importance of the role.

**Recommendation 12:** DfE should commission a sector body, for example the Teaching Schools Council, to develop some national standards for mentors.

**Recommendation 13:** All schools should, whenever practically possible, seek out and participate in robust local partnership arrangements. In a school-led system, this recommendation is naturally the responsibility of schools.

**Recommendation 14:** Building on the development of school-led ITT, DfE should work in collaboration with those involved in ITT to consider the way in which teachers qualify with a view to strengthening what has become a complex and sometimes confusing system. We would like applicants to understand that QTS is the essential component of ITT and that a PGCE is an optional academic qualification.

**Recommendation 15:** DfE should undertake a review of the effectiveness of the skills tests in selecting high quality trainees.

**Recommendation 16:** In order for applicants to make well informed decisions when choosing a course, we recommend the development and expansion of the NCTL's 'Get

into Teaching' website. This should signpost information that applicants might consider when choosing a course, for example: provider Ofsted rating and inspection report; completion rates; NQT survey results; and employability rates.

**Recommendation 17:**
In order for schools to find out how to get involved with ITT and make well-informed decisions about the partners they work with, we recommend that the DfE develop a page on the Gov.uk website to signpost information that schools should consider when making choices about a partner provider, including, for example: provider Ofsted ratings and inspection reports; completion rates of trainees; and employability rates.

**Recommendation 18:**
Schools should make clear information about how to train readily available at all school reception areas and a link to recruitment appointments on all school websites. It would be for schools to take this recommendation forward.

(Carter, 2015:67-69)

| Teachers' Standards |
| --- |
| **Standard 3 – Demonstrate good subject and curriculum knowledge** |
| **A teacher must:** |
| • have a secure knowledge of the relevant subject(s) and curriculum areas, foster and maintain pupils' interest in the subject, and address misunderstandings<br>• demonstrate a critical understanding of developments in the subject and curriculum areas, and promote the value of scholarship<br>• 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<br>• if teaching early reading, demonstrate a clear understanding of systematic synthetic phonics<br>• if teaching early mathematics, demonstrate a clear understanding of appropriate teaching strategies. |

| Core Content Framework | |
| --- | --- |
| **Subject and curriculum Knowledge (Standard 3 – 'Demonstrate good subject knowledge'** | |
| **Learn that…** | **Learn how to…** |
| 1. A school's curriculum enables it to set out its vision for the knowledge, skills and values that its pupils will learn, encompassing the national curriculum within a coherent wider vision for successful learning.<br>2. Secure subject knowledge helps teachers to motivate pupils and teach effectively.<br>3. Ensuring pupils master foundational concepts and knowledge before moving on is likely to build pupils' confidence and help them succeed.<br>4. Anticipating common misconceptions within particular subjects is also an important aspect of curricular knowledge; working closely with colleagues to develop an understanding of likely misconceptions is valuable.<br>5. Explicitly teaching pupils the knowledge and skills they need to succeed within particular subject areas is beneficial. | **Deliver a carefully sequenced and coherent curriculum, by:**<br>• *Receiving clear, consistent and effective mentoring in how to identify essential concepts, knowledge, skills and principles of the subject.*<br>• *Observing how expert colleagues ensure pupils' thinking is focused on key ideas within the subject and deconstructing this approach.*<br>• *Discussing and analysing with expert colleagues the rationale for curriculum choices, the process for arriving at current curriculum choices and how the school's curriculum materials inform lesson preparation.*<br>**And - following expert input - by taking opportunities to practise, receive feedback and improve at:**<br>• *Providing opportunity for all pupils to learn and master essential concepts, knowledge, skills and principles of the subject.*<br>• *Working with expert colleagues to accumulate and refine a collection of powerful analogies, illustrations, examples, explanations and demonstrations.*<br>• *Using resources and materials aligned with the school curriculum (e.g. textbooks or shared resources designed by expert colleagues that carefully sequence content).*<br>• *Being aware of common misconceptions and discussing with expert colleagues how to help pupils master important concepts.*<br>**Support pupils to build increasingly complex mental models, by:** |

| | |
|---|---|
| 6. In order for pupils to think critically, they must have a secure understanding of knowledge<br><br>7. In all subject areas, pupils learn new ideas by linking those ideas to existing knowledge, organising this knowledge into increasingly complex mental models (or 'schemata'); carefully sequencing teaching to facilitate this process is important.<br><br>8. Pupils are likely to struggle to transfer what has been learnt in one discipline to a new or unfamiliar context.<br><br>9. To access the curriculum, early literacy provides fundamental knowledge; reading comprises two elements: word reading and language comprehension; systematic synthetic phonics is the most effective approach for teaching pupils to decode.<br><br>10. Every teacher can improve pupils' literacy, including by explicitly teaching reading, writing and oral language skills specific to individual disciplines. | • *Discussing and analysing with expert colleagues how to revisit the big ideas of the subject over time and teach key concepts through a range of examples.*<br>• *Discussing and analysing with expert colleagues how they balance exposition, repetition, practice of critical skills and knowledge.*<br>**And - following expert input - by taking opportunities to practise, receive feedback and improve at:**<br>• *Drawing explicit links between new content and the core concepts and principles in the subject.*<br>**Develop fluency, by:**<br>• *Observing how expert colleagues use retrieval and spaced practice to build automatic recall of key knowledge and deconstructing this approach.*<br>**And - following expert input - by taking opportunities to practise, receive feedback and improve at:**<br>• *Providing tasks that support pupils to learn key ideas securely (e.g. quizzing pupils so they develop fluency with times tables).*<br>**Help pupils apply knowledge and skills to other contexts, by:**<br>• *Observing how expert colleagues interleave concrete and abstract examples, slowly withdrawing concrete examples and drawing attention to the underlying structure of problems and deconstructing this approach.*<br>**And - following expert input - by taking opportunities to practise, receive feedback and improve at:**<br>• *Ensuring pupils have relevant domain-specific knowledge, especially when being asked to think critically within a subject.*<br>**Develop pupils' literacy, by:**<br>• *Observing how expert colleagues demonstrate a clear understanding of systematic synthetic phonics, particularly if teaching early reading and spelling, and deconstructing this approach.*<br>• *Discussing and analysing with expert colleagues how to support younger pupils to become fluent readers and to write fluently and legibly.*<br>• *Receiving clear, consistent and effective mentoring in how to model reading comprehension by asking questions, making predictions, and summarising when reading.*<br>• *Receiving clear, consistent and effective mentoring in how to promote reading for pleasure (e.g. by using a range of whole class reading approaches and regularly reading high-quality texts to children).*<br>• *Discussing and analysing with expert colleagues how to teach different forms of writing by modelling planning, drafting and editing.*<br>**And - following expert input - by taking opportunities to practise, receive feedback and improve at:**<br>• *Teaching unfamiliar vocabulary explicitly and planning for pupils to be repeatedly exposed to high-utility and high-frequency vocabulary in what is taught.* |

| | |
|---|---|
| | • *Modelling and requiring high-quality oral language, recognising that spoken language underpins the development of reading and writing (e.g. requiring pupils to respond to questions in full sentences, making use of relevant technical vocabulary).* |

**Notes**

Learn that… statements are informed by the best available educational research; references and further reading are provided below

Learn how to… statements are drawn from the wider evidence base including both academic research and additional guidance from expert practitioners.

**[Further reading recommendations are indicated with an asterisk.]**

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## Appendix E - Standards Progress Indicators

This document shows a section of the "Trainee Progress Indicators and Assessment Descriptors" from 2017-2018. This is what we used to assess student teachers during their placements in 2017-2018. I have included the section relating to Teachers' Standard XXX.

These descriptors were design to support the introduction of the Teachers' Standards (Department for Education, 2011a) and were a way of monitoring, recording, reporting and supporting STs against the Teachers' Standards. They were used mid-placement and at the end of placement to assess progress towards the Standards. At the end of Placement A, an ST was expected to be **'making progress towards the Standards'**. The Standards highlighted in bold are the particular Standards towards which trainees should be working during Placement A. In order to pass the placement and progress to the next stage STs had to meet the minimum requirement of the 'satisfactory' column.

I have only included the progress indicator for Teachers' Standard 3 as this is the one focussing on subject knowledge.

| S3 | Standards | Unsatisfactory Progress | Making Progress towards the Standards | Satisfactory | Good | Very Good |
|---|---|---|---|---|---|---|
| **S3: Demonstrate good** | **a) Have a secure knowledge of the relevant subject(s) and curriculum areas, foster and maintain pupils' interest in the subject, and address misunderstandings** | Requires support with subject and curriculum knowledge when planning lessons in order to meet the needs of their pupils. Only able to maintain low level pupil interest due to limited subject knowledge and inability to adequately address misunderstandings. | **Developing understanding and use of subject knowledge in relation to their specific subject area and its place in the wider curriculum** **Demonstrates developing ability to foster and maintain pupil interest in the subject by delivering effective teaching episodes, supporting learner progression and addressing misunderstandings.** | Appropriate subject knowledge in relation to their specific subject area and its place within the wider curriculum. Is able to foster and maintain pupil interest in the subject by delivering effective teaching episodes, supporting learner progression and addressing misunderstandings. | Competent level of subject knowledge related to both their specific subject area and to the wider curriculum. Is able to foster and maintain increasing pupil interest in their subject and the wider curriculum as well as addressing misunderstandings. | Highly confident and competent level of subject knowledge related to their specific subject area and the wider curriculum. Is able to foster maintain increasing pupil interest in the subject by delivering engaging teaching episodes, ensuring progression is made by all learners and addressing misunderstandings. |

| S3 | Standards | Unsatisfactory Progress | Making Progress towards the Standards | Satisfactory | Good | Very Good |
|---|---|---|---|---|---|---|
| | **b) Demonstrate a critical understanding of developments in the subject and curriculum areas,** and promote the value of scholarship | Demonstrates no or limited awareness of developments in the subject and curriculum area.<br><br>Limited subject knowledge to promote the value of scholarship. | **Is developing understanding and shows some awareness of developments and changes in the subject and curriculum area.** | Demonstrates awareness of developments and changes in the subject and curriculum area.<br><br>Promotes scholarship and further study within their subject and curriculum area. | Demonstrates good awareness and critical understanding of developments and changes in both the subject and the curriculum area.<br><br>Promotes scholarship and further study to all pupils within their given subject and curriculum area. | Demonstrates a high level of awareness and critical understanding of developments in both the subject and curriculum area.<br><br>Promotes high levels of scholarship and the value of further study to all pupils within their subject and curriculum area. |
| | c) 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 | Has no or limited understanding of strategies for promoting literacy, articulacy and the correct use of standard English and hence limited or no ability to put these into practice. | Demonstrates a developing use and understanding of strategies for promoting high standards of literacy, articulacy and the correct use of standard English, in the teacher's specialist subject | Demonstrates the necessary understanding of strategies for promoting high standards in literacy, articulacy and the correct use of standard English and is able to put these into practice | Demonstrates an established understanding of strategies for promoting high standards for literacy, articulacy and the correct use of standard English and is able to use a range of strategies to put these into practice. | Demonstrates a well-established and thorough understanding of strategies for promoting high standards for literacy, articulacy and the correct use of standard English and is able to use a wide range of strategies to put these into practice. |
| | d) If teaching early reading, demonstrate a clear understanding of systematic synthetic phonics | Has no or limited understanding of the role of systematic synthetic phonics in the teaching of early reading and hence limited or no success in doing this. | Demonstrates a developing understanding of the role of systematic synthetic phonics in the teaching of early reading to develop pupils' reading skills. | Demonstrates sufficient understanding of the role of systematic synthetic phonics in the teaching of early reading to develop pupils' reading skills. | Demonstrates a good understanding of the role of systematic synthetic phonics in the teaching of early reading to develop pupils' reading skills. | Demonstrates a thorough understanding of the role systematic synthetic phonics in the teaching of early reading and applies this knowledge to provide engaging and challenging learning opportunities to develop pupils' reading skills. |

| S3 | Standards | Unsatisfactory Progress | Making Progress towards the Standards | Satisfactory | Good | Very Good |
|---|---|---|---|---|---|---|
| | e) If teaching early mathematics, demonstrate a clear understanding of appropriate teaching strategies. | Has no or limited understanding of strategies for the teaching of early mathematics and hence limited or no success in doing this. | Demonstrates a developing understanding of strategies for the teaching of early mathematics. | Demonstrates sufficient understanding of strategies for the teaching of early mathematics. | Demonstrates a good understanding of strategies for the teaching of early mathematics | Demonstrates a thorough understanding of strategies for the teaching of early mathematics. |
| | | | Increasingly applies this knowledge to devise appropriate learning opportunities to support pupils' developing mathematical skills | Applies this knowledge to devise appropriate learning opportunities to support pupils' developing mathematical skills. | Increasingly applies this knowledge to prepare and deliver engaging and challenging learning opportunities to develop pupils' mathematical skills. | Consistently applies this knowledge to prepare and deliver engaging and challenging learning opportunities to develop pupils' mathematical skills. |

| How well does the trainee: | Evidence for this standard may be demonstrated by: |
|---|---|
| <ul><li>Have secure pedagogical and subject/phase related knowledge and understanding?</li><li>Have knowledge of recent NC frameworks and developments including national strategies and initiatives and critically evaluate and reflect upon the use of these?</li><li>Plan and set subject/phase related targets for individuals and groups of learners?</li><li>Break down ideas and concepts and sequence them logically to support the development of learners' knowledge and understanding?</li><li>Answer learners' questions confidently and accurately?</li><li>Construct and scaffold learning, know when to make effective interventions and respond to learners' common misconceptions and mistakes?</li><li>Support learners in using and developing literacy, numeracy and ICT skills in their subject area/phase?</li><li>Demonstrate depth of knowledge and understanding of early reading, and SSP and use a range of strategies for the teaching of early reading and SSP and critically evaluate and reflect upon these?</li><li>Demonstrate depth of knowledge and understanding of early mathematics and use a range of strategies for the teaching of early mathematics and critically evaluate and reflect upon these?</li></ul> | Planning documentation <ul><li>Subject knowledge, key concepts and principles identified</li><li>Lesson plans, schemes of work and resources providing examples of how pupil literacy is being developed</li><li>Differentiated resources planned and utilised</li></ul>Lesson observations from mentors and tutors <ul><li>Demonstration of clear subject knowledge and the ability to develop pupil understanding</li><li>Use of guided reading and development of appropriate subject specific vocabulary</li><li>Questioning builds on answers and pupils asked to build upon and reflect upon their answers</li></ul>Pupil assessment records <ul><li>Assessment includes language and literacy learning</li><li>Summative, formative and diagnostic assessment of pupil understanding</li></ul>Additional evidence <ul><li>Subject knowledge audits</li><li>Assignments</li></ul> |

## Appendix F – Details of data analysis

Using the stages suggested by Braun and Clarke (2006) I have set out how I analysed my

data in the different stages. This is then exemplified with examples from my research.

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**Stage 1: Familiarising myself with the data**

The interviews were transcribed, and photos of the card sorts gathered together. I
went through the data and as I listened to the interviews I added my own initial notes.

Figure 39 shows my initial notes when listening to the interview with ST2 and figure
40 shows my notes from the interview with SM2. I did the same for each interview.

This helped me to begin to make sense of the data. I also summarised each interview
and card sort on one post it note (figure 41). This helped when I returned to the data
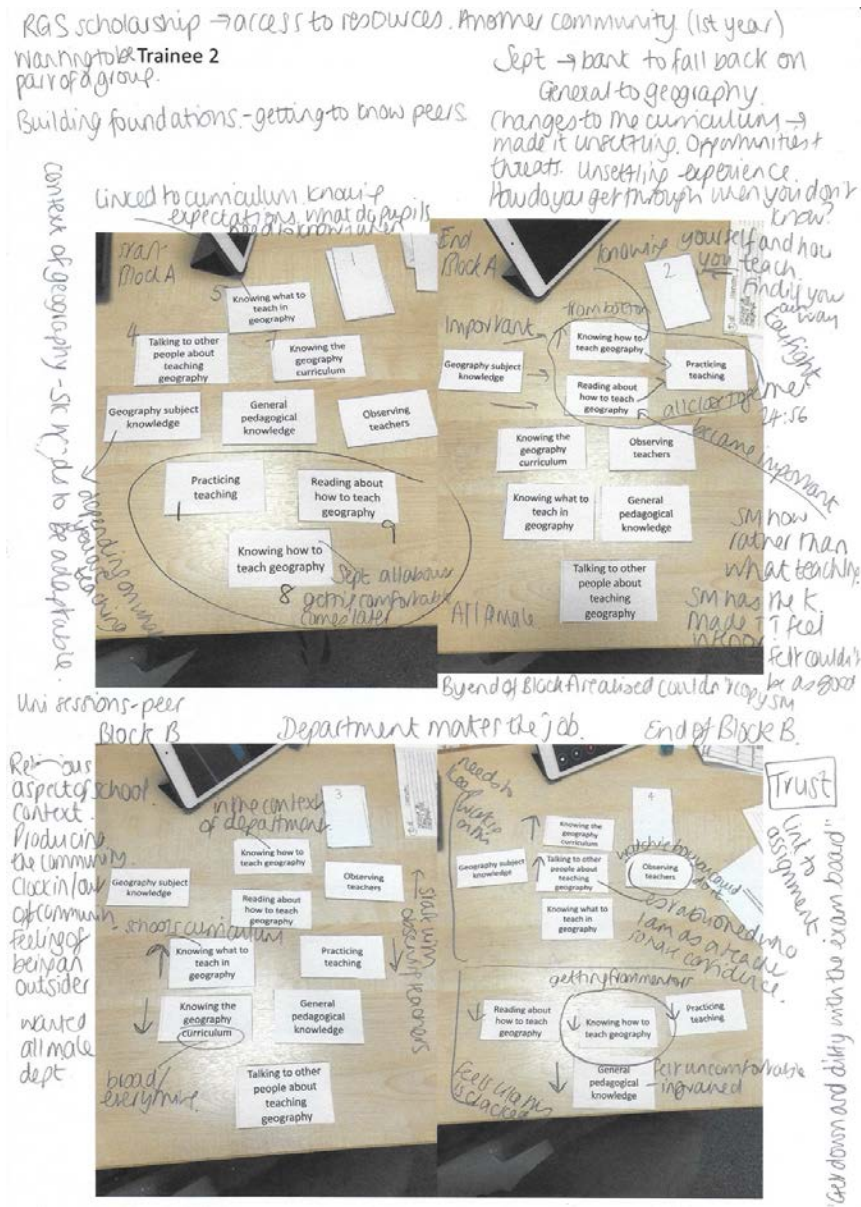each time.

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Figure 39: Initial notes from ST2 interview

Figure 40: Initial notes from SM2 interview


Figure 41: Summary of ST2

| Stage 2: Generating the initial codes |
|---|
| In the initial coding I focussed on the types of knowledge set out by Shulman (1986) and based on the card sort. This has formed part of the interview and therefore initially this seemed like a logical step. |
| However, as I went through each of the interview and card sorts multiple times it was hard to see patterns as STs, SMs and UTs used different language, and had |

different viewpoints.  This meant that there was more than one layer of initial coding.

My first examples are in figures 42 and 43.   I went through and made more notes and started to think about the categories.

My initial codes were:

| Category 1: Context | Subcategory 1: Experience | Code 1: Prior experience in school |
| | | Code 2: teachers in the family |
| | | Code 3 Influence of own education |
| | Subcategory 2: Context of the school | Code 1: Contrast to own life |
| | | Code 2: Similar context to prior experience |
| Category 2: General Teaching Knowledge | Subcategory 1: Observing Teachers | |
| | Subcategory 2: Practicing Teaching | |
| | Subcategory 3: General Pedagogical Knowledge | |
| Category 3: Teaching Knowledge | Subcategory 1: Geography subject knowledge | |
| | Subcategory 2: Knowing what to Teach | |
| | Subcategory 3: Knowing the geography curriculum | |
| | Subcategory 4: Reading about teaching geography | |
| | Subcategory 5: Knowing how to teach geography | |
| | Subcategory 6: Talking to other people about teaching geography | |

Then you start putting it to what was previously going to be taught, and then you would just feel like shit, to be fair, because it's not as good as that, as hers; or, at least you believe that because you're a trainee compared to her ten years' experience.

*[handwritten: feeling like being compared to SM. Negative exp]*

So, then, this is what reading about how to teach geography and knowing how to teach geography, this is where that connection comes with me, because knowing how to teach geography was what my mentor was trying to teach me, and I would watch her do it. ___[0:23:19] teacher. She was fantastic at what she does. She was completely comfortable in her resources and, again, her lessons were unparalleled; they were brilliant.

*[handwritten: being able to read about it gave confidence that TT2 could get there.]*

It took me until the end of Block A to realise that's not my style, and that's where my anxiety, or my...

*[handwritten: growing confidence in own teacher identity]*

I mean, there was one Year 10 lesson where I just... literally five minutes before I was meant to teach it, I just basically had a massive anxiety over it and I was like, "No, I don't want to do it." So, my mentor had to do it, and she taught it for me, and then that was it. A learning curve, and all the rest of it, but it worked.

*[handwritten: All coming together]*

> The idea being, knowing how to teach geography, and reading about how to teach geography is good because I feel like knowing how to teach, you know yourself, and you know how you teach.

*[handwritten: making sense of what he was seeing in the classroom ↓ gave alternatives]*

Reading how to teach, for me, that was soothing the idea that I read about teaching, identified how my mentor taught, and then realised there are other ways you can do it. So, I was like, "Right. That's how I do it."

27

Figure 42: Extract from ST2 interview

JB: And the top half are things that are going to continue.

Respondent: I think you have to keep refreshing, or keep updating.

So, particularly with the curriculum. That's what this summer's all about, for me. It's just trying to work out what my school does, read the tests, you know, the school and the kids have done, and jump in that way.

Talking to people about teaching geography. "This is what I think of it. What do you think of it?"

Knowing what to teach in geography. Again, come September, new school. I need to see what they need to do, want they want to do.

Observing teachers; that is a key one for me. I feel like you can always do that, and always learn off other people.

JB: Yes, definitely.

Respondent: Then, again, subject knowledge; that's something you always have to keep up to date, and keep refreshing.

Whereas, again, like I said, that divide, reading about how to teach geography, practicing teaching, knowing how to teach geography and the general pedagogical knowledge; I feel like that's done, if that makes sense?

JB: Yes.

45

*[Handwritten margin annotations: "curricula", "Teaching geog", "Observe", "S.K. always need to keep wonder.", "this is embedded"]*

Figure 43: Extract from ST2 interview

I went through the data again, this time using NVivo to code my data. This time I widened my codes and looked at the data through Bakhtin. I started by looking for authoritative discourses and internally persuasive discourses and then set up another set of codes. This time I used the following codes school, curriculum, news, own context and values, peers, pupils, social media, subject mentor, theory and university. This opened up the data in a different way and widened the stories the interviewees were telling me (See figures 44 and 45).

Figure 44: Codes relating to Shulman and knowledge



Figure 45: Codes relating to authoritative discourse

| Stage 3: Searching for themes |
|---|
| I went through the data again using these codes and realised that these themes supported my research questions, and it went beyond my initial codes which focussed purely on the knowledge and linked to my research questions.<br><br>The extracts in figures 46, 47 and 48 show this coding as I developed the themes. |

Can you remember what you got out of those sessions? What did you learn from those sessions?

Trainee 2: For me, the whole month of September was sort of like building foundations. I felt like the whole programme in September was just made to lay the foundations for you guys to bring everyone on a level playing field. Tell everyone where they sit. This is what's happening now. This is where you guys are. This is what's going to happen, and then we will sort of... I think it was quite clever; you said, "We'll drip-feed you, as and when you need it, the information, what you need," and it was quite good.

I mean, for me, the key points with September, it was stuff like... So, obviously, Castelton was a big one, and that was, for me, really good, in terms of... We learnt – that was towards the end of it, as well, so we learnt a lot in the university itself – then you went to the actual class and you got to see geography in the real world, and you could then start applying it to... If you're doing it as a field trip, this is what you could do.

For me, it was more about bringing all of us... There were a lot of us all together in one room, and you got to know a lot of people very quickly over the course of two days.

Figure 46: Extract from interview coded in NVivo
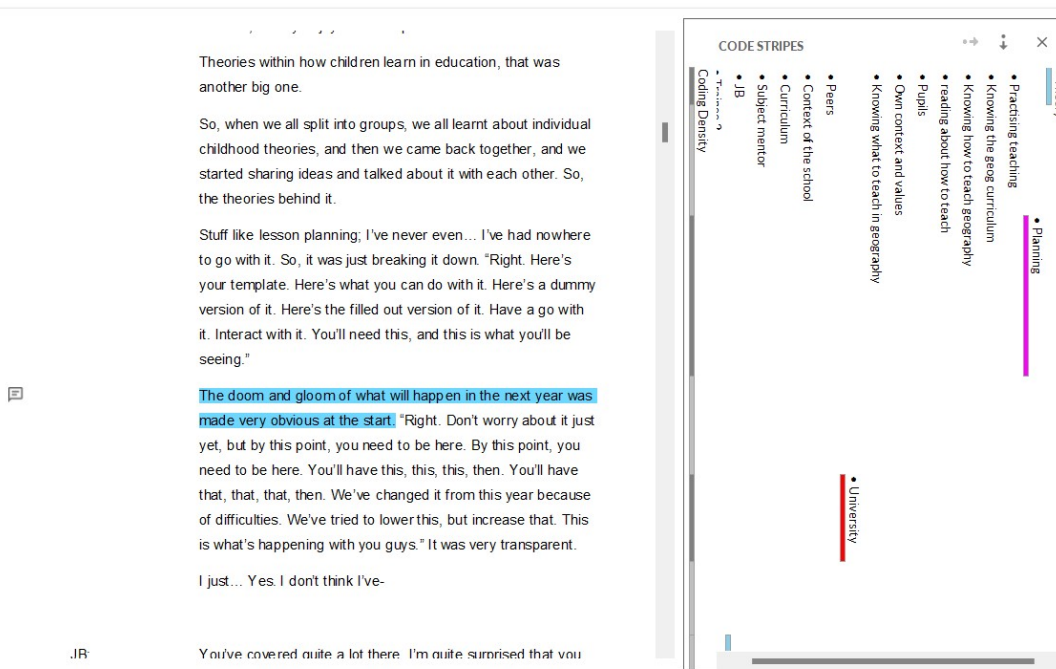


Theories within how children learn in education, that was another big one.

So, when we all split into groups, we all learnt about individual childhood theories, and then we came back together, and we started sharing ideas and talked about it with each other. So, the theories behind it.

Stuff like lesson planning; I've never even... I've had nowhere to go with it. So, it was just breaking it down. "Right. Here's your template. Here's what you can do with it. Here's a dummy version of it. Here's the filled out version of it. Have a go with it. Interact with it. You'll need this, and this is what you'll be seeing."

The doom and gloom of what will happen in the next year was made very obvious at the start. "Right. Don't worry about it just yet, but by this point, you need to be here. By this point, you need to be here. You'll have this, this, this, then. You'll have that, that, that, then. We've changed it from this year because of difficulties. We've tried to lower this, but increase that. This is what's happening with you guys." It was very transparent.

I just... Yes. I don't think I've-

JB: You've covered quite a lot there. I'm quite surprised that you

Figure 47: Extract of interview coded in NVivo
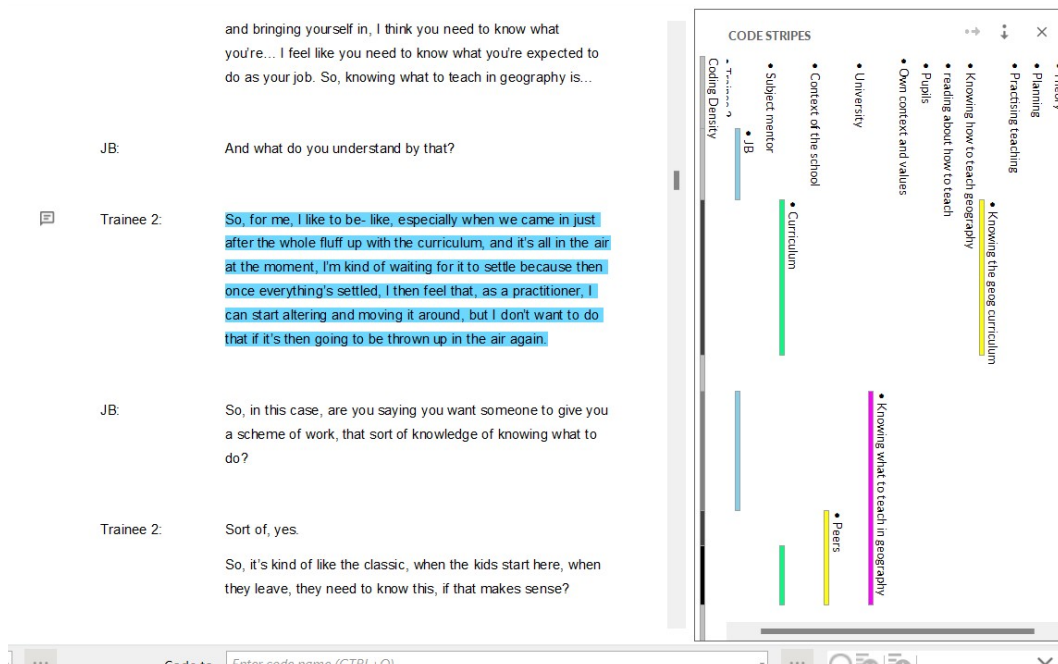
Figure 48: Extract of interview coded in NVivo

| Stage 4: Reviewing themes |
|---|
| Those themes were then reviewed again and grouped to avoid any overlap. For example ST3 used the pupils as an authoritative discourse as she wanted to make sure she listened to them and their needs. Whereas ST1 talked more about behaviour of the pupils as the authoritative discourse. |

| Stage 5: Defining and naming themes |
|---|
| Finally the themes used in the cross-case analysis were decided upon. This took many different attempts to group and regroup the original themes until I settled on them. This analysis was done manually and using NVivo. NVivo allowed for each theme to be drawn out (see figure 49) and then I printed the interviews and group paragraphs for each theme. |

Figure 49: Example of how NVivo groups together data relating to one theme

| Stage 6: Producing the report |
|---|
| Finally the themes used in the final thesis were used to structure the final piece of writing:<br>Theme 1 – Professional knowledge<br>Theme 2 – Observing teachers<br>Theme 3 – Belonging<br>Theme 4 – Context<br>Theme 5 – Reflection<br>Theme 6 – Sense of self<br>Theme 7 – Who shapes the knowledge?<br><br>These are discussed and described in more detail in Table 5. |

## Appendix G - Timeline of interview data collection

**Trainee 3 Lesson feedback with Subject Mentor 3 and University Tutor 3**

9 March 2018

**Trainee 2 Lesson Feedback with Subject Mentor 2 and University Tutor 2**

23 March 2018

**Trainee 1 Lesson Feedback with Subject Mentor 1 and University Tutor 1**

11 May 2018

**Trainee 2 Interview**

6 June 2018

**Trainee 1 Interview**

5 June 2018

**Trainee 3 Interview**

11 June 2018

**Trainee 4 Interview**

11 June 2018

**University Tutor 3 Interview**

11 June 2018

**Trainee 5 Interview**

14 June 2018

**University Tutor 2 Interview**

7 July 2018

**Subject Mentor 1 Interview**

10 July 2018

**Subject Mentor 4 Interview**

10 July 2018

**Trainee 3 Interview**

11 July 2018

**Subject Mentor 2 Interview**

23 July 2018

**University Tutor 1 interview**

23 July 2018

# Appendix H - Geography PGCE University Session Planner 2017-2018

*This plan should be used in conjunction with your individual timetable and the overall course planner. This may be updated throughout the year to meet the needs of the group. You should also refer to your individual timetable and the overall calendar, which can be found on the partnership website.*
https://www2.mmu.ac.uk/secondary/partnerships/resources/

| Uni Wk | Day | Date | Morning | Afternoon | Intersession Tasks | Core/SD |
|---|---|---|---|---|---|---|
| 6 | Thurs | 07-Sep | **10-12**<br>**Subject Pedagogy Session 1: Introductions and expectations of the course**<br>**Room: 4.48**<br>*Tutor: XXX*<br><br>*In this session, you will get to meet the rest of the group. We will do some introductory activities to get you talking and thinking. We will go through the structure of the course (Core and Schools' Direct). We will also go through the details of the field trip.*<br><br>*We will also talk about teacher identity and professionalism.*<br><br>*Refer to the programme handbook, how we support students etc.*<br><br>**11.50 DBS team to speak to anyone without DBS.** | **13-15**<br>**Subject Pedagogy Session 2: Diversity of Geography; Developing Subject Knowledge**<br>**Room: 3.89**<br>*Tutor: XXX*<br>*This session will raise your awareness of the diverse nature of geography as subject discipline. We will also get you to consider how to develop curiosity in the future geographers you will be teaching.* | Please bring to the session:<br>• Your 3 items to this session - do not discuss them with anyone else.<br>• Subject knowledge confidence form<br>• Pre-course task YOU WILL NEED PRINTED COPIES OF THESE<br><br>Complete the reading of Castree - Questioning Geography – You will need to log in to the library to access this. | Core & SD |
| 6 | Fri | 08-Sep | **9-11 eSafety session**<br>*Tutor: XXX*<br>*Room: Lecture Theatre 3*<br><br>*This session will provide full coverage of the 'CEOP ThinkUKnow' Introductory training for teachers to demonstrate some of the online dangers and daily challenges young people may face when using mobile technology. The session will also raise awareness of trainees' own online conduct and digital footprint. There is also mention of what to do if faced with a disclosure and the importance of knowing safeguarding policies and procedures in school* | **14-16 Introduction and Support**<br>**Room: Lecture Theatre 4**<br><br>*This lecture will include a welcome to the programme, unions and support services library induction, introduction to Moodle and introduction to OneDrive and the Record of Professional Development.* | | Core & SD |

| Uni Wk | Day | Date | Morning | Afternoon | Intersession Tasks | Core/SD |
|---|---|---|---|---|---|---|
| | | | **11-13 Subject Pedagogy Session 3: Research informing practice, becoming a critical practitioner and Teaching Geography in 2017 – A Historical Overview of School Geography**<br>**Room: 1.64**<br>*Tutor: XXX*<br><br>*This session will explore the ways in which school geography has changed over the years.* | | | |
| 7 | Mon | 11-Sep | **9-12**<br>**Subject Pedagogy Session 4: The geography curriculum and how do Children Learn?**<br>**Room: 3.89**<br>*Tutor: XXX*<br>*This session will look at different theories of learning and how these help us to understand how children learn in geography.* | **13-15**<br>**Subject Pedagogy Session 5: Planning 1 – The Planning Process – Long, Medium and Short Term**<br>**Room: 2.16**<br>*Tutor: XXX*<br>*In this session, we look at how we plan in different ways and how personalise learning to the students we teach, including lesson plans and mark books.*<br><br>*Introduce the peer teaching activity – 15 minute maximum. Starter, quick activity and 2 minute plenary, in pairs* | Listen to Carol Dweck talking the radio *here* | Core & SD & AoM |
| 7 | Tues | 12-Sep | **9-12**<br>**Subject Pedagogy Session 6: Professionalism and Planning 2 - Lesson Planning**<br>**Room: 4.65**<br>*Tutor: XXX* | **1.30 to 4.30 TBC**<br>**Session 7 - GIS and Digimaps**<br>**Room: Business School (North Atrium) 2.09** *(need to check number of computers but think it is 48 so may need a couple of you to bring a laptop)*<br>**Tutor: XXX**<br><br>*Library session – Organise with Gopal once Darren has confirmed times.* | Read Chapter 2 The Effective Teacher, Cedric Cullingford, 1995 | Core & SD & AoM |
| 7 | Wed | 13-Sep | *Self-supported Study Day- Preparing for peer teaching in groups. See session 6 PowerPoint for instructions and groups.* | | | Core & SD |
| 7 | Thurs | 14-Sep | **9-12 – We will split into two groups for this session. You will do both sessions.** | **13-15**<br>**Subject Pedagogy Session 10: Thinking Skills and developing pupils' metacognition**<br>**Room: 4.48** | Assessment – Watch Dylan William – The Classroom Experiment – on BoB or *here* | Core & SD & AoM |

| Uni Wk | Day | Date | Morning | Afternoon | Intersession Tasks | Core/SD |
|---|---|---|---|---|---|---|
| | | | *Subject Pedagogy Session 8 - Creativity and Geography*<br>*Room: 1.64*<br>*Tutor: XXX*<br><br>*Session 9 – Assessment 1 - Assessing Geographical Understanding and Assessment for Learning*<br>*Room: 2.04*<br>*Tutor: XXX*<br><br>*Session 1 will run 9.30 to 10.30*<br>*Session 2 will run 10.50 to 12*<br>*Please see the list on Facebook for the groups* | *Tutor: XXX* | | |
| 7 | Fri | 15-Sep | 9-12<br>*Subject Pedagogy Session 11: Geographical Concepts – Where's the geography?*<br>*Room: 4.65*<br>*Tutor: xxx* | *1-3 Seminar- Professionalism*<br><br>*Lecture delivered by podcast – Rationale for Professional Practice*<br>*Tutor: XXX* | | Core & SD & AoM |
| 8 | Mon | 18-Sep | Castleton Residential Fieldtrip (Subject Pedagogy Session 12)<br><br>*Tutor: XXX and XXX*<br><br>*This is a residential fieldtrip with the aim of developing your knowledge and understanding of the process of planning and executing a fieldtrip, as a teacher.  There will be a range of activities to build your geographical knowledge as well as team building and how to occupy children in their 'free time' on a residential.*<br><br>*All meals will be provided while we are away.*<br><br>*Arrive at Losehill YHA for* **10am** *on Monday*<br>*Leave Losehill at approximately* **3pm** *on Tuesday* | | *Before the trip read ......* | Core & SD & AoM |
| 8 | Tues | 19-Sep | | | | |
| 8 | Wed | 20-Sep | *Self-supported Study Day- Planning Fieldwork for Year 12 and Preparing for peer teaching in pairs* | | | Core & SD |

| Uni Wk | Day | Date | Morning | Afternoon | Intersession Tasks | Core/SD |
|---|---|---|---|---|---|---|
| 8 | Thurs | 21-Sep | **9-12**<br>Subject Pedagogy Session 13: Peer Teaching<br><br>*Group 1 – Room: G16*<br>*Tutor: XXX*<br><br>*Group 2 – Room: 4.52*<br>*Tutor: XXX* | 13-15<br>Subject Pedagogy Session 14: Debrief from fieldtrip and planning for Y12 visit<br>Behaviour for geographical learning 1<br>Room: 4.51<br>Tutor: XXX | | Core & SD & AoM |
| 8 | Fri | 22-Sep | **9-12 Subject Pedagogy Session 15: Planning for Placement, including observations and managing your mentor Preparing for Review 1 and the ETL assignment**<br><br>Room: 4.48<br>Tutor: XXX | 12-13 Lecture – Teaching and Learning<br>Tutor: XXX<br><br>14-16 Seminar- Teaching and Learning | | Core & SD |
| 10 | Thurs | 05-Oct | *9-12*<br>Subject Pedagogy Session 16: Planning for your subject knowledge audit and introduction to reflective writing; introduction to M Level writing<br><br>Creativity in the classroom<br>Room: 4.52<br>Tutor: XXX | 13-15<br>Subject Pedagogy Session 17: What makes a curriculum? Resources for teaching geography, a range of teaching and learning strategies including starters and plenaries<br>Room: 3.68 (PC lab) 35 computers. *Will need to bring a few laptops*<br><br>Tutor: XXX | | Core |
| 10 | Fri | 06-Oct | *9-12*<br>**Subject Pedagogy Session 18** *Enquiry geography and questioning*<br>Room: 4.52<br>Tutor: XXX | 12-13 Lecture – Introduction to Assessment<br>Tutor – XXX<br><br>14-15.30 Workshop 1 – Details will be on Moodle | | Core |
| 11 | Fri | 13-Oct | Review 1 – times and location to TBC<br>XXX | 12-13 Lecture – Behaviour Management<br>Tutor: XXX | | Core & SD |

| Uni Wk | Day | Date | Morning | Afternoon | Intersession Tasks | Core/SD |
|---|---|---|---|---|---|---|
| | | | XXX<br>XXX<br><br>XXX to arrange times with individual tutees. | 14-15.30 Seminar – Teacher persona | | |
| 12 | Tues | 17-Oct | GA Lecture | | | |
| 12 | Fri | 20-Oct | 9- 10 *Subject Pedagogy Session 19 Observations: similarities and differences*<br>Room: 1.64<br>Tutor: XXX | 12-13 Lecture – Inclusive Learning Assignment<br>Tutor: XXX | | Core & SD |
| | | | 10-12 *Subject Pedagogy Session 19 Inclusive learning and differentiation 1*<br>Room 1.64<br>Tutor: XXX | 13 onwards Review 1<br>XXX and XXX times TBC | | |
| 14 | Fri | 03-Nov | **9-10**<br>*Subject Pedagogy Session 20: Talking though examples of good practice*<br>Room: 4.52<br>Tutor: XXX | 12-13 Lecture – Resilience<br>tutor: XXX | Bring with you a lesson plan or episode you have completed this week, or observation notes from a lesson you thought went really well. | Core |
| | | | **10-12**<br>*Subject Pedagogy Session 20: Inclusive learning assignment and writing workshop*<br>Tutor: XXX | 14-15.30 Workshop 2 – Details will be on Moodle | | |
| 15 | Fri | 10-Nov | **9-12**<br>*Subject Pedagogy Session 21: Fieldwork with Y12*<br>Room: 4.49<br>Tutor: XXX | 12-13 Lecture – Dyslexia<br>Tutor: XXX | | Core & SD |
| | | | | 14-15.30 Seminar - Inclusion | | |
| 16 | Fri | 17-Nov | **9-10**<br>*Subject Pedagogy Session 22: Developing meaningful evaluations*<br>Tutor: XXX | 12-13 Lecture – Research informed teaching<br>Tutor: XXX | | Core |

| Uni Wk | Day | Date | Morning | Afternoon | Intersession Tasks | Core/SD |
|---|---|---|---|---|---|---|
| | | | Room: 4.52 | | | |
| | | | 10-12<br>*Subject Pedagogy Session 22: Written feedback and marking policies*<br>*Tutor: XXX* | 14-15.30 Workshop 3 – Details will be on Moodle | | |
| 17 | Fri | 24-Nov | 9- 10<br>*Subject Pedagogy Session 23: ILA – where are we now?*<br>*Room: 4.65*<br>Tutor: XXX | 12-13 Lecture – EAL<br>*Tutor: XXX* | | Core & SD |
| | | | 10-12<br>*Subject Pedagogy Session 23: Lesson Planning 2: Teaching, Learning and Assessment*<br>*Room 4.65*<br>Tutor: XXX | 14.15.30 Seminar – Language and literacy | | |
| 18 | Fri | 01-Dec | 9-9.30<br>*Subject Pedagogy Session 24*<br>*Room: 4.65*<br>Tutor: XXX | 12-13 Lecture - Diversity<br>*Tutor: XXX* | | Core & SD & AoM |
| | | | 10-12<br>*Subject Pedagogy Session 24: Geography and Language, including EAL*<br>*Room: 4.65*<br>Tutor: XXX | 14-15.30 Seminar – Diversity | | |
| 19 | Fri | 08-Dec | 9..00 to 9.30 Tutor XXX<br>10-12 XXX<br>*Subject Pedagogy Session 25 Inclusive Learning Assignment Presentations and KS2-3 transition – planning for primary placement*<br>Room: 4.52 | 12-13 Lecture - Creativity<br>tutor: XXX | *Prepare a short presentation on your ILA – more details will be given nearer the time.* | Core |
| | | | | 14.15.30 Workshop 4 – Details will be on Moodle | | |

| Uni Wk | Day | Date | Morning | Afternoon | Intersession Tasks | Core/SD |
|---|---|---|---|---|---|---|
| | | | Tutor: XXX | | | |
| 24 | Mon | 08-Jan | 9-12<br>*Subject Pedagogy Session 26: Transition and progression from primary to secondary geography; Applying for Jobs*<br>*Room: 2.18*<br>Tutor: XXX | 13-15<br>*Subject Pedagogy Session 27: New technology in geography; Preparing for review 3*<br>*Room: G.29 – Lecture Theatre 3*<br>Tutor: XXX<br><br>*Work out groups for Post 16.  Share resources etc.* | | Core & SD |
| 24 | Tues | 09-Jan | 9-12<br>*Subject Pedagogy Session 28: A Level Geography*<br>*Room: 3.77*<br>Tutor: XXX | 13-15<br>*Subject Pedagogy Session 28: A Level Geography continued*<br>*Room: 4.65*<br>Tutor: XXX<br><br>*Twilights - TBC* | | Core & SD |
| 24 | Wed | 10-Jan | *Self-supported Study Day – Model making activity in pairs/3's.  Writing a letter of application and preparing for A Level teaching* | | | Core & SD |
| 24 | Thurs | 11-Jan | 9-12<br>*Subject Pedagogy Session 29: Curriculum Making and Curriculum Development Assignment*<br>*School Direct*<br>*Room: 4.52*<br>Tutor: XXX<br><br>Core<br>*Room: 4.49*<br>Tutor: XXX | 13-15<br>*Subject Pedagogy Session 30: Creativity & Curriculum making*<br>Room: 4.51<br>Tutor: XXX<br><br>*Twilight sessions - TBC* | | Core & SD |
| 24 | Fri | 12-Jan | 9-12<br>*Subject Pedagogy Session 31: Games based learning*<br>9-10<br>*Room: 4.65*<br>Tutor: XXX | *12-13 Lecture – British Values*<br>*Tutors: Pupils from XXX School*<br>*14-15.30 Seminar – Pastoral and PSHE* | | Core & SD |

| Uni Wk | Day | Date | Morning | Afternoon | Intersession Tasks | Core/SD |
|---|---|---|---|---|---|---|
| 25 | Mon | 15-Jan | *Please note we will be in John Dalton all day* | | | Core & SD |
| | | | 9-12<br>*Subject Pedagogy Session 32: Weather*<br>*Room: JD E232*<br>*Tutor: XXX* | 13-15<br>*Subject Pedagogy Session 32: Weather*<br>*Room: JD E223 (Lecture theatre)*<br>*Tutor: XXX* | | |
| 25 | Tues | 16-Jan | 9-12<br>*Subject Pedagogy Session 33: Using Data to inform planning and geographical futures*<br>*Room: 3.77*<br>*Tutor: XXX* | 13-15<br>*Subject Pedagogy Session 34: Powerful knowledge in geography*<br>*Room: 4.65*<br>*Tutor: XXX* | | Core & SD |
| 25 | Wed | 17-Jan | Review 3 XXX, XXX | *XXX – 1pm onwards*<br>*XXX – 1pm onwards (5)*<br>Sixth form teaching – need to confirm once the twilights are set | | Core & SD |
| 25 | Thurs | 18-Jan | Review 3<br>*XXX and XXX* | 13-15<br>*Subject Pedagogy Session 35: Assessment 2: Is the focus on assessment or learning?*<br>Room: 4.51<br><br>*Tutor: XXX* | | Core & SD |
| 25 | Fri | 19-Jan | 9- 10<br>*Subject Pedagogy Session 36: Preparation for Block B*<br>*Room: 1.64*<br>*Tutor: XXX* | *12-13 Lecture – Pedagogy*<br>*Tutor: XXX* | | Core & SD |
| | | | 10-12<br>*Subject Pedagogy Session 36: Curriculum Making*<br>*Room: 1.64*<br>*Tutor: XXX* | *14 – 15.30 Seminar – Subject groups with trainees leading session in numeracy*<br>*Room: 4.48* | | |
| 26 | Fri | 26-Jan | 9- 10<br>*Subject Pedagogy Session 37*<br>*Room: 1.64* | *Employability event on campus – details will be on Moodle* | | Core & SD |

| Uni Wk | Day | Date | Morning | Afternoon | Intersession Tasks | Core/SD |
|---|---|---|---|---|---|---|
| | | | Tutor: XXX | | | |
| | | | 10-12 Subject Pedagogy Session 37: Curriculum Development Assignment Planning Room: 1.64 Tutor: XXX | | | |
| | Fri | March | SC3 – Details to be confirmed. All trainees to attend and subject mentors invited Tutor: XXX and Tutor: XXX | | | Core & SD |
| 38 | Fri | 27-Apr | 9-12 Subject Pedagogy Session 39: The push to outstanding Room: 1.64 Tutor: XXX | 12-13 Lecture – Assessment Tutor: XXX 14-15.30 Seminar - assessment | | Core & SD |
| 42 | Mon | 14-May | 9-12 Subject Pedagogy Session 40 Your NQT year Room: 2.31 Tutor: XXX | 13-15 Subject Pedagogy Session 41 Becoming a form tutor Room: 2.04 Tutor: XXX | | Core |
| | Mon | 11 June | Review 6 | | | |
| 46 | Wed | | 9-12 Enrichment Conference Room: 4.48 Tutor: XXX and Tutor: XXX | | | Core & SD |

## Research Goals
**Study title:**
What professional knowledge does a trainee geography need to have?

**The purpose of the study is to:**
- To investigate what early career geography teachers need to know and be able do
- To investigate who has the authority to decide what a trainee needs to know and be able to do to
- To investigate how trainee geography teachers acquire and develop professional knowledge and skills? Does this change during the year? How does it change? What are the pivotal moments?

## Interview Objectives
It is anticipated that the interview will give the opportunity for exploration of the issues surrounding knowledge acquisition and what a trainee knows and understands, and how this knowledge and understanding has changed throughout the year.

## Sample size and selection criteria
The sample size is six trainees, six subject mentors and three university tutors. The trainees volunteered to be involved and subsequently asked their mentors if they would be interviewed.

**Aims of the interview**
- To find out what knowledge is needed before teaching can take place.
- To find out how that knowledge is acquired
- To find out who supports you in getting that knowledge

**Interview Questions**
1. Can you tell me about your experience of teaching before starting the course?

2. Thinking back to September. You have chosen to do a university led route into teaching what do you remember from those sessions? Can you remember what you learnt?

   *Give interviewee a copy of the programme before the interview so they can remind themselves what we did. Also have a copy in the interview to refer to if needed.*

3. This research is looking at what you need to know and do when training to teach. Based on the reading I have done I've got nine things I believe you need to know about. Do you agree with this list?

   *Show the interviewee the list and lay them on the table*

4. Is there anything missing?
   *Have spare blank cards to add any missing items on you*

5. Again, think back to when you started in September. Can you rank these as a diamond 9 from the most important to the least important? Talk me through why you think this is the case.

6. Do you think this changed during the year?
   a. When was the first time it changed?
      *Probe as necessary. What happened at that point? Did something change?*
   b. Has it changed again?
   c. Do think it will change in the future?
      *Take photos as the diamond 9 changes Get interviewee to say why they think it changes.*

7. What do you think were the key moments for you during your PGCE year?
   *Might need to prompt here.*

End of interview

## Research Goals
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The sample size is six trainees, six subject mentors and three university tutors. The trainees volunteered to be involved and subsequently asked their mentors if they would be interviewed.

**Aims of the interview**
- To find out what knowledge is needed before teaching can take place.
- To find out how that knowledge is acquired
- To find out who supports you in getting that knowledge

**Interview Questions**
1. Can you tell me a little bit about your experience of teaching and being a subject mentor? How long? Where? How did you train to be a teacher? How many times have you been a subject mentor?

2. I am interested in what a trainee geography teacher needs to know. What do you think they need to know? Before they start teaching?

3. How do you think they get this knowledge?

4. Based on the reading I have done I've got nine things I believe trainees need to know about. Quick discussion about the things that the mentor mentioned. How do they compare? Could add any extras to the card.
   *Show the interviewee the list and lay them on the table*

5. Thinking about Block B can you rank these as a diamond 9 from the most important to the least important types of knowledge a trainee might need? Talk me through why you think this is the case.

6. What about at the end of Block B?
    a. When was the first time it changed?
        *Probe as necessary. What happened at that point? Did something change?*
    b. Has it changed again?
    c. Do think it will change in the future?
        *Take photos as the diamond 9 changes Get interviewee to say why they think it changes.*

7. Where do you think the trainee gets this knowledge from?

8. Is there anything else you'd like to add?


End of interview

**Research Goals**
**Study title:**
What professional knowledge does a trainee geography need to have?

**The purpose of the study is to:**
- To investigate what early career geography teachers need to know and be able do
- To investigate who has the authority to decide what a trainee needs to know and be able to do to
- To investigate how trainee geography teachers acquire and develop professional knowledge and skills? Does this change during the year? How does it change? What are the pivotal moments?

## Interview Objectives

It is anticipated that the interview will give the opportunity for exploration of the issues surrounding knowledge acquisition and what a trainee knows and understands, and how this knowledge and understanding has changed throughout the year.

## Sample size and selection criteria

The sample size is six trainees, six subject mentors and three university tutors.  The trainees volunteered to be involved and subsequently asked their mentors if they would be interviewed.

**Aims of the interview**
- To find out what knowledge is needed before teaching can take place.
- To find out how that knowledge is acquired
- To find out who supports you in getting that knowledge

**Interview Questions**
1. Can you tell me a little bit about your experience of being a teacher educator? How long have you been involved in geography education and teacher education?

2. I am interested in what a trainee geography teacher needs to know.  What do you think they need to know? What professional knowledge do they need? Before they start teaching? When they begin teaching?

3. How do you think they get this knowledge?

4. Based on the reading I have done I've got nine things I believe trainees need to know about.  Quick discussion about the things that the tutor mentioned.  How do they compare? Could add any extras to the card.
   *Show the interviewee the list and lay them on the table*

5.  Thinking about Block B can you rank these as a diamond 9 from the most important to the least important types of knowledge a trainee might need. Talk me through why you think this is the case.

6.  What about at the end of Block B?
    a.  When was the first time it changed?
        *Probe as necessary. What happened at that point? Did something change?*
    b.  Has it changed again?
    c.  Do think it will change in the future?
        *Take photos as the diamond 9 changes Get interviewee to say why they think it changes.*

7.  Where do you think the trainee gets this knowledge from?

8.  Is there anything else you'd like to add?


End of interview

**Manchester Metropolitan**
University
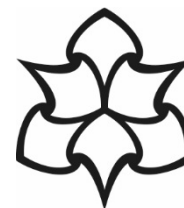
Dear Student

I am researching the professional knowledge acquisition of trainee geography teachers. I am investigating what professional knowledge trainee geography teachers need to have and I would like to invite you to take part in a series of semi-structured interviews to develop a case series of trainees.

Before you decide if you would like to take part in this discussion, it is important for you to understand why the research is being done and what it will involve. Please take time to read the attached information sheet carefully and discuss it with others if you wish. This information covers the most commonly asked questions, but please ask if there is anything that is not clear or if you would like more information. Please take time to decide whether or not you wish to take part.

There is a consent form for you to complete if you wish to take part.

Thank you for your time and co-operation.

Yours sincerely

Joanna Baynham
Doctor of Education Student

Faculty of Education

Manchester Metropolitan University

j.baynham@mmu.ac.uk

# Manchester Metropolitan University

## Trainee Teacher Information Sheet

**Study title:**
What professional knowledge does a trainee geography need to have?

**The purpose of the study is to:**
- To investigate what early career geography teachers need to know and be able do
- To investigate who has the authority to decide what a trainee needs to know and be able to do to
- To investigate how do trainee geography teachers acquire and develop professional knowledge and skills? Does this change during the year? How does it change? What are the pivotal moments? What third spaces are involved in this experience?

**Why have I been asked to take part?**
You have been invited to take part as I would like to gain an understanding of how trainee geography teachers experience their training year. I would like to hear a range of views about knowledge and skills acquisition during the year.

**Do I have to take part?**
It is up to you to decide whether or not you take part. If you do decide to take part, I would like you to sign the attached consent form. If you do decide to take part, you are still free to withdraw at any time and without giving a reason. A decision to withdraw at any time, or a decision not to take part, will not affect you in any way. This research is in no way linked to your progress on your PGCE and should be seen as separate from your studies. The research will have no bearing on your assessment throughout the PGCE and I will not be assessing you in school, or university.

**What will I have to do?**
If you agree to take part in the study, you will be invited to take part in three semi-structured interviews when you are on placements in school. The interviews will last no more than 30 minutes. There will be one interview at the start of the first placement and two interviews during the second placement (one at the start and one at the end). The interviews will take place at the university. In addition to this I will observe your mentoring meeting with your subject mentor and university tutor (once in the first placement and once in the second placement). All interviews will be audio-recorded. I would also like to use data that the university collects throughout the PGCE course, for example your review documents, record of professional development, teaching files and assignments.

**Will my name appear in any written reports of this study?**

All information that is collected about you during the course of the study will be kept strictly confidential. Any information about you which leaves the Manchester Metropolitan University will have your name removed so that you cannot be recognised. When the results of the research are published, direct quotes from the interviews may be used. These will all be anonymised.

**What will happen to the data generated?**

All digital data will be kept in a secure online space, to which only the researchers on this project will have access. Any paper documents, such as lesson plans or evaluations, will also be digitised and paper copies destroyed. All data reported as part of the project will be anonymised. It will be kept for three years after the study has been written and then will all be permanently deleted.

**What are the benefits of taking part?**

The results of the study will not directly affect you, but the information gained from the research will help us to plan a training curriculum that meets the needs of future trainees. Your views and experience will make a valuable contribution. You will, however, benefit from opportunities to reflect on your progress, which will support you with your reflective writing during the PGCE course, and in your future career.

**What if you have questions or complaints?**

If you would like to contact someone other than the researcher about anything relating to the study, there are four people you may contact

Liz de Freitas (Chair of Faculty Ethics Committee)  l.de-freitas@mmu.ac.uk
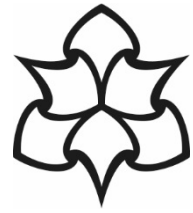Elaine Sheehan (Research Administrator)  e.sheehan@mmu.ac.uk
Prof Moira Hulme (Supervisor)  m.hulme@mmu.ac.uk
Dr Dominic Griffiths (Supervisor)  dominic.griffiths@mmu.ac.uk

If you would like to take part in the research, please read and complete the attached consent form. Thank you for taking the time to read this information.

Yours sincerely

Joanna Baynham
Doctor of Education Student
Faculty of Education
Manchester Metropolitan University
j.baynham@mmu.ac.uk

## Manchester Metropolitan University

*Doctor of Education*
*Faculty of Education*
*Brooks Building*
*Manchester Metropolitan University*

*Alternative contact: Liz de Freitas, Chair of Faculty Ethics Committee l.de-freitas@mmu.ac.uk*

## Trainee Teacher Consent Form

**Title of project:** What professional knowledge does a trainee geography need to have?
**Researcher:** Joanna Baynham, Faculty of Education, Manchester Metropolitan University

I confirm that I have read and understood the Participant Information Sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐

I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason. ☐

I understand that taking part in this study is in no way linked to my success on the PGCE course. ☐

I consent to interviews being audio-recorded. ☐

I consent to direct quotes from my interviews being used as part of this study. ☐
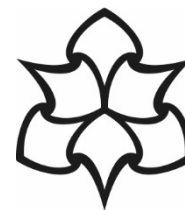
I acknowledge that:

- Participants will NOT be identified by name in any publications arising from this study. ☐
- The material will be treated as confidential and kept in secure storage at all times. ☐
- The material will be destroyed within three years of completion of the study. ☐
- The material may be used in future publications, both print and online. ☐

I agree to take part in the above study. ☐

| Name of Participant: | Signature: |
|---|---|
| Date: | |

| Name of Researcher: JOANNA BAYNHAM | Signature: |
|---|---|
| Date: | |

**Manchester Metropolitan**
University

Dear Subject Mentor

I am researching the professional knowledge acquisition of trainee geography teachers. I am investigating what professional knowledge trainee geography teachers need to have and I would like to invite you to take part in a series of semi-structured interviews to develop a case series of trainees.
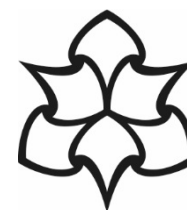
Before you decide if you would like to take part in this discussion, it is important for you to understand why the research is being done and what it will involve. Please take time to read the attached information sheet carefully and discuss it with others if you wish. This information covers the most commonly asked questions, but please ask if there is anything that is not clear or if you would like more information. Please take time to decide whether or not you wish to take part.

There is a consent form for you to complete if you wish to take part.

Thank you for your time and co-operation.

Yours sincerely

Joanna Baynham
Doctor of Education Student

Faculty of Education

Manchester Metropolitan University

j.baynham@mmu.ac.uk

## Manchester Metropolitan University

**Subject Mentor Information Sheet**

**Study title:**
What professional knowledge does a trainee geography need to have?

**The purpose of the study is to:**
- To investigate what early career geography teachers need to know and be able do
- To investigate who has the authority to decide what a trainee needs to know and be able to do to
- To investigate how do trainee geography teachers acquire and develop professional knowledge and skills? Does this change during the year? How does it change? What are the pivotal moments? What third spaces are involved in this experience?

**Why have I been asked to take part?**
You have been invited to take part as I would like to gain an understanding of how subject mentors work with their trainee geography teachers during their training year. I would like to hear a range of views about knowledge and skills acquisition during the year.

**Do I have to take part?**
It is up to you to decide whether or not you take part. If you do decide to take part, I would like you to sign the attached consent form. If you do decide to take part, you are still free to withdraw at any time and without giving a reason. A decision to withdraw at any time, or a decision not to take part, will not affect you in any way.

**What will I have to do?**
If you agree to take part in the study, you will be invited to take part in an interview. The interview will last no more than 20 minutes and will take place in the summer term.  The interview will be conducted at a time and place convenient to you.  In addition to this I will audio record your mentoring meeting with your trainee and university tutor.  All interviews and observations will be audio-recorded.

**Will my name appear in any written reports of this study?**
All information that is collected about you during the course of the study will be kept strictly confidential. Any information about you which leaves the Manchester Metropolitan University will have your name removed so that you cannot be recognised. When the results of the research are published direct quotes from the interviews may be used. These will all be anonymised.

**What will happen to the data generated?**

All digital data will be kept in a secure online space, to which only the researchers on this project will have access. Any paper documents, such as lesson plans or evaluations, will also be digitised and paper copies destroyed. All data reported as part of the project will be anonymised. It will be kept for three years after the study has been written and then will all be permanently deleted.

**What are the benefits of taking part?**

The results of the study will not directly affect you, but the information gained from the research will help us to plan a training curriculum that meets the needs of future trainees. Your views and experience will make a valuable contribution. You will, however, be given the opportunity to reflect on your role as a subject mentor and this may support you in developing your skills as a mentor.

**What if you have questions or complaints?**

If you would like to contact someone other than the researcher about anything relating to the study, there are four people you may contact

Liz de Freitas (Chair of Faculty Ethics Committee)  l.de-freitas@mmu.ac.uk

Elaine Sheehan (Research Administrator)  e.sheehan@mmu.ac.uk

Prof Moira Hulme (Supervisor)  m.hulme@mmu.ac.uk

Dr Dominic Griffiths (Supervisor)  dominic.griffiths@mmu.ac.uk

If you would like to take part in the research, please read and complete the attached consent form. Thank you for taking the time to read this information.
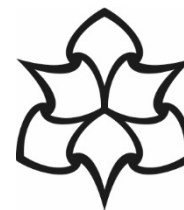
Yours sincerely

Joanna Baynham
Doctor of Education Student
Faculty of Education
Manchester Metropolitan University
j.baynham@mmu.ac.uk

# Manchester Metropolitan University

*Doctor of Education*
*Faculty of Education*
*Brooks Building*
*Manchester Metropolitan University*

*Alternative contact: Liz de Freitas, Chair of Faculty Ethics*
*Committee l.de-freitas@mmu.ac.uk*

## Subject Mentor Consent Form

**Title of project:** What professional knowledge does a trainee geography need to have?
**Researcher:** Joanna Baynham, Faculty of Education, Manchester Metropolitan University

I confirm that I have read and understood the Participant Information Sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐

I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason. ☐

I consent to interviews being audio-recorded. ☐

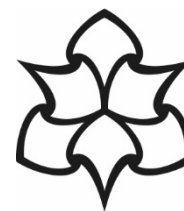I consent to direct quotes from my interviews being used as part of this study. ☐

I acknowledge that:

- Participants will NOT be identified by name in any publications arising from this study. ☐
- The material will be treated as confidential and kept in secure storage at all times. ☐
- The material will be destroyed within three years of completion of the study. ☐
- The material may be used in future publications, both print and online. ☐

I agree to take part in the above study. ☐

| Name of Participant: | Signature: |
|---|---|
| Date: | |

| Name of Researcher: JOANNA BAYNHAM | Signature: |
|---|---|
| Date: | |

# Manchester Metropolitan
## University

Dear University Tutor

I am researching the professional knowledge acquisition of trainee geography teachers. I am investigating what professional knowledge trainee geography teachers need to have and I would like to invite you to take part in a series of semi-structured interviews to develop a case series of trainees.

Before you decide if you would like to take part in this discussion, it is important for you to understand why the research is being done and what it will involve. Please take time to read the attached information sheet carefully and discuss it with others if you wish. This information covers the most commonly asked questions, but please ask if there is anything that is not clear or if you would like more information. Please take time to decide whether or not you wish to take part.

There is a consent form for you to complete if you wish to take part.

Thank you for your time and co-operation.

Yours sincerely


Joanna Baynham
Doctor of Education Student
Faculty of Education
Manchester Metropolitan University
j.baynham@mmu.ac.uk

**Manchester Metropolitan University**

## University Tutor Information Sheet

**Study title:**
What professional knowledge does a trainee geography need to have?

**The purpose of the study is to:**
- To investigate what early career geography teachers need to know and be able do
- To investigate who has the authority to decide what a trainee needs to know and be able to do to
- To investigate how do trainee geography teachers acquire and develop professional knowledge and skills? Does this change during the year? How does it change? What are the pivotal moments? What third spaces are involved in this experience?

**Why have I been asked to take part?**
You have been invited to take part as I would like to gain an understanding of how university tutors work with trainee geography teachers during their training year. I would like to hear a range of views about knowledge and skills acquisition during the year.

**Do I have to take part?**
It is up to you to decide whether or not you take part. If you do decide to take part, I would like you to sign the attached consent form. If you do decide to take part, you are still free to withdraw at any time and without giving a reason. A decision to withdraw at any time or a decision not to take part, will not affect you in any way.

**What will I have to do?**
If you agree to take part in the study, you will be invited to take part in an interview when that will last no more than 40 minutes. This will take place in the summer term and will be held at the university. In addition to this I will audio record your mentoring meeting with your trainee and the subject mentor in Block B. All interview and observations will be audio-recorded.

**Will my name appear in any written reports of this study?**
All information that is collected about you during the course of the study will be kept strictly confidential. Any information about you which leaves the Manchester Metropolitan University will have your name removed so that you cannot be recognised. When the results of the research are published direct quotes from the interviews may be used. These will all be anonymised. However, due the very small number of university tutors involved it may be difficult to ensure total anonymity.

**What will happen to the data generated?**

All digital data will be kept in a secure online space, to which only the researchers on this project will have access. Any paper documents, such as lesson plans or evaluations, will also be digitised and paper copies destroyed. All data reported as part of the project will be anonymised. It will be kept for three years after the study has been written and then will all be permanently deleted.

**What are the benefits of taking part?**

The results of the study will not directly affect you, but the information gained from the research will help us to plan a training curriculum that meets the needs of future trainees. It is anticipated that the results will support you in your role as a university tutor involved in the training of geography teachers.  Your views and experience will make a valuable contribution.

**What if you have questions or complaints?**

If you would like to contact someone other than the researcher about anything relating to the study, there are four people you may contact.

Liz de Freitas (Chair of Faculty Ethics Committee)  l.de-freitas@mmu.ac.uk

Elaine Sheehan (Research Administrator)  e.sheehan@mmu.ac.uk

Prof Moira Hulme (Supervisor)  m.hulme@mmu.ac.uk

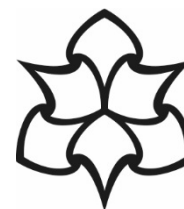Dr Dominic Griffiths (Supervisor)  dominic.griffiths@mmu.ac.uk

If you would like to take part in the research, please read and complete the attached consent form. Thank you for taking the time to read this information.

Yours sincerely


Joanna Baynham

Doctor of Education Student

Faculty of Education

Manchester Metropolitan University

j.baynham@mmu.ac.uk

# Manchester Metropolitan University

*Doctor of Education*
*Faculty of Education*
*Brooks Building*
*Manchester Metropolitan University*

*Alternative contact: Liz de Freitas, Chair of Faculty Ethics Committee*
*l.de-freitas@mmu.ac.uk*

## University Tutor Consent Form

**Title of project:** What professional knowledge does a trainee geography need to have?
**Researcher:** Joanna Baynham, Faculty of Education, Manchester Metropolitan University

I confirm that I have read and understood the Participant Information Sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐

I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason. ☐

I consent to interviews being audio-recorded. ☐

I consent to direct quotes from my interviews being used as part of this study. ☐

I acknowledge that:

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- The material will be treated as confidential and kept in secure storage at all times. ☐
- The material will be destroyed within three years of completion of the study. ☐
- The material may be used in future publications, both print and online. ☐

I agree to take part in the above study.

| Name of Participant: | Signature: |
|---|---|
| Date: | |

| Name of Researcher: JOANNA BAYNHAM | Signature: |
|---|---|
| Date: | |