

Learning from practitioner enquiries.

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'The school as a place is embedded in context and cannot be detached from it. It is simultaneously 'context derived' and 'context generative'. (Thomson, 2002, p. 73)

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We also acknowledge the invaluable assistance of our research participants who remain anonymous.

Executive summary

This report presents the outcomes of the University of Glasgow's project, *'Playing the long game: Building capacity in final year initial teacher education and newly qualified teachers to improve outcomes for children in disadvantaged communities'*, funded as part of the Scottish Attainment Challenge project of the Scottish Council of Deans of Education.

The project asked three questions:

- What learning can be gained and shared from practitioner enquiries undertaken in teacher education?
- Can such contextualised learning also generate decontextualized learning that could resource other teacher education students and the profession?
- Could sharing practitioner enquiries undertaken in disadvantaged communities contribute to professional growth and the Scottish Attainment Challenge?

These questions were explored through interviews with two cohorts of PGDE students about to enter their probationer year, and repeat interviews with some of the first cohort one year later. Recruitment for the second cohort was impacted by COVID-19.

Practitioner enquiry is now an essential part of teacher preparation, cultivating professional judgment and research-informed curiosity about practice within actual classroom settings. These enquiries can draw on theory, concepts, practice, past experience, tips and reflections to address problems of practice or explore enriched approaches within a particular classroom context.

The current literature debates the merits of practitioner enquiry as a pedagogy for professional growth, with contextualisation considered either a strength or a weakness. The report argues that attention to context is of particular relevance to teachers' practice in sites of multiple deprivation. The theoretical framing was interested in how teachers' professional learning over time seeks to integrate theory and experiential insight with ideas of possible alternatives then apply these in new contexts. The literature review raised the possibility that presumptions about what is possible in contexts of high deprivation might deter the use of more innovative pedagogies. The interviews explored whether and how contextualised learning from an enquiry might be de-contextualised as abstract principles, or re-contextualised to inform practice embedded within a new context, and what kinds of contextual conditions informed their professional judgements.

The participants' responses demonstrated that learning of different types can be recontextualised from their own and others' practitioner enquiries and that novice teachers are sensitive to multiple factors that condition their contexts of practice. There was evidence that the respondents considered innovative pedagogies more, not less, relevant in contexts of high deprivation, and that potential learning from others' enquiries can resource an appreciation of complexity and diversity across contexts. The conclusion argues that sharing enquiries conducted in SIMD 1-40 contexts would have benefit, particularly for ITE students who do not experience such settings on their placements.

List of abbreviations

ACE	Adverse childhood event
GTCS	General Teaching Council for Scotland
ITE	Initial teacher education
MEduc	Master of Education
NQT	Newly qualified teacher
PGDE	Postgraduate Diploma in Education
SAC	Scottish Attainment Challenge
SCDE	Scottish Council of Deans of Education
UofG	University of Glasgow

Introduction

In 2015 the Scottish Government launched the Scottish Attainment Challenge (SAC) as the flagship policy for its current term in office. The Challenge has focused efforts to improve all aspects of education that could contribute to better and more equitable outcomes for children living in communities of high deprivation, particularly in regard to literacy and numeracy attainment and health and wellbeing. The quality of teachers' professional preparation and practice in these particular domains and more generally becomes a matter of central importance and a key site of intervention for this agenda. The Scottish Council of Deans of Education were invited to propose a research programme in the fields of teacher preparation and induction that could contribute to the goals of the Scottish Challenge.

This report presents the outcomes of the University of Glasgow's project, *'Playing the long game: Building capacity in final year initial teacher education and newly qualified teachers to improve outcomes for children in disadvantaged communities.'*

This research was undertaken with students in initial teacher education (ITE) programmes at the University of Glasgow, and with alumni of those programmes in their early career phase as a newly qualified teacher (NQT) in their probationary year in different local authorities. The research focussed on the practitioner enquiries that students undertake in their final school placement, and the subsequent practitioner enquiries that are now required by many local authorities in the NQT phase. The research explored whether and how the contextualised learning from practitioner enquiries can:

- a) inform the ITE teacher's own practice in subsequent contexts, and
- b) be shared with other students to inform their practice.

In this way, the study was interested in understanding processes of ongoing professional learning that continue across initial teacher education and the probationary year, and in exploring how teacher education programmes and the profession at large might harvest and maximise the pedagogic potential of the many practitioner enquiries undertaken.

Research questions

- What learning can be gained and shared from practitioner enquiries undertaken in teacher education?
- Can such contextualised learning also generate decontextualized learning that could resource other teacher education students and the profession?
- Could sharing practitioner enquiries undertaken in disadvantaged communities contribute to professional growth and the Scottish Attainment Challenge?

Framing the question of context

Practitioner enquiry involves 'systematic, intentional, and self-critical inquiry about one's work in K-12, higher education, or continuing education classrooms, schools, programs, and other formal educational settings' (Cochran-Smith & Lytle, 1999, p. 22, Footnote 1). In their review of a decade of the teacher research 'movement' in the US, Cochran-Smith and Lytle (1999) noted the growing popularity and protean nature of practitioner enquiries that risked diluting the idea so that it became 'anything and everything' (p.17). Through their concept of 'inquiry as stance' they argued that such work should be 'both social and political ... making problematic the current arrangements of schooling; the ways knowledge is constructed, evaluated and used; and teachers' individual and collective roles in bringing about change' (p. 18). This conceptualization is more ambitious than approaching teacher research as merely 'practical inquiry' (p. 19), and potentially aligns with the Scottish Attainment Challenge's project of promoting more equitable outcomes.

Practitioner enquiry is now an important pedagogy that forms part of teachers' initial preparation and ongoing professional learning in Scotland and beyond 'to help teacher candidates become lifelong learners who raise questions and continuously learn how to teach by researching and reflecting on practice across the professional life span' (Cochran-Smith, Barnatt, Friedman, & Pine, 2012, p. 17). Engaging in 'professional enquiry' is also an explicit requirement for provisional teacher registration with the General Teaching Council of Scotland (2012, p. 19). As part of both their final year placement and their probationary year programme, many teacher education students in Scotland are required to conduct, document and share practitioner enquiries to encourage and cultivate an enquiring professional disposition. While beneficial for the person undertaking the enquiry in their immediate context, we are interested in whether such contextualised learning can also generate decontextualized learning to resource other teacher education students and the profession more broadly. Further, we are interested in what attributes of a context are considered to deter such transfer of learning.

Practitioner enquiries are typically small scale, purposeful enquiries conducted by teachers under an explicit design in their own professional setting. The research problem often arises within that particular professional context, posed as an applied problem or question to improve practice. They can be understood as evidence-based enquiries which have the researcher's feet in research literature and educational theory, their hands are in a particular context of practice, and their heads working to connect the two. This interface between theory and practice makes practitioner enquiry a valuable mode of applied research that enriches and challenges teachers' professional reflection and development.

The precedent concept of teacher-as-researcher emerged in the 1960-80s in response to growing critiques that educational research was too far removed from the practitioner, and that the profession needed their own 'action-based' mode of research to explore processes and ultimately improve practice (Hammersley, 1993; Kemmis & McTaggart, 2005). Participatory action research offered a context-embedded mode of iterative enquiry framed to explore situational particularities:

The criterion of success is not whether participants have followed the steps faithfully but rather whether they have a strong and authentic sense of development and

evolution in their *practices*, their *understandings* of their practices, and the *situations* in which they practice. (Kemmis & McTaggart, 2005, p. 563)

Subsequent modes of 'practitioner' or 'professional' enquiry and design-based research (The Design-Based Research Collective, 2003) similarly highlighted the constitutive force of context in authentic settings.

There has been some debate as to whether such context-embedded work achieves the status of 'research'. Hammersley (1993) was sceptical about the capacity of 'insider' teacher-research to replace the work of 'outsider' educational research. He noted that its strength in contextual relevance was also its limitation:

if the circumstances in which individual teachers work are highly variable, how can generalisations about such situations or theories about them that abstract away the particularities, be of value? These problems are not easy to deal with ... but they face the teacher-as-researcher as well as conventional researchers: at least to the extent that he or she is concerned with generalising from past experience to the future, and/or with developing collective professional knowledge. (p. 431)

Kemmis and McTaggart (2005, pp. 563-564) take a position that rejects this critique:

it should also be stressed that participatory action research involves the investigation of *actual* practices and not *abstract* practices. It involves learning about the real, material, concrete, and particular practices of particular people in particular places. ... participatory action research differs from other forms of research in being more obstinate about its focus on changing particular practitioners' particular practices. ... changing practices in 'the here and now'. In our view, participatory action researchers do not need to apologize for seeing their work as mundane and mired in history ...

The Design-Based Research Collective (2003, p.5) takes a more mitigated position:

Claiming success for an educational intervention is a tricky business. If success means being certain that an intervention caused learning, then we need to look carefully at the intervention in a particular setting. However, research in this model would be difficult to generalize to other settings. On the other hand, if success means being able to claim that an intervention could be effective in any setting, then we should study effects across a variety of settings in order to generalize. However, this kind of research leaves many questions unanswered about how any observed learning was caused by interactions between intervention and setting.

More recently, the British Educational Research Association has undertaken a project to define the characteristics of high quality 'close-to-practice' (CtP) research following poor evaluations of such educational research in the 2014 Research Excellence Framework (REF). They defined CtP research as focussed 'on issues defined by practitioners as relevant to their practice, and involves collaboration between people whose main expertise is research, practice, or both' (Wyse, Brown, Oliver, & Poblete, 2018, p. 34). Practitioner research was included amongst the variety of research designs that fell under this umbrella term. Careful reviewing of exemplar studies revealed common weaknesses of being too descriptive, under-theorised, small-scale or lacking in methodological rigour. In contrast, high quality CtP

studies were the best of both worlds which 'made an original contribution to an aspect of teaching practice and provided a robust use of the methodology ... sufficient theorisation was evident throughout' (p. 20). In this frame, theorising is the mechanism that would extract, explain and translate insights from the particular into a larger more generalised scale, thus achieving a wider sphere of relevance.

Interestingly, the BERA report made a distinction between 'academic research' and 'enquiry', the latter being 'research conducted within school settings by practitioners' (p.24). This distinction reflects how the different provenance of knowledge projects and their audiences creates different demands (see also Yates, 2004). Academic research was distinguished by 'the role of theory which can enable generalisation across cases ... the main purpose is the contribution to knowledge, while enquiry is linked to more practical aims and more specific to particular contexts and times ... more concerned with practical and contingent issues' (pp. 24-25). Under this definition, an enquiry can thus be understood to result in a contribution to professional learning, as opposed to a contribution to a field of scholarly knowledge. Thus the capacity for its results to be decontextualized and applied elsewhere is not a necessary condition.

For the purposes of this project, these different treatments highlight the defining quality of contextualisation in practitioner enquiry, and the associated questions of whether and how the learning achieved in that context might be transferred and applied to other contexts. Then the question becomes what might be the status and validity of such knowledge in the next context?

The Scottish Attainment Challenge is very much about the impact and importance of context in its concern with how communities of multiple deprivation encounter resilient barriers to learning that impact on children's school achievement (Kintrea, 2018). Localities of concentrated and pooled social disadvantage produce a particular kind of context that cannot be ignored. Thomson (2002), in her study of rustbelt¹ secondary schools in South Australia, described this condition as the 'thisness' of such settings:

Rustbelt school administrators, teachers, parents and students routinely begin their sentences saying 'This school ... these kids ... this community ...' In order to understand thisness, it is necessary to think of the school as a particular material place. Each school 'place' is a distinctive blend of people, happenings, resources, issues, narratives, truths, knowledges and networks, in and through which the combined effects of power-saturated geographies and histories are made manifest. ... The school as a place is embedded in context and cannot be detached from it. It is simultaneously 'context derived' and 'context generative'. (pp. 72-73)

The work of preparing new teachers to work in such settings in the future may not be able to anticipate the specific demands of each destinations but can cultivate the necessary ethics of context-sensitivity, curiosity and responsiveness, and the intellectual ability to factor contextual conditions into professional decisions. This is where the practitioner enquiry task is an important pedagogical tool valued for both its process and its product of learning.

¹ 'Rustbelt' refers to working class communities established around large manufacturing plants which have later closed, causing high unemployment and poor labour market prospects.

The idea of context itself warrants further consideration. The constellation of relevant contextual factors that shape teachers' practice may include: the age of students, the nature of their community, the resources in the families, students' gender, class dynamics, the curricular subject and its pedagogical traditions, the impinging assessment regime, school/class reputation, the material resources to hand, student aspirations and prospects, pedagogical fashions, the time available, and so forth. Any particular context will also implicate the professional identity of the teachers themselves, what they bring to the pedagogical setting in terms of mindsets, background and ideology, and how their strengths or preferences align with student qualities. Maybe an experienced teacher will be able to discern patterns and make predictions across contexts as part of their accrued professional wisdom, but for the neophyte practitioner each context is encountered and read as uniquely specific and unknown.

We thus understand context as the complex, dynamic and relational nexus of past, present and future conditions that intersect in the classroom space and time as the situation's 'thisness'. Efforts to de-contextualise professional knowledge would suppress, downplay or erase the causal contributions of the multiple contextual elements, yet these are exactly the factors that rise up to meet ITE students and teachers in their practice settings. For this project, this raises the question of how professional learning achieved in one context, can be not just be de-contextualised, but also re-contextualised into the particularities of the next setting.

The disadvantaged school as context

There have been numerous studies of pedagogy and schooling outcomes in poorer communities in the international literature. Here we sample just a few to understand how features of schools serving disadvantaged communities can exert influence as context.

Pedagogy in schools located in disadvantaged communities has long been documented as firstly asking less of children and secondly avoiding innovative pedagogy. In a classic study from the US, Anyon (1981) observed 5 classrooms ostensibly teaching the same curriculum for Year 5 students spread across a social gradient of working class, middle class, 'affluent professional' and 'executive elite' communities. Her observations of classroom pedagogy and students' relationship to knowledge in the poorest communities' schools highlighted the low expectations, fragmented busy work, a concentration on 'basics' and student resistance as 'a dominant characteristic of student-teacher interaction' (p.11). This work was revisited by Luke (2010) in the aftermath of *No Child Left Behind* reforms and the introduction of standardised testing in the US which have, if anything, exacerbated 'the classroom practices of unequal education' (Luke, 2010, p.169).

In Australia, Johnstone and Hayes (2008) conducted a study of pedagogy in 'challenging' schools characterised by 'day to day crisis management and a preoccupation with welfare issues and discipline' (p. 114). They reported a 'widespread and resilient survival-mode of teaching' within their case study schools 'where a high level of order or control was achieved at the expense of student engagement' (p.115). This trade-off was sustained by 'justifications as to why this particular practice was all that could be hoped for in the

particular situation of this classroom, in this school, with these students.’ The authors further observed:

Our research in classrooms in schools characterised by high levels of poverty and cultural and linguistic diversity suggests that teachers and students in these difficult environments construct a widespread and resilient logic of practice that restricts the possibilities of high-challenge curricula. ... Any new idea or innovation is recontextualised and adapted to fit within the logics of practice that shape what is seen to be possible within these classrooms. (pp. 110-111)

This patterning means that different contexts should be understood as creating different conditions of possibility – either in their actualities, or in teachers’ pre-emptive perceptions of what will work without jeopardising classroom order. In her study of rustbelt schools, Thomson (2002, p. 93) similarly argued that ‘what can be done and what needs to be done are very different in each school’s set of circumstances’. For Thomson, the disadvantaged school was distinguished by ‘the time taken managing order and welfare, and the resulting lack of time and resources to do as much as might be done to change curriculum, pedagogy and school practices’ (p. xiv). Though these studies are separated by time and distance, their similarities suggest a significant tension between what might be desirable and what a context makes possible. In particular, they bring to the surface the negotiation and trade-off between pedagogic innovation and classroom order.

These observations may or may not apply to Scottish settings, where there has been a long-standing respect and care for nurturing educational opportunities in poorer communities, and greater social mix in public schools. However, for the purposes of this project and its focus on ITE and NQTs, we must acknowledge how the pressure to maintain classroom order remains a major if not overriding concern for new teachers (Conway & Clark, 2003). For this reason, this research is interested to see whether the more disadvantaged school is read as a ‘tough’ context that rules out the choice of innovative forms of pedagogy in the interests of preserving classroom order. If this presumption informs practice, that is, if reputation precedes practice, then the possibilities of more engaging, innovative or challenging pedagogies will not be considered suitable to be re-contextualised in such sites.

Theoretical framing of de/re/contextualisation

Bernstein (2000) was interested in how different knowledges were more or less specialised (strongly/weakly ‘classified’) and how knowledge was distributed and transformed in pedagogic processes. In this way, Bernstein’s sociology of knowledge offers a way to think about how knowledge can be more or less contextualised in its substance and its expression. In this section we outline his concepts of vertical and horizontal discourses, horizontal and vertical knowledge structures, and recontextualization, which will be used to analyse student interview responses.

Bernstein distinguished between commonsensical ‘**horizontal discourses**’ (p. 157), which we use in everyday settings and interactions, and more abstract or theoretical ‘**vertical discourses**’ which take

the form of a coherent, explicit and systematically principled structure, hierarchically organised as in the sciences, or ... the form of a series of specialised languages with specialised modes of interrogation and specialised criteria for the production and circulation of texts as in the social sciences and humanities' (p. 157).

Horizontal discourses are those used in the everyday context of here and now without technical terms or specialist wordings. These discourses are accessible to most people. Vertical discourses express axiomatic principles or abstractions in claims that can rise above the immediate context. They do this by using specialist technical or theoretical terms that only some can access.

Education as a field of professional practice draws on a number of different disciplines and typically does not rely heavily on a specialist vertical discourse, as would perhaps the field of medicine or a physical science. Historically, teacher education in Anglophone settings has moved away from preparation in the four disciplinary 'pillars' of philosophy, history, sociology and psychology towards more emphasis on practical preparation (Hulme, Menter, Murray, & O'Doherty 2016). In this 'practical turn', guidance as practical 'tip' expressed in horizontal discourse can displace theoretical principles expressed in vertical discourse. This raises the question whether preservice teachers and NQTs have command of a conceptual vocabulary that helps them draw out and express more abstract ideas and decontextualized learning that might push their thinking beyond the contextualised here-and-now to a more generalised concept.

Bernstein further distinguishes between **vertical and horizontal knowledge structures**. In a vertical structure, knowledges of different scales can stack up – so that the top level encompasses and subsumes the insights of the lower levels. Mathematics provides the archetype here. Horizontal knowledges in contrast sit alongside each other as competing alternatives. The social sciences serve as exemplars here with their different theoretical lenses.

These different knowledge structures help us model different circumstances. At one extreme, if teacher education placements are considered to be entirely unique contexts, then the learning in one context will sit 'horizontally' beside the learning achieved in another, which will be treated as another matter. At the other extreme, if placement contexts are treated as examples of the same, consistent phenomenon, then the learning might 'stack up' and accumulate vertically across sites.

The reality of the condition of knowledge in the field of education will come somewhere between these two extremes: some aspects of a context will be unique, while other aspects of a context will be cognate with other settings. In their on-campus studies, ITE students are exposed to vertically structured knowledge, for example constructivist learning theory or theory of cultural capitals. They will also be exposed to the craft wisdom of experienced teachers, and will be learning to work across and between these knowledge types. All is potentially useful, depending on the context. So for the purposes of this study, we are interested in when and why teacher education students might decide that a particular context is too unique for transferring learning, and when and why they might treat placement settings as essentially the same.

Finally, Bernstein (2000) offers us the concept of '**recontextualisation**', which explains the process whereby knowledge is selected from its site of origin then transferred and re-

animated in a pedagogic setting. Bernstein notes that in that process, there is a degree of freedom for the actor to filter and shape the recontextualised knowledge. This concept alerts us to the way knowledge produced across a chain of pedagogic recontextualisations is never the same as the original knowledge.

For this study, we shall understand that when a student takes knowledge or know-how acquired in one setting then revisits it in subsequent settings, this is essentially a recontextualization of learning – and in that process the knowledge can be reshaped in subtle ways, for example, in terms of simplifying, approximating or adjusting it to suit the new setting. For this reason, we were interested in how the students applied or drew on their previous learning in new settings. Given the space of freedom in the act of recontextualising knowledge, we were keen to see whether beliefs about what was considered possible in disadvantaged contexts entered the equation, and mitigated the transfer of innovative or engaging pedagogies.

Methodology

This study was designed as an interview study and document analysis, involving two sets of participants:

- a) Cohort A – recruited in final stage of PGDE programme (May 2019; n = 9), interviewed firstly on completion of their practitioner enquiries, and again 6 months later as probationer teachers (November 2019; n = 6).
- b) Cohort B – recruited in final stage of subsequent year's PGDE programme (April 2020; n = 1).

We made a number of efforts to recruit participants for each stage, speaking at lectures then following up with email appeals, and had hoped for larger sample sizes. However, under ethical guidelines, we could not unduly force people to participate. PDGE programmes are intense and demanding. We understand that while more students initially expressed interest in participating in the project, there were other demands on their time.

For the first interview, Cohort A participants provided an electronic copy of their practitioner enquiry. Interviewers read the relevant practitioner enquiry prior to each interview. Semi-structured interviews of 30-45 minutes duration were conducted with both researchers attending. Some interviews were conducted face to face, others over the phone as possible. Interviews were recorded and later transcribed. Questions in the first interview explored the interviewee's background, their placement contexts, the nature of their professional enquiry, its origins and the learning they planned to take from this into future contexts, or share with others. See Appendix 1 for the interview themes and prompts.

For the second interview with Cohort A, six of the original sample agreed to participate. At this stage, the participants were probationer teachers spread across Scotland with multiple demands on their time, so we were grateful for the six who participated in second interviews. The second interview explored how they were faring in their first position, the nature of their new context, what of their professional enquiry they have been able to transfer, and what they would do differently with hindsight. These Cohort A participants were asked for permission to share their professional enquiries with Cohort B, with the option of having their name as author revealed or masked. All gave their consent.

When it came to recruiting Cohort B, Covid 19 had interrupted placements and disrupted on-campus studies. We understand that this unprecedented situation impacted on recruitment for Cohort B. The only participant who volunteered was interviewed about his background, placements, and own professional enquiry. Then the interview explored the Cohort A professional enquiry he had read, and what he felt he could take from this work.

The analysis of the interview data and the professional enquiry documents was content-based qualitative analysis attending to participants' meanings, while alert to their use of vertical discourse in terms of theoretical vocabulary. In addition, the analysis sought to identify what qualities they highlighted when describing different contexts and accounting for how any consideration of context informed their professional thinking.

Analysis

Table 1 summarises Cohort A participants who were interviewed in the first round, and the topic of their professional enquiry. The following discussion profiles: each participant; their professional enquiry; what contextual attributes they registered; and what they felt they and others could take from it to another setting. For those who did a follow-up interview as probationer teachers, their reflections on recontextualising their enquiry learning is presented as well.

Table 1: Cohort A participants overview

No.	Gender	Age	background	Enquiry topic	Second interview
A1	F	21	Community Development, Primary PGDE	Primary 3 Using interdisciplinary learning activities to encourage literacy in play	yes
A2	F	50	Business education, Secondary PGDE	Secondary Year 1, 2 Cooperative learning and group work to increase engagement, 'fun', 'enjoyment', and learning from each other	
A3	M	44	First career in employment services, Primary PGDE	Primary Negotiating professional identity as visible minority and male in primary schooling	yes
A4	M	27	Primary PGDE	Primary 3/4 Active learning in maths classes to address maths anxiety	yes
A5	M	23	Secondary PGE	Secondary 4 Cultivating whole class discussion in senior maths classes. Learning from each other – learning skills of listening and 'academically productive talk'	yes
A6	F	30s	Degree in psychology, Primary PGDE	Primary 1, 2 Literature circles to encourage reading. Oracy analysis of types of talk, positive change in T/S and S/S relationships.	yes
A7	F	20s	Degree in sociology and anthropology, Secondary PGDE	Secondary 1 Mock election in Modern Studies. Series of activities in small groups leading up to staging an election.	
A8	M	20s	Degree in history, Secondary,	Secondary History, Secondary 4 Different modes of formative feedback – student preferences and feedback to teacher	yes
A9	M	31	Degree in English, Secondary PGDE	Secondary English, Secondary 2 Formative assessment to model growth mindset and aspiration.	

Participant A1

Participant A1 brought an undergraduate degree in Community Development to her PGDE (Primary), with this discipline's strong interest in informal learning modes, a knowledge of UN Rights of the Child and experience working with teenagers but not younger age groups. This background gave her a strong social justice stance: 'my belief in informal education as well, that's, um, quite core to that as well, you know, every child has a right to, to an education and to try new things and have different opportunities.' In her practitioner enquiry she was interested in play-based learning, particularly in how the free choice of an optional activity she staged building on an imaginative premise might facilitate literacy learning and practice.

She described her placement as set in 'quite a well-off area ... and so there's a lot of input from parents, you know, the parent council, a large staff'. By her description, the majority of students in her Year 3 class were 'over the age' in literacy tests and 'only a few of them that were maybe slightly under.' Over her placement in this context she started to recognise the difference in students' differential achievement:

'I think going into it, I maybe didn't realise, but then when you're in the classroom, you do [...] see the difference between those who have support at home and those who don't ... I think you can notice that really quite quickly, um, within the classroom.

When asked what she learnt from her enquiry, she replied:

I learned that, ... yeah, play-based and that has been encouraging children to use their literacies outwith class, outwith the lessons, ... and allows them to be creative and ... get a message across ... So seeing how socially ... an imaginative situation that they were put in and seeing how they, um, used their literacy skills to communicate and work, work out the situation.

In terms of vertical discourse, she mentioned 'phoneme knowledge' and 'literacies' as the plural conceptualisation with an additional reference to visual literacy. She contrasted the imaginative play-based literacy activity with time- and topic-bound literacy 'work' in the usual school day. She concluded that such play was beneficial: 'to write in maybe different ways to what, to what they normally do ... practicing in a fun way or a way that they might not, you know, didn't realise they're doing it.'

In terms of what others might take from her enquiry, she focused on the element of planning for student choice: 'I think it's important to be able to create the opportunity for the class, you know, to go and pick and things up... for the purpose of practicing or learning something new, just doing something in a slightly different way, and possibly they'll – getting involved in the place.' She also highlighted how she as a teacher entered the imaginary play and followed the children's lead.

Her next placement was in the same school, but a Year 5 class. She described using the opportunity of interdisciplinary learning to develop similar scenarios and optional activities related to the class's theme of plants:

so we'll have lots of, like, visuals, like plants and things around. Um, I put out magazines, like planting magazines and books. I just, I really wanted to make the point of there's plenty of resources there for them to go to. So although it's not play ... there's still books there, there's magazines, it's – there's still literacy there, there's still, um, things for them to go and look at that's related to what they're learning about.

While enthusiastic about the possibilities, she outlined contextual conditions that would make such activity difficult:

I do actually know, that, like, when you have a class of 30, you know, it's, it's difficult to keep them all on track, doing exactly what they're meant to be doing ... you know, the resources you have and the size of the class and the space you have as well, like, that all kind of counts towards it.

For the purposes of this study there are some further points worth noting. This participant made no mention of the socioeconomic status of the community in her consideration of context. Rather, Participant A1's referred to pupils not having 'support at home'. This expression uses a common euphemism for relatively disadvantaged students which implicates the family setting in student achievement, with such parents found wanting. This speaks to an assumption of an implicit social contract between schooling and home with responsibilities and expectations for both parties.

In her second interview, Participant A2 shared that her first year as a probationer teacher of a Primary composite Year 4 and 5 class was 'hard work' given its very different context in a community with very high levels of deprivation:

There's lots and lots of issues going on at home for them ... Whether it's parents with addictions, parents, um, that have been, you know, like in prison. Um, there's, yeah, there's lots and lots of home issues, um. ... children that have multiple ACEs ... Although there's, it's a smaller class, there's a much higher level of need.

As well as the social differences from her enquiry placement, her class presented very differently in terms of level of literacy and achievement more broadly. She explained her major learning curve in her probationer year as 'behaviour management', which had recalibrated her assessment her past experience: 'when I look back now, think, yeah, those, the children were, like, they were really very well behaved.' The play-based pedagogy she developed in her enquiry was considered difficult to re-contextualise:

I don't know, in terms of comparing it to like where I'm at with the class I have now ... because it was all very open, and actually I can't have a lot of things that are awfully open, um, for this class that I have just now. They're, um, / they need to be very

guided. I just don't know if they would have that urge or like that interest to, um, like, to participate in, in something like that.

She reported some success in game-based carousel activities for mathematics, but otherwise found it hard to plan play-based learning given limited space and time pressure 'just knowing that I have to get through a plan ... a forward plan and trying to get all the experiences and outcomes.' In retrospect, she wished that she had spent her ITE time 'reading up on nurture and behaviour.' Another teacher was temporarily teaching her class the formal writing curriculum. This displaced the cross-curriculum approach to literacy she had developed in her ITE enquiry, but she was looking forward to later in the year when she took over this part of the curriculum, when she is 'hoping to kind of bring it all together. Um, and the science will link in. Um, I've got a lot of the different areas of the curriculum linking in together in January.'

She was due to do another practitioner enquiry, but this was to be co-designed with other probationers in the secondary partner school, so she felt it was unlikely to accommodate her interest in play-based learning.

Participant A2

Participant A2 was a mature student with a degree in Business, returning to study a PGDE (Secondary) after raising a family which included a child with additional needs. Her most recent placement had been in a secondary school serving a mixed community: 'It's considered a very affluent area, but most people don't realise there's a large pocket of deprivation at the centre.' Her practitioner enquiry in a lower secondary business subject explored the value of collaborative group work to foster engagement, enjoyment and keep students attending school. Her interest in this topic had been sparked by her own preferences and her observations in a previous placement in a very deprived post-mining town marked by chronic unemployment:

I think I've always believed it's the best way to learn. I think people learn more by doing than they do by listening or by watching other people, and the first placement that I was in, we did a lot of group work, and it worked really well, so I was interested to see whether it was just that environment or whether it was like that in other schools as well.

Her professional curiosity thus reflected this project's interest in whether learning from one setting can apply in another. Rather than avoiding innovative pedagogies in more disadvantaged communities, she explained how she now understood it to be the reverse case:

they actually do more of that with them there because the attainment levels are very, very low ... So rather than pushing them for results, they're pushing them more for, uh, kind of peer learning and active learning, I suppose, in group work and things, and doing practical tasks ...

She had previously worked as a teaching assistant in pupil support, 'so I did get more involved in what's actually working for pupils and what pushes them away.' Her enquiry explored whether more enjoyment produced more learning. Another dimension was whether collaborative work created behavioural issues, but she observed: 'if you've got them in a task that they enjoy doing and they see the purpose of it, there's probably less behavioural problems ... on the whole.'

The group activity she devised were simulated 'real world' business tasks with distinct roles allocated to group members which involved literacy and digital skills, 'but they're not thinking that that's literacy ... It wouldn't occur to them that that's literacy because otherwise they would switch off.' She reported that she had learnt about ensuring groups were mixed ability:

So as well as listening to you and learning from doing, they're learning from watching each other and being shown by each other, I suppose, how to do things. I think it's, it's more kind of pupil-led ... once they're in groups than, than teacher-led.

She had also learnt about integrating students with additional needs into group work thoughtfully: 'it's just a case of, like, carefully placing them.'

By her report, these professional insights will stay with her across her career: 'wherever possible, I would build in group work. Definitely. Because I do think they learn from it more. They enjoy it more, which means they're, they're gonna engage with it more.' She described how she was 'definitely' using these strategies in her ongoing practice:

I've been making up a lot of games for pupils as well to try and engaged them and make them want to learn, because a lot of the time, they just shut off, especially at this time of year, they've got a lot of tests and, like, they, the senior phase had a lot of exams and the motivation just goes out the window.

She now routinely integrates 'shoulder partner' discussion to improve both learning and participation:

they've got an answer for you when you go back to them because you're giving them that extra wee bit of time that it's meant they've got a chance to talk about it rather than saying something off the cuff with the fear of being wrong.

In terms of what others might take from her study in her context, this participant argued that her study was particularly relevant to 'Attainment Gap' settings:

I think particularly for people who are in deprived area, ... like, fighting to bridge the Attainment Gap and things, but that, as well, I think it's even more important because with a lot of kids, that's the only way you'll get through to them, the only way I think you'll, that they'll, they'll respond, if you were to play, to play some kind of games with them, or have them in groups that they feel comfortable in.

This interviewee does not draw on theoretical discourse, though the terms 'engagement' and 'peer learning' carry professional meanings, but her attention to students' emotional states created a different line of enquiry and innovation. She was alert to the potential of

community context, attainment and student motivation levels to change the condition of possibilities for professional practice. Her enquiry convinced her to adopt collaborative learning into her ongoing practice regardless of context, and convinced her of its particular value-adding potential in high deprivation settings.

For the purposes of this study, this participant defied the pattern of avoiding risky pedagogies in disadvantaged settings as reported in the literature, and was rewarded with greater engagement in simulated activities involving embedded literacy tasks.

Participant A3

Participant A3 is a mature student who enrolled in the PGDE (Primary) after a career in employment services 'working with people with mental health problems, problems, addiction issues, learning disabilities' in post-industrial areas of high unemployment. This experience had convinced him of the importance of early educational experiences and motivated him to study education. He undertook his practitioner enquiry while on placement in a small school in a village with high unemployment and poor services, where he felt conspicuous being from a minority of visible difference. He was also the only male teacher apart from the headteacher, and one of the few male role models for many students 'who actually hadn't seen their fathers for a while ... so I had lots of children with attachment issues always kind of trying to latch onto me.' This combination of factors made him reflect on how he might construct a professional identity and 'maintain a professional boundary' while still being accessible and supportive: 'I'm still trying to work out who I am as a teacher, you know. Am I friendly? Am I nice? Am I, am I academic? You know, I'm still trying to work out my role.'

He shared how on placement, he came to realize that he is ultimately 'in other people's classroom':

... so I'm picking up on the things that they're doing that work for them, but they don't necessarily work for me, so I'm having to rethink, thinking, 'Well, that command works for that teacher in that way, but it's, it's had no impact. They're not calming down when I use it, so I need to try something else which feels more natural to me.

In this sense the attribute of context he was negotiating was the variable of the teacher and their established classroom order.

His practitioner enquiry was a reflective piece, describing the hypervigilance of wondering how others at school and in the placement community viewed him and his actions, and the sense of pressure of always being read as a role model for his minority group. He was keen that others might learn from his enquiry in terms of coming to better understand diversity in any community:

I think in the west of Scotland anyway, um, we are – and I consider myself part of this – we are quite, quite insular... I think there's a fear of, 'Oh, I don't want to say anything in case it offends someone.' So I think what I want is just for people to start to, to start to question, to start to ask questions, so what is it actually like? How does it feel? I think it's almost like the elephant in the room. Yeah, so someone's here who is different, but let's not say anything in case we offend that person... it's just about being confident enough to ask questions and say, 'So what are your experiences of...? ... how can I be aware of what, what to say or do to a child who might be feeling isolated or alone because of A, B or C instead of just ignoring it and thinking it's fine?' ... I think you need to have some kind of dialogue about it ... I think we're almost afraid of being ... of being ((sighs)) – I don't know – unintentionally offensive. But it's not about that. It's just about asking the right questions and kind of listening and trying to learn from, from other experiences ... I think we need to start thinking about perspectives and, you know, what other people from other backgrounds are bringing into, into the profession

His subsequent placement was 'worlds apart' in terms of a community of greater wealth, and less forms of deprivation or degree of disadvantage. The contrast has sparked interest in working with poorer communities:

looking at children who maybe don't have access to the same resources outside of, outside of Monday to Friday 9 to 5, so it's that kind of, oh, what is in place for these kids to learn? What family support is there because that's a big thing.

He drew a contrast between parental involvement in his first and second placement schools. While at the second, wealthier setting, 'the families are very hands-on, they're very involved' and homework was designed to elicit parent input, at his first setting, 'homework wasn't done because the parents just couldn't cope with it.' He later elaborated with a more sympathetic account of the pressures on parents in circumstances:

I know that there was definitely one parent who – single parent who was working part-time jobs and I remember, um, her son had vomited the night before and he turned up at school and the class teacher said, 'No, no, you need to go home.' And I remember seeing this parent coming in, because obviously it meant she had to. It meant she couldn't work for that one day as a result. It was going to have a huge impact on the family income, and I just felt terrible. ... she needs to keep that family fed. ... So it's a real dilemma ... I don't think she has a choice.

The difference in parental involvement emerges as an attribute that distinguishes contexts. He also contrasted his rural placements with larger urban settings, with 'bigger class sizes with children who require lots of additional support, so I'm not seeing those same kind of pressures ... That could change, you know, in a different area, in a different school, it could be completely different.' These comments demonstrate an acute sense of how contexts can differ and his expectation that this will influence his practice.

For the purposes of this project, Participant A3 did not use any theoretical terms in his account of his project and its potential learning for others, but demonstrated an acute sensitivity to how contexts do and might differ in multiple ways. His placements in contrasting communities helped him to both develop this relational sense and to interrogate how he as a teacher might contribute. His project though highly personal offered important insights into diversity for others to learn from.

In his second interview, Participant A3 summed up his progress as 'swings and roundabouts, um, good days and bad days, if I'm honest with you.' He was teaching a Primary 5 class, in a small, socially mixed, rural school: 'I would say the school is the heart of the village, um, so there's a real community feel ... The parents are quite involved with the school, which is very nice.' He appreciated the extra support the school provided for students with additional needs in his class but felt he had more to learn about how to work with these support workers. He was no longer so concerned about his visible difference, and had found it helpful for supporting new migrant students. He was still 'overthinking' being male but reported that there were more males on staff at this school than his enquiry placement. In addition:

the other new teachers are actually speaking up and saying, "Oh, you can't say that," so it's actually quite nice, you know, just to have that kind of, um, that kind of bond. So that's, so I'm really appreciating that and realising that actually male teachers aren't such a rare thing.

By his account, the probationary year has been challenging: 'it's really been quite eye-opening in terms of just actually what's involved in teaching.' He reported learning more about differentiation and inclusivity on the job, and was aware of making progress: 'I think I'm becoming more comfortable in my role as a teacher.' He considered his ITE enquiry to be beneficial at the time: 'I think I had to do it then.' He drew a distinction between the 'theory' of the on campus studies and the 'reality' of the workplace: 'I think university was really good for giving us the theory behind why we do things, but the theory and the reality I'm finding completely different.'

He was expected to do another practitioner enquiry for his probationary year and had initially hoped to look at how he could tailor teaching for a new student with English as his second language, but that student was due to move on. He was then planning another reflective enquiry, 'maybe look at how I learned to unwind in my own time because I think I'm still worrying a lot and still, preparing lessons up until 12, 1 in the morning ... I know it's not healthy ... it's not sustainable.'

Participant A4

Participant A4 had an undergraduate degree in English literature and language, but 'sort of fell into' primary teaching after visiting a class and enjoying the interaction with young children. His practitioner enquiry was on active learning as a way to defuse maths anxiety in a Primary year3/4 composite class in a community that was wealthier than his first placement's setting. His enquiry was informed by his own experience with maths anxiety as

a child, classes he had observed in a previous placement, his concern that the 'strong focus' on testing was fuelling children's anxieties, and observations in the first weeks of his enquiry placement:

the kids, you could tell, you know, as soon as it's like the textbooks come out and stuff, it's like, 'Ugh,' you know, 'I don't wanna... Maths, you know, it's all these numbers and stuff'.... but as soon as you start bringing out, you know, almost like toys and games and stuff, like, they completely switch on, and they're just like, 'This is – You know, I can't believe I'm doing maths right now.' This is a totally different experience.

He found students responded well to his carefully planned activities with growing confidence and lower anxiety in mathematical thinking plus more positive behaviour: 'We were doing, I remember we were doing sequencing at one point. Just even a tennis ball, you know, back and forward, you know.' He explained how he reinforced mathematical terms in these activities:

I actually tried when I was doing the kind of active stuff to use that terminology as well as, you know, do the active, the kind of fun part of it. Like, so I tried to get the terminology in just so, when it did come up in the, you know, it wasn't alien to them.

However he also reported that these learning experiences did not necessarily convert to greater confidence with more paper-based exercises or test in maths: 'they just kind of almost, like, shut off a wee bit.' This effect was more marked with the able Year 4s in his group, not the Year 3s.

In terms of his own learning, he was confident that it would apply across different contexts: 'I had seen that being used a wee bit and I thought, I'm gonna try and continue that because it seems to be the better way for the kids of all backgrounds to learn, like.' He thought the 'strong focus' on testing nowadays was fuelling children's anxieties. He justified his focus on fun and games as particularly relevant to children from disadvantaged backgrounds: 'I think is very important, especially for kids with, you know, disadvantaged backgrounds and stuff. Like, they need to have that freedom to play and be just kids like everyone else.'

In terms of whether his more innovative pedagogy risked behavioural challenges:

to be honest, that was trickier, to be fair. Cause I'm still kinda learning ... So I'm still trying to get a handle on that a wee bit, but... It's more just the engagement side of things, I would rather have them, you know, if they're quite loud and chatty and stuff, but they're talking about the work.

He related his approach to on-campus studies where the student teachers were encouraged 'to get away from that kinda didactic, you know, traditional approach of, you know, you're saying "Sit down", 50 minutes, pure quiet like.'

His first placement in an area of high deprivation had opened his eyes:

it was kind of a win if you got the kids to come to school almost ... they've never had breakfast and they've not brushed their teeth and all that kind of stuff. It was horrible, especially for your first placement, you're like, 'This is heart-breaking.'

He also reported drawing on his on-campus preparation to adopt a 'growth mindset' approach in his work with these students:

... what they've been teaching us here is just go in with a clear mindset and just whatever they are used to and stuff, like, try and evolve their mindset, you know? Try and do a whole growth mindset thing, like, if they think they can't do anything, then you just encourage them. And the thing is, though, the kids – I always felt like kids from these kinda, you know, backgrounds, they want to learn.

He felt that as a male teacher the students in this school responded to him: 'they wanted to come and talk to me and stuff and all that kinda stuff, which was good, which was great, you know?'

For the purposes of this study, Participant A4 downplayed the different levels of dis/advantage between his placement contexts for his pedagogic design, but focused more on building relationships and students' learning potential in the more deprived setting. This focus on how to work productively with children in these communities contrasts with other participants' orientation to the presence or absence of parental involvement. He made connections with his on-campus studies, in particular the concept of 'growth mindset' to inform his practice. He understood that his innovative game-based maths activities took the risk of creating behavioural challenges, but he was prepared to work his way through this as a novice teacher, rather than forego the evident engagement of the students. The issue of transition from active modes of learning to more codified, worksheet activities raised in his enquiry was acknowledged as an important sticking point for his more active pedagogy.

In his second interview, this participant reported that he was now working with a Primary 5 class in a school with a high degree of social mix, and was doing well. He considered his learning about active pedagogies in maths to be highly relevant to his new context: 'what stayed with me and works well with this class as well, actually, is the whole active part of it. I mean a lot of kids in this class have quite a kind of negative mindset towards maths.' He described a card game he had devised to reinforce multiplication tables: 'they absolutely love it ... even the ones that are in my kind of lower ability [group], they're usually the ones that ask for it, actually ...'. He described the same reluctance to move to more paper-based exercises, but then outlined a new strategy he had developed:

What I've been trying to do recently, actually, is anyone who's struggling, just bring them down to the carpet and just work with them individually through ... the workbook and stuff, any sort of, like, actual written things ... try and get them to actually [engage] with it and use the kind of active strategies that I would be using anyway, like number dots and everything. Um, so using that, but then trying to apply it into the textbook so that they don't feel as if it's too pressurised.

He also described how he was using peer-tutoring to help build students' understanding. The concept of growth mindset was still very important to his practice and how he works with students 'with a negative mindset':

on my walls are all the kind of different displays and stuff, but I've got a huge bit on just growth mindset and it's, um, you know, all these different things, 'I'm no good at this,' you know, 'What can I do to improve?' So it's like I've got that visually there for them.

He thought he would 'absolutely' continue doing practitioner enquiries: 'it's almost like as you're doing it, you, you understand more about your own practice while you're actually doing it, if you know what I mean, like taking in all the evidence and everything as well.' For his probationer enquiry, he planned to build on his ITE enquiry:

it still will be a little bit to do with, you know, active maths and how that does benefit kids, but the whole idea of talking about number and actually trying to get to the kind of brass tacks of what number is.

If he had his ITE time again, he thought he could also have profitably explored 'how dyslexia can be kind of challenged', given the number of students in his current class who were dyslexic and the school's 'massive focus' on improving literacy outcomes.

Participant A5

Participant A5 had enrolled in a PGDE (Secondary) immediately after completing an undergraduate degree in mathematics. His enquiry was conducted in a public secondary school servicing a relatively deprived urban area. By his description: 'it's quite a tough school because pupils are coming from backgrounds where they have all sorts of problems, and in some cases, that makes it extremely hard to come to school ready to learn anything.' He described the vast difference in numbers enrolling in higher Maths at this school, compared to the school 'worlds apart' in the middle class catchment ten minutes away.

His enquiry conducted in a large 'top set' S4 Maths class was about encouraging whole class discussion for its more collaborative, inclusive classroom climate. He was also interested in how to pose appropriate levels of challenge to elicit 'academically productive talk'. He explained his impetus:

It was during my research that, um, I read a couple of papers that sparked my interest, ... I just wanted to sort of utilise, um, pupils and their input rather than just the ... the input from the teacher. So...I guess it, it serves two purposes in that, um, it, it gives the pupils an opportunity to, um, learn from each other, critique each other, so you have your social skills there as well as let's collectively improve our learning.

The enquiry included consideration of his questioning style to pose problems: 'it should be something that, um, the answer isn't apparently obvious ... which people don't really think of as being a case in maths, but I would, I would vouch for that definitely. It would be more

obvious in a more social subject, but I think it's possible to do it in any subject.' He also described how he had to establish routines for turn-taking which once in place allowed all students to contribute, and continued to act as a moderator to keep the discussion focused.

Where such whole discussion might be a common pedagogy in humanities subject, he explored its relevance and value to him as a maths teacher:

And it's useful for me as a teacher in that I can take a step back, hear their discussion and see where they're at, and it's generally a more true representation as if I were to ask pupils individually... I find it really, really interesting just sitting back and taking mental notes of, 'Okay, there's this misconception that I had no idea was there. I need to sort that out.'

The last comment re exposing misconception is of particular relevance to mathematics, given its vertical knowledge structure, where a misconception can jeopardise further learning reliant on this understanding. He acknowledged that such discussion or group work is not part of conventional maths pedagogy.

By his description the class group involved were 'focused and engaged and self-motivated to work'. When asked if he could transfer this pedagogy to a different 'less focused' group, his response is carefully mitigated:

...for this to work, we only need one pupil – we must have one pupil speaking at a time, and everyone else listening. I think just because, as you know, low attainment is associated with poor behaviour, just unfortunately that's the case, um, I think in a class, that discipline needs to be there amongst the pupils, um, regardless of whether or not they're a high or low attaining class, I think that can be a useful thing, um, a useful pedagogy to, to try out.

Another potential issue was time pressure: 'we could spend 5 minutes having an open discussion about this, and you might come up with the answer, the class might come up with the answer, or I could tell them and that would take 30 seconds.' However he justified the discussion pedagogy in two ways – the better understanding achieved, and the social skills developed.

In terms of recontextualising this pedagogy, he distinguished contexts in terms of what subject was being taught and the nature of the student group: 'I think you can generalise it across subjects very easily ... I think it takes a certain, um, maturity and respect.' Notwithstanding this consideration, he felt others could learn from his enquiry, and thought its focus of mutual respect and social skills made it particularly relevant in settings characterised by poor behaviour:

I'll go back to the social skills of it. Um, I think a lot of the reason that poor behaviour is in school, um, both inside the classroom and through the corridors and everything, is that pupils just don't have that practice interacting with each other in a structured way... regardless of whether you're learning maths ... I think the most useful thing that can be taken from it is that pupils learn how to respond to one another, how to

interact with one another, um, while the teacher is there to facilitate and say, 'Actually, that's inappropriate, how you just, um, talked to your peer. We need to work on this.' Um, so I think taking it entirely out of context, I think that's the most useful thing, and that would probably help, um, especially if you do it in subjects like, um, politics or English maybe, if you're doing newspaper articles, things like that. That, that helps pupils speak about important issues ... if you're speaking about different stances on abortion or something like that that you would study in school, that teaches pupils how to, um, actually have a civil dialogue with each other.

For the purposes of this study, this participant drew on the vertical discourse of classroom discourse research (IRE, open questioning) to describe his pedagogic design which he felt could work in different contexts and different subjects. He was mindful of the impact of students' family background as a characteristic of professional contexts, but was interested in ways to work productively with students of different dispositions and abilities within and beyond his subject specialisation.

In his second interview as a probationer, Participant A5 had been placed in a secondary school with a wealthier catchment than his enquiry placement but still with a significant social mix: 'so you would still get plenty of classes where, um, you have pupils who, um, maybe haven't had breakfast or, um, pupils who are evidently being neglected somewhat at home ... So familiar issues, um, with that, but certainly a lot less of them.' He was teaching two S1 classes, 'now a top set class and a bottom set class', Maths being one of the subjects that is streamed from an early stage at this school. He described a new found confidence and independence: 'it gives you more room to try your own things rather than ... going by what the teacher normally does, as a student teacher.'

When asked whether he was continuing with the whole class discussion pedagogy developed in his ITE practitioner enquiry, he explained how it was less possible in the current context, 'just with where my classes are':

I've certainly had less of an opportunity to, um, to use that because I would say, um...at least as far as classroom discussion in an academic sense, um, it takes a class who already have a fairly good understanding ... And just with the demographics of classes I have this year, um, it doesn't lend itself very well. I would say the only class that I could do that with is my top set first year class, and I have done that with my top set first year class, and they've responded really well to it, but, um, I haven't tried it with any other class.

He did however describe how he had adapted the other aspect of his enquiry in developing social skills to his new context:

I do, um, try to incorporate that into my lessons and, and it's definitely not so much in whole class, unguided discussion that my professional enquiry was on last year. But, um, definitely in terms of, um...just getting pupils used to speaking in pairs or groups and me facilitating that as I go around the classroom, and me correcting or at least pointing out any, um, inappropriate, um, kind of responses.

In this interview he re-interpreted this focus as one concerned with incorporating health and wellbeing in his teaching.

As a probationer, he was expected to conduct another practitioner enquiry, but this time in coordination with other probationer teachers at the school, while strategically aligned with the school's improvement plan. They were planning a collaborative enquiry into whether and how a common language of 'command' words was possible across curricular areas. He had new questions about the curriculum, and now had doubts about some of the routines that he had been taught in his ITE:

I was always taught that your lessons should have the very sort of particular structure of starter ... some sort of, um, instruction, whether that's from the front or in groups, and then individual work and then plenary kind of thing ... whereas I'm actually finding that for certain classes or at certain points of the day or whatever the variables might be, um, you know, they're not always going to get settled down and do starter questions in their jotter right away ... so maybe you need to find a creative way to make that engaging enough that you can slip in the, the learning there. ... I guess it boils down to ... what we're told in our teacher education is that things, um, do have a routine and a structure, and maybe that's good to start with, but as you go on, I think you kind of learn that, you know, that sort of saying that 'you're not teaching maths, you're teaching children'.

This is a telling statement, demonstrating the development of judicious praxis and growing confidence in breaking the rules by recontextualising knowledge from his ITE programme but with consideration of his context and its multiple 'variables'.

Participant A6

Participant A6 had a degree in psychology and had worked with adults in a mental health service before enrolling in a PDGE Primary. She also brought valuable experience from voluntary work befriending vulnerable families in high deprivation areas:

so I think going into schools, I was very aware of what homelife could be like for some of those kids ... And that actually them just getting into school was a big achievement, whether that was 5, 10 minutes late or not, with their full school uniform or not, with their lunch or not, with their permission slip that they were supposed to bring in, that actually the households could have been quite chaotic in that they've managed to get into school. ... just kind of seeing all that, so I suppose having that awareness, um, meant that I wasn't shocked maybe at some of the backgrounds for the kids.

The enquiry placement was in a less deprived community than her first placement, which she contrasted in terms of 'the extra baggage that they [the children] would bring to school'.

For her practitioner enquiry, she built on the school's focus at the time on reading for enjoyment and the opportunity of 'big play' sessions for the early childhood years. These extended sessions encouraged student choice of guided play activities. Within this frame she set up literature circles with small groups of students. Being passionate about reading to her own children, she found the on-campus studies in children's literature inspiring and became interested in making the classroom 'a literature rich environment'. Her tutor introduced the idea of 'literature circles', a concept which she adapted for infants sharing and discussing picture books with some text. Though centred on literacy skills, her enquiry reported more on the rich oracy this activity generated, the different types of talk, and how the students embraced the discussion mode:

and they would just start to talk to each other without involving me ... actually listening and responding to each other's questions ... But for the Primary 1, 2 level, I was absolutely blown away by just their, the level of questioning and what they looked at and how they engaged with each other about it as well.

From her enquiry, she drew various insights for her future settings, including the benefit of mixed ability groups, the compromises made for time management, how to accommodate children with special needs, the benefits of small group activities to build relationships with students, and how to balance routine with innovation and prepare students for change. She also mentioned the process of conducting a practitioner enquiry itself was important learning she would draw on when 'something's not working in your class and you aren't quite sure why something's not working, or there is a gap within your class and you need to fill it for whatever reason.' This included accessing published research:

but there is this wider...research that's been done on child development and how to impact, and just still accessing all of that information. And then it is this lifelong learning that, you know, in five years' time I'm not gonna be like, 'Yeah, I know everything there is to know about teaching.'

In terms of what others might learn from her enquiry, she stressed the more meta-benefits of conducting a well planned, research and structured enquiry;

on the surface, you can think, '((sighs)), what is the point in doing this? I just want to do my placement, too,' Um, but I would say it, it is beneficial. It's beneficial for all the reasons that GTCS say that professional inquiry is beneficial.

For the purposes of this study, this participant drew a strong link between on campus studies and her innovative practice and was comfortable using conceptual terms in her enquiry's typology of talk. She demonstrated how theoretical ideas can be adapted or recontextualised to work in the constraints of real settings. Her previous work gave her a deep appreciation of, and empathy with, the different experiences of children living in vulnerable families and how these might manifest at school. Her enquiry had a lot to offer other Primary ITE students, but she chose to highlight the generative enquiry process itself as the major point to take away.

In her second interview, Participant A6 described her new setting as 'quite similar' to her enquiry placement in its social make up, though a slightly larger school. She described herself as 'surviving' after an initial 'shock to the system':

I found the, um, the responsibility of having my own class, um, I found that probably quite overwhelming... it's definitely settling down now, but ... just in terms of I think just getting to grips with how the school works and just the, just everything that goes on within school life, but how, you know, that particular school works for things. And I know so few of the things that everyone else just knows, 'Okay, that's what we do.' I'm still, you know, learning all, all of that. But also just really getting to know the kids in the class and knowing what their, what their needs are and what their, you know, like and what they dislike and ... what they find easy. And so that's been, as well as actually looking at the curriculum overall and making sure that, you know, the lesson things that I'm providing for are actually meeting, uh, meeting the benchmarks and Es and Os.

In this passage, she outlines how she has to come to terms with the contextual this-ness of 'that particular school' and its established mode of operation of 'that's what we do'. That learning is happening at the same time as the learning every teacher has to do each year, coming to understand their class group. She also found the teacher role frustrating and limited in terms of its opportunities for contact with parents, compared to the family interface she had in her previous volunteer role.

With regard to adapting her enquiry learning, she first outlined the 'quite prescriptive' literacy programme the school follows, but then described her own classroom design that allowed her to incorporate aspects of her enquiree's literature circle design:

in my class, I have different areas, and one of the areas is ... a reading corner. So I have, uh, a library at one part of my classroom, but then in the reading corner, I have other books and everything like that set up, which is changed regularly ... We had a book of the week ... So the kids would vote on, I would maybe give them three choices. The kids would vote on what book they wanted to have for book of the week, um, and then we would read that, like, three or four times that week... we would, we would read it and then we would read it again and we read it again, and then we would come back to looking at it even a second time, I would be encouraging the child – I will encourage the discussion with them then, like, 'Oh, do we remember what happened?'... Or if somebody wasn't in, I would say, 'Okay, someone else tell them what happened.'

She explained how in 'drop everything and read' time in class, the poorer readers would choose the book of the week to read in pairs or groups;

And then one of them, they read a page each. So that was just all off, you know, all off their own back. It wasn't, it wasn't like that was kind of structured for them or

anything. It was something that they, that they did by themselves. Um, so that was obviously lovely to see.

She was hoping to introduce mixed ability literature circles into her class in the future term, 'that's where I would eventually like to go'. She was particularly keen to do this for students with less literacy exposure in the home:

you can see the kids that come in that obviously have access to a lot of books and are reading books at home, and you can kind of see the kids that maybe don't have as much access to books, that maybe aren't doing that at home. And I think that having that access to other books that aren't just the banded reading books in the classroom environment is so important.

For the probationary year's practitioner enquiry, she had at this stage no firm plans: 'actually even just the thought of undertaking another professional enquiry ((laughs)) when I feel like I'm still learning everything on a daily basis is, um, is probably quite overwhelming.' Nevertheless she still consider practitioner enquiries important and valuable to foster professional dialogues: 'it was really easy to see, being in schools, how teachers could just become quite insulated in, you know, the day-to-day teaching ... It means that you can better your practice.'

Participant A7

Participant A7 had completed a degree in social science, then had travelled for five years and taught English in South East Asia, before returning to Glasgow to do a PGDE (Secondary) in Modern Studies. Her enquiry placement was in a 'truly comprehensive' secondary school with a marked social and cultural mix: 'quite a lot of affluence, ... but then, then at the same time, not ... there were a lot of school refusers versus mums and dads dropping kids off in Range Rovers'. Her class was a mixed ability group in S1. By her report, a mock election is a well established feature of this subject in this year to teach political literacy:

I was like, 'Does a mock election actually ... help? Or is it just something that it's a wee add-on at the end of the unit, a nice wee thing for the teachers to do?' ... But is there something more to it? And that's where I got, you know, ties in with the political literacy. Does it actually make a difference?

Her enquiry was informed by theory on collaborative learning, and assessment for learning. Students chose party groups then allocated roles in preparing and running a campaign, designing posters, preparing a manifesto, and giving speeches with the use of authentic artefacts from various political parties. Her design also involved a word bank, glossary and intentional teaching to support the necessary vocabulary development: 'I'm quite interested in that strategy as, as it's actually a little bit of explicit teaching about the term, the concepts in amongst the more process kind of learning.' Her report also drew on theoretical sources to make the distinction between teaching citizenship and learning democracy, which had sparked her interest in democratizing the classroom:

it's like giving them choice, so they're learning, so, you know, you choose your own political party, you sit at whatever table you want. Okay, so now you choose your representative. Who's going to be filling in that, you know, checklist? Choose the speaker, choose the – you know, it's just all about learning democracy through doing it.

She was mindful of excitement tipping into behavioural concerns, 'but for this particular PE, it was, like, they wanted to do me proud as well ...'

In her enquiry report, she reflected on the tension between the pace and the depth of learning: 'I'm glad, the class that I chose for it, because they were so able, they could handle the lightning speed that I was sometimes going at.' When asked whether she would take learning from her enquiry into other contexts, she replied, 'I could definitely, but over a much longer period of time ... more time just to go into more depth. Um, if it was a class that just needed a lot more extra support, then yeah, I think, I think I would struggle. I think they would struggle. It wouldn't be fair for them, I don't think, to, to push them through. Thus classes' levels of ability became an important attribute of the professional context with consequences for pedagogic design. She intended to pursue these pedagogic ideas in future contexts, 'for the rest of my teaching career.' In her subsequent placement, she had already replicated the use of authentic resources, 'trying to always relate the learning back to real life'. She also highlighted what she had learnt about student motivation: 'I think it's just something I'll take generally from the whole experience is just keeping them motivated and interested and engaged in what they're doing'.

She was keen to share her enquiry with others, in terms of its substance, but also in terms of its process in translating theory to practice:

hopefully they would take from the actual PE that...theory...translates into something. So the theory that you learn at uni, although some of the teachers that I've worked with have said, 'Forget about it all,' I don't think that's the case... It does translate into practice.

For the purposes of this study, Participant A7 was keen to take learning from her practitioner enquiry and its theoretical premises into new professional contexts. For her, the vertical discourse of theory was useful and stimulating, and the enquiry process a valuable tool for herself and others to work across theory and practice in different contexts.

Participant A8

Participant A8 was enrolled in a PGDE (Secondary) specialising in History. His enquiry placement was in a relatively disadvantaged secondary school in a poor urban area, with a high proportion of speakers of English as an additional language and associated low literacy levels. His enquiry was about formative assessment in a S4 class, with an interest in adapting routines for assessment for learning to suit students in secondary school where it tended to be displaced by a focus on summative assessment. He set out to ascertain what form/style of feedback students preferred, then 'do more of it', seeking feedback on his feedback. By

his account, the feedback he received and used was mostly oral in class: 'There were a couple of times I used, um, like, written feedback stuff, but I was [relying] mainly upon, like, classroom contributions because a lot of the time we spent doing classroom discussions.' His enquiry tipped the teacher student relationship on its head, and asked the students to comment on his feedback practice and how he could improve.

When asked if the nature of the school context helped to shape his enquiry, he talked about tailoring the amount of writing he could ask of these students:

I don't really know if I could attribute it to the SIMD index [factor], but one thing that was sort of very prevalent was that they liked to talk. They had good opinions. They could articulate opinions. They hated writing ... as I expected, they, they wanted simple verbal feedback. That was in line with my expectations because they didn't particularly like, you know, um, written feedback or any sort of, you know ... I initially, thought it would be a case of, you know, a sort of page to page conversation, because that would be good for collecting evidence, but I knew that that wasn't gonna work.

Thus the nature of the students and their literacy levels served as the pertinent contextual attributes that delivered 'quite a specific finding'. Given such contextual considerations, he was keen to continue with this consultative practice, but expected to make similar adjustments in subsequent settings:

the main takeaway is having that supportive back and forth conversation. ... and I did see a lot of, you know, what I assume is a lot of variants depending upon the class, so I would like to do something similar in future to try and gauge specifically ... just to give a bit of leeway.... specifically what that class benefits from.

He then explained how other attributes of disruptive behaviour and class size might influence his thinking, though he would maintain his emphasis on consultative relationships with such students

I just couldn't do that with a large class where there were several, you know, being disruptive. ...It's difficult because with kids that are particularly disruptive, I have found personally that engaging them in some sort of dialogue, even if it's sort of one to one – the whole class is there, but one to one – is quite effective sort of get them to try and focus on you rather than the rest of the class. So there would be some scope for applying it there, but just, just...maybe not so much disruption, maybe to do with the size of the class ...

In his report he referred to the students' 'meta-learning', which he later explained as 'the students themselves describing their own learning, ... rather than talking about the content of what they were learning, they were getting into a discussion about how they were learning it ... basically what was most effective for them.' He was encouraged by this observation, and linked it to independent learning: I felt quite happy with ... I was like, "Okay, we'll do more of that then."

In terms of what others might take from his enquiry, at first this participant talked about the mechanics of designing a better enquiry. On further questioning, he suggested 'the dialogue ... getting them, the children, to think about their own learning.' On the topic of feedback, he conceded that 'there isn't some sort of silver bullet feedback strategy that's going to, that is the best type of feedback. There is the type of feedback that works best the most with that class.'

For the purposes of this study, this participant had engaged with topical assessment theory but concluded that context matters in how these ideas are to be enacted. The students, their predilections, behaviours and capacities constituted the pertinent contextual attributes, but in this process, he had arrived at the 'meta' principles of fostering reflection on learning and staging dialogue that allows this to emerge.

In his second interview, Participant A8 described his new context as a large secondary school, 'fairly well-performing', with a large cohort taking History for the National 5 Highers. While this community was 'much more affluent' in general, the school was making efforts to poverty-proof their offerings, and be more socially inclusive. He felt that 'some of the things that, uh, seemed important no longer seem that important ... Rather than the lesson by lesson how good is your lesson, it's more about, you know, how good is your relationship with the class overall ...'.

While his ITE enquiry had been concerned with formative assessment, he suggested that his learning curve on the job was more to do with formal summative assessment, and the work towards this with tracking reports and keeping written records: 'So even if you are having the conversation, there's got to be records of it.' To this end, he described a target-setting form he had developed to help students show progress towards success criteria. This enabled him to incorporate the kind of formative interactions and focus on meta-learning that his ITE enquiry had highlighted.

With hindsight, he felt he should have concentrated on strategies of differentiation given the current school's integration of students with high needs 'So there is a real need for differentiation at both ends'. For his probationer enquiry, he was planning to work on retrieval practice and revision practices:

So when I do the sort of retrieval practice type things, I try and get them to, to, to, to identify what it is that they could have worked on out of what they were missing. Um, I guess that's sort of metalearning in terms of being aware of their own progress and what they can do about it.

In this way, he explained how the next enquiry will purposefully build on his first: 'I wanted to, you know, keep on progressing with that because I feel like it's something that I, after my professional enquiry, continue to try and make a focus of my teaching.'

Participant A9

Participant A9 studied English in his undergraduate degree, then worked abroad teaching English as a subject in a foreign language school in East Asia before returning to enrol in the PGDE Secondary programme. Despite having no teaching qualification at this stage, he was involved in the preparation of the university entrance examination for this country. This experience sparked an interest in assessment. Later in his ITE programme he encountered the concept of formative assessment, though it seemed a 'kind of nebulous term that, um, was being used a lot but didn't have any kind of real, well, any kind of concrete blueprint applications for how it should be used'. Then on placement he observed a gap between official rhetoric around formative assessment and the actual practices. His own background as the child of a single migrant mother, also informed his approach to students from disadvantaged backgrounds. His practitioner enquiry combined his interest in formative assessment practice and classroom feedback strategies with the concept of 'growth mindset' applied to reflections on his own practice, and the plan to model such a disposition for students.

He described his enquiry placement as in a 'behaviourally challenging, mixed low ability group' Secondary 2 class in a public secondary school serving a high deprivation community. For this participant, these conditions 'reminded me of my own kind of school experience.' which gave him 'better understanding or sympathy, maybe, empathy ...' He described how his 'aspirational attitude' towards these students was considered 'naïve' and 'idealistic' by other 'disillusioned' teachers, for whom he had some sympathy given the history of austerity and its impact on work environments. He outlined how he modelled and cultivated relations based on dignity, candour and respect, in the face of students 'apathetic' about their futures:

I found you had two different types of students that would put their hands up: one that would say, 'Can I get some help?', another saying that 'I can't do it'. Um, and they're both asking the same question, but just from different...different attitudes.

He drew on the work of Alain Botton to describe his approach to students' behavioural flares.

When asked what he would take from this enquiry to subsequent placements, he replied: 'I think that depends on what the next context is.' On further reflection, he suggested:

the idea that, of kind of modelling the behaviour I wish to see in students and how powerful that is... I also take away the idea that...or it kind of reinforced what I understood of, uh, students having an attitude of themselves and...the idea that that can be challenged, that can be changed... But that takes – again, that requires a very unique and nuanced approach and an understanding of their position.

In this way, his synthesis of formative assessment practices, growth/fixed mindset theory, and his own reflective practice, builds a professional disposition dedicated to improving

outcomes for students in high deprivation communities, not as a routine but as a carefully contextualised sensibility.

For what others might take from his enquiry, he highlighted understanding the gap that can open between theory and practice; and some inspiration:

the idea that...something as simple as a post-it note in a classroom can have a great long-lasting effect if used regularly and repeated, and that they need to fundamentally – this sounds, this is a Mandela quote, isn't it? – be the change they wish to see.

For the purposes of this study, this participant used a vertical discourse of concepts for talking about modes of assessment and mindset types in his professional talk, and drew links between his own schooling contexts, and that of his placement. The attribute of context he highlighted was the students' typical diffidence towards future ambition in these communities, casting that as the site of possible intervention.

Analysis Cohort B

To address the research question, 'Can such contextualised learning also generate decontextualized learning that could resource other teacher education students and the profession?', the design sought to recruit a second cohort of students from the following year's PGDE. By the time we reached this phase, Covid-19 was disrupting ITE programmes, and our efforts to recruit participants only resulted in one respondent. This respondent was asked to choose one of the practitioner enquiries by the previous participants to read, then participate in an interview about whether and how they might learn from someone else's enquiry.

Participant B1

Participant B1 was a mature student, enrolling in the PDGE Secondary after an undergraduate degree in Mathematics, postgraduate study, then a career teaching maths in further education including the prison system. He had enjoyed tutoring peers at university and found it helped his own understanding. With school students, he'd come to the conclusion that: 'for a lot of them it's about applied mathematics so, you know, trying to make maths relevant to school children, often the usual question is when will they ever use maths. When will they ever use this?'

His placements prior to the interview had been in two secondary schools, both in 'a more or less an affluent area'. By his description, the two schools had very different approaches to maths pedagogy. The first one he described as 'very traditional... very didactic ... very much textbook, work and exercises, things that I'd been used to.' The second one he described as 'very much active learning ... fast paced ... smartboard type technology and software so they would be firing through slides, and answers were on Show-Me boards.' He reflected on the difference between these settings and his experience in prison programmes where 'you were always firefighting with behaviour.' He was grateful for the opportunity to learn to teach in classrooms with few behavioural challenges, but

I might choose to go and work some place where there is a bit more difficulties, because I've seen the outcome of, you know, kids that aren't engaged, they haven't been given the same opportunities as others, what can happen to them.

He had done his own practitioner enquiry on differentiation in a Secondary 1 class in the second school, observing other teachers and reflecting on his own strategies. This interest was sparked by his own experiences teaching very mixed ability classes in the prisons: 'In terms of what I've found, that's probably the most difficult thing a teacher can do.' He expected to continue learning about differentiation strategies in future settings. He explained how he thought his enquiry would have had a different outcome if conducted in the first school, where he would have had 'more scope to try something a little bit different.' In this way, he foregrounded the contextual attribute of departmental cultures because he had experienced such a stark difference across his two placements.

He thought that others reading his enquiry would learn 'basically that, I suppose, that it is a very difficult thing to achieve, obviously knowing the pupils, knowing the circumstances, the

school that they are in and what they can and cannot do.' By this description, he casts differentiation as the ultimate context-sensitive and responsive dimension of teachers' practice, always work in progress.

Of Cohort A's set of practitioner enquiries, he chose to read Participant A2's enquiry about collaborative group work and cooperative learning in a secondary Business class, because he felt he had seen little of this kind of pedagogy in Maths classrooms. In his account of the study, he highlighted the literature reviewed about different grouping strategies, and the care with methodological considerations and mitigation of findings: 'She did recognise that it's maybe not transferable entirely across, which again, comes out in her literature, you know, the research is worth sharing but it is not always going to work.' He recounted how a comment about 'desk truancy' in the enquiry report sparked his interest and helped to articulate some of his own observations:

I started thinking about that, but I was just observing, it was a second-year class. Yes, so you could see the group dynamics, some pupils were taking the lead, some pupils were interested and it worked, you know, even in that class, some groups were really, really good and some were just ...

The ideas in the enquiry also resonated with his ITE lecturers' promotion of problem-based learning, and had given him some encouragement to pursue this pedagogy in his own practice:

you can see the value in not just standing up and saying to pupils, 'here's an equation and here's how you solve it.' But giving some sort of opportunity for people to discover some things themselves. With a bit of help. It's got my attention that, you know, I would like to try it. But I think I would need time and space to do it.

The recontextualization here would be firstly across different subjects not just different school/class settings. Then the recontextualization would be into different schools with perhaps different pedagogic cultures, such as his contrasting placements.

I suppose the thing that it left me thinking was, I did think, I would like to try that. I would be interested to see what it would look like to have children discover mathematics without someone telling them what, you know, the properties of the triangle are or whatever ... That's probably left me thinking, how could I make that work in a maths class, what would that look like and feel like. Rather than me just standing at a white board saying this is how it is done.

The idea of mixed ability grouping appealed to him as he had seen it work well in his prison programmes and university tutoring: 'it's like prisoners would listen to prisoners, students listen to students, why can't pupils be the same?'

When asked whether he thought such cooperative learning would work in a school serving a more disadvantaged community, his response was immediate and enthusiastic:

Well, to put that bluntly, I probably think that it would probably be the best thing, or for me, it would be the answer. When you think about it, with the two schools I was in, because they were so high achieving there was a high expectation for pretty much all of the pupils. Now, without having been in a school from a disadvantage background, but I know from anecdotal evidence from other people that the

expectations there are lower, it's almost like you've got nothing to lose ... in a school where you don't have those expectations, you think right, let's try something else, you know, and I don't mean experimenting on people but just try something different ... So again, all this anecdotal evidence is all feeding into my psyche, you know. I think if I had a choice, I would go somewhere like that and then just try whatever there is to try and get the kids engaged, because they're going to be lost anyway if you just keep doing the same thing. I don't know enough about this, that's just my interpretation with the little knowledge I have. So, just be brave and try something.

In this response he considers the high-achieving school as the more risk-averse setting that might avoid more innovative pedagogy. He assembles a principled position using a horizontal mixture of anecdote along with Participant A2's study and his own experience while mindful of their limits. In the same vein, he was enthusiastic about practitioner enquiry for future professional learning: 'I think for me, it's, I don't know, it's got my attention, it's caught my imagination.'

Discussion

This project built from the epistemological premise that context matters in teachers' professional practice, a point of particular relevance to the Scottish Attainment Challenge. As Thomson reminds us, 'neighbourhood issues come together in specific schools in specific ways. No disadvantaged school is identical to another' (2002, p. 92). This means that answers revealed 'here' may not necessarily apply over 'there'.

As circumstances vary and change, new settings and new communities produce new challenges and new questions, requiring that teachers 'be research-minded, adopting a questioning, enquiring approach to their various roles' (Christie & Menter, 2009, p. 339). In addition, education is morally infused and cannot be reduced to some objective 'technical-rationality' (Schön, 1983, p. 33) of predictable cause and effect. Rather, any practice is shaped by the moving tide of contemporary values and normative theory about what should be happening, for example, the contemporary push to improve differentiation and inclusivity. The practitioner enquiry is now an essential pedagogy in teacher preparation, one that serves to cultivate both a research-as-stance disposition (Cochran-Smith 2007) and professional judgement about what is desirable, what should be prioritised, and what is possible.

Where scholarly research typically seeks to dampen or neutralise the effects of idiosyncratic context to extract de-contextualized theory, practitioner enquiry works to foreground and dignify the multiple variables of context that impinge. The participants could articulate what conditions and attributes of a context impacted on their designs, or mitigated its application in a subsequent setting. As a result practitioner enquiry may only ever produce a claim or protocol that will need to be evaluated afresh in the next setting, or with the next class group. Participant A3 captured this knowledge condition succinctly: 'That could change, you know, in a different area, in a different school, it could be completely different.'

This context sensitivity means that the knowledges accrued in placements will not necessarily stack up vertically (Bernstein 2000) into an all-encompassing, definitive theory of practice that applies everywhere all the time. Rather, the participants' accounts show how snippets of theoretical knowledge and conceptual terms drawn from different sources are collected and assembled along with insights, tips and anecdotes across a horizontal plane of alternatives and possibilities to consider. This mix includes knowledge and valuable experience that PGDE students might bring from their undergraduate degree and previous work experience, which is often overlooked. We could also include the 'apprenticeship of observation' (Lortie, 1975) that teacher education students bring from their own experiences of being schooled. For example, Participant A4 drew on his own experience of maths anxiety, and A9 felt comfortable in a disadvantaged school given his own schooling. All these knowledge sources contribute some insight or line of enquiry. As Participant B1 explained: 'you think right, let's try something else, you know, and I don't mean experimenting on people, but just try something different ..., all this anecdotal evidence is all feeding into my psyche.'

This capacity to extend possibilities without displacing other 'truths' would suggest that reading peers' practitioner enquires can be stimulating and generative. Though we only have the evidence of one participant in Cohort B, his response to another's work was to find potential, curiosity and relevance for his own practice: 'That's probably left me thinking, how could I make that work in a maths class, what would that look like and feel like.'

When asked retrospectively about what else their ITE enquiry could have been about, some participants cited a new priority or problem that had emerged for them in their next setting (for example, Participant A1 would rather have chosen 'reading up on nurture and behaviour' and Participant A4 would have explored 'how dyslexia can be kind of challenged'). This update of what the problem might fruitfully have been demonstrates how contexts will present their own problems or challenges, and how the pertinent enquiry for Context A may not be the pertinent enquiry for Context B. Nevertheless the value of these comments lies in how these students embraced practitioner enquiry as a productive process for exploring applied questions of practice. In the second interviews with Cohort A, reports (for example, by Participants A1 and A5) of probationer enquiries becoming streamlined collaborative efforts decided by school strategic priorities might unfortunately displace the specificity and personal relevance that practitioner enquiries are uniquely capable of providing.

The retrospective designs also made evident the hope that learning from their practitioner enquiries could be transferred to their next setting. When asked about what learning they took from their ITE practitioner enquiry into their NQT setting, the replies brought to the surface participants' understanding of what contextual attributes mediated such transfer. These included year level, class size, time and curriculum pressures, students' levels of achievement and need, student engagement and behaviour, space, resourcing and so forth. Participants A4 and A8 were the only ones interviewed as an NQT who were planning their NQT enquiry to explicitly build on their ITE enquiries. The others were crafting some degree of continuity to implement the practice ideas developed in their ITE enquiry, as possible in their new settings. For example, Participant A6 had adapted her literacy circles to fit the school culture of her new setting; Participant A5 had incorporated his coaching of social skills into his NQT practice; Participant A1 had restricted time and space as a NQT, but hoped to introduce her cross-curricular approach to literacy later; Participant A7 was continuing to incorporate authentic resources for purposes of motivation and engagement.

In reference to the SAC focus on improving schooling outcomes in communities of high deprivation, the literature review suggested that contexts of disadvantage can trigger deficit presumptions of what such children can manage, lower expectations therefore a thinner curriculum, and a trade-off between innovative pedagogies and classroom order. This risk informed our question about whether the various initiatives explored in ITE enquiries would work in more disadvantaged settings.

The participants' responses invoked a loose constellation of factors and attributes they understood to characterise such settings, such as: a lack of parental support and involvement, lower achievement and literacy levels, more problematic behaviour and

attendance, less engagement and interest, low aspiration and poor self belief, less ability to cope with free choice and greater need to be guided, less space and resources available, less home resources, and home 'issues'. While some of these factors fall outside a teacher's sphere of influence or capacity to change and therefore serve as fatalistic explanations, others pertain to conditions within the school setting that contribute to the uneven playing field of concern in the SAC.

From the participants' accounts, an ITE placement in high deprivation settings was valuable and productive for learning about the texture of such settings, observing possible responses, and challenging naïve or deficit mindsets. Participant A2's interest in cooperative learning was sparked in a high deprivation setting, 'so I was interested to see whether it was just that environment or whether it was like that in other schools as well.' Participant A4 settled on a strategy of more game-based pedagogy for disadvantaged groups, even if it risked more behavioural challenges. Participant A3 was confronted in one of his ITE placements by the single parent faced with the loss of a day's salary to look after a sick child, this moment sparking empathy and understanding. Participant A5 had reframed his approach to teaching: 'you're not teaching maths, you're teaching children.' Participant A8 had come to understand the learning preferences of his more disadvantaged students, and the importance of nurturing a one-to-one relationship. Participant A9 had resolved to challenge the low aspirations of such students. While some learnt on the job, Participants A6 and A3 came to teaching with a deep understanding of vulnerable families, marginalised people and how their children fare in school.

In contrast, Participant A1 did not have an ITE placement in a disadvantaged setting, so was confronted with the more complex needs in her NQT placement in a high deprivation community: 'parents with addictions, ... in prison ... lots and lots of home issues ... children that have multiple ACEs ... there's a much higher level of need.' As an NQT she was on a steep learning curve to understand and respond to these different needs.

Other reports in the greater SCDE SAC project² have highlighted the 'luck of the draw' in who is assigned what placements (SCDE, 2019). Sharing ITE practitioner enquiries may help bridge some of the gaps and broaden all students' perspectives about the diversity within and between communities. While they may not offer first hand experience, the enquiry reports will offer an accessible perspective on how a peer makes sense of pedagogy and priorities in these particular contexts.

² <http://www.scde.ac.uk/wp-content/uploads/2020/01/SCDE-SAC-project-report-Dec-2018.pdf>

Conclusion

The research undertaken for this project was necessarily limited and partial. The participants who responded to the invitation may well be self-selected in terms of their willingness to engage with the Attainment Challenge, and therefore are not necessarily representative of their larger cohorts. However, by the same token, their enquiries and responses offer us a window into the potential of this pedagogy. With these limitations in mind, this conclusion responds to the three research questions driving this project.

What learning can be gained and shared from practitioner enquiries undertaken in teacher education?

There is learning to be gained in both the process and the outcomes of a practitioner enquiry on multiple levels for the ITE student. In posing a problem or question to be addressed, the ITE student is learning to look critically at their own practice in the conditions of the placement context, in order to improve or enrich their professional practice. There is an important stage of reading relevant research to resource one's thinking and learning from other studies. In working through a purposeful and thoughtful enquiry, there is then learning about optimising practice in the enquiry's context.

When these ideas are re-contextualised in a subsequent context and found to be more or less relevant, there is a further layer of learning about contextual differences and their impact on practice. The relational understanding of whether these ideas work here and/or there produces learning about the context-sensitivity of teachers' professional practice and the this-ness of each setting.

For other readers, each enquiry offers a worked example of context-embedded professional reflection in dialogue with previous research, demonstrating how particular ideas provoke enquiry and how particular circumstances, qualities or conditions can impinge and mediate practice.

Can such contextualised learning also generate decontextualized learning that could resource other teacher education students and the profession?

No. The small scale and the particularity of context are important for practitioner enquiry, but reduce its capacity to produce and legitimate decontextualized claims, that is, theoretical propositions that can be generalised and expected to operate regardless of context. This was evident in the participants' limited capacity to transfer learning from one context to the next without adjustment. While some might see this as a weakness, others would see these properties as a defining strength of practitioner research, foregrounding the 'actualities' of practice while talking back to the impracticality of idealised or 'abstract' pronouncements on practice (Kemmis and McTaggart, 2005, p.563).

Practitioner enquiries are not designed to produce decontextualized theory, so will not resource the vertical dimension of theoretical knowledge (Bernstein, 2000). Rather the insights produced in the enquiries will accumulate as possibilities and alternatives to consider. They will accumulate in a horizontal knowledge structure that broadens a professional repertoire of strategies and considerations.

The exception may be where the participants derive and articulate a deeper principle that will underpin their future career, for example, Participant A2's commitment to cooperative learning, Participant A8's commitment to meta-learning, and A9's commitment to challenge low aspirations. These principles are normative theory working from a moral base to shape their professional practice rather than abstracted theory derived from an empirical base.

Could sharing practitioner enquiries undertaken in disadvantaged communities contribute to professional growth and the Scottish Attainment Challenge?

Yes. The participants who undertook a practitioner enquiry in a school serving a community of high deprivation produced thoughtful work that demonstrated empathy and more nuanced understandings of family circumstances and student dispositions. At this stage of their career, the acknowledgement of lower literacy levels or lower engagement by some encouraged more active or game-based pedagogies rather than discouraged them. Frank recording of such efforts brought to light the difficulty of moving from such active pedagogies to codified written activities.

Sharing such enquiries and initiatives allows for vicarious experience, of particular relevance to ITE students who are not placed in a more disadvantaged community for their placements. By sharing the questions, considerations, innovations and outcomes of enquiries situated in such settings, the reader is also exposed to the challenges such enquiries make to business as usual in the practice and expectations which the Scottish Attainment Challenge is seeking to disrupt.

ITE students will be exposed to different types of knowledge in their preparation and ongoing professional learning, and stand to benefit from both academic 'research' and practitioner 'enquiry' (Wyse, Brown, Oliver, & Poblete, 2018). They need to develop the capacity to sift and sort ideas according to the conditions of the context they find themselves in. Reading others' practitioner enquiry will give examples of how to work across the differently textured knowledges to draw out what matters in a particular context.

Taking ideas forward

The last stage of the collaborative SCDE SAC project involves the trial of ideas generated by the previous stages.

The outcomes of this project would support a trial of making previous students' practitioner enquiries available to subsequent cohorts, as an additional resource to read, think about, and discuss. This would not be intended to convey ready made answers, but rather to raise possibilities and questions to be consider with due reference to the particular context of practice.

Given the Scottish Government's current priorities, the trial could be tailored to identify high quality enquiries undertaken in schools servicing communities of high deprivation as a way to give all ITE students some sense of what practice in these sites would 'look like and feel like', in Participant B1's words. They could also be used to start discussions about how schooling might reinforce or disrupt patterns of inequitable outcomes for such communities.

Appendix 1: interview themes

COHORT A: FIRST Interview themes and prompts for participants end of PGDE

What were you interested in and how did that focus arise as important?
Describe the relevant aspects of your context that shaped your enquiry.
What theoretical or research ideas informed your study?
How did you stage your enquiry?
What did you learn from your enquiry?
What evidence did you have of change, success or impact?
What would you do differently next time?
What more general learning do you take from this context into other contexts?
What more general learning would you share with others?

COHORT A: SECOND Interview themes and prompts for participants in probationer year

How's it going? Learning curve
Revisit nature of Professional Enquiry done in PGDE – remind re what said at the time...
What stays with you from that experience?
 Process of professional enquiry
 Enquiry topic/question, curiosity
 Enquiry findings - transferring learning ...
 Value of professional enquiry
What kind of context are you teaching in now?
 Similarity – difference
 Attainment challenge? PEF ...
What kind of new questions are emerging for you?
New answers to old questions?
Do you have to conduct a PE for probationer programme?
 Details; Scale; Motivation
 Overlap with PE1?
What would you do differently if you re-did PE1?

COHORT B: Interview themes and prompts for participants end of PGDE

tell us a bit about yourself
 background; undergraduate degree; teacher preparation
tell us a bit about your placements to date
 kind of schools, communities, SAC?
 experiences; challenges; questions; learning
tell us a bit about your own Practitioner enquiry
 topic choice, motivation, context; method; outcomes, insights
 could you take this learning to another site?
 what might others learn from this?
tell us about the PE you read
 why this choice? recount/summary; what evidence
 what might you take from this? (impact)
 what mightn't transfer? why not?
reflection on PE process - how much depends on the context?

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