

Scottish Council of the Deans of Education Attainment Challenge Project

Developing pedagogies that work for Pre-Service and Early Career Teachers to reduce the Attainment Gap in Literacy, Numeracy and Health and Wellbeing.

Report on Research Question 2:

Of our current practice, what do we do well and what could we do better?

October 2019

University of Aberdeen

University of Dundee

University of Edinburgh

University of Glasgow

University of the Highlands and Islands

University of Stirling

University of Strathclyde

University of the West of Scotland



UNIVERSITY OF STIRLING



Contents

Project members.....	4
Executive summary	5
List of abbreviations.....	6
Introduction	7
Research Question 2	8
Framing the question.....	9
Teacher education waves and trends	9
Teachers' knowledge-base.....	11
The new teacher and preparedness	12
Understanding poverty, deprivation and school attainment	13
Methodological approach.....	16
Participants	16
Analytical approach	17
Thematic content analysis	17
Theoretical coding.....	17
Themes by university community.....	18
University A.....	18
University B	19
University C.....	20
University D.....	21
University E	21
University F	23
University G.....	23
Themes by participant group.....	25
Teacher educators	25
Head teachers and mentor teachers	25
Newly qualified teachers	26
Local authority staff	26
Analysis by teachers' knowledge type	28
Conclusion.....	30
What are we doing well?	30
What could we do better?	30
Concluding remarks	31
Next steps	32
References	33

Project members

Principal Investigators:

Professor Moyra Boland University of Glasgow
Professor Catherine Doherty University of Glasgow

The Project Reference Committee members:

Dr Archie Graham University of Aberdeen
Dr Dean Robson
Professor Teresa Moran University of Dundee
Dr Jim Scott
Mr Derek Robertson
Professor Do Coyle University of Edinburgh
Dr Laura Colucci-Gray
Dr Yvonne Foley
Ramone Al Bishawi
Professor Moyra Boland University of Glasgow
Professor Catherine Doherty
Dr Kevin Proudfoot
Professor Morag Redford University of the Highlands and Islands
Mr Mark Lindley-Highfield
Dr John l'Anson University of Stirling
Dr Alison Jasper
Professor Kate Wall University of Strathclyde
Professor Ian Rivers
Dr Stephen Day University of the West of Scotland
Mrs Carol Webster

Ph.D. Students:

Mr Christian Hanser University of Edinburgh
Mrs Julie Przyborski University of Glasgow
(Candidate withdrew) University of Stirling

Executive summary

This report presents the outcome of the second collaborative research phase in the Scottish Attainment Challenge project of the Scottish Council of Deans of Education. The project's aim is to inform innovative pedagogies in initial teacher education (ITE) to better prepare teachers to work productively to close the poverty-related gap in schooling outcomes. The research questions driving this phase were: 'What do we do well?' and 'What could we do better?' in regard to initial teacher education programmes.

A brief literature review frames this research phase in international and national research about teacher education pedagogies, teacher preparedness, and understandings of poverty and place to highlight how Scotland's teacher education and circumstances do and don't align with international trends. Given the complexity of teachers' knowledge base, diversity of programme models and moving political agendas, teacher education offers just one of many sites of possible intervention needed to address the wicked problem between poverty, deprivation and schooling outcomes.

Interviews and focus groups were conducted with a total of 93 participants from four stakeholder groups across seven of the participating university communities, including 24 teacher educators, 22 alumni newly qualified teachers, 28 head teachers and mentor teachers in partner schools and 19 staff in the relevant local authorities.

Firstly, qualitative analysis of responses from each university community produced a rich profile of the different settings, their ITE programme initiatives, contextual challenges, and strengths and weaknesses as perceived by stakeholders.

Secondly, an aggregated analysis by stakeholder group across the sector identified common themes:

- Teacher educators endorsed practitioner enquiry, partnerships around placements, and social justice as a professional disposition. As weaknesses they highlighted the limited time forcing difficult curricular decisions, their own need to keep abreast of changes, and the desire to expose students to more diverse placements and greater life experience.
- Headteachers and mentor teachers considered ITE students well prepared in professional disposition of social justice, technological literacies and enquiry skills. As weaknesses they raised concerns around covering the practical 'basics', supporting students with additional needs, data literacy.
- The newly qualified teachers interviewed felt 'as well prepared as possible', were mindful of ongoing professional learning, and valued experiences in services beyond schools. They wanted more preparation in meeting complex needs, behaviour management, and the specific programmes used in local authorities.
- Local authority staff with employment, induction and professional development roles considered the new teachers to be well prepared with regard to professional attitudes and values, technology, enquiry skills, but wanted more data literacy, practical strategies for the classroom, and more exchange between universities and local authorities to share systemic learning.

Thirdly, the themes emerging across stakeholder groups were mapped against the various types of teachers' knowledge outlined by Shulman (1987):

- *General pedagogic knowledge* was considered as both weakness and strength, while a priority at the ITE stage of professional learning.
- *Pedagogic content knowledge* for literacy and numeracy instruction was considered a weakness by some, given their priority in the Scottish Attainment Challenge.
- *Knowledge of learners* raised the problem of the difficulty understanding both the individual learner and the aggregated community patterns.
- *Knowledge of educational contexts* was a strength in terms of broad principles, but a weakness in regard to specific communities ITE students weren't familiar with.
- *Knowledge of educational ends, purposes, and values* was considered a strength. Teacher educators were keen that this included critical perspectives on policies.

In addition to Shulman's categories, all stakeholders reported *knowledge of self and dispositions* as programme strengths that tackled assumptions and low expectations and cultivated an enquiring disposition.

In conclusion, no participants suggested something could be dropped from existing programmes, but many suggested elements to be further developed or added. This creates the curricular dilemma of depth versus breadth, especially in postgraduate ITE courses. Initial teacher education is only the beginning of professional learning over a career, so there needs to be more dialogue about what can be achieved at the ITE stage and how further learning might build on this. The report suggests that the sequence of learning opportunities be approached as a spiralling curriculum rather than threshold steps, so previous learning can be re-visited, challenged, elaborated and taken to the next level through experience in different contexts with different mentors.

List of abbreviations

ASN	Additional support needs
ITE	Initial teacher education
MQuITE	Measuring Quality in Initial Teacher Education project
NQT	Newly qualified teacher
SAC	Scottish Attainment Challenge
SCDE	Scottish Council of Deans of Education
SEN	Special educational needs
SIMD	Scottish Index of Multiple Deprivation

Introduction

In February 2015, the Scottish Government launched its Attainment Challenge to tackle the poverty-related attainment gap in Scotland, in particular to improve achievement in literacy, numeracy and health and wellbeing for pupils living in areas of high deprivation. As part of this effort, the Scottish Council of Deans of Education were invited to develop a research agenda in the field of teacher education. In early 2018, funding was secured from the Scottish Government for a three year research programme involving representatives of the eight Schools of Education providing initial teacher education (ITE) across Scotland at that time.

The broad aim informing the suite of projects is to research how the sector might better prepare early career teachers (understood as final year ITE and probationer year) to work more effectively to improve literacy and numeracy attainment and health and wellbeing outcomes in schools serving pupils from SIMD¹ 1-40 backgrounds. Under this common purpose, the research programme has three strands:

1. an overarching collaborative project to achieve a perspective across the national sector and across phases of audit, evaluation, horizon scan and reform;
2. eight research projects conducted by individual Schools of Education reflecting their context and priorities;
3. three PhD studentships hosted in the Universities of Edinburgh, Glasgow and Stirling.

The first report on the collaborative project, tabled in December 2018, documented the kind of inputs, experiences, assessment tasks and scholarly approaches that were currently offered in ITE programmes. This audit of the learning opportunities, innovations and diverse resources evidenced the sector's core values of promoting social justice and equity, and the sector's ongoing work to prepare teachers to work in disadvantaged communities. The audit also raised some questions for the sector:

1. whether the ethic of inclusivity has created some resistance to anticipating the needs of students living in poverty and deprivation in order to avoid deficit constructions of such students;
2. whether the focus on attainment detracts from broader understandings of achievement;
3. how to reconcile the tension between curricular breadth and depth, particularly in intense PGDE programmes;
4. how ITE students manage the wealth of different approaches and advice available;
5. how to balance the effort to shape broad professional attitudes with the development of more focussed pedagogic skills;
6. how literacy is to be understood given diverse approaches and debates;
7. how to overcome the 'luck of the draw' in practicum placements;
8. how to cultivate more proactive dispositions rather than responsive ones.

¹ SIMD is the Scottish Index of Multiple Deprivation – see <https://simd.scot/2016/#/simd2016/BTTTTT/9/-4.0000/55.9000/>

Research Question 2

This report addresses the second research question of the collaborative research project. This stage of the project was designed to evaluate current practice in ITE programmes across the sector. ITE constitutes the first stage in a continuum of teacher preparation and on-going professional development opportunities that are offered over the student experience, the probationer year, the NQT induction year and further career pathways. The research questions driving this phase of the project were: **'What do we do well?'** and **'What could we do better?'** in ITE in response to the Attainment Challenge.

This evaluation was an opportunity to subject the sector's current practice to critical scrutiny and invite a range of stakeholders to provide constructive evaluative feedback, including their criteria and expectations of the early career teacher. The stakeholders included:

- teacher educators themselves;
- newly graduated teachers;
- head teachers and mentor teachers as partners in ITE placements and mentors for early career teachers; and
- staff in Local Authorities as both the eventual employers of probationers and newly qualified teachers, and providers of teacher education in these subsequent phases.

Framing the question

This section situates this research project in the wider field of research on initial teacher education, and how progress in this field of research has necessarily reflected, and responded to, social change, global debates and educational reforms. In terms of social change, the field has been impacted by the historical shift from manufacturing economies to 'knowledge' economies in post-industrial economies and the pressure this has put on the teaching profession and education sector to deliver economic competitiveness (Rizvi and Lingard, 2010; Spring, 2015). This shift has highlighted questions of teacher 'quality' (Cochran-Smith, 2005). The second significant social change has been the growing presence and recognition of diversity within school populations. This has highlighted questions of teachers' competence to meet diverse needs and tackle educational inequities. In terms of global debates, there have been highly politicized debates about what methodologies educational research should use, with the risk that evidence-based policy becomes more a case of policy-based evidence (Hammersley, 2013). These debates have fractured the field into methodological and paradigmatic camps that speak to different audiences (Furlong and Whitty, 2017; Yates, 2004). Meanwhile the growing dominance of international tests and rankings in education policy discourse has informed a global trend of educational reforms premised on a logic of performance measurement and international benchmarking (Sahlberg, 2016). The current project could be considered to be vested in all these contextual agendas to some degree: how well are initial teacher education programmes in Scotland preparing new teachers of a high quality, skilled in addressing difference and inequity, such that their practice will improve student attainment?

Teacher education waves and trends

Mayer and Reid (2016) offer an historical overview of policy and research about teacher education in Anglophone nations, and argue that over time teacher education has come to be constructed as a problem that needs fixing. They distinguish three historical phases: 'i) teaching education as training under somewhat benign government control; ii) teacher education as learning to teach under institutional governance; and more recently iii) teacher education as policy in a governance context of professional self-regulation and deregulation' (p. 454). In many jurisdictions this history has increasingly politicized initial teacher education, undermined confidence and trust in teacher education programmes, and encouraged experimentation in alternative routes and new players, such as the 'Teach for ...'² Organisations that privilege sites of practice (Henry et al., 2012; Menter, 2016).

In Scotland however, this has not been the case. Rather, a strong ethic of partnership (Donaldson, 2011) and shared responsibility has avoided this reductive and polarised blame game. Rather, initial teacher education programmes have recently been extended to Masters level (Donaldson, 2014) while some alternative routes into teaching such as those under the 'Teach for ...' banner are not recognized for professional registration by the General Teaching Council of Scotland. In addition, Scotland provides ITE graduates with a guaranteed probationary year to enter the profession with the principle that: 'teacher education must build throughout a career and go well beyond recreating the best of past or even current practice' (Donaldson, 2011, p. 4). For this reason, the local authorities have an important role to play in teacher education through the probationer year, the early career phase and later career stages, along with postgraduate offerings in universities.

² 'Teach for ...' and 'Teach First' are the products of a teacher education agenda gaining traction across the world. It has been championed by corporate sponsors as the 'solution' to poor schooling outcomes in disadvantaged communities (Henry, Bastian, and Smith, 2012), thus of relevance to this project.

Mayer and Reid (2016) trace the waves of research since the 1970s that have informed the transition from teacher 'training' to teacher 'education', and their respective pedagogies. These waves include:

- research into teacher characteristics and a process-product approach to teaching effectiveness that informed demonstration lessons, and micro-teaching classes;
- research into professional learning, teachers' thinking and professional decision-making;
- research into teachers' knowledge base and different forms of expertise;
- research into professional practice as reflective practice, that has informed models of action research, self-study and practitioner enquiry now embedded in ITE programmes.

These waves reflect a growing understanding of teachers' work as 'situated, complex, and uncertain' (Mayer and Reid, 2016, p. 456). Labaree (2000) similarly highlights teaching's 'irreducible complexity':

We ask teacher education programs to provide ordinary college students with the imponderable so that they can teach the irrepressible in a manner that pleases the irreconcilable, and all without knowing clearly either the purposes or the consequences of their actions. (p. 231)

In earlier work that wrestled with such complexity, Katz and Rath (1992) flagged six dilemmas they considered 'endemic' to teacher education. Dilemmas were understood to be situations that offered choices but no perfect solution, such that 'each of the available choices in such predicaments involves a choice of negative factors as well as positive ones' (p. 376). The dilemmas included three that are generic to any educational setting:

- 'coverage versus mastery' – how much breadth versus how much depth in curricular treatments.
- 'evaluative versus affective emphases' – the tension between the work of selecting suitable candidates versus the work of encouragement and support for candidates' learning.
- 'current versus future needs of candidates' – prioritising immediate relevance, versus building the capacity to think beyond immediate applications and anticipate future questions.

and three more particular to teacher education:

- 'thematic versus eclectic approaches' – seeking broad coherence across programme elements or exposing students to a diversity of approaches.
- 'emphasis on current practice versus innovative practice' – preparing teachers for contemporary settings or preparing them to think beyond contemporary practices.
- 'specific versus global assessment criteria' – to break teaching down into specific competencies, or to assess it as a more holistic judgement.

More recently, Fransson and Grannas (2013) have developed the concept of 'dilemmatic space' for educational contexts, to refer to how 'people working in the teaching profession find themselves in situations in which there is often no right way of acting, but only a way of "acting for the best"' (p. 5). They understand any dilemma and its resolution not to be situated within the professional as a moral conundrum, but rather as built into and 'ever-present' in institutional settings and exacerbated by their reforms: 'societal transformation changes the relations, positions and boundaries of the dilemmas, which in turn renders some aspects of dilemma more or less intense' (p.6).

These treatments of complexity, endemic dilemmas in teacher education and dilemmatic spaces in educational settings sit uncomfortably beside the contemporary appetite for ‘evidence-based’, ‘what works’ research, that seeks predictive, decontextualised answers to issues of effective practice (Gale, 2018). Efforts to definitively distil what should constitute an ITE curriculum (for example, Perry, Booth, Owen, and Bower, 2019) are thwarted by the moving targets of professional standards, differently structured routes into the profession, different stakeholder perspectives and the evolving knowledge demands of different curricular subjects.

In their large US-centric review of teacher education research since 2000, Cochrane-Smith and Villegas (2015) identified three broad thematic programmes: ‘a) research on teacher preparation accountability, effectiveness and policies; b) research on teacher preparation for the knowledge society; and c) research on preparing teachers for equity and diversity’ (p. 11). Our project aligns with the third programme given its focus on the Attainment Challenge. In the second part to this review (Cochran-Smith et al., 2015), the authors characterize this third programme of research as producing mostly studies about pedagogical approaches that challenge and reframe student teachers’ beliefs about disadvantaged groups. In other words, the body of research has typically highlighted work on the teacher’s self as the source of professional practice, rather than developing ‘a repertoire of culturally responsive/socially just teaching practices if they are going to teach diverse student populations effectively’ (p. 116). This distinction reflects the questions raised in the first report for this project, on how to balance efforts in ITE programmes to shape broad generative attitudes against efforts to develop particular pedagogic skills, which could be considered another dilemma endemic in initial teacher education.

Further, Cochrane-Smith et al. (2015) note that to date the majority of such research has been confined to consideration of single courses, rather than entire programmes. In response to this limitation of the literature, we were able to take a more comprehensive view of the variety of knowledges that contribute to the teaching profession and how student teachers are prepared in these various professional domains across their early years. This larger scale allows the dilemmas and tensions between elements in programmes to surface. However, by taking a programme-wide lens across the sector, we include far more actors with their multiple perspectives, sample a wide variety of ITE programmes and invite the nuances of multiple disciplinary approaches which may undermine the capacity to generalise.

Teachers’ knowledge-base

Shulman’s (1987) analysis of the ‘content, character, and sources for a knowledge base of teaching’ (p.4) offers a productive tool with which to start thinking about teacher preparation and to help parse the various elements that ultimately contribute to professional competence. Shulman’s work was a response to the way ‘teaching is trivialized, its complexities ignored, and its demands diminished’ (p. 6). He outlines a typology of knowledge types in which no knowledge base is understood to be sufficient in itself:

- content knowledge;
- general pedagogic knowledge;
- curriculum knowledge;
- pedagogical content knowledge;
- knowledge of learners and their characteristics;
- knowledge of educational contexts, including ‘character of communities and cultures’ (p. 8);
- knowledge of educational ends, purposes and values.

Shulman then highlights pedagogical content knowledge as the knowledge and expertise particular to the teaching profession. We would argue that for this project's focus on the Scottish Attainment Challenge, other domains, in particular 'knowledge of learners' and 'knowledge of educational contexts', also become crucial. This orientation is in marked contrast to the valorisation of content knowledge in the 'Teach For ...' alternative routes with their distinctive premise in recruitment of the 'best and brightest'.

In this project we use Shulman's typology to interpret and synthesise the stakeholders' evaluation of current programmes, in terms of which knowledge domains we reportedly do well and which we could pay more attention to. This need not rule out consideration of additional knowledges that stakeholders consider to be important, or missing. For example, Shulman's typology does not mention the reflexive knowledge of one's own beliefs about disadvantaged groups that Cochrane-Smith and colleagues report as a common focus in research about teacher education for equity.

The new teacher and preparedness

This project could also be situated in research gauging the preparedness of new teaching graduates (the first broad programme of research identified in Cochran-Smith and Villegas, 2015). In Scotland, the MQITE Project³ under the auspices of the Scottish Council of Deans of Education is conducting a dynamic longitudinal study of how quality might be understood and measured across different ITE routes, using annual survey data from student cohorts as they progress from ITE into the profession and other data sources. This project aims to develop a context-appropriate approach to quality assurance and enhancement in response to global debates around teacher quality and the effectiveness of ITE programmes.

A similar study has been undertaken in two Australian states by Rowan, Kline and Mayer (2017). The research involved longitudinal surveys of 971 early career teachers to gauge among other things their self-reported 'level of preparedness for teaching culturally, linguistically and socio-economically diverse learners, students from Aboriginal and Torres Strait Islander backgrounds, students with a range of abilities and students with a disability' (p.72). While acknowledging the complexity of factors that contribute to the poor schooling outcomes for marginalised groups, the report highlights the potential impact a high quality teacher can make, and that this impact stems from 'what teachers know about, believe and actually do when working with diverse learners' (p.74). Using data collected in the 2012 survey wave, the analysis showed that the newly qualified teachers reported a moderate degree of preparedness in this regard. Participants were asked to respond on a scale of 1 (strongly disagree) to 5 (strongly agree) to the statement 'My teacher education program prepared me to teach students from diverse socioeconomic backgrounds'. This item displayed a mean of 3.48, in contrast to a mean of 2.94 for 'to teach to linguistic diversity' and a mean of 3.83 for 'to develop inclusive classroom activities' (p. 81). More generally, when compared to other aspects of their practice, the participants reported feeling less well prepared to support diverse learners. This study relied on self-report, but maybe in this matter, self-report is the most valid measure of professional confidence. The authors recommend that:

It is important for teacher education programs to reflect upon how much of their program explicitly provides teachers with the threshold knowledge about 'diversity' that is required to ensure that teachers have both an understanding and capacity to respond to the *multiple* forms of diversity which characterize modern classrooms. (p 84)

³ See <http://www.scde.ac.uk/projects/measuring-quality-in-initial-teacher-education-mquite/>

While Australia's particularities in population diversity differ from Scotland's, their teacher education programmes and registration standards are largely cognate and have followed similar historical and political trends. Their idea of 'threshold' is an important one in principle, but perhaps difficult to articulate in terms of exactly what knowledge, understandings and capacities should be prioritised in the ITE threshold. Thresholds lead to somewhere else, in this case, to the next phases of development programmes for the probationer year and the induction programme for NQTs. The difficulty in articulating what constitutes the threshold at which stage raises the question of whether the relationship between ITE curriculum and subsequent teacher education could be conceptualised more as a spiral metaphor than as a step.

Understanding poverty, deprivation and school attainment

The Attainment Challenge has used the Scottish Index of Multiple Deprivation (SIMD) to identify and prioritise spatial communities to receive targeted assistance. This index is a calculation drawing on an amalgam of demographic attributes and indicators that flag hardship or 'deprivation' in seven domains: housing, health, employment, education, service provision, crime and income (Scottish Government, 2016). The index calculation derives a relative measure for each small spatial unit, which can then be ranked overall or in terms of each domain of deprivation and aggregated at a larger scale. The Attainment Challenge has concentrated on supporting schools in locations assessed as within SIMD 1-40 percentiles, that is, communities experiencing the highest levels of multiple deprivation.

For the purposes of this study, it serves to highlight that the SIMD is more than a measure of poverty/income. By incorporating the seven domains into one index, it can be appreciated that multiple deprivations can be mutually compounding and pose challenges well beyond the remit of any one government department. Cheaper housing will draw families on lower incomes together, be they impacted by unemployment, poor health, low paid or precarious employment related to low levels of qualifications, criminal justice proceedings, and so forth. The term 'wicked problem' (Head, 2008; Skaburkis, 2008) has been coined to characterise such policy conundrums that resist simple solutions within the one policy portfolio and implicate multiple stakeholders with different frames for action. The correlation between poor schooling outcomes and high deprivation is but one aspect of the tangle of compounding interactions that create, reinforce and reproduce conditions of multiple deprivation. Similarly, any impact that educational strategies may make on this correlation will be mediated and filtered by circumstances beyond the domain of education when it comes to improving life chances. As Bernstein expressed it, 'Education cannot compensate for society' (Bernstein, 1970). A catchment characterized by multiple deprivation presents as many interlocking problems, not just one. Nevertheless, most studies use terms such as 'poverty-related' or 'economically disadvantaged' to refer to such marginalised groups in society. This should be understood as referring not just to absolute poverty, but also to relative poverty, being insufficient income and resources to allow full participation in the local society.

For the purposes of this study, it is also important to understand that the SIMD rankings offer a spatial summary, not a predictor for individuals. Rather than explain or predict an individual student's outcomes, use of the SIMD demands that we consider how relative forms of advantage and disadvantage come to pool in certain places and certain school communities, and how such pooling impacts on teachers' practice, curricular offerings and schooling outcomes.

Sociology of education has long documented the vexed relationship between educational institutions and the working class child, and the more strategic relationship between the middle class child and school. For example, Willis (1977) documented the self-defeating forms of resistance working class 'lads' took to school work and teachers' authority, and how this counter-school culture

delivered them to a life of manual work in factory jobs. From Bourdieu and Passeron's (1977) analysis we understand how formal schooling can reward the dispositions, language and cultural capitals of the middle class family, while mis-recognising the child's inherited class attributes and sources of advantage as individual merit. From Ball's (2003) research, we understand how middle class families can exercise their collective acumen, choice and 'strategies of closure' to create spaces of enriched learning that exclude other students. However, the SIMD's mapping of multiple deprivation entails more than these resilient patterns of class difference in schooling outcomes.

In Scotland, Sosu and Ellis (2014) reported on the persistence and nature of the poverty-related attainment gap. Using data from the annual Scottish Survey of Literacy and Numeracy and students' overall tariff scores over time, they concluded that: 'analysis of data from different tiers of the educational system shows that the attainment gap in Scotland is pervasive, starting from preschool and widening as children move up through the school system' (p. 8). They reported an average of 300 points difference in tariff scores between the most and least deprived groups, with flow on effects for school completion, post-school destinations and access to higher education pathways. This benchmark study has been influential in setting the political agenda around closing the poverty-related gap.

Mowat (2017) analyses the borrowed logic behind Scotland's Attainment Challenge to argue that 'the problem cannot be addressed by focussing primarily, and almost exclusively, on the school as the agent of change and that the starting point for change should be addressing endemic inequalities in society' (p. 300). Mowat argues that the success of the London Challenge reforms in lifting school attainment in disadvantaged parts of London cannot be transferred to other settings and achieve the same results without further adaptation to local conditions.

In this vein, a recent report by Kintrea (2018) explores the relationship between place and schooling outcomes in Scotland, noting Scotland's different, less marketized and less segregated history to that of England. Scotland offers public schooling within defined catchment boundaries, with some degree of flexibility on application. This means the vast majority of Scottish pupils attend their local schools, reinforcing the 'socio-spatial sorting' whereby 'schools are context-derived but they are also "context-generative"' (p. 14, citing Thomson). Rather than erase differences between groups, this place-based allocation can amplify them. Kintrea distinguishes three attainment gaps that are often conflated in policy: the gap between places, the gap between socio-economic groups, and the gap between different schools. He asserts that 'while there are in practice overlaps, the debate often misses the point that place, social class and schools each have the potential to exert independent influences on children's attainment ... Each dimension of inequality also prompts a different response' (p. 9). Kintrea's analysis of the 'spatial school system' (p. 16) and the relationship between place and school attainment notes: 1) the tendency for urban middle class families to exercise choice of 'better' schools beyond their local catchment; 2) the interaction between school reputation and housing market and historical legacies in this regard; 3) how the different natures of local populations influence the work demands within schools; 4) the neighbourhood effect in collective socialisation that cultivates and concentrates certain attitudes, identities and behaviours, such that 'living in a poor neighbourhood intensifies disadvantage' (p. 19). Kintrea argues for more forms of data to explore how factors beyond schools contribute to the achievement gap.

This section has situated the empirical work of this research phase in cognate international literature about teacher education research, teachers' knowledge base, the preparedness of new teachers, and the relationship between schooling outcomes and social class. The review brought to the surface the endemic tensions in teacher education programmes, the variety of knowledge domains contributing to teachers' practice, and attention to teachers' own attitudes and assumptions as a

key pedagogy in preparing teachers to work with diverse communities. Then literature pertaining to Scotland more particularly was also reviewed to show how developments in Scotland at times reflect international trends, and at other times, chart their own particular course. Taken together, the Scottish studies argue for a rich contextualised understanding of the poverty-related attainment gap as a persistent and complex problem involving social drivers beyond the school's remit. Such understanding need not negate the potential of initial teacher education to contribute within its zone of influence given that the quality of schools in places marked by deprivation will matter. For this reason, initial teacher education offers one of many sites of possible intervention to disrupt persistent patterns linking deprivation and social disadvantage to poor school outcomes.

Methodological approach

This second research phase was designed as semi-structured interviews or focus groups with stakeholders within each participating university's alumni and networks. Stakeholders included:

- Teacher educators working in the ITE programmes;
- Newly qualified teachers (first year post-probation) working in Attainment Challenge local authorities;
- Head teachers and mentor teachers in partner schools;
- Local Authority staff with teacher recruitment or Attainment Challenge responsibilities.

Ethical approval for this research phase was received from the College of Social Sciences Research Ethics Committee at the University of Glasgow. Project members from seven of the eight project universities conducted the interviews and focus-groups with volunteers within their own university communities. All names of universities, organisations and people have been masked in this report as required for confidentiality and the ethical conduct of research. Participants involved in focus groups were carefully reminded to maintain each other's confidentiality.

Participants

The following table reports on the number of participants interviewed in each university community, and in total by stakeholder group:

Stakeholder group	University							Totals
	A	B	C	D	E	F	G	
Teacher educators	3	3	2	4	7	2	3	24
Newly qualified teachers	6	1	2	6	3	1	3	22
Head teachers and mentor teachers	5	7	2	6	2	1	5	28
Local authority staff	5	4	2	2	0	1	5	19
Totals	19	15	8	18	12	5	16	93

Interview themes for teacher educators included: how their understandings of the Attainment Challenge informed their ITE programme/courses; what they considered the key contributions towards preparing ITE students for working with diverse populations; what they considered to be their programmes' strengths and weaknesses; what more and what else could be done in this regard.

For newly qualified teachers, interview themes included: a description of the school setting where they work; how well prepared they felt for their first post; what aspects of their ITE they are consciously drawing on; what they are learning on the job; what they are learning about improving literacy/numeracy/health and wellbeing outcomes; what they wished they knew more of; what questions they still have; their perspectives on what should be prioritised in ITE.

Interview themes for head teachers and mentor teachers as school-based partners in ITE included: what a teacher needs to know/do/understand to address the Achievement Challenge; their perspective on how well initial teacher education is preparing early career teachers for the Achievement Challenge; what else early career teachers typically require; what they would prioritise in ITE for the purposes of the Attainment Challenge; and what is best learnt on the job in this regard.

For local authority staff, interview topics included: what early career teachers do well in relation to responding to the Attainment Challenge; how they are supported in their first years; participants' perspectives on how newly qualified teachers might be better prepared; and what they would prioritise in ITE.

Analytical approach

To make sense of the qualitative responses and multiple perspectives from stakeholder groups, we applied two steps of analysis to the data set: a 'bottom-up' thematic analysis that also served as data reduction, and then a 'top-down' theoretical coding, as outlined in the following.

Thematic content analysis

Thematic analysis engages with the meanings made by the participants, and draws out themes within and across their responses. Following Braun and Clarke (2006, p. 82), 'a theme captures something important about the data in relation to the research question, and represents some level of patterned response or meaning within the data set.' Braun and Clarke then distinguish between the criteria of 'prevalence' and 'keyness' in distilling themes. The first criteria of prevalence identifies themes that are 'repeated patterns of meaning' (p. 85), that is, by frequency across the data set. The second criteria of keyness distinguishes themes that 'capture something important in relation to the overall research question' (p. 82), that is, by the insight they precipitate. We interpreted these moves as firstly, what are the recurring messages from our participants about programme strengths and weaknesses; and secondly what 'key' comments provoke fresh insight.

Theoretical coding

With the bottom-up thematic coding, we are able to distil a summary of the interviews and focus groups tailored to the research questions. This level remains in the language of the participants. The next stage of theoretical coding uses the typology and theoretical language offered by Shulman (1987) as reviewed above to make sense of what kinds of knowledge are being talked about (either as strengths, weaknesses or oversights in the ITE programmes). This allows us to step away from the details of each particular ITE programme, and consider more their structural underpinnings and blind spots. Braun and Clarke would consider this a thematic analysis at the 'latent level', because it 'goes beyond the semantic content of the data, and starts to identify or examine the underlying ideas, assumptions, conceptualizations and ideologies that are theorized as shaping or informing the semantic content of the data' (p. 84).

To present the analysis, we first present summary responses from within each university's network and community, to draw out themes in terms of what strengths and weaknesses were invoked. We then consider themes by the stakeholder categories. The final stage interprets the themes through the theoretical codes.

Themes by university community

The following profiles summarise interview responses from each university's community. The interviewees do not necessarily represent all members of their category, but offer insight into how the ITE programmes are designed, experienced and evaluated, and the kind of tensions, critiques and constraints that are reported.

University A

The teacher educators interviewed talked about their programme's treatment of the Attainment Challenge and associated policies as both 'permeating' their courses, and addressed in particular ways through targeted design. Strengths of the programme were considered to include the effort to set students up 'for the realities of today's classrooms', the complementary nature of campus and placement learning, new modules addressing equity and inequality and creating opportunities for learning in community organisations, invited speakers, challenging complacent views of poverty, a focus on pedagogy and 'high quality relationships' to create the conditions of learning, and the effort to recruit students from SIMD 1-20 communities. Local authority staff members considered the new graduates to be well prepared in terms of awareness of the Attainment Challenge, their capacity to work collaboratively, and being keen to embrace professional learning opportunities. The head teachers were impressed with the new graduates' interest in professional learning and dialogue. The NQTs themselves reported feeling 'adequately', 'well', 'quite' prepared and 'as well-prepared as you can be'. In terms of programme strengths, the NQTs highlighted: the professional file they compiled on placement, their preparation in reflective practice, their preparation in embedding technology, and the 'supportive collegiate discursive culture' cultivated at university that prepared them for the workplace culture.

In terms of possible improvements, the teacher educators mentioned: 'keeping abreast of everything that is going on nationally', being able to participate in policy debates, exploring support available beyond the classroom setting, growing partnerships between schools and university beyond the work of placements, more volunteer work to broaden students' horizons, maintaining space for the arts, and cultivating a 'research informed teaching culture' that can engage critically with policy and curricular reform now and in the future. One teacher educator raised the difficulty of responding to policy initiatives in a timely manner in established accredited programmes. It was also felt that programmes and employers should stop expecting students to make a difference with challenging cohorts in a short space of time. The NQTs raised the issue that different placements gave different learning opportunities. Their other suggestions included more time in school, and more practical hands on workshops. One suggestion to 'remove lectures about theory and leave it up to self-study' was not endorsed by the others. The Local Authority staff suggested programmes should cultivate a greater understanding of data and its use, and of additional supports available in schools. As a priority, they suggest early attention to any 'blame culture', and more attention to building the resilience of NQTs.

The head teachers interviewed felt that the Attainment Challenge demanded certain qualities and capacities in teachers, including: empathy, good non-judgemental relationships with families, knowledge of 'the local school context within the wider context of [town] within the wider context of Scotland', knowledge of the political agenda, funding sources, how to work with data and capacity to undertake 'small tests of change'. Practitioner enquiry was highlighted as a way to inform and influence practice while 'being open to say you don't know something when you feel it is expected that you should'. They suggested improvements in mentoring for early career teachers, repairing

partnerships after staff turnover in local authorities, and the opinion that 'we all need to work harder on developing a culture that understand the story behind each person in a school'. There was further discussion about 'tall order' expectations of NQTs who need 'to get the basics first', what can be achieved in a PGDE course timeframe, and how universities might resource mentors in school. NQTs were considered to be keen to seek out professional learning opportunities.

University B

Three teacher educators were interviewed. The lived effects of poverty are addressed in a course on health and wellbeing, starting with global poverty, then 'we narrow that right down from EU, UK, then Scotland then right into [town]'. The approach was described as a holistic approach, with health and wellbeing considered the foundation for scholastic attainment. This teacher educator described how students 'from affluent backgrounds' returned from their first placements, 'and they say, I get what you're talking about ... I never thought that [degree of poverty] really existed'. Other educators talked about understanding poverty to include the poverty of 'multiple losses' in families, the working poor, the poverty of 'ambiguous loss' in families that are not coping, and 'the poverty of expectations'. This raised the question whether explicit treatments of the vocabulary gap or differences in attainment can contribute to stereotypes that feed low expectations: 'I tie myself in knots ... am I saying the wrong thing?' The practitioner enquiry was considered to be valuable pedagogic space for further enquiry.

One educator felt that placements in 'both ends of the spectrum' and in specialist SEN units would be invaluable. Another problem raised was the inability to prepare students in every relevant local authority's bespoke literacy and numeracy programmes given the geographic range in placements. All the educators felt time was restricted: 'do we want to do more? Of course we do...'

The NQT interviewed felt 'very prepared' by her ITE programme, she nominated classroom management as something she had necessarily learnt on placement and on the job. She also mentioned her lack of content knowledge in some subjects and the ongoing work of knowing enough before teaching a unit. She valued all her university subjects in retrospect, but particularly a subject addressing globalization:

Even if someone had told me a few years ago, I'd think, 'why, why did I need to know that?' Now working in a classroom where children have come from a complete range of different societies: that has been really powerful for me.

Another telling comment was how wrong her preconceived image of children living in high deprivation communities was, which wasn't challenged 'until you go out and see for yourself'.

The local authority interviewees felt that the new graduates had the right values, a strong commitment to social justice, enthusiasm and good work ethic with a willingness to pursue professional reading and research. Their preparation in professional enquiry was valued and the possibility of students working in schools part-time in their final year of Masters level study was considered 'marvellous'. They felt that while NQTs had a good initial awareness of inclusion and the Attainment Challenge as priorities, they needed more practical strategies, particularly in additional needs, complex needs, teaching literacy, numeracy and other core curriculum. They felt that NQTs needed assistance to approach behaviour management as more about learning needs, more 'live' experience in schools and more varied experience in specialist units and relevant services outwith schools. These interviewees recommended prioritising the practical in ITE, and more exchange between authorities and universities to share successes and ongoing learning.

The seven head teachers interviewed placed great importance on data literacy as a necessary skill for NQTs particularly for tracking and monitoring students' progress, but also a nuanced critical understanding of how data is one 'piece of the jigsaw' amongst others. NQTs also needed a nuanced understanding of poverty as more than postcode and SIMD categories, while maintaining high expectations and aspirations for individual pupils. It was felt that students had an awareness of the issues but needed more strategies to deal with the issues.

A theme across the head teachers' interviews and the local authority staff was the rate of learning happening in schools in response to the Attainment Challenge and the need to find ways that 'all that good work' such as poverty-proofing the curriculum, family learning and other interventions that are working could be fed back into university programmes. Students needed to be familiar with key policy documents, the moderation cycle and how to use assessment data in data conversations. One Headteacher pointed out that the detailed information on school websites, HMIE reports and twitter feeds should allow students to arrive at placements well informed about a school's priorities. For the Attainment Challenge, they suggested that more understanding of adverse childhood events, the parents' perspectives, the wider community and ASN strategies was crucial: 'These schools are dealing not just with the material poverty with dealing with different types of kids – more demanding types of kids, more challenging ...'. High school head teachers also argued that as well as ITE students, also 'mainstream teachers need learning supports skills' and more strategies to de-escalate challenging behaviour and build positive 'non-confrontational' relationships. The parent interface was another topic that needed more preparation.

University C

The teacher educators interviewed expressed reservations about the political nature, design and operationalisation of the Attainment Challenge policy and questioned to what extent school-based interventions can close the poverty-related gap. They understood it to be 'treading a difficult line' in acknowledging that schools can make a difference - being realistic about what can be achieved without being fatalistic. They thought that their programmes were successful in helping students question deficit approaches, address unconscious bias, be more reflective about their use of language and 'sufficiently brave and professional' to challenge assumptions. Including experienced teachers in the teaching team was considered a strength.

The mentor teachers interviewed discussed their mentoring experience, some of the problems with who was allocated how and the tension between judging and facilitating the students' learning. A second mentor was considered valuable for NQTs. The plethora of development opportunities offered to NQTs in their probationer year 'can be a bombardment', and could be more powerful if more flexibly tailored. One expressed the opinion that 'standards have dropped' and students are not as well prepared as in the past, for example, in teaching reading. The four year programme was considered a better preparation than the one year PGDE, given the number of different mentor models along the way. Another comment suggested that connecting with pupil voice would be valuable learning. The local authority staff interviewed highlighted new graduates' strength in building relationships with young people, and their greater awareness of equity issues and health and wellbeing. There was feedback that the students needed to be more aware of how data is used in decision-making.

However on the other hand, the teacher educators interviewed thought that the programmes did not develop sufficient data literacy in the students, which leaves students vulnerable on placement. Further, they felt this should be a critical data literacy that can help students to imagine how schooling might be otherwise. They described the tension in their university programmes between preparing students for the 'real world' but also helping them think beyond these immediate

demands, and cultivate skills for future research-informed practice. It was felt that students needed a genuine breadth of experience to develop their understanding of difference in childhoods and parenting. In addition, more could be done between universities and schools while respecting the different contributions of each context. From the local authority staff's perspective, NQTs needed more resilience.

University D

In terms of strengths, the four teacher educators interviewed highlighted their ITE programmes' focus on inclusive practice and social justice and the emphasis on building relationships, all of which link to supporting children from diverse backgrounds. They also work hard to merge theory and practice in their pedagogies, and to develop professional enquiry skills. The six NQTs interviewed also highlighted the importance of building relationships with young people as key learning they valued. They felt well prepared in terms of content knowledge, and planning, but not prepared for working with those pupils 'not wanting to learn'. The five head teachers and mentors interviewed were impressed with the digital literacy of the students on placements, which became a resource in schools. The local authority staff were impressed with the NQTs' nurturing approach, reflective practice, and holistic approach to the pupils.

In terms of possible improvements, the teacher educators talked about: developing tools to help students make more connections across the elements and sites involved in their programme, and with the practitioner enquiry; planning earlier placement experiences; ensuring students experience placements in different types of settings. They raised the question, 'Does the role of placements need to be redefined? Is the current model of placement fit for purpose?' The NQTs recommended more help to link theory to practice, more attention to classroom setup, behaviour management, assessment and longer term planning. They similarly asked for broader experience in diverse placements. The head teachers and mentor teachers recommended closer communication between mentors and university to they shared understandings, and some collaboration around appropriate mentoring skills. The local authority interviewees suggested more attention to understanding communities and the school contexts, more exposure to diagnostic tools and assessment and assessment for learning strategies, better use of reflective logs to consider differentiation; and more ongoing dialogue between ITE partners and student on placements. They raised the possibility of continuing university partnerships to support probationers. A clearer sense of where the ITE graduate is at the start of their probationer year would also help the local authority.

University E

Two focus groups were held with teacher educators who outlined their approach to learning as 'wholly inclusive and creating environments that all children belong to, feel part of, are engaged in' within a larger agenda of social justice and breaking down barriers to learning. There was some critique of the nomenclature and logic of the Attainment Challenge policy. There was also an opinion that treatment of health and wellbeing was being displaced by an emphasis on literacy and numeracy. The ITE programme encouraged students to consider their own identities and pupil contexts. They considered student learning to be 'galvanized' when the students go on placement 'because then they see what you have been talking about actually happening'. This is further processed in mid-placement recall; 'because they hear our words and the theories in their heads as they are watching things, so what they are seeing then ... starts to make sense to them'. One strength of the programme was considered to be 'a really strong research aspect ... building all the way through'. Another was engaging the students in the kind of learning that 'is exactly what you should be doing'. There was some discussion of what to prioritize when: 'if it is ITE presumably you

are trying to develop broad understanding that will help to inform your sort of life long approach to children in a classroom. Whereas actually specific sessions on literacy for SIMD 1-40 backgrounds strikes me as the sort of thing you could do in CPD'. There was a strong sense that students should experience a range of placement settings to broaden their horizons, and develop an understanding of how schools sit within a wider community.

Three NQTs were interviewed. They felt that campus studies and the placements were complementary, that 'actually working in these (Attainment Challenge) environments' was extremely valuable. One student felt the pressure on schools to fix social problems was unfair, but as a graduate of a two year Masters, felt better prepared than others. This was echoed by the others. Another highlighted the critical pedagogical work and importance of relationships which she applied to good effect in her placement. The design of this university's rolling placement was valued 'So you do get some time to know your class, understand who everybody is.' Another NQT considered herself 'basically equipped ... but it is the actually doing part ... that is still to develop.' Over school holiday periods they were encouraged to 'go into the community', '... getting to know the community and the context of our pupils'. This was considered a 'great element of our programme'. There was also time devoted to 'really thinking about how you, yourself, affect your practice.' One NQT highlighted the need to be better prepared to teach a broad range of abilities in the same classroom:

this huge diagonal slice in any particular year group of children's abilities, capabilities, strengths and where they are in terms of their literacy and numeracy progression. ... the spread I guess of the children was quite marked. And that was something that teacher training didn't really make me think how do I deal with this in the classroom. Having children who have come to this country and English is not their first language. And then having to deal with their learning at the age of 11 and they are working at that very early first level and then you have other children who are working at third level. And just managing those different parts of the classroom ... it is quite difficult.

Another described how her first understandings were challenged: 'when I came on the course I was quite naïve in my understanding of the concept of social justice and reality just thought about income related poverty gap. I didn't really think about things like power and obviously there are many more gaps, it is not just about income as well.'

The head teacher interviewee highlighted 'the nurture, the care, the passion, the relationships ... and also yes, that self-reflection' as the underlying ethos and values and key priorities for ITE, and valued the fresh approach ITE students brought. The mentor teacher considered the ITE students 'well-informed' and 'quite proactive' and the placements across primary and secondary settings as 'positive learning'. The mentor teacher felt there was a strength was 'the attention to theory and how they could bring that in, how they could draw on those ideas'. The head teacher felt some students more so than others understood the social justice and nurturing mindset: 'they haven't really experienced some of the challenges that are going on in schools, and with some of the challenges young people face in schools it can be quite hard for them to be really empathetic.' This interviewee considered knowledge and support of diverse pathways and routes to employment was important, along with high expectations about behaviour and futures: 'If a young person trusts you and is feeling confident in the subject, they will learn'. The head teacher was mindful of the great differences and disparities across the sector that makes preparedness for all settings difficult. This interviewee considered the students to be resilient around their use of technology making the most of what's available. The mentor teacher considered classroom management as a 'basic' and additional support needs as significant learning needed. In that regard, this interviewee recommended 'more time, I think time and resources are always a challenge across any school'.

Nevertheless this interviewee highlighted how positive hosting a student was in terms of professional learning: 'it's a very positive cycle'.

University F

In terms of strengths, teacher educators highlighted the quality of partnerships, attention to career changer students, their use of technology, and involving local contributors in their ITE programme as strengths. The NQT interviewee reflected on the value of a range of placements, contact with other agencies, and access to a variety of tutors with varied teaching experience, though this could create a problem in consistency of feedback. The Head teacher interviewed thought the support given ITE students on placement was 'fantastic ... students involved ... are treated as a human being and not a number'. This interviewee also highlighted the enquiry-based learning in ITE as 'spot on'. The local authority staff interviewed considered the link between ITE programme and schools to be responsive and productive.

In terms of possible improvements, the teacher educators raised the issue of managing expectations of what could be achieved in a one year ITE programme, and the variety of pathways making it confusing for school partners and visiting tutors. The NQT participant suggested preparation in the relevant local authority's specific literacy and numeracy programmes, and more high quality worked examples in subject areas:

It would be great to be see some really solid ideas/ full lessons to show us visually what a high standard lesson in these areas look like. We could then evaluate it and also see how assessment is used well in a lesson and also relate what we have seen to the Es and Os and standards.

The Headteacher thought ITE programmes could offer 'more practical strategies', and 'more focus on behaviour management'. The local authority interviewee highlighted 'tracking and assessments', 'use of diagnostic testing', 'confidence in numeracy and literacy' and familiarity with the Developing the Young Workforce policy and resources as weaknesses that could be addressed. In addition, it was felt the ITE programme needed more emphasis on planning, and could make more use of action research on placement to understand both generic and particular approaches.

University G

The teacher educators interviewed described how consideration of the Attainment Challenge is embedded across their programmes, with attention to challenging students' assumptions and developing an inclusive approach for *all* students. The strengths of the programmes were considered to be their strong theoretical foundations, guest speakers on specialist topics, and the literacy and numeracy clinics. The NQTs felt themselves to be as prepared as possible given the limited time, yet ill-equipped for the scale of the challenges of their new roles – 'neither under-prepared not over-confident'. They reported feeling better prepared in teaching literacy compared to teaching numeracy and health and wellbeing. They felt that they were well prepared for the Attainment Challenge 'alongside the other 99 priorities'. The local authority interviewees considered the new graduate teachers to be strong in evidence-based and reflective practice and to be open to professional learning.

In terms of weaknesses and possible improvements, the teacher educators raised the limited time that forced choices between important topics ('if you add something you have to remove something else') and the need to revisit the placement system so students experience a variety of settings. The teacher mentors interviewed suggested that students could be relieved of some of the paper work

required on placement to enable other conversations and reflection. They suggested that considerations of the Attainment Challenge should not impact on pedagogy which should 'meet the child on an individual level', and that early career teachers be allowed to focus on learning 'the trade of teaching' with 'big picture' policy considerations taking a back seat. While the NQTs felt they understood the Attainment Policy well, they wanted more learning about 'the social work' aspect of the teaching role, and how to handle issues the pupils bring from outside the classroom. The local authority interviewees suggested that new graduates needed more preparation in dealing with children with additional needs, though they recognised the time constraints. Overall, these interviewees had difficulty reconciling the focus on the individual child on one hand, and using data for a community to inform practice on the other.

Themes by participant group

In this section the data is cut and summarised across the eight universities by stakeholder group to see what common or key themes surface from the perspective of each group.

Teacher educators

Across the sector, the teachers educators interviewed expressed the following similar approaches and evaluations in regard to preparing ITE students for the Attainment Challenge:

- a shared interest and effort in cultivating a nuanced awareness of the Attainment Challenge and associated policies;
- ongoing work to establish deep dispositions of social justice and challenge unexamined assumptions;
- evaluation of practitioner enquiries in ITE as valuable pedagogy;
- a strong sense that university studies and placement experiences are complementary and symbiotic in the way they resource each other;
- partnerships with schools are important, strong and productive;

The teacher educators expressed the following general concerns:

- students needing more life experience beyond school settings;
- the need to keep abreast of the changes underway in the education system;
- time restrictions which force difficult choices about what ITE can do as opposed to CPD
- the need to develop more data literacy in ITE programmes to prepare for such practices in schools;
- the difficulty in raising awareness of the poverty-related gap without feeding deficit labelling;
- inability to address every local authority's bespoke programmes in ITE;
- whether students can experience placements in a variety of contexts, including specialist units.

Head teachers and mentor teachers

To summarise the responses of head teachers and mentor teachers, there was broad agreement that:

- ITE students were well prepared in terms of professional dispositions such as empathy, work ethic and had an awareness of the Attainment Challenge;
- ITE students were very well prepared in terms of their technological literacies;
- the practitioner enquiry was fertile space for focussed learning;
- partnerships between schools and universities were working well, but needed ongoing attention to maintain their strengths.

This group of respondents raised common concerns around:

- getting the practical 'basics' right in terms of classroom management, working with students with additional support needs, literacy and numeracy pedagogy, and planning;

- Preparation of ITE students to handle the parent interface sensitively, with adequate understanding of how the nested contexts of family circumstances, school and community impact on pupil learning;
- The need for students to know about additional supports available in schools;
- The need for greater attention to data literacy and understandings of how various types of data are used in tracking and monitoring pupil progression.
- The rate of learning underway in schools, and how to share this with universities;

They acknowledged that it was difficult for universities to prepare students for every possible context and contingency.

Newly qualified teachers

The new graduate teachers interviewed felt 'as well prepared as possible', a position which acknowledges the learning achieved, the ongoing learning in their first years in the profession, and the pragmatic limits to what ITE can achieve. As a group, they valued any experiences with services outwith the school setting, and their greater awareness of how their own attitudes play a role in student outcomes.

As a group, they expressed interest in broader experience in placement settings, and learning more about:

- How to link 'theory' to 'practice';
- Behaviour management;
- Meeting complex needs in lived classrooms;
- Preparation in programmes specific to the local authorities in which they are placed;
- The wider pastoral role of teachers.

Local authority staff

In their interviews, staff from the local authorities expressed their appreciation of the newly qualified teachers' professional attitudes and values, mentioning their willingness to collaborate and to continue learning, their awareness of contemporary policies, their reflective practice and the relationships they build with young people. Their use of technology and their preparation in professional enquiry were also mentioned a number of times as strengths. As a group, these interviewees raised the following topics as suggested improvements on NQT preparation:

- data literacy, for example, being able to reconcile community-level data with a focus on the individual child;
- more practical strategies for additional support needs, complex needs, behaviour management;
- personal resilience;
- more varied experience in placements to build professional insight;
- more exchange between universities and local authorities for mutual update on developments.

Across the four respondent categories, some recurring themes emerged. First, all stakeholder groups argued the value of varied placements, including differently positioned schools and other services that support the work of schools. Secondly, the NQTs, local authority staff, head teachers and mentor teachers highlighted the immediate practicalities facing a new teacher as the appropriate

focus to be prioritised in ITE programmes, while the teacher educators highlighted the constraints of time available in ITE programme that make prioritizing necessary and important. This raises the question of who should take what responsibility in the division of labour between ITE, probationer support programmes and NQT induction, and how these various levels could better articulate and dovetail. Lastly, there was an emergent theme across all groups that the whole sector is rapidly learning about how to respond to the Attainment Challenge, and such systemic learning should be harvested and shared with university partners in ITE.

Analysis by teachers' knowledge type

This last step in the analysis maps the themes from interviewee's responses against Shulman's (1987) categories of knowledge in teachers' professional knowledge base. He outlined seven such domains of knowledge as the 'minimum' (p. 8):

- Content knowledge;
- General pedagogic knowledge;
- Curriculum knowledge;
- Pedagogical content knowledge;
- Knowledge of learners and their characteristics;
- Knowledge of educational contexts;
- Knowledge of educational ends, purposes, and values.

From the literature review above, an additional domain of knowledge of teacher's own attitudes, expectations and assumptions was identified and highlighted in previous research into teacher education for diversity. Each domain shall be considered in terms of how the stakeholder interviewees considered it as a strength or as a weakness in the universities' ITE programmes. It should be noted that the lack of any mention in interviewee responses does not necessarily mean that the domain is missing in the programmes.

Content knowledge in terms of curricular knowledge did not attract much attention as either a weakness or a strength. One NQT mentioned the challenge of building the necessary content knowledge across all primary school subjects. Teacher educators described the difference between core and elective subjects, where the latter allowed time for deeper learning in priority content areas such as health and wellbeing. Generally, content knowledge was not invoked as problematic in regard to preparing teachers for the Attainment Challenge.

General pedagogic knowledge refers to 'broad principles and strategies of classroom management and organization that appear to transcend subject matter' (Shulman, 1987, p. 8). This domain featured in a lot of comments, in terms of both strengths and weaknesses. The broad principle of and reflective practice was explicitly mentioned as strengths in many of the programmes, and recognised as a valuable disposition in new teachers by the local authority staff and head teacher interviewees. The suggestions for more practical focus in ITE on the 'basics' such as classroom behaviour, additional support needs, inclusive practice, and planning would all align with this category of broad professional knowledge. The NQTs felt adequately prepared in general, which suggests that there is significant learning routinely achieved in this domain across ITE. However, the other stakeholder groups' comments suggest that there is always more learning to be done in this regard. In this way, there is a need to examine how ITE articulates with further development opportunities in the probationer year and early career phases. The NQTs themselves nominated behaviour management and meeting complex needs as ongoing learning needs.

Curriculum knowledge is defined by Shulman as 'particular grasp of the materials and programs that serve as "tools of the trade" for teachers' (p. 8). This domain was invoked in terms of the particular literacy and numeracy programmes used by local authorities. NQTs expressed interest in these, while teacher educators in urban ITE programmes talked about the difficulty of addressing all the different programmes used in the local authorities their students were placed in. In addition, this domain is moving fast as local authorities adopt and implement new programmes.

Pedagogic content knowledge is ‘that special amalgam of content and pedagogy that is uniquely the province of teachers, their own special form of professional understanding’ (Shulman, 1987, p.8). The head teachers and mentor teachers interviewed highlighted a need for more preparation specifically in literacy and numeracy pedagogies, these being of heightened importance under the Attainment Challenge, though the NQTs did not express a similar need.

Knowledge of learners and their characteristics was invoked in terms of the frequent mention of the ethic of attending to the needs of individual learners. This ethic was understood by some teacher educators to be in tension with the more sociological categories of the Attainment Challenge. The call for greater data literacy could also perhaps be mapped to knowledge of learners in terms of understanding the new practices and tools with which to know the learners and their progression. A local authority captured these two points when asking that NQTs be able ‘to reconcile community-level data with a focus on the individual child’.

Knowledge of educational contexts, according to Shulman (1987, p.8), includes ‘workings of the group or classroom, the governance and financing of school districts, to the character of communities and cultures. These amount to the nested contexts of different scale that ultimately shape what happens in classrooms. The Attainment Challenge with its grounding in the spatial mapping of multiple deprivation and its targeted resourcing to redress such disadvantage is a major focus in this domain, and the various stakeholders considered the NQTs to be aware and mindful of the relevant policy landscape at the national scale. This domain reportedly became more problematic when the NQT was placed in a community with which they had no prior experience. All stakeholders placed great importance on lived experience in such communities, their schools and the services that support them to be achieved through placements, rather than through campus studies. The development of critical data literacy was another recommendation from teacher educators and some head teachers to help NQTs discern and problematize aggregated patterns.

Knowledge of educational ends, purposes, and values includes ‘their philosophical and historical grounds’ (Shulman, 1987, p.8). In this study, the social justice and equity motivations behind the Attainment Challenge are reportedly well understood and embedded across all programmes. The head teachers and local authority staff recognised this learning in the students and NQTs they worked with. For the teacher educators, there was an additional aim to give their ITE students some critical approaches to the contemporary policies and their mechanisms.

An additional category of teachers’ knowledge in **knowledge of self and dispositions** was flagged in the literature review. This captured the pedagogical approaches and ITE work that challenged and reframed student teachers’ beliefs about disadvantaged groups. This kind of self knowledge was invoked by the interviewees: the NQTs talked of their greater awareness about the role of their expectations, and teacher educators reported explicitly challenging unexamined assumptions. Further, there were frequent mentions of the value of practitioner enquiry in ITE and probationer years, to cultivate a research curiosity and enquiring disposition. Both the head/mentor teachers and the local authorities valued the NQTs readiness to engage in professional learning and enquiry.

Conclusion

This project staged conversations with four groups of stakeholders to gain their perspectives on what Scotland's ITE sector is doing well, and what could be done better. The ITE sector offers a variety of ITE programmes of different length and different design, with different specialisations and audiences in mind. Much of these detail has been glossed over in this report's sector-wide gaze, but will feature in other phases of the larger project. The critiques and recommendations reported here were about balancing, extending and sequencing the existing curriculum, and additional learning, rather than about removing any curricular topics. This pattern resonates with Katz and Raths (1992) argument about endemic dilemmas in teacher education, in particular the necessary trade-off between 'coverage' and 'mastery': 'teacher educators are under constant pressure to expand the curriculum to cover more content and skills. Rarely are proposals put forward to eliminate a program component' (p. 377). Similarly, the comments about thresholds and prioritising 'basics' in the interviews resonate with the dilemma 'Emphasis on current versus future needs' (p. 379) regarding what learning should happen when. Such resonances suggest that the sector will long continue to negotiate such tensions, and any temporary settlement will be revisited when priorities shift. In this way, the political commitment to the Attainment Challenge has invited such a reassessment.

What are we doing well?

There was shared recognition that students and new teachers arrived primed with valuable dispositions of social justice and self-awareness, knowledge of the Attainment Challenge policy, and valuable technology skills. This suggests that the work in ITE around challenging deficit assumptions, embedding technology and policy orientation is working well.

Local authority staff and head teachers commented favourably on the students' capacity to undertake professional enquiries. Professional enquiry as a pedagogy in the ITE programme was highly valued for the skills and dispositions it cultivates. These skills should be understood as highly relevant to the Attainment Challenge in terms of seeking contextualised solutions to professional problems.

Newly qualified teachers themselves felt 'as well prepared as possible' thus recognising the time constraints of ITE programmes, and the challenges of their chosen profession. This judgement also reinforces the understanding that ITE is the beginning of a continuum of career-long professional learning opportunities. There was shared recognition of the complementary synergy between campus study and placement in ITE, and the strength and importance of partnerships involved.

What could we do better?

There was general agreement that for the purposes of the Attainment Challenge, ITE students need more opportunities to broaden their life experience and worldview through more varied school placements, experience in specialist units and in community services that support schools and families in disadvantaged communities. This lived experience was considered essential to develop empathetic understandings of students', families' and communities' circumstances. This stance reflects growing recognition that the school is one hub in a network of nested supports, and that teaching in communities of multiple deprivation will benefit from inter-agency work.

Head teachers, mentor teachers and local authority staff, as well as the NQTs, felt they needed more practical preparation in additional needs, behaviour management, parent relations, literacy and

numeracy education and the specific programmes being used in particular local authorities. Rather than constructing an either/or equation between theory and practice, there was interest in more guidance on how to 'link' theory to practice. Teacher educators felt constrained by the time restrictions of their programmes, limiting their ability to do justice to all relevant authority programmes.

Head teachers and mentor teachers requested that students on placement come better prepared for the particularities of each school site and its Attainment Challenge strategies. Nuanced data literacy was repeatedly identified as additional learning now required, given its importance in the Attainment Challenge. These requests reflect the learning curve and new practices underway in schools. There was a general consensus that local authorities, schools and universities should find some mechanism or forum to share the learning that is happening across the sector, so ITE can be responsive to fast-moving policy fronts.

Concluding remarks

The preparation of high quality teachers to work productively in communities of high deprivation is the responsibility of many parties across the professional's career. This report has suggested that the sequence of learning opportunities available be approached as a spiral rather than steps, so previous learning can be re-visited, challenged, elaborated and taken to the next level through experience in new settings with different mentors. This might help resolve the temporal tension between immediate and longer term relevance, and encourage conversations about how contemporary practice emerged, and how it might change in the future. In this way, 'what teachers know about, believe and actually do when working with diverse learners' (Rowan, Kline and Mayer, 2017, p.74) is always up for discussion.

Next steps

This research has started important conversations between stakeholders within each university's extended community and across the ITE providers. These conversations will continue to inform the ongoing design of effective, innovative and responsive programmes that stay abreast of change, emerging needs and national priorities.

The next 'resource' phase in the SCDE research programme involves an international literature review, looking for other documented models of teacher preparation programmes and pedagogies that focus on preparing teachers to work productively in communities of high disadvantage. For each programme identified, the conceptualisation, design, and case for impact will be considered in terms of whether and how it might inform ITE in Scotland. This phase is due to report in March 2020.

The final year of the SCDE project will involve the trialling of new ideas garnered from the previous audit, review and resource phases in the participating universities' ITE programmes.

References

- Ball, S. (2003). *Class strategies and the education market: the middle classes and social advantage*. London: RoutledgeFalmer.
- Bernstein, B. (1970). Education cannot compensate for society. *New Society*, 15(387), 344-347.
- Bourdieu, P., & Passeron, J.-C. (1977). *Reproduction in education, society and culture* (R. Nice, Trans. English ed.). London: SAGE.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101.
- Cochran-Smith, M. (2005). The New Teacher Education: For Better or for Worse? *Educational Researcher*, 34(7), 3-17.
- Cochran-Smith, M., & Villegas, A. M. (2015). Framing teacher preparation research: An overview of the field, Part 1. *Journal of Teacher Education*, 66(1), 7-20.
- Cochran-Smith, M., Villegas, A. M., Abrams, L., Chavez-Moreno, L., Mills, T., & Stern, R. (2015). Critiquing teacher preparation research: An overview of the field, Part II. *Journal of Teacher Education*, 66(2), 109-121.
- Donaldson, G. (2011). *Teaching Scotland's future: Report of a review of teacher education in Scotland*. Edinburgh: The Scottish Government.
- Donaldson, G. (2014). Teacher education and curriculum change in Scotland. *European Journal of Education*, 49(2), 178-191. doi: 10.1111/ejed.12077
- Fransson, G., & Grannas, J. (2013). Dilemmatic spaces in educational contexts - towards a conceptual framework for dilemmas in teachers work. *Teachers and Teaching: Theory and Practice*, 19(1), 4-17.
- Furlong, J., & Whitty, G. (2017). Knowledge traditions in the study of education. In G. Whitty & J. Furlong (Eds.), *Knowledge and the study of education: An international exploration* (pp. 13 - 57). Oxford: Symposium Books.
- Gale, T. (2018). What's not to like about RCTs in education? In A. Childs & I. Menter (Eds.), *Mobilising teacher researchers: Challenging educational inequality*. (pp. 207-223). London: Routledge.
- Hammersley, M. (2013). *The myth of research-based policy and practice*. London, England: SAGE Publications.
- Head, B. (2008). Wicked problems in public policy. *Public Policy*, 3(2), 101-118.
- Henry, G., Bastian, K., & Smith, A. (2012). Scholarships to recruit the "best and brightest" into teaching: Who is recruited, where do they teach, how effective are they, and how long do they stay? *Educational Researcher*, 41(3), 83-92.
- Kintrea, K. (2018). Education, disadvantage and place in Scottish secondary education. *CRADALL Working Paper CR&CALL WP301/2018*. Glasgow: CR&DALL. Available from <https://www.ubdc.ac.uk/news-media/2018/october/education-disadvantage-and-place-in-scottish-secondary-education/>
- Labaree, D. (2000). On the nature of teaching and teacher education: Difficult practices that look easy. *Journal of Teacher Education*, 51(3), 228-233.
- Mayer, D., & Reid, J. (2016). Professionalising teacher education: Evolution of a changing knowledge and policy landscape. In J. Loughran & M. Hamilton (Eds.), *International handbook of teacher education* (pp. 453-486). Singapore: Springer Science+Business.
- Menter, I. (2016). Introduction. In G. Beauchamp, L. Clarke, M. Hulme, M. Jephcote, A. Kennedy, G. Magennis, I. Menter, J. Murray, T. Mutton, T. O'Doherty & G. Peiser (Eds.), *Teacher education in times of change*. Bristol: Policy Press.
- Mowat, J. (2017). Closing the attainment gap - a realistic proposition or an elusive pipe-dream? *Journal of Education Policy*, 33(2), 299-321.
- Perry, E., Booth, J., Owen, D., & Bower, K. (2019). *The curriculum for initial teacher education: Literature review*. Sheffield Hallam University: Sheffield Institute of Education.

- Rizvi, F., & Lingard, B. (2010). *Globalizing education policy*. London: Routledge.
- Rowan, L., Kline, J., & Mayer, D. (2017). Early career teachers' perceptions of their preparedness to teach 'diverse learners': Insights from an Australian research project. *Australian Journal of Teacher Education*, 42(10), 71-92.
- Sahlberg, P. (2016). The Global Educational Reform Movement and its impact on schooling. In K. Mundy, A. Green, B. Lingard & A. Verger (Eds.), *Handbook of global education policy* (pp. 180-196). Chichester: Wiley Blackwell.
- Scottish Government. (2016). *Introducing the Scottish Index of Multiple Deprivation 2016*. Edinburgh Scottish Government. Retrieved 28 October 2019 from <https://www2.gov.scot/Resource/0050/00504809.pdf>.
- Skaburkis, A. (2008). The origin of 'wicked problems'. *Planning Theory and Practice*, 9(2), 277-280.
- Sosu, E., & Ellis, S. (2014). *Closing the attainment gap in Scottish education*. York: University of Strathclyde. Available from <https://www.jrf.org.uk/sites/default/files/jrf/migrated/files/education-attainment-scotland-full.pdf>
- Spring, J. (2015). *Economization of education: Human capital, global corporations, skills-based schooling*. New York and London: Routledge.
- Willis, P. (1977). *Learning to labour: How working class kids get working class jobs*. Aldershot: Gower.
- Yates, L. (2004). *What does good education research look like?* Maidenhead: Open University Press.