



Carter review of initial teacher training (ITT)

Sir Andrew Carter OBE

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Foreword from Sir Andrew Carter OBE



In April 2014, the Secretary of State for Education asked me to undertake an independent review of initial teacher training (ITT). The aim of the review would be to identify which core elements of high quality ITT across phases and subject disciplines are key to equipping trainees with the required skills and knowledge to become outstanding teachers. In addition, I was charged with the task of looking at how to improve transparency of training offers and access to courses.

At the heart of every community lies a school and at the heart of every school are the teachers. No matter how well organised or detailed the curriculum, how grand or well-resourced the building, what really matters most in a child's education is the quality of the teaching. The challenge for the nation is to maintain a supply of outstanding teachers so that every child has the opportunity to be taught by inspirational, skilled teachers throughout their time in school. This is a mighty and noble aim and one that should not be underestimated. Currently, we need to train approximately 35,000 teachers each year through a range of providers and partnerships, involving both schools and universities. The range of partners offers opportunities for all trainees to find a course that suits their particular needs.

Possible debates around whether ITT should be delivered by School-Centred Initial Teacher Training providers (SCITTs) or universities, School Direct or not, are not terribly helpful in this process. The truth is that partnership is the key. Sometimes universities will take the lead, sometimes and increasingly, it will be the schools that lead the way. However, neither can do it alone and our review has made recommendations that emphasise the strength of working together within a system that is increasingly school led.

Diversity of provision, whilst identified as a challenge by some, is probably a strength of the system. Trainees are very different – they range from those who come into the profession at an early age to others who are career changers and, of course, all are welcome. Our aim is to ensure that the *initial* element of training is matched to a rigorous and incrementally supportive professional development programme. ITT should introduce new teachers to crucial elements of knowledge, skills and understanding that all teachers need. ITT should also provide an environment for new teachers to learn from our best

teachers. This programme should create a robust work force that is always seeking to learn more about how children learn and how we can relentlessly improve the opportunities for young people.

I have been greatly supported by the review's advisory group and the secretariat at the Department for Education. My heartfelt thanks goes out to everyone who has so generously given their time and wisdom: to the universities who have welcomed us with open arms, to individuals who have travelled to 'round table' meetings, to those who have gone to considerable efforts to write to me and share their ideas. There has been much debate and good humour throughout which has made the task a most rewarding experience for us all.

Lastly, may I say that the level of engagement has been truly impressive, with everyone displaying that tremendous sense of moral purpose that is a distinguishing characteristic of this noble profession.

A handwritten signature in black ink that reads "Andrew Carter".

Sir Andrew Carter OBE

Executive Summary

Methodology

- I. The aims of this review were:
 - To define effective ITT practice
 - To assess the extent to which the system currently delivers effective ITT
 - To recommend where and how improvements could be made
 - To recommend ways to improve choice in the ITT system by improving the transparency of course content and method
- II. We have gathered a wide range of evidence and views through a range of activities including: extensive discussions with sector experts and stakeholders; 31 visits to ITT providers and schools; a call for evidence (which received 148 responses); a review of course materials; and a review of the existing evidence base, including international evidence, Ofsted evidence and findings from the 2014 Newly Qualified Teacher (NQT) survey.

Findings and Recommendations

The ITT System

- III. Overall the evidence we have about the system suggests that it generally performs well, with some room for improvement in particular areas.
- IV. Data provided to the review group by Ofsted suggests that the majority of trainees are being trained within 'good' partnerships. Ofsted inspected accredited providers training the following number of trainees between November 2013 and May 2014:
 - 1855 (14%) were trained by outstanding ITT partnerships
 - 10870 (82%) were trained by good ITT partnerships
 - 505 (4%) were trained by ITT partnerships requiring improvement.¹
- V. In the 2014 NQT survey (National College for Teaching and Leadership (NCTL), 2014), the quality of ITT was seen as at least good by 89% of primary trained respondents and 93% of secondary trained respondents (though it is important to note the survey only had a 20% response rate).

¹ Ofsted's annual state of the nation data states that, of the ITE partnerships that remained open on 31/8/2014, 78 partnerships were judged 'outstanding (35%)', 142 were judged as 'good' (63%) and 5 were judged 'satisfactory' or 'requires improvement' (2%) at their last inspection. None were judged inadequate. (Ofsted, 2014).

VI. A National Association of Head Teachers (NAHT) teacher recruitment survey of their members (NAHT, 2014a) found that:

- of those who recruited NQTs, 33.7% found it easy to recruit to the roles but nearly 8% were unable to recruit at all
- ‘quality of applicants in our area’ (45%) and ‘plenty of applicants but of poor quality’ (nearly 35%) were the main reasons members struggled to recruit
- The key areas where skill shortfalls were identified were classroom management (73% of respondents), subject knowledge (58%) and understanding of pedagogy and child development (56%)

VII. It is difficult to draw conclusions about whether one route into teaching is any more effective than another. We have found strengths across all routes. The findings from the Good Teacher Training Guide (Smithers and Robinson, 2013), the 2014 NQT survey (NCTL, 2014) and a report by the Institute for Fiscal Studies (Allen and others, 2014) suggest that the move towards school-led ITT has had benefits.

ITT Course Content

VIII. We believe ITT course content should have a relentless focus on pupil outcomes (including pupil progress, achievement and well-being) and should be delivered purposefully towards this overarching goal.

IX. We believe it is crucial to remember that ITT is initial; the best providers and schools develop programmes for trainees that will equip them well to start out as effective teachers, forming the basis for on-going development.

X. The Teachers’ Standards (Department for Education (DfE), 2011) set a common expectation across the system about the knowledge, understanding and skills new teachers should have. However, we have found considerable variability in ITT content across the system. We have identified what appear to be potentially significant gaps in a range of courses in areas such as subject knowledge development, subject-specific pedagogy, behaviour management, assessment and special educational needs and disabilities (SEND). We believe there may be a case for a better shared understanding of what the essential elements of good ITT content look like.

Recommendation 1: DfE should commission a sector body (for example, the Teaching Schools Council, a future professional body (College of Teaching), or another sector body) to develop a framework of core content for ITT. We feel it is critical that a framework is developed by the sector, rather than by central government. Though we have not aimed here to set out exactly what should be in the framework, we

have included an Annex in this report that offers a starting point. We would like the framework to be informed by the areas for improvement we outline in this report, as highlighted in the sub-recommendations below.

Subject Knowledge Development

- XI. Evidence suggests that a high level of subject expertise is a characteristic of good teaching (Coe and others, 2014). We have found that the most effective courses address gaps and misconceptions in trainees' core subject knowledge. This is important for both primary and secondary courses and across all subjects.
- XII. Across all subjects and phases we have found variability in the way subject knowledge is addressed. Given the importance of subject knowledge for good teaching, this is not satisfactory.
- XIII. Overall, we have been pleased to see the majority of ITT programmes are preparing trainees to teach the new national curriculum. However, we are concerned about a significant minority of courses where it appears programmes have not been updated to reflect changes.

Recommendation 1a: Subject knowledge development should be part of a future framework for ITT content.

Recommendation 2: All ITT partnerships should:

- i. rigorously audit, track and systematically improve trainees' subject knowledge throughout the programme
- ii. ensure that changes to the curriculum and exam syllabi are embedded in ITT programmes
- iii. ensure that trainees have access to high quality subject expertise
- iv. ensure that trainees have opportunities to learn with others training in the same subject

- XIV. There are some particular challenges for subject knowledge development - the breadth of the subject knowledge primary teachers need to teach the new curriculum, for example, may be difficult to cover, especially within a one year programme. We believe there is a number of ways that providers and the system could build in extra opportunities for the development of subject knowledge.

Recommendation 3: Schools should include subject knowledge as an essential element of professional development.

Recommendation 4: DfE should make funded in-service subject knowledge enhancement courses available for primary teachers to access as professional

development.

Recommendation 5: Universities should explore offering “bridge to ITT” modules in the final years of their subject degrees for students who are considering ITT programmes.

Subject-Specific Pedagogy

XV. Teachers who understand the way pupils approach different subjects, understand the thinking behind pupils’ methods and can identify common misconceptions are more likely to have a positive impact on pupil outcomes (Sadler and others, 2013 and Hill and others, 2005). We believe ITT should address subject-specific issues including phases of progression within the subject, links between subjects as well as common misconceptions and how to address these. This is important for both primary and secondary programmes. Both trainers and mentors should have a strong grasp of subject-specific pedagogy. However, there are important areas of content on subject-specific pedagogy that are not addressed on all courses.

Recommendation 1b: Issues in **subject-specific pedagogy should be part of a framework for ITT content.**

Evidence-Based Teaching

XVI. We believe it is critical that ITT should teach trainees why engaging with research is important and build an expectation and enthusiasm for teaching as an evidence-based profession. International evidence, including the RSA-BERA inquiry (British Educational Research Association (BERA), 2014), shows us that high-performing systems induct their teachers in the use, assessment and application of research findings.

XVII. Our findings suggest that sometimes ITT focuses on trainees conducting their own research, without necessarily teaching trainees the core skills of how to access, interpret and use research to inform classroom practice. It is important that trainees understand how to interpret educational theory and research in a critical way, so they are able to deal with contested issues.

Recommendation 1c: Evidence-based teaching should be part of a framework for ITT content.

Recommendation 6: The Teachers’ Standards should be amended to be more explicit about the importance of teachers taking an evidence-based approach.

Recommendation 7: A central portal of synthesised executive summaries, providing practical advice on research findings about effective teaching in

different subjects and phases, should be developed. A future College of Teaching would be well placed to develop this.

Recommendation 8: ITT partnerships should make more systematic use of wider expertise outside university departments of education. There are many universities that are home to world-leading research and assessment organisations.

Assessment

- XVIII. Being able to assess pupil progress effectively is crucial to good teaching. ITT should equip new teachers to use summative as well as formative approaches and should introduce them to important concepts in assessment (such as validity, reliability, norm and criterion referencing). New teachers should also be taught theories of assessment - for example, why, when and how to assess. Trainees also need to be taught how to use pupil data, including training in basic statistics.
- XIX. Of all areas of ITT content, we believe the most significant improvements are needed for training in assessment. Findings from the NAHT Commission (2014b) as well as Ofsted have also found weaknesses in assessment training. We believe that there are significant gaps in both the capacity of schools and ITT providers in the theoretical and technical aspects of assessment.

Recommendation 1d: Assessment, including the theories of assessment and technical aspects of assessment, should be part of a framework for ITT content.

Recommendation 9: Alongside a central portal on evidence-based practice, a central repository of resources and guidance on assessment should be developed.

Child and Adolescent Development

- XX. In order to teach effectively, trainees need to understand typical expectations of children at different stages of development as well as issues that can have an impact on pupil progress. This also provides a good basis for addressing other priorities such as behaviour management or SEND.
- XXI. Discussions with providers, schools and professional bodies have highlighted a lack of training in child development. Our review of course materials found that while child development was generally well-covered in primary courses, it lacked coverage in secondary courses.

Recommendation 1e: Child and adolescent development should be included within a framework for ITT content.

Behaviour Management

- XXII. Behaviour management should be prioritised within ITT programmes. ITT providers should build in opportunities for trainees to learn from a range of outstanding teachers, with a specific focus on managing pupil behaviour. We have found that the most effective programmes are practically focussed and underpinned by deeper understanding of behavioural issues. We believe it is crucial that trainees receive practical advice - tangible strategies for new teachers, grounded in evidence. All ITT programmes, for example, should support teachers to develop their own classroom presence and cover use of voice, body language and how to develop classroom routines and defuse situations.
- XXIII. In our discussions with ITT providers, we have found some reluctance towards practical approaches to training in behaviour management. We feel that in all programmes there is a need for more practical and specific advice on managing behaviour.

Recommendation 1f: Managing pupil behaviour should be included in a framework for ITT content, with an emphasis on the importance of prioritising practical advice throughout programmes.

Planning

- XXIV. Planning should be treated as a priority and given significant time and emphasis. Trainees should be encouraged to master established and evidence-based approaches. Trainees should be taught how to find, adapt and evaluate resources in their planning.

Differentiation

- XXV. It is important that new teachers are equipped to teach in ways that enable the large majority of pupils to learn essential curriculum content, build on this and keep up with the taught curriculum. Effective differentiation does not mean having several different lesson plans for one class. New teachers should be skilled in careful design and skilled delivery of teaching so that all pupils can access and secure the concepts being taught. Additionally, new teachers should have a sound grasp of practical strategies to enable lower achieving pupils to address critical gaps, make quick progress and keep up.

Special Educational Needs and Disabilities (SEND)

- XXVI. It is important that ITT recognises that good teaching for SEND is good teaching for all children. ITT should introduce trainees to the most common issues they will encounter and practical strategies for addressing these. There should be an emphasis on instilling a clear expectation of on-going development. Trainees should be introduced to how to work with a range of colleagues and professionals, as well as parents and carers, to support children with SEND.

Well-planned experience in specialist settings allows trainees a significant opportunity to learn about a range of needs and observe specialists in action.

- XXVII. Throughout this review, organisations have raised concerns with us about how ITT inadequately prepares new teachers to address special educational needs and disabilities. We acknowledge that it can be challenging to address SEND within ITT programmes, particularly those that are one-year long. However, we feel there is too much variability across the system in what is covered in SEND.

Recommendation 1g: **Special educational needs and disabilities** should be included in a framework for ITT content.

Recommendation 10: **Wherever possible, all ITT partnerships should build in structured and assessed placements for trainees in special schools or mainstream schools with specialist resourced provision.**

Professionalism

- XXVIII. As highlighted in the Teachers' Standards (DfE, 2011), it is important for new teachers to have a clear understanding of the professional role and expectations of the teacher. ITT programmes should include explicit and on-going content on professionalism. This should include an understanding of the wider role of the teacher, the idea of teachers as role-models as well as how to work with parents and carers and other professionals effectively. We believe it is also important that ITT includes explicit content on resilience and time management.

ITT Course Delivery

Course Structure and Pattern of Experiences

- XXIX. Many schools and providers have considerably developed beyond traditional placement models to offer carefully crafted school-based experiences. In order for school experiences to be as effective as possible, trainees need built-in opportunities to observe good and outstanding teaching. They also need to understand the importance of observation and how to observe effectively. Trainees also need chances to come together in peer groups, for secondary trainees this should include opportunities to come together in subject groups.

- XXX. Trainees and schools alike have highlighted the benefits of experiencing school as early as possible in the year. This provides opportunities to observe and be part of the process of establishing routines. Watching a teacher establish themselves with a class is a great way of learning behaviour management. Trainees are also more likely to feel part of the school community, which can help them progress more quickly.

Mentoring

- XXXI. There is evidence to suggest that high quality mentoring is critically important for ITT (Hobson and others, 2009). Effective mentoring has wider benefits, providing professional development opportunities for mentors and building the capacity of the school as a whole. Effective mentors are outstanding teachers and subject experts, who are also skilled in explaining their own practice. We have found that the best programmes also give careful thought as to how to train and recognise mentors effectively.
- XXXII. However, evidence suggests that mentoring across England is not as good as it should be (Hobson and Malderez, 2013). We have found methods for identifying and recruiting mentors, training and quality assuring mentoring to be variable. Given its importance, we feel that mentoring should have much greater status and recognition, within schools and within the ITT system as a whole. The qualities of effective mentors should be better understood across the system.

Recommendation 11: ITT partnerships should ensure all trainees experience effective mentoring by:

- i. selecting and recruiting mentors who are excellent teachers, who are able to explain outstanding practice (as well as demonstrate it)
- ii. providing rigorous training for mentors that goes beyond briefing about the structure and nature of the course, and focuses on how teachers learn and the skills of effective mentoring
- iii. considering whether they are resourcing mentoring appropriately (to reflect the importance of the role)

Recommendation 12: DfE should commission a sector body, for example the Teaching Schools Council, to develop some national standards for mentors.

Partnership

- XXXIII. Across the system, schools and providers have emphasised the importance of genuine partnerships, where schools play a leading role in the recruitment and selection of trainees, course design and delivery, assessment of trainees and the on-going review of the programmes. Schools and universities alike have highlighted the benefits that all partners can gain from partnerships. We believe the most effective partnerships include a range of types of schools (ideally including Special Schools and Pupil Referral Units) as well as a university partner.

Recommendation 13: All schools should, wherever practically possible, seek out and participate in robust local partnership arrangements. In a school-led system, this recommendation is naturally the responsibility of schools.

The crucial link between ITT and professional development

XXXIV. As we have said before, it is critical to remember that ITT is initial. We believe ITT providers, teacher educators and mentors should be absolutely explicit about this - emphasising to trainees that they will need to develop further as an NQT, in their early career and beyond. Schools must understand that when they employ an NQT they are taking on a responsibility as well as a great opportunity. It is critical that progression between ITT and the NQT year is as seamless as possible.

XXXV. Our findings suggest that the link between ITT and professional development is often weak in the system. We hope that changes to the Ofsted inspection framework as well as recent DfE announcements in relation to professional development will support the strengthening of this link.

Academic Awards in ITT

XXXVI. We have seen many strong, robust partnerships across the system. These are characterised by an emphasis on a common sense of purpose, clear management structures and equality within the partnership, with every member contributing and being valued for their contributions.

XXXVII. In a school-led system, schools must be at the very heart of ITT and play a leading role in course design and delivery. It is important that schools that choose to work with a university make this decision based upon the genuinely recognised potential that pooling expertise and experience brings.

XXXVIII. The highest quality courses equip trainees to be critically reflective and this is not exclusive to either PGCE (Postgraduate Certificate in Education) or QTS (Qualified Teacher Status) only routes (or any other academic awards). We have seen evidence that the best courses, be they PGCE, undergraduate based or QTS only, offer an academically rigorous and highly effective introduction to the classroom. However, we have found graduates perceive PGCE courses as having more status and as more likely to be academically rigorous. We are concerned that there may be a misconception among trainees that perceive the gaining of a PGCE as more important than gaining QTS when, of course, it is the status of QTS that qualifies the teacher. While many schools actively choose to work with a university to award a PGCE, some feel compelled to do so to reflect trainee demand.

XXXIX. One clear finding is the inconsistency in the number of Masters credits awarded on PGCE programmes. There is no sector-agreed rationale for the number of credits associated with a programme.

Recommendation 14: Building on the development of school-led ITT, **DfE should work in collaboration with those involved in ITT to consider the way in which teachers**

qualify, with a view to strengthening what has become a complex and sometimes confusing system. We would like applicants to understand that QTS is the essential component of ITT and that a PGCE is an optional academic qualification.

Selecting Trainees - professional skills tests

XL. Many providers and trainees have expressed frustration about the skills tests, arguing that they can lead to otherwise good candidates being lost from ITT.

Recommendation 15: DfE should undertake a review of the effectiveness of the skills tests in selecting high quality trainees.

Making Informed Choices

Clarity of information for applicants to ITT

XLI. Applicants must have access to clear and available information about routes into teaching and the range of courses available in order for them to be intelligent consumers of ITT provision. It is clear from the evidence we have gathered from potential applicants, trainees, schools and ITT providers that the current picture is confusing.

Recommendation 16: In order for applicants to make well informed decisions when choosing a course, we recommend the development and expansion of the NCTL's "Get into Teaching" website to signpost information that applicants should consider when making choices about ITT courses.

Clarity of information for schools choosing to work with ITT providers through School Direct

XLII. It is important that all schools are able to access information about how to get involved with ITT to improve choice in the system. It is also important that all School Direct schools are able to access information about the full range of providers when looking to identify a partner provider, so they can make well informed choices about who they work with. In our conversations with schools, they have told us it can be difficult for schools to find information about how to get involved with ITT.

Recommendation 17: In order for schools to find out how to get involved with ITT and make well informed decisions about the partners they work with, we recommend that the DfE develops a page on the Gov.uk website to signpost information that schools should consider when making choices about a partner provider.

Promoting ITT

XLIII. Schools are an important focal point for ITT and they can all play a role in supporting the recruitment of trainees.

Recommendation 18: Schools should make clear information about how to train readily available on all school websites and at other public communication points.
It would be for schools to take this recommendation forward.

1. Introduction

1.1. The Review Process

1.1.1. Within a relatively short timescale, we have aimed to gather as much evidence as possible from a range of sources for this important review. This has only been possible thanks to the help of those working across the ITT sector who have been generous with their time in sharing their expertise.

1.1.2. The advisory group for this review has also been crucial in offering expert advice, support and challenge in developing this review:

- **Professor Samantha Twiselton**, Director of the Sheffield Institute for Education at Sheffield Hallam University
- **Sir Daniel Moynihan**, CEO of the Harris Federation
- **Dr Louise Walker**, Director of Undergraduate Studies and Acting Associate Dean of Teaching and Learning in the School of Mathematics at the University of Manchester
- **Judith O’Kane OBE**, Executive Principal of Melland High School and Director of Education at Bright Futures Educational Trust
- **Daisy Christodoulou**, Research and development manager at ARK

Aims of the Review

1.1.3. The Terms of Reference stated the purpose of this review:

To consider how well ITT² currently prepares trainees to be outstanding teachers.

1.1.4. The Terms of Reference also stated the review’s aims and objectives:

- To define effective ITT practice
- To assess the extent to which the system currently delivers effective ITT
- To recommend where and how improvements could be made
- To recommend ways to improve choice in the ITT system by improving the transparency of course content and method

Methodology

² We acknowledge that many refer to initial teacher training (ITT) as initial teacher education (ITE). We have chosen in this report to refer to ITT as this was the term used in our Terms of Reference.

1.1.5. This review was not intended to be a research project. Though we have not had the scope to undertake our own research, we have gathered a wide range of evidence and views through a range of activities:

- 11 themed roundtable discussions with sector experts
- 24 meetings and discussions with experts and stakeholders
- 31 visits to ITT providers and schools involved in ITT, involving meetings with trainers, mentors, headteachers as well as current and former trainees
- A call for evidence that received 148 responses from a range of individuals and institutions, including universities, professional bodies, schools, teachers and trainees
- A survey of trainee and applicant opinions about ITT course information (receiving 165 responses)
- A review of the existing evidence base including international evidence, Ofsted evidence and findings from the Newly Qualified Teacher (NQT) survey
- A review of course materials from ~150 programmes³. These were reviewed by ITT experts and helped us build a picture of ITT course content across the system, including the areas of ITT content most and least commonly covered

³ We have provided an approximate figure here as there are different ways of counting the number of programmes (for example when an institution offers a subject or phase as a provider-led and School Direct programme).

1.2. What does the current ITT system look like?

1.2.1. The current ITT system is diverse. There is a range of different ITT routes, to meet a range of needs for both applicants and schools.

Summary of ITT routes:

Main Routes

- Post-graduate
 - Provider-led
 - School Direct (salaried and unsalaried)
- Undergraduate

Additional Provision

- Teach First
- Troops to Teachers

Size of routes - number of trainees recruited (for academic year 2014/15):

Route	Trainees recruited ⁴
All Routes	32,543
Main Routes	
Post-graduate (total)	26,218
Provider-led	16,986
School Direct (unsalaried)	6,451
School Direct (salaried)	2,781
Undergraduate (total)	5,938
Additional Routes	
Teach First	1,387 ⁵
Troops to Teachers	93 ⁶

1.2.2. The different ITT routes have a number of features in common. All routes lead to qualified teacher status (QTS). All ITT programmes involve an accredited provider that must demonstrate compliance in relation to the statutory ITT criteria and provide training

⁴ Figures include forecast. Figures taken from Initial Teacher Training (ITT) census (DfEa, 2014) for academic year 2014 to 2015.

⁵ Data provided by Teach First.

⁶ Data taken from NCTL data management system.

that enables trainees to meet the Teachers' Standards. The ITT criteria cover issues such as recruitment, training and quality assurance. For example, all routes must involve:

- preparation to teach across two consecutive age ranges
- sufficient time being trained in schools⁷
- training in at least two schools

Some of the differences between routes are set out below.

1.2.3. New teachers can train as undergraduate or post-graduate students.

Undergraduate programmes are offered by universities – these programmes are for those who do not already have a degree. Full-time programmes are either three or four years long, while part-time programmes are four to six years long. These programmes lead to an undergraduate degree; those who successfully meet the Teachers' Standards will also gain QTS.

1.2.4. Many new teachers train through post-graduate programmes (at postgraduate or professional level). Those who already have a degree can train in a number of ways:

Provider-led training

1.2.5. Accredited ITT providers are responsible and accountable for all ITT programmes. Providers can either be universities or School-Centred ITT providers (SCITTs). Some programmes are “provider-led” which means the programmes will be led and managed by the provider, working in partnership with schools. Where the provider is a university, the course will normally lead to Postgraduate (or Professional Graduate) Certificate in Education (PGCE), as well QTS. SCITTs may also partner with a university to offer an academic award (most often a PGCE) as well as QTS.

School Direct

1.2.6. School Direct courses are led by a group of schools. The school partnership chooses an accredited provider – a SCITT or university – to work with them and to be accountable for the provision. The school partnership will normally play a greater role in recruiting and selecting applicants as well as delivering part or all of the course.

1.2.7. Most School Direct programmes do not offer salaries. Some School Direct courses, however, are salaried so that trainees can earn while they train.

⁷ For a four year undergraduate programme, 160 days (32 weeks); a two or three year undergraduate programme 120 days (24 weeks); a secondary graduate (non-employment based) programme 120 days (24 weeks); a primary graduate (non-employment based) programme 120 days (24 weeks).

Additional routes

1.2.8. Besides the main routes into teaching there are a number of bespoke routes and schemes, designed to meet specific needs across the system. For example:

- **Teach First**

Teach First is an education charity that runs a two-year course, where trainees learn to teach by working in a challenging school in a low-income community. The course is a “Leadership Development Programme” designed to give trainees leadership skills.

- **Troops to Teachers**

Troops to Teachers is a bespoke employment-based programme aimed at high quality Service Leavers who can apply for either a non-graduate route or post-graduate route depending on their experience and qualifications.

- **Primary PE Specialist**

The primary PE specialist route is a one year training course comprising 50% primary core and 50% PE specialist training, delivered by teaching schools in association with sporting associations and partner universities.

- **SEN in ITT Pathway Pilot**

The National College for Teaching and Leadership (NCTL) has recently commissioned a small scale pilot of test and learn projects with a focus on increasing knowledge around Special Educational Needs and Disabilities (SEND) in ITT within the current framework of the Teacher Standards and the ITT Criteria. These are school-led projects that will be delivered by Teaching School partnerships that have already identified themselves as having a lead focus on SEND.

2. Defining Effective ITT practice

2.1. Introduction

2.1.1. This section sets out our conclusions about effective practice in ITT. Our conclusions are based on our definition of effective teaching. Like Coe and others (2014), we define effective teaching as that which is linked to enhanced pupil outcomes. We similarly believe that “there is not necessarily any assumption that such outcomes should be limited to academic attainment: whatever is valued in education should count” (Coe and others, 2014, page 11).

2.1.2. The review has provided a good opportunity to share some of the excellent practice we have found across the system. We hope this section will be particularly helpful for those delivering ITT, particularly new providers and schools becoming involved in teacher education for the first time.

2.1.3. This section looks first at ITT content (the areas of knowledge and understanding that should be covered in any programme) – followed by ITT delivery (the characteristics of how the most effective programmes are delivered).

2.2. Models of Teacher Development

How teachers learn to teach

2.2.1. Whatever the route, it is clear that ITT has to prepare teachers to be able to cope effectively in the classroom in terms of both the knowledge and the practical skills that they will require. We believe that the complexity of this process cannot be overestimated. It is therefore very important that all programmes of ITT are underpinned by a clear understanding of how new teachers learn and how to support their growing knowledge and understanding at every step throughout this crucial period of their development. The Teachers’ Standards set a clear baseline of expectations for professional practice. We believe ITT will often support new teachers to exceed these expectations. To become effective teachers, trainees need to develop a wide range of knowledge, understanding and skills and the ability (by the time they become an NQT) to apply these effectively to a range of contexts.

2.2.2. We have found that the most effective programmes give careful consideration to how trainees’ learning experiences are structured. Programmes should be structured so there is effective integration between the different types of knowledge and skills trainees need to draw on in order to develop their own teaching. Programmes that privilege either ‘theory’ or ‘practice’ fail to take account of the necessity of such integration. What is needed are models of ‘clinical practice’ (as described by Burn and Mutton (2013)), where trainees have access to the practical wisdom of experts and can engage in a process of enquiry, in an environment where they are able to trial techniques and strategies and evaluate the outcomes. Importantly, by making explicit the reasoning and underlying

assumptions of experienced teachers, trainees are encouraged to develop and extend their own decision-making capacities or professional judgments.

2.2.3. We believe that ITT should provide a foundation for on-going development by providing an appropriate combination of access to the expertise of teachers and pupil learning contexts, as well as engagement with and experience of relevant educational research. We believe this supports trainees to become teachers who can reflect on their own teaching, nurturing and reinforcing the idea that teachers are researchers of their own practice who continue to develop throughout their career.

2.2.4. Developing close relationships between theory and practice, in a way that helps trainees to understand and explore the links between research and classroom practice, is therefore a crucial element of all ITT programmes. Prominence needs to be given to the careful structuring of school experiences that give well-planned exposure to and engagement with a range of expertise. In the course of this experience beginning teachers need to observe and analyse their own and other teachers' teaching with a continuous and increasingly refined focus on pupil learning. In doing this, they need to undertake progressively more demanding teaching episodes with learners. We have found that the quality of this approach is strengthened where: schools see themselves as centres of professional learning; teachers collaborate in curriculum development, pupil assessment, and school improvement; the principle of schools as self-evaluating institutions is taken seriously; and, as a consequence, the notion of the teacher as researcher is continuously reinforced.

2.2.5. We have found evidence that however effective ITT may be, it is crucial that structures are in place to ensure that NQTs are well supported during their induction year and indeed throughout their careers. Effective programmes of ITT can be limited if they are not built upon in ways that take teachers' professional understanding and skills further forward in a structured way, well beyond the point of induction. We therefore consider that ITT programmes need to be structured in a way that takes careful account of the complex learning needs of trainees in a staged and progressive way that then leads seamlessly into a well-planned on-going professional journey.

2.3. ITT Course Content

2.3.1. As set out earlier, we define effective teaching as that which is linked to enhanced pupil outcomes (including pupil progress, achievement and wellbeing). As such, we have found it is critical that ITT content is delivered purposefully towards this overarching goal. This theme underpins all of our conclusions about ITT content.

2.3.2. We believe it is crucial to remember that ITT is initial; ITT forms only the beginning of a new teacher's development. ITT should provide firm foundations on which new teachers can continue to build, forming the start of their professional journey. The best providers and schools appreciate this and are thoughtful in developing a programme for trainees, which will equip them well to start out as effective teachers and form the basis of on-going development. We believe that it is less effective to cover a huge range of content, at the expense of covering the most important issues effectively. ITT content should therefore be focused on issues likely to develop the skills needed to improve pupil outcomes, treating these systematically.

2.3.3. We have found strengths in the system where providers and schools have embraced innovation and adapted their programmes to meet trainee needs. However, we believe that the most effective courses consistently tend to cover the following areas explicitly and systematically. Later we explain the rationale for each of these elements.

- **Subject knowledge development** – ITT should address core content knowledge in teaching subjects with appropriate rigour, including the definition and scope of the subject, why it matters and the concepts that underpin it (at both primary and secondary level).
- **Subject-specific pedagogy** – ITT should address subject-specific issues such as: phases of progression within the subject; common misconceptions in the subject; linkages between subjects; and, most importantly, how to make it accessible and meaningful to learners at different abilities and stages of development.
- **Evidence-based teaching** – ITT should instil an evidence-based approach to teaching by inducting new teachers in where and how to access relevant research, how to evaluate and challenge research findings, how this can be applied to classroom practice, as well as why using research matters.
- **Child and adolescent development** – ITT should provide new teachers with a grounding in child and adolescent development, including emotional and social development, which will underpin their understanding of other issues such as pedagogy, assessment, behaviour, mental health and SEND. ITT should also introduce new teachers to strategies for character education and supporting pupil wellbeing.
- **Behaviour Management** – This should be a central element in any ITT programme, equipping new teachers with practical strategies and knowledge to deal with pupil behaviour effectively and create a positive climate for learning.

- **Planning** – This is a central element of any effective ITT programme, which should equip trainees to plan effectively from day one, teaching them evidence-based and established techniques in planning and how to plan efficiently by using and building on existing resources.
- **Assessment** – ITT should equip new teachers to be confident in assessing pupil progress, using summative as well as formative approaches. ITT should also introduce new teachers to important concepts in assessment (such as validity, reliability, norm referencing and criterion referencing). New teachers should be taught how to work with pupil data (for example, using data in their planning or target setting).
- **Differentiation** – ITT should equip teachers so they can ensure that all pupils in the class, including lower and higher achievers, should make progress and keep pace with the curriculum.
- **Special Educational Needs and Disabilities (SEND)** – ITT should prepare all new teachers to support SEND in their classrooms, providing a solid grounding in the most pertinent issues and setting an expectation for on-going high quality professional development.
- **Professionalism** – As implied by the Teachers' Standards, ITT should cover the professional role of the teacher explicitly, covering the wider responsibilities of a teacher, including important issues such as working with parents and carers as well as other professionals. We believe it is also important that ITT includes explicit content on resilience and time management.

2.3.4. We believe the most effective programmes treat these issues systematically and explicitly throughout and make no assumptions that trainees will automatically absorb important areas in a single input or context.

2.3.5. The following section looks at these areas in more detail, including why we have chosen them in particular.

The Importance and Purpose of Good Teaching

2.3.6. We know that good teaching has the power to transform the lives of children. Good teaching contributes to the well-being of the nation by building a fairer and more knowledgeable society. New teachers are joining one of the most important professions – the best ITT programmes and providers make this explicit as a matter of constant pride and motivation. The most effective partnerships articulate a strong ethos that reflects these values and demonstrate this in everything they do. Though there may be many providers who do this, we have found some who do this particularly explicitly and effectively. Embedding this message is not only important in itself but is an important motivating force that can build resilience and pride in new teachers, helping to sustain them in the first few challenging years of their career.

ITE should actively encourage teachers to see themselves as contributing collectively to social change, the common good and the creation of a fair society. We would like to see a renewed focus on the moral imperative of teaching and the purpose of education, which we believe will create a strong sense of energy, collective purpose and professionalism from the point of entry to the profession. (Association of School and College Leaders, Response to Carter Review Call for Evidence, 2014).

Case study: Teach First's vision, mission and values

The charity Teach First has a vision, mission and set of values that it communicates throughout the programme. Teach First recruits trainees through a rigorous, competency-based, selection process designed around its five core values (leadership, excellence, collaboration, integrity and commitment), which together with the vision and mission are woven through its training programme. These messages are constantly reinforced through every aspect of Teach First's activity and this is done in a way that is supported by both quantitative and qualitative data and illustrations. As a result, trainees that are recruited through the Teach First programme speak passionately and with great pride about their moral purpose, often citing Teach First's vision, "working towards a day when no child's educational success is limited by their socio-economic background" and mission, "working to end inequality in education by building a community of exceptional leaders who create change within classrooms, schools and across society". This sense of mission and pride is so integrated into all aspects of the Teach First provision that its impact goes well beyond usual vision and values statements and is an outstanding feature of the programme that is clear in everything it does.

Subject Knowledge Development

2.3.7. Evidence suggests that a high level of subject expertise is a characteristic of good teaching (Sadler and others, 2013 and Hill and others, 2005). We have found that the

most effective courses treat subject knowledge development seriously. We believe that though many ITT entrants will begin their courses with sound subject knowledge, ITT must nevertheless systematically address gaps and misconceptions in core subject knowledge. We have found that in some cases, there can be a perception, often from trainees themselves, that they begin ITT with all of the content knowledge they will need and that ITT only needs to teach new teachers how to translate that knowledge effectively. For example, evaluations from subject knowledge enhancement courses show trainees begin courses believing they have a reasonable level of subject knowledge in their subject of study, but after the course recognise that they over-estimated their levels of understanding of their subject (Department for Education (DfE), 2013).

2.3.8. Addressing subject knowledge systematically is important for both primary and secondary courses and across all subjects. For secondary teachers a degree will form an important basis but not a guarantee of good subject knowledge across the breadth of the national curriculum in their subject. For primary teachers, the challenge is one of breadth. Post-graduate trainees may have specialised in their degree studies and the breadth of the primary curriculum can be challenging to address within ITT. Shortage secondary subjects face particular challenges – in some cases, trainees may be training in a subject that they did not study directly or exclusively at degree level.

2.3.9. We have found that these challenges mean it is important for subject knowledge to be treated as a priority in ITT. We consider the following practices as characteristics of effective teaching to address subject knowledge development:

- Subject knowledge development should be addressed systematically, through a process of auditing and tracking with specific on-going input to address subject knowledge gaps. There is a range of online tools provided by subject associations as well as subject knowledge specifications that can support this process. We have found that the most effective courses make use of pre-course time for subject knowledge development.
- Subject knowledge development in ITT should be sharply focused on “subject knowledge for teaching”; it should focus on the content knowledge and concepts required to deliver the national curriculum and exam syllabi where relevant, ensuring that content reflects any changes to these. Emphasis should also be put on exploration of the importance of the subject and why it matters to the learner now and in the future.
- Trainees need access to sufficient high quality subject expertise – we have found that universities can be well-placed to provide this. The best partnerships also make systematic use of subject expertise in schools (such as Specialist Leaders in Education (SLEs)). We have also found that cross-phase expertise can be used particularly effectively in some partnerships.

2.3.10. Subject knowledge enhancement (SKE) courses can be used before, during or after ITT to support subject knowledge development. Our conversations with providers,

school leaders and trainees highlighted the benefits of these courses in supporting the development of subject knowledge. A government commissioned evaluation of SKE found that “SKE courses provide trainees with a high level of subject knowledge and confidence in the subject”. It also found that overall, by the end of the SKE course, “students thought their subject knowledge had improved significantly” (DfE, 2013).

2.3.11. The Teachers’ Standards require trainees to demonstrate good subject knowledge. Subject knowledge is an area that all teachers must continue to review and develop throughout their career. As such, ITT providers should instil an expectation and appetite for on-going development of subject knowledge beyond ITT and throughout a teacher’s career. Directing trainees towards subject communities and networks, as well as resources from subject associations, is a helpful way of supporting this.

Subject-Specific Pedagogy

2.3.12. There is evidence to suggest that teachers who understand how pupils think about subjects, including their common misconceptions, are more likely to have a positive impact on pupil outcomes (Sadler and others, 2013 and Hill and others, 2005).

2.3.13. We believe that ITT programmes should address subject-specific issues, including phases of progression within the subject, linkages between subjects as well as common misconceptions and how to address them. We have found this to be important both for primary and secondary programmes. Our discussions with trainees and former trainees have highlighted that they can be particularly concerned about the practical issues relating to their subject (for example, experiments in science and use of equipment in Design and Technology) – this was also highlighted in our call for evidence. As such, ITT programmes should provide opportunities for new teachers to develop confidence in these areas.

2.3.14. Providers and schools have also told us that it is important that both trainers and mentors have a strong grasp of subject-specific pedagogy. This relates to the issues above about trainees having access to sufficient subject expertise.

Evidence-Based Teaching

2.3.15. As mentioned earlier, ITT should instil in trainees the importance of pupil progress. To achieve this, we believe it is critical that ITT should instil an evidence-based approach. International evidence, including the recent RSA-BERA inquiry (British Educational Research Association (BERA), 2014), indicates that high performing systems induct their teachers in the use, assessment and application of research findings and that schools should be research-rich environments. The use and development of relevant research should be embedded at every level.

2.3.16. ITT should teach trainees why engaging with research is important and build an expectation and enthusiasm for teaching as an evidence-based profession. The National Federation for Educational Research (NFER) particularly highlighted the importance of

this in their response to our call for evidence.

2.3.17. New teachers need to be taught how to become intelligent consumers of research; this means teaching them where and how to access research findings, how to interpret and challenge research and how it can be applied in practice.

2.3.18. Trainees need to be explicitly taught how to reflect on practice, being able to analyse what has gone well and less well in a lesson. This involves teaching trainees how to effectively and analytically observe in the classroom. High quality mentoring and structured school experiences are important in facilitating this (we return to this issue later).

2.3.19. Theory and research need to be seamlessly linked with practice; this was strongly highlighted in the international evidence within the Aspiring to Excellence report (Sahlberg and others, 2014). Trainees need timely opportunities to apply theory in the classroom and reflect upon their experience afterwards. Structured assignments and other forms of recording should be used to support this process.

Case study: Ark Teacher Training - integrating theory and practice

A fundamental aim of Ark Teacher Training's ITT programme is to develop trainees into rigorous evaluators of their impact on pupils; critical engagement with theory and research is central to this. The masters assignments place evidence of direct impact on pupil progress as the main indicator that the trainee is able to understand and adapt the key general principals governing classroom practice. By continuously reflecting on the relationship between theory, research and what's happening in their own classrooms, trainees develop into teachers who can confidently contribute to the education debate from a solid evidence base. By working with their university partner to redesign the masters level assignments, Ark Teacher Training are able to show trainees that a teacher can make the conscious application of theory a very real part of their everyday practice.

2.3.20. Universities can play an important role in supporting trainees to become teachers who take an evidence-based approach. The best practice, however, is where school-based trainers are also actively engaged with research and evidence-based teaching (Sahlberg and others, 2014), where mentors, for example, actively demonstrate engagement with research.

Case study: Lesson study approach

Lesson study is a form of classroom action research focusing on the development of teacher practice knowledge. It involves groups of teachers collaboratively planning, teaching, observing and analysing learning and teaching in 'research lessons' (Dudley, 2011). Lesson study has been identified as a strategy that can develop deeper teacher knowledge (in pedagogy and subject) leading to higher standards of educational attainment (Stigler and Hiebert, 1999). The approach can take a range of forms but in ITT

will generally involve the trainee working with their mentor and other teachers to:

- Choose an area of focus (ideally linked to the school's development plan)
- Choose a series of lessons to focus on and a lesson to review
- Jointly plan the lesson

One colleague teaches the lesson with the other members of the group observing. The observation focuses particularly on the children's learning rather than on the teacher's teaching. Following the lesson, the group review the learning that took place and apply what they have found in future lessons. The group observation allows the group to see things they could not otherwise see and capture insights through multiple perspectives. This approach allows trainees to apply theories they have learnt directly into practice. It introduces them to how research can take place in the classroom and the benefits of working collaboratively. The approach also provides a development opportunity for other staff involved. Because the study is focused on improving teaching and learning, it has wider benefits for the school.

Child and Adolescent Development

2.3.21. Discussions with teachers, school leaders, professional bodies and specialists have consistently highlighted the importance of teachers having an understanding of child and adolescent development. In order to teach effectively, trainees need to understand what typically to expect of children at different stages of development as well as issues that can impact on pupil progress (for example, autism spectrum and genetic disorders). This also provides a sound basis for trainees to address other issues, such as behaviour management or SEND.

2.3.22. We believe teachers can support pupil outcomes by developing their character, as well as developing their knowledge, understanding and skills. As such, new teachers should be introduced to character education and strategies for developing characteristics such as drive, grit and optimism in pupils as well as supporting pupil wellbeing.

2.3.23. Experts, providers and schools have told us about the importance of understanding a wide range of mental health issues, including those that teachers might come across in groups that are not traditionally thought of as vulnerable (for example, self-harm). ITT should equip new teachers to identify what is within the norms of child adolescent behaviours and what is a cause for concern. ITT should prepare trainees to know when and how to refer appropriately to more specialist support.

2.3.24. Our call for evidence highlighted the fact that more and more children are presenting in schools with difficult and disruptive behaviour that is interfering with their learning. Respondents emphasised that teachers well-trained in children's emotional development and the impact of trauma and loss are likely to be more confident and effective in providing a safe setting for all students, including the more vulnerable and

challenging, leading to better pupil outcomes. We therefore advise that ITT programmes should give priority to this aspect of trainees development.

Case study: The Atticus Alliance's Mental Health Awareness Course

The Pendlebury Centre Pupil Referral Unit (PRU), a partner school of the Atticus Alliance, offers a five day accredited Mental Health Awareness course to all its trainees. The course provides bespoke training around social and emotional needs, classroom management and autism. It provides an excellent grounding in many aspects of child development and well-being in a way that feeds into all other aspects of the ITT programme. Trainees, NQTs and recently qualified teachers (RQTs) who have experienced this course report a lasting impact in terms of knowledge, confidence and a much deeper awareness of the factors that can impact on pupil learning and wellbeing. The Alliance has strong links with the University of Manchester and Manchester Metropolitan University and has been facilitating placements across their Alliance of 21 schools and within Pendlebury PRU. The course has been running for seven years and proven very popular, boosting the Alliance's attractiveness to potential ITT trainees. It has also provided this training to Teach First students and we consider that this model could be equally transferable to other programmes.

Behaviour Management

2.3.25. Based on our discussions with trainees and teachers, we know behaviour management is a crucial issue for trainees. There is evidence to suggest that this is a common reason why teachers leave the profession (Barmby, 2006). We also believe that managing behaviour effectively and creating safe classroom environments, conducive to learning, is essential for pupils to achieve. Ofsted (2014b) have highlighted that low level disruption is too common. It is therefore critical that ITT prepares trainees well in this area.

2.3.26. Behaviour management should be taken very seriously and prioritised within ITT programmes. Providers should build in systematic opportunities for trainees to learn from a range of outstanding teachers, with a specific focus on managing pupil behaviour. We have found that in many cases, for trainees, those who are effective at dealing with behaviour seem to do so invisibly; it may not be obvious how they are addressing behaviour issues – as such, trainees need to be guided in their observations, be taught and mentored in what to look for and have structured opportunities for reflection where policy and practice is deconstructed and explained. To support the development of classroom presence, it is also important that trainees have access to a range of different styles in order to find a role model that is appropriate to their personality.

2.3.27. We believe it is crucial that trainees receive practical advice about what is and is not likely to work. Trainees need to feel confident in beginning their practice as an NQT;

they should begin their careers armed with a range of evidence-informed strategies they can draw upon with the knowledge that these need to be increasingly underpinned by broader and deeper knowledge and understanding. We believe that the more trainees can be helped to overcome concerns about behaviour, the sooner they are able to focus more fully on pupil outcomes and wellbeing.

2.3.28. We have found that the most effective programmes are practically focussed and underpinned by deeper understanding of behavioural issues. A grounding in child development, including an understanding of mental health issues, is an important basis for understanding pupils' behaviour in the classroom. By practical advice we mean tangible strategies for new teachers, grounded in evidence. We believe all ITT programmes, for example, should support teachers to develop their own classroom presence and cover use of voice, body language, as well as how to develop and establish classroom routines and defuse situations.

2.3.29. Good training in behaviour management will make clear links with good teaching – for example, highlighting that effective planning and teaching with pace and creativity can go a long way to prevent behaviour issues. However, we believe it is also important that ITT sets realistic expectations that even the most well-planned lesson cannot completely prevent behaviour issues occurring. Therefore, providers need to equip trainees with strategies to use in response to behaviour problems when they arise.

2.3.30. We have found it is important that new teachers have opportunities to observe and reflect on particularly challenging pupil behaviour. This can be facilitated effectively through focused visits to observe in schools working to improve challenging behaviour. This does not mean simply exposing trainees to challenging environments and assuming they will absorb good practice from their experience. The best school-based learning experiences are guided and structured so that good practice is explicitly highlighted. We have seen very good examples of these kinds of experiences offered within outstanding specialist provision, for example, Pupil Referral Units (PRUs).

2.3.31. Our discussions with school leaders, mentors and trainees have also identified clear benefits for trainees being based in school early, ideally on the first day of term. This means trainees can observe how teachers develop and establish classroom routines and develop relationships with pupils. Often trainees enter school once these routines have been established and have become so embedded that they are difficult to perceive. Observing how these are established on day one is excellent preparation for the new teacher's first day as an NQT.

Case Study: Harris Federation Teaching School Alliance – Practical Approaches in Managing Behaviour

Behaviour management is an important element of Harris's ITT programme, which is

emphasised at the very start of the programme, at its Summer School and continues throughout the training year. Trainees are supported to develop consistent, effective classroom routines, follow behaviour procedures and policies, and learn from observing outstanding practitioners. A popular element of the course are trainees' sessions with a voice and body language coach to support the development of a positive presence in the classroom; the course seeks to develop individual strengths and approaches around a central model of consistency, clarity and rigour, giving trainees a set of core effective approaches to manage classroom behaviour and means of adapting these in context.

Trainees complete research into the most effective ways to promote good behaviour for learning in their MA Level modules and visit a range of learning contexts throughout the year, in order to consider a range of strategies for positive classroom management and how to motivate those learners most challenged by the conventional classroom environment.

There is a strong focus on the use of praise and encouragement in training sessions, as well as exploration of the underlying causal factors for poor behaviour and ways in which trainee teachers can successfully inspire, motivate and challenge all students, with the ultimate goal of creating a classroom culture and ethos of enthusiasm for learning, intellectual curiosity, courtesy and collaboration.

Case study: Thames Primary SCITT - Use of Voice in Managing Behaviour

In 2009 Thames Primary SCITT evaluated the qualities that were emerging in the practice of their strongest and less able trainees and identified a correlation between use of voice and quality of teaching, particularly in the trainee's ability to manage behaviour. In 2010 the SCITT introduced a rigorous voice training programme, delivered by qualified voice teachers, that moved beyond vocal care and explored the vocal techniques needed to create voices that were effective and easy for children to process. Almost immediately the SCITT saw a reduction in trainee absence due to voice loss and an improvement in behaviour management. The SCITT then extended the training so that all mentors in school were trained enabling them to guide trainees in their use of voice and creating a common language for professional dialogue about use of voice in teaching and learning. The SCITT now assesses trainees' voices at interview in order to plan support. They also provide 1 ½ days of voice training, provide training for all new mentors and provide one-to-one voice support when required.

Planning

2.3.32. We emphasise the importance of training in how to plan effective lessons, as highlighted in the Teachers' Standards. Like behaviour, this issue is a clear priority for new teachers. Providers should treat this area as a priority, giving it significant time and emphasis throughout the programme.

2.3.33. Trainees need to be taught how to plan for progression from initial starting points and should be given practical strategies and examples of best practice. Trainees should be encouraged to master established and evidence-based approaches. New teachers are likely to spend a considerable time planning and their training should also include techniques for working smartly and efficiently. Trainees should be introduced to relevant resources such as text books and online resources and should be taught how to find, adapt and evaluate these resources in their planning. We note that the use of text books is far more common in high performing education systems than in England; the 2011 TIMSS survey found that in Finland and Singapore the percentage of students whose teachers use textbooks is 95% and 70% respectively, compared to 10% in England (Mullis and others, 2012).

Assessment

2.3.34. Being able to assess pupil progress accurately is clearly crucial to good teaching. Following government reforms, there is also an increased role for teachers in assessment, meaning this issue is all the more important.⁸ From our conversations with NQTs and trainees, we also know this is a priority for them – new teachers understandably want to feel confident and secure in their assessments of pupils.

2.3.35. Based on discussions with colleagues from Cambridge Assessment, the Centre for Evaluation and Monitoring (Durham University) as well as Ofqual. We believe that the following topics should be covered within training on assessment:

- The theories of assessment – why, when and how to assess
- Important concepts in assessment: validity, reliability, and utility
- Stages of development within subjects so new teachers know what to assess
- How to use a range of assessment approaches – including norm referencing, criterion referencing and standardised tests
- How to give effective feedback and the next steps for progression
- How to write “good questions” – i.e. how to design valid assessments
- Misconceptions and how to identify them through assessment
- How to use pupil data (including some training in basic statistics)

2.3.36. This theoretical content, core knowledge and technical skill can be provided usefully by universities. It is also important for this content to be delivered in the context of schools and classrooms to ensure that trainees understand its relevance. ITT

⁸ Following government reforms to remove levels and not replace them, it is up to schools to implement an assessment system that best suits their needs and those of their pupils. End of Key Stage assessments will remain to give consistent national ‘checkpoints’, but within Key Stages it is for schools to decide how best to assess their pupils.

partnerships should also make sure they make full use of the expertise within their networks – whether this is particular expertise in schools or perhaps drawing on other linked bodies. In England, there are world-leading organisations in educational assessment and yet this expertise is not always utilised in ITT programmes.

Differentiation

2.3.37. We believe all pupils in the class, including lower and higher achievers, should make progress and keep pace with the curriculum. It is important that new teachers are equipped to teach in ways that enable the large majority of pupils to secure essential curriculum content, build on this and keep up with the taught curriculum.

2.3.38. It is critical that attainment gaps are not reinforced through approaches taken to pupil differentiation. Effective differentiation does not mean having several different lesson plans for one class, which can lead to lower attaining pupils falling further behind. New teachers should be skilled in careful design and skilled delivery of teaching so that all pupils can access and secure the concepts being taught. This includes addressing pupil misconceptions during teaching and using questioning in class to assess and address differences in understanding between pupils.

2.3.39. Additionally, new teachers should have a sound grasp of practical strategies to enable lower achieving pupils to address critical gaps, make quick progress and keep up. Similarly they should understand how to deepen and to enrich the understanding of pupils who grasp curriculum concepts quickly. These will include, for example: provision of additional tutorial support and practice outside the lesson for pupils who have not secured the concepts covered; and, for higher attaining pupils, more complex tasks and exercises or outside-lesson enrichment activities on the same topic.

2.3.40. It is important that new teachers know how to support the progress of pupils with specific needs, such as those who do not speak English as their first language or those with SEND. Using assessment data and information on pupils' starting points, trainees need to be taught how to establish objectives and design programmes for pupils to enable them to make good progress and access the mainstream curriculum.

Special Educational Needs and Disabilities (SEND)

2.3.41. All teachers are potentially teachers of SEND. This is highlighted in the new SEND Code of Practice (DfE, 2014b). As such, it is critical that all new teachers are given training in how to support children with SEND – this should not be treated as an optional extra but as a priority. We believe understanding how to teach children with SEND is critical to improving progress and achievement for all children.

2.3.42. Though SEND should have its own particular focus in ITT, we feel it is important that ITT recognises that good teaching for SEND is good teaching for all children. Having an understanding of child and adolescent development, for example, including knowledge of typical stages of development and the barriers that might occur, is

important in understanding how to drive progress for all pupils – and particularly for those with special educational needs. The other core areas we outline in this report are crucial for supporting all children, including those with SEND – good planning, assessment and a strong grasp of the subject will drive the progress of all children.

2.3.43. We feel it is important to be realistic about what can be covered in an ITT programme – particularly post-graduate, year-long programmes. ITT programmes should prioritise the knowledge and understanding new teachers will need to support all children in their classrooms from day one as a qualified teacher. ITT should introduce trainees to the most common issues they will encounter – for example, Autistic Spectrum Disorders, Severe Learning Difficulties and Dyslexia – and provide practical strategies for addressing these needs. ITT should also address issues such as speech and language development; The Communication Trust have highlighted the importance of this in supporting pupils to make progress (Lee, 2013). It is also important that trainees are taught how medical conditions can affect learning. However, it can be challenging to address these important issues effectively, particularly on shorter programmes – the emphasis should be on instilling a clear expectation of on-going development. For example, new teachers should feel confident in knowing where to look and who to speak to for further advice and guidance, such as Special Educational Needs Coordinators (SENCos). We have found that the best programmes explicitly highlight the importance of professional development and direct trainees towards further training they might undertake.

2.3.44. Through discussions with colleagues with considerable expertise in SEND, school leaders and teacher educators, we have identified the following characteristics of strong practice:

- Trainees should be introduced to multi-agency working (for example, meeting or shadowing professionals such as child educational psychologists and speech and language therapists)
- Trainees should also be introduced to how to work with a range of colleagues (SENCos, teaching assistants) as well as parents and carers to support children with SEND
- SEND should be addressed within subject contexts – looking at ideas of expected progress from starting points, barriers to learning, participation and making reasonable adjustments

2.3.45. Visits to ITT providers and schools, as well as discussions with school leaders, teachers and trainees, have highlighted the benefits of training experiences in special schools or mainstream schools with specialist resourced provision during ITT programmes. These experiences allow trainees a significant opportunity to learn about a range of needs and observe specialists in action. Such experiences need to be properly structured and focused – they should never be tokenistic or merely viewed as an enrichment opportunity. School experiences should be carefully structured to offer

opportunities to observe outstanding practice and develop practical strategies that arise from this. Placements where trainees have opportunity to practice and be assessed in a special school or a mainstream school with specialist resourced provision are particularly beneficial.

Professionalism

2.3.46. As highlighted in the Teachers' Standards, it is important for new teachers to have a clear understanding of the professional role and expectation of the teacher. ITT programmes should include explicit and on-going content on professionalism. This should include an understanding of the wider role of the teacher, the idea of teachers as role-models, as well as how to work with parents and carers and other professionals effectively. They should also cover specific issues such as confidentiality, safeguarding and dress-code, appropriate boundaries with pupils, use of social media as well as the promotion of fundamental British values. All of these are important issues that we should not assume new teachers will automatically understand.

“The role of ITE in preparing students for a rich and varied teaching career should also include awareness and strategies to promote resilience, addressing issues such as work/life balance, managing workload, and dealing with physical, mental and emotional stress.” (ATL, 2014)

2.3.47. We believe it is also important that ITT includes explicit content on resilience and time management which are critical for a teacher’s early career. For example, ITT should set realistic expectations about what is and is not an acceptable workload and should provide some practical strategies for smart working and achieving an appropriate work/life balance. ITT might also introduce trainees to strategies for coping with stress and self-regulation.

2.4. ITT Course Delivery

2.4.1. The previous section considered the most important areas of content for an ITT programme – the areas of knowledge and understanding that all new teachers need to develop. This section considers the best means of delivering effective ITT programmes. An ITT programme can cover all of the essential areas of ITT content, but without effective delivery and careful structuring the programme is unlikely to produce outstanding teachers. The advice offered here draws upon extensive conversations with ITT providers, schools and teacher educators.

Course Structure and Pattern of Experiences

2.4.2. Our visits with ITT providers and schools have revealed some good examples of innovative use of time over the programme to provide trainees with a range of structured school experiences in contrasting settings. We have been impressed by creative approaches we have found in this area – many providers have considerably developed beyond traditional placement models to offer carefully crafted school-based learning experiences for trainees. This fits well with international evidence that shows that “clinical practice” models are a hallmark of successful systems. Clinical practice is characterised by an emphasis on sustained spells in school under the supervision of experienced and accomplished teachers who provide effective mentoring and structured learning experiences. It is important that school experiences are carefully scaffolded and planned. As highlighted in the RSA-BERA Inquiry (BERA, 2014) it is important that school experiences are high quality.

“Learning to teach requires sustained spells of school-based work under the supervision of accomplished, experienced teachers. In the course of this experience beginning teachers observe and analyse their own and other people’s teaching, undertake progressively more demanding teaching episodes with learners and begin to come to terms with the way of life of schools. The term “clinical practice” refers to more than effective mentoring, where practising teachers take an active role in providing learning experiences for novice teachers. It involves the provision of opportunities for student teachers to engage with other forms of knowledge - from research, from theory, from practice in other places and contexts - and to use that knowledge and the insights it provides to challenge, to question, to reflect on and to improve their own teaching. Such clinical practice is one of the hallmarks of the most successful systems”. (Sahlberg and others, 2014).

Innovative placement models

2.4.3. In our meetings and visits with providers and schools we have seen a range of excellent examples of innovative placement models.

- **Placements and other structured experiences in alternative settings** – as

discussed earlier, some providers make effective use of alternative settings and specialist provision, for example, PRUs or special schools to offer trainees contrasting experiences. These are often used as opportunities to gain experience of specific areas where trainees observe specialists dealing with issues such as challenging behaviour or SEND. In the best examples these experiences are highly structured and focused with built-in opportunities for trainees to observe teaching and reflect on the learning that arises from this. These experiences work less well when they lack focus and trainees are expected simply to absorb good practice without structured analysis and the opportunity to make broader connections to other situations.

Case study: Swiss Cottage School Development and Research Centre

Swiss Cottage School is a five-times outstanding special school and designated Teaching School. Swiss Cottage works with a range of schools, ITT providers and partners relevant to child development (for example, mental health agencies) to offer special school experiences for trainees and teachers.

For example, Swiss Cottage runs a one day programme on “What’s Special about Special” – the course is designed to develop strategies for inclusion and personalised learning. Trainees develop a toolbox of strategies that they are able to take back and apply in mainstream settings. 700 trainees have undertaken the programme over two years and the course is embedded in the ITT programmes offered by the school’s partner SCITTs and universities.

Swiss Cottage also offers a week long experience for ITT trainees in a special school or setting. This experience develops knowledge and understanding of effective inclusive practice and how it applies to the mainstream classroom. We believe these are excellent opportunities for trainees to work with specialists and develop critical knowledge and skills about good teaching for SEND.

- **Multiple Placement models** – some providers have developed school experiences where larger numbers of trainees are placed in a smaller number of schools (we note that this is a characteristic of successful international systems too). Providers delivering these models told us they create a learning community (within the school there are extensive opportunities for peer observation, team teaching and the adoption of a range of different roles) and also lead to deeper and more effective partnerships.
- **Short, sharp themed experiences** – some of the best programmes complement longer placements by building in shorter, experiences on a particular theme. These short, intense experiences appear capable of achieving high and lasting impact on trainee understanding and development.

Case study: Sheffield Hallam University - National Priority Placements

All primary trainees undertake a series of “National Priority Placements” designed to allow trainees to observe high quality practice in four national priority areas: early reading, early number, SEND and English as an Additional Language (EAL). Each placement lasts 3 days (on post-graduate programmes) or 4 days (on undergraduate programmes). The placements are designed with school partners to build on university-based sessions that introduce trainees to important concepts and strategies. Experiences in the placement allow trainees to apply their understanding and work alongside experts in that area. For example, trainees on the Early Reading placement are required to work alongside a literacy specialist to plan and teach a phonics lesson to a group, evaluate the lesson and deliver a second lesson in light of their evaluation. They are also required to plan, teach and evaluate at least one guided reading session. During the placement trainees also observe the teaching of phonics across a range of different year groups as well as discussing with teachers how they plan the provision of a rich language environment.

The other National Priority Placements offer similar opportunities relevant to the different national priorities, for example in maths they carry out a diagnostic assessment of an individual child’s maths ability and plan for next steps; in EAL they may focus on a child’s progress in the core subjects and focus on the school’s provision of a range of EAL support. After these placements trainees review their experiences and then apply their learning within their next assessed block placement. We believe that this kind of short but highly focussed placement allows trainees to make rapid progress in a particular area – this type of placement could easily be replicated on other programmes.

Teaching teachers to observe

2.4.4. Effective observation is challenging and is an area where further research would be helpful. In order for school experiences to be as effective as possible, trainees need built-in opportunities to observe good and outstanding practice – they also need to understand the importance of observation and need to be taught how to observe effectively. Paired observation, for example, observation in partnership with a mentor, is one way to support this effectively. We have also seen examples where providers and schools have used video effectively to teach trainees how to observe and analyse teaching and learning.

Communities of practice

2.4.5. We have found that it is important that providers build communities of practice for trainees, providing opportunities for them to come together and learn in peer groups. For

secondary trainees this should include opportunities to come together in subject groups. This is particularly important in circumstances where trainees are more likely to be isolated, where there are fewer trainees in the school or centre or where the partnership is smaller.

Innovative use of time

2.4.6. In our discussions with providers, teacher educators, and trainees, we found that the best programmes make innovative use of time. Trainees and schools alike have highlighted the benefits of trainees experiencing school as early as possible in their training. As we discussed earlier, this provides opportunities to observe and be part of the process of establishing routines. Trainees and schools have also told us that being in school early in the term means trainees are more likely to “feel part of the school”. This can help them progress more quickly and also means they are more likely to experience some of the wider professional duties of being a teacher. It is good practice to make full use of all the time available: for example, using time outside school-terms to bring together trainees in residential or conferences. We have found examples where trainees have a short spell of training at the end of the summer, before continuing their course in September. Trainees and schools have told us that this helps trainees integrate into school and the programme more easily and reduces anxiety about the start of the autumn term. It also helps trainees build relationships with their peers, teacher educators and the teachers and pupils they will be working with. We have found that early engagement with the programme gives programme leaders the opportunity to informally assess trainees at the start of the programme and give them directed tasks over the summer – this is particularly useful for subject knowledge development.

2.4.7. Many schools and providers have talked about the benefits of placements in contrasting settings such as Requires Improvement (RI) schools or schools in particularly challenging circumstances. We understand that these experiences can be beneficial for trainees – however, like all school experiences, these require careful planning in terms of quality assurance and support. Providers should have a good knowledge of the schools in their partnerships and be able to assess placements on a case-by-case basis taking into account the capacity of the leadership in the school, the quality and experience of mentoring and trainees’ past experiences in the school. Providers should ensure that more support is in place (including access to outstanding practice) for more challenging placements.

Mentoring

2.4.8. There is evidence to suggest that high quality mentoring is critically important in ITT (Hobson and others, 2009). This point has also been widely highlighted by providers, schools and teachers – both in our discussions with them and through our call for evidence.

2.4.9. Effective mentoring has wider benefits – many have highlighted that becoming a

mentor is an excellent professional development opportunity for the mentor, as it involves them reflecting upon and explaining their own practice. Schools have told us that having effective mentors builds the capacity of the school as a whole. Based on our discussions with outstanding providers and schools and mentors, we have identified the following characteristics of effective mentoring:

- Effective mentors are outstanding teachers who are also skilled in deconstructing and explaining their practice – outstanding practitioners are not automatically outstanding mentors
- Effective mentors are subject and phase experts, aware of the latest developments. Subject mentors should be members of subject mentor networks and should access resources from subject associations
- The most effective mentors have a secure understanding of the Teachers' Standards, including a range of methods for assessing against the standards, in a way that goes beyond the minimum requirements for meeting them
- Effective mentors are strong role-models of all the Teachers' Standards – for example, they are skilled in managing behaviour effectively. Effective mentors are also good role-models in relation to their own engagement with research

2.4.10. We believe the best programmes also give careful thought as to how to train and value mentors effectively – both when teachers become mentors and on an on-going basis. This goes beyond briefing about the course structure, assignments and paperwork: effective training supports mentors to further improve their practice by training them in how to deconstruct and articulate their practice, how to coach and how to support and assess trainee teachers effectively. Effective training will also indicate other sources of support – for example, subject associations.

2.4.11. We believe the most effective programmes also offer a coherent structure for mentoring, with specific foci throughout the course, which align with other elements of the course structure.

Partnership

2.4.12. Across the system, schools and ITT providers have emphasised the importance of genuine partnerships, where schools play a leading role in recruitment and selection of trainees, course design and delivery, assessment of trainees and the on-going review of programmes (we note this is also a requirement of the ITT criteria). We have seen several examples of long-standing partnerships between university providers and schools where this works well with all partners sharing a common ethos and vision. We welcome the work NCTL has undertaken in consultation with bodies in the ITT sector, which has drawn similar conclusions about effective school-led partnerships.

Case study: Durham University “cluster model”

The Durham Partnership operates a cluster model across all of its primary provider-led courses. We believe this model is a good example of how ITT can be school-led at both undergraduate and post-graduate level. Trainees on the undergraduate course are placed in a school for their first year and move around the cluster for the remaining two (post-graduate students follow a similar pattern for the two PGCE placements). School staff from partner schools act as coordinators, managing the entire cluster and arranging all placements. The school also has a crucial role in leading the professional side of the ITT programmes, in close partnership with the university, and contributes significantly to decisions about the award of QTS. There are systematic opportunities for all schools involved to influence the programme and provide experiences at a range of schools, to meet the needs of trainees. Further detail on this model is available in an Ofsted case study of good practice [here](#).

2.4.13. A clear message coming from schools and universities alike is about the benefits that all partners can and should gain from partnerships. Universities can benefit from school involvement in commissioning, facilitating and disseminating research and other forms of development and enquiry. Similarly, schools can benefit from the expertise of universities to become research-rich environments and to help them drive school improvement and impact positively on pupil outcomes and achievements.

2.4.14. We know from our discussions with trainees that it is important that ITT programmes are coherent, cohesive and support progression. Effective partnerships mean that the different elements of programmes are seamlessly integrated rather than disjointed or fragmented. Our discussions with schools and providers have also identified the following characteristics of effective partnerships:

- Effective partnerships utilise expertise from across the partnership – from both school partners and universities and between the different phases and subjects they offer.
- Effective partnerships are built on mutual respect and a shared vision as well as clearly defined and agreed roles.
- Effective partnerships require a critical mass of expertise. Partnerships should be sufficiently diverse so that they can facilitate opportunities for trainees to access a range of settings and contexts and types of expertise (ideally allowing access to Special Schools, PRUs and other contrasting settings). We believe the most effective partnerships include a range of types of schools as well as a university partner.

The crucial link between ITT and professional development

2.4.15. We stress the point here again that it is critical to remember that ITT is indeed initial. We believe ITT providers, teacher educators and mentors should be absolutely explicit about this – emphasising to trainees that they are not the finished product once they are qualified and that they will need to develop further as an NQT, in their early career and throughout their career.

There is evidence internationally that, however effective initial teacher education may be, it is, in itself insufficient: structures are also needed to ensure that newly qualified teachers are well supported during their induction year and indeed throughout their careers. (Sahlberg and others, 2014).

2.4.16. Schools must understand that when they employ an NQT they are taking on a responsibility as well as a great opportunity. It is critical that the progression between ITT and the NQT year is as seamless as possible. We have seen some effective practice in this area. Some providers provide excellent support for NQTs, inviting them to return for particular lectures or sessions, facilitating alumni networks that provide strong early career support and giving a strong sense of on-going membership of a supportive community of practice. We have also found that some effective school-based partnerships, led by teaching school alliances or academy chains have developed career pathways that make the links between ITT and professional development seamless and explicit.

Case Study: Cramlington Learning Village

We were impressed with the explicit and strong links Cramlington Learning Village have made between ITT and on-going professional development through their career pathway. All NQTs have access to a ‘New Teacher Programme’ focussed on the ‘basics’ supported by both a subject mentor and a whole school mentor, as well as the Teaching and Learning team. The programme involves induction over the summer holidays, after school sessions as well as a weekend residential. Following the ‘New Teacher Programme’, all those in their second year of teaching (NQT+1) undertake the ‘Developing Teacher Programme’ designed to deepen their understanding of teaching and learning and new curriculum development. All those in their third year of teaching (NQT+2) then move onto an ‘Advanced Teacher Programme’ with an emphasis on new technologies in the classroom as well as opportunities to lead training for others. Opportunities are also available for more experienced and senior staff through other programmes. All staff are also members of professional enquiry groups undertaking classroom-based research as well as a whole school professional development package. Cramlington are working with a university partner to evaluate the impact of their professional development programmes to measure the impact they are having on pupil outcomes. Cramlington’s coherent programme not only builds a systematic and explicit link for the trainee moving into their

early career but also builds a whole-school culture of continuous development. More information about the career pathway can be found [here](#).

Selecting Trainees

2.4.17. Requirements for selecting candidates are set out in the ITT criteria. Our conversations with providers and schools have emphasised the importance of having rigorous selection processes, assessing candidates for their subject knowledge as well as a range of competencies. We have seen some excellent methods of assessing subject knowledge for teaching - including consideration of academic achievements but also looking beyond these to assess the candidates potential to explain a concept. We have also found that some schools and providers have developed innovative methods of assessing other competencies through group exercises and interviews. Important competencies such as resilience can be difficult to assess, though some partnerships felt that carefully designed interview questions can be effective. Many have emphasised the importance of observing candidates in a classroom setting or interacting with pupils - with some highlighting that it is particularly useful to ask trainees to reflect on these experiences afterwards. Many providers and lead schools emphasised the benefits of having partner schools directly involved in selection processes – this not only helps in selecting the best candidates but also means that school staff have early engagement with the trainees they will be working with. Ofsted have worked with the Alban Federation to develop a good practice case study, part of which is about their rigorous selection processes (see [here](#)).

Trainee Assessment

2.4.18. Those involved in ITT, particularly accredited providers who assess trainees to become qualified teachers, play a critical role as gatekeepers to the profession. The ITT criteria sets out that all providers should ensure that no trainee teacher is recommended for the award of QTS until they have met all of the standards for QTS. All aspects of assessment should be ultimately linked to pupil progress, outcomes and wellbeing - a teacher can only be as good as the learning they lead and the impact they have in the classroom. This has important links with the training new teachers receive on assessment; they will only be able to self-evaluate effectively if they have a confident grasp on how to assess pupil progress.

2.4.19. We believe that feedback for trainees should be based on the six principles of teacher feedback identified by Coe and others (2014):

1. the focus is kept clearly on improving student outcomes;
2. feedback is related to clear, specific and challenging goals for the recipient;
3. attention is on the learning rather than to the person or to comparisons with others;
4. teachers are encouraged to be continual independent learners;

5. feedback is mediated by a mentor in an environment of trust and support;
6. an environment of professional learning and support is promoted by the school's leadership. (page 5).

2.4.20. We have seen good examples of how technology can support trainee assessment.

Case study: University of Brighton - Using technology to support assessment

The University of Brighton has developed an e-portfolio, which is tailored to suit each ITT route as well as individuals' training needs. It allows trainees to evaluate their progress and collate evidence drawn from university and school-based training against the Teachers' Standards. As an online learning space, it enables all those involved (for example, mentors and tutors) to interact and view the materials remotely and monitor and track trainee progress. It strengthens dialogue between partners and is useful for early tracking and intervention strategies that support trainee development. Trainees have found this a really effective way of storing evidence of meeting the Teachers' Standards electronically, without creating excessive amounts of paperwork. By uploading work to their e-portfolio, trainees always have access to their work and the file, as well as staff, despite being miles apart.

Web technology has also allowed the university to communicate using webcams and chat tools which can be used to create trainee-led peer support groups and monitor attendance. Trainees have found this an incredibly useful interactive resource which has supported their development.

3. The ITT System

3.1. Introduction

3.1.1. So far this report has set out our conclusions about best practice in ITT. This section will consider what we know about how far the ITT system delivers this, focussing on some areas that we believe could be improved. Overall, we have been inspired by the good practice we have found across the system. It has been a pleasure to speak with providers, schools and trainees who talk passionately and with pride about the strengths of their programmes.

3.1.2. Overall, the evidence we have about the system suggests that it generally performs well, with some room for improvement in particular areas.

3.1.3. Data provided to the review group by Ofsted suggests that the majority of trainees are being trained within ‘good’ partnerships. Ofsted inspected accredited providers training the following number of trainees between November 2013 to May 2014:

- 1855 (14%) were trained by outstanding ITT partnerships
- 10870 (82%) were trained by good ITT partnerships
- 505 (4%) were trained by ITT partnerships requiring improvement⁹

3.1.4. In the 2014 NQT survey (NCTL, 2014) the quality of ITT was seen as good or very good by 89% of primary trained respondents and 92% of secondary trained respondents (though it is important to note the response rate was 18%).

3.1.5. The National Association of Head Teachers (NAHT) responded to our call for evidence by submitting a survey of their members (NAHT, 2014a). Their survey received 1127 responses and included the following findings:

- 759 of respondents recruited NQTs – of those, only 33.7% found it easy to recruit to the roles and nearly 8% were unable to recruit at all
- When asked about the main reasons why members struggled to recruit, NQTs as well as other roles, the key reason was ‘quality of applicants in our area’ (45%) and ‘plenty of applicants but poor quality’ (nearly 35%)
- Over 88% of respondents had recruited NQTs over the last two years and only 50% of those believed that NQTs were well prepared to start working in a school

⁹ Ofsted annual data, as at 31 August 2014, states that 78 partnerships were judged ‘outstanding’, 142 were judged as ‘good’ and 5 were ‘satisfactory’ or ‘requires improvement’ (none were ‘inadequate’) (Ofsted, 2014).

- The key areas where skill shortfalls were identified were classroom management (73% of respondents), subject knowledge (58%) and understanding of pedagogy and child development (56%)

3.1.6. As we will explore in this section, the areas highlighted by this survey support areas of ITT content we have identified for improvement.

3.2. Comparing different routes into teaching

3.2.1. It is very difficult to draw conclusions about whether one route into teaching is any more effective than another. One way to consider this is by combining Ofsted judgements with a variety of other measures. One example is the Good Teacher Training Guide (Smithers and Robinson, 2013), which compares ITT providers. They consider entry qualifications, quality of provision (as defined by Ofsted) and take-up of teaching posts using these factors to give a score to each provider. These scores can be considered to provide some picture of different routes. In 2013 the picture was relatively mixed. The report describes the following findings:

- SCITTs had the highest average score
- University providers had the most highly qualified entrants but lower take-up of teaching posts than SCITTs
- The picture given by Ofsted grades and NQTs differ somewhat; Ofsted judge the university provision to be the best but the NQT survey shows the best results for SCITTs
- The Guide does not consider the performance of School Direct programmes

3.2.2. The 2014 NQT survey (NCTL, 2014) did not report significant differences in the quality of training in different routes, though SCITT trained respondents were more likely to report that their training had been good or very good.

3.2.3. More recently the Institute for Fiscal Studies (IFS) carried out a study to compare the costs and benefits of different ITT routes. They found that schools are more likely to state that benefits are higher than costs for school-based routes (Allen and others, 2014).

3.2.4. Ultimately it is difficult to compare the effectiveness of different routes. Our engagement with universities, SCITTs and schools has not led us to draw any clear conclusions that any one route is better than another. We have found strengths across all routes. The findings from the Good Teacher Training Guide, the 2014 NQT survey and IFS report, however, suggest that the move towards more school-led ITT has had benefits. We have also found that the diversity of different routes is a strength, allowing the system to meet the needs of different schools and trainees.

3.2.5. The majority of new teachers train through post-graduate provider-led programmes led by either SCITTs or universities. Many of the comments in this report

refer to these types of programmes – we have seen clear strengths in these. We have also drawn the following conclusions about other routes:

- **Undergraduate programmes** have the potential to allow more time for the development of subject knowledge and more gradual development over a sustained period. These programmes are particularly well-suited to the development of primary subject knowledge, pedagogy and a more extended understanding of child development. Anecdotally, there has been a perception in the past that undergraduate programmes accept those with lower academic standards than those on post-graduate routes. So we are pleased to see that this year the average UCAS points score for undergraduate entrants to ITT has now reached a record high (330 points, equivalent to an A and 2 Bs at A-level).
- **School Direct** is in early development, but in our conversations with SCITTs, universities and particularly schools, the benefits are clear. We have heard that School Direct has led to schools taking increased ownership over ITT, which has facilitated deeper and more effective partnership. We would also like to clarify that a School Direct programme means that the trainee necessarily has a narrower range of school experiences – School Direct programmes are subject to the same requirements as provider-led programmes and, in fact, a Teaching School Alliance leading a School Direct programme is likely to have access to a wide range of excellent school experiences for trainees. The nature of data about different ITT routes means it is difficult to evaluate the effectiveness of School Direct – we would welcome an evaluation of the implementation and impact of School Direct.
- **Teach First** serves a useful purpose in the system – it allows schools who might otherwise find it difficult to engage with ITT to have a role in the system (if perhaps they find it difficult to recruit). It is also supports teacher supply in areas of socio-economic disadvantage.
- **Troops to Teachers** is in early development with the first two cohorts of trainees commencing their training in January and September 2014. The programme offers bespoke school-based training at both non-graduate or post-graduate level. Aimed at high quality service leavers, it takes into account the breadth of skills that they can bring to the classroom and not only supports their training through a blended learning approach delivered by a network of universities and schools, but also develops their capacity as future leaders. An evaluation strategy is planned to inform the future expansion of the programme, which includes a focus on addressing disadvantaged areas.

3.3. ITT course content across the system

3.3.1. The Teachers' Standards set a common expectation across the system about the knowledge, understanding and skills a new teacher must have. We might expect, then, that ITT course content would be similar and consistent across the system. In fact, we have found considerable variability. This has been clear both from our conversations with providers, trainees and former trainees, and through our review of course materials. Concerns about this variability were raised through our call for evidence. As we will outline in this section, we have identified what appeared to be potentially significant gaps in a range of courses in areas such as subject knowledge development, subject specific pedagogy, behaviour management, assessment and special educational needs. As such, we believe there may be a case for a better shared understanding of what the essential elements of good ITT core content looks like.

Recommendation 1: DfE should commission a sector body (for example, the Teaching Schools Council, a future professional body (College of Teaching), or another sector body) to develop a framework of core content for ITT. We believe that a framework of the essential elements of core content would build a stronger shared understanding of good ITT content meaning that trainees will have a more consistent experience. We also hope that this framework will provide trainees with a greater understanding of the areas they should be covering in ITT. We feel it is critical that a framework is developed by the sector, rather than by central government. Though we have not aimed here to set out exactly what should be in the framework, we feel that the areas outlined in section 1 offer a strong starting point (we have included this as an Annex in this report). We would like the framework to be informed by the areas for improvement we outline in this section (as highlighted in the sub-recommendations below).

Subject Knowledge Development

3.3.2. Across all subjects and phases we have found variability in the way that subject knowledge is addressed. Based on our discussions with providers and our review of course materials, subject knowledge audits are common. However, the rigour of this audit (i.e. whether it is checked or monitored) appears to be variable. The extent to which subject knowledge is tracked and systematically developed also seems variable. Research (Wellcome Trust, 2011) has found there is little evidence of robust auditing and that trainees view the process as inefficient and ineffective. Ofsted has similarly found that insufficient attention is paid to trainees' subject knowledge development. Too often, we have found that subject knowledge development is dependent on trainees addressing the shortfalls in their knowledge themselves. Given the importance of subject knowledge for good teaching, we feel this is not satisfactory. As set out in section 2, we believe all partnerships should rigorously audit, track and develop subject knowledge in an on-going way.

3.3.3. We have been interested in exploring how far changes to the curriculum are embedded in ITT programmes. Overall, we have been pleased to see the majority of ITT programmes are preparing trainees to teach the new curriculum. Our review of course materials, however, highlights that there are a significant minority of courses where it appears that programmes have not been updated to reflect changes. Ofsted has also found that providers need to do more to check that changes to the curriculum are embedded in training. It is of course vital that programmes are preparing new teachers to teach the new curriculum and in general keeping abreast of all the latest developments.

3.3.4. In section 2, we highlighted the importance of trainees receiving high quality input from subject experts. We have visited many providers who are offering excellent subject support. We have some concerns, however, about smaller partnerships: there needs to be a critical mass of subject expertise within a partnership to ensure that trainees have access to the expertise they need. We also found that the best partnerships made full use of subject expertise from across the partnership (such as SLEs). We feel this kind of practice could be more systematic and widespread. Ofsted has placed increased emphasis on ensuring trainees have access to subject materials and guidance within and beyond the partnership, including that provided by subject associations in its revised ITE inspection framework from June 2014. In our review of course materials, we found that less than half of courses referenced resources from subject associations. Ofsted has also found that more rigorous checks need to be made of the subject expertise of subject trainers, ensuring they receive appropriate training and professional development.

3.3.5. We feel that learning with others training in the same subject is an important part of ITT. In our visits to ITT providers and schools, we found some variability in the existence and strength of subject communities. We feel this is particularly important in partnerships where trainees may be more isolated – perhaps because the partnership is small or because they are placed alone or in small numbers in schools. As Ofsted has advised, we feel providers could make more and better use of links and resources from subject associations to facilitate these communities.

3.3.6. We make a number of recommendations to providers and schools involved in ITT to address these inconsistencies:

Recommendation 2: All ITT partnerships should:

- i. **rigorously audit, track and systematically improve subject knowledge throughout the programme**, including a check at the end of the course to ensure the trainee has strong subject knowledge (indeed, a trainee does not meet the Teachers' Standards without demonstrating good subject and curriculum knowledge)
- ii. **ensure that changes to the curriculum and exam syllabi are embedded in ITT programmes**
- iii. **ensure that trainees have access to high quality subject expertise** by ensuring that subject trainers are quality assured and receive appropriate training, and that trainees have access to subject materials and guidance within and beyond the partnership, including that provided by subject associations
- iv. **ensure that trainees have opportunities to learn with others training in the same subject**

3.3.7. There are some particular challenges for subject knowledge development. The breadth of subject knowledge that primary teachers need to teach the new curriculum may be difficult to cover, especially within a one year programme. In subjects like modern foreign languages, music and computer science, trainees are more likely to lack subject knowledge, experience and confidence. There are relatively few primary teachers with a maths or science background, meaning that ITT needs to address core subject knowledge in these areas to give primary teachers the necessary knowledge as well as confidence to teach them effectively.

3.3.8. As we highlighted in section 2, ITT cannot completely address subject knowledge. The issue here is clearly one of time. We have already identified that undergraduate programmes benefit from having greater time to address a breadth of subject knowledge. We believe there are a number of ways that providers and the system could build in extra opportunities for the development of subject knowledge:

Recommendation 1a: Subject knowledge development should be part of a future framework for ITT content.

Recommendation 3: One year programmes are too short to fully address subject knowledge. Schools, therefore, should include subject knowledge as an essential element of professional development, particularly in the NQT year and early career.

Recommendation 4: DfE should make funded in-service subject knowledge enhancement courses available for primary teachers to access as professional development – particularly in subjects such as modern languages, computing, music, maths and science.

Recommendation 5: For secondary subjects, we feel that more could be done before trainees enter post-graduate ITT programmes. We recommend that universities should explore offering “bridge to ITT” modules in the final years of their subject degrees for students who are considering ITT programmes. These modules would take a broad look at the subject, covering areas in the national curriculum where students are likely to have gaps. This would mean students enter ITT with more appropriate subject knowledge for teaching. We believe this would also facilitate useful links between university subject departments and schools of education.

Subject-specific pedagogy

3.3.9. The points above about access to subject expertise and subject communities clearly apply here too. We would like to highlight that there are important areas of content on subject-specific pedagogy that are not addressed in all courses. For example, despite the importance of understanding common pupil misconceptions and how to address these, our review of course materials suggests that these areas do not always appear to be covered. Our discussions with subject associations and responses in our call for evidence have highlighted lack of coverage of practical work in subjects – for example, practical experiments in science and fieldwork in geography. Our review of course materials highlighted possible gaps in this area. Ofsted has found that more work needs to be done to ensure all secondary trainees are aware of expectations at the end of Key Stage 2 for pupils and are able to draw on this when planning for Year 7s.

Recommendation 1b: Issues in subject-specific pedagogy, such as pupil misconceptions, phases of progression in the subject as well as practical work, should be part of a framework for ITT content. In developing this section of a framework, the sector body should draw on advice from subject associations and learned bodies.

Evidence-based teaching

3.3.10. As teaching schools become more involved in research as well as ITT, we predict evidence-based teaching will become increasingly embedded in schools. However, there is more that could be done to encourage research engagement in the profession.

3.3.11. ITT has a crucial role in instilling the importance of evidence-based teaching in new teachers and giving them the knowledge and skills to access, evaluate and interpret research to apply in their teaching. Our visits to ITT providers and our review of course materials have found that many ITT courses are addressing these issues. We do think, however, that there is more that could be done in this area.

3.3.12. Our review of course materials and visits to providers has suggested that sometimes ITT focuses on trainees conducting their own research, without necessarily teaching trainees the core skills of how to access, interpret and use research to inform classroom practice. In ITT, we consider that the initial priority should be on the latter with careful consideration about how to do the former effectively in the time available. For example, our review of course materials highlighted that important concepts relating to evidence-based teaching (validity, reliability, qualitative and quantitative data, effect sizes, randomised controlled trials) appeared to be covered in only about a quarter of courses. Some providers use assignments that require trainees to carry out their own research as a vehicle to teach trainees these core skills. We feel that in a one year course it can be challenging for trainees to learn how to teach as well as undertaking quality research unless these two areas are skilfully brought together in a way that support each other. The priority for ITT is to support trainees to become intelligent consumers of research who take an evidence based approach to their own practice.

3.3.13. It is important that trainees understand how to interpret educational theory and research in a critical way. There is good evidence to suggest that some false ideas about how children learn are prevalent in education. For example, the OECD (2002), the Wellcome Trust (2014), Sense about Science (Buch, 2014), Paul Howard-Jones (2014), Ben Goldacre (2008) and others (Dekker and others, 2012) have all pointed out that education is susceptible to faddish ‘neuromyths’. There are particular beliefs that have been widely discredited and yet still seem to be very popular in education. A good example of this is the idea of learning styles, which has been thoroughly debunked by many researchers (Coffield (2004), Geake (2008), Kratzig and Arbuthnott (2006), Pashler and others (2008), Riener and others (2010), Sharp and others (2008), but which was praised and recommended in some of the course materials we reviewed. As Geake (2008) says, “A more sceptical approach to educational panaceas could contribute to an enhanced professionalism of the field” (page 123). As such, we believe it is critical that ITT should teach trainees to challenge and evaluate evidence so that new teachers have the skills to navigate this complex landscape.

We make the following recommendations, which we believe would build on existing good practice to ensure that more new teachers become skilled evidence-based practitioners:

Recommendation 1c: Evidence-based teaching should be a part of a framework for ITT content.

Recommendation 6: The Teachers' Standards should be amended to be more explicit about the importance of teachers taking an evidence-based approach. We recognise that there are no current plans to review the Teachers' Standards. However, we feel this issue is of such importance that we strongly recommend that when the standards are eventually reviewed there should be a new standard that emphasises the importance of using evidence to inform teaching.

Recommendation 7: A central portal of synthesised executive summaries providing practical advice on research findings about effective teaching in different subjects and phases should be developed. A future College of Teaching would be well placed to develop this. Trainees and teachers should be able to quickly access up-to-date high quality research that can be interpreted easily to inform their practice. The Education Endowment Foundation's (EEF) Teaching and Learning Toolkit is a good starting point in this area. The EEF toolkit, though, serves a number of purposes besides directly informing classroom practice – its main focus is to identify effective interventions for disadvantaged pupils. We would like to see a central portal that synthesises the most up to date research findings in different subjects and phases and offers practical summaries to teachers.

Recommendation 8: ITT partnerships should make more systematic use of wider expertise outside university departments of education. We believe that providers do not always make use of the full potential of their existing networks. There are many universities that are home to world-leading research and assessment organisations – yet in our experience it can be the case that these organisations are either not involved in ITT or are involved in a superficial way.

Assessment

3.3.14. Of all areas of ITT content, we believe the most significant improvements are needed on training for assessment. The NAHT Commission (2014b) reported the following findings, in relation to training for assessment:

- Teacher training is not of a sufficiently high or rigorous standard. This applied across the board, from the initial teacher training through to ongoing professional development. [...].
- All teachers are not automatically equipped to assess, even though there is an apparent assumption that this is the case.

- Teachers need practical training in assessment methodology and practice and an ongoing programme of CPD [continuing professional development].
- Although the awareness of newly qualified teachers in relation to accountability measures seems to have increased, the same cannot be said for their awareness of assessment practice.
- In part, this is due to some deficiencies in initial teacher training, as well as the inability or unwillingness of schools to be flexible in the approaches when working with trainee teachers. (NAHT Commission, 2014b, page.17)

3.3.15. The commission recommended that:

- “Further work should be undertaken to improve training for assessment within ITT, the NQT induction year and on-going professional development. This will help to build assessment capacity and support a process of continual strengthening of practice within the school system.” (NAHT Commission, 2014b, page.18)

3.3.16. We have found a wide range of evidence to support the NAHT Commission’s findings. For example, the Times Educational Supplement informed the review group that resources to support assessment are the most commonly downloaded from their bank of resources – this might suggest that teachers lack confidence in assessment.

3.3.17. Ofsted inspection reports indicate that there is insufficient attention paid to trainees’ understanding of different types of assessment practice. The 2014 NQT survey (NCTL, 2014) found that “assessing pupils’ progress” was one of the lowest rated aspects of teacher training for primary trainees; “using pupil data to support learning” was the lowest scoring aspect of primary training. One trainee made the following comments about their training:

“My training did not provide me with a 'bigger' picture of assessment. There was a lot of focus on AfL [Assessment for Learning] and how this changes subsequent lessons in the short term. However, I did not know about end of term assessments, tracking, how the data is used in APP meetings and appraisals, how the data reflects the school's progress, how it is used by Ofsted etc. I have learnt this during my induction.” (NCTL, 2014, page 56).

3.3.18. We note that the difference between ratings given by SCITT trained respondents and university trained respondents was greatest in this area, with SCITT trainees more likely to rate their training in assessment as good or very good.

3.3.19. In section 2, we outlined the kind of content we would expect to see on a strong ITT programme. This included issues relating to theories of assessment as well as the technical aspects of assessment. Our discussions with trainees, NQTs, providers and schools, as well as our review of course materials, has highlighted that these issues are hardly ever, if ever at all, covered on ITT programmes. As the quotation above shows schools can provide effective training on how to use data effectively. However, in terms

of covering some of the concepts in assessment that we believe are important (validity, reliability, norm-referencing, criterion referencing), we (like the NAHT commission) believe that there are significant gaps in both the capacity of schools and ITT providers in the theoretical and technical aspects of assessment.

3.3.20. This is a great concern – particularly as reforms to assessment in schools mean that teachers have an increased role in assessment. There are also important links here with the notion of evidence-based teaching. The profession’s ability to become evidence-based is significantly limited by its knowledge and understanding of assessment – how can we effectively evaluate our own practice until we can securely assess pupil progress?

3.3.21. We would like to see schools and teacher educators becoming more rigorously skilled in assessment and we would like to see ITT providing more training in the technical aspects of assessment as well as the purpose of assessment. Given the system-wide lack of expertise and confidence in this area, we make the following recommendation:

Recommendation 1d: Assessment, including the theory of assessment and technical aspects of assessment, should be part of a framework for ITT content.

Recommendation 9: Alongside a central portal on evidence-based practice, **a central repository of resources and guidance on assessment should be developed**. This would support the learning of trainees, as well as practicing teachers and teacher educators. Again, a future College of Teaching would be well placed to develop this, in partnership with expert organisations in assessment.

Child and Adolescent Development

3.3.22. In section 2, we outlined the importance of new teachers having a grounding in child and adolescent development. Based on our conversations with providers, schools and professional bodies, we know that this idea is welcomed by the sector. However, experts like those from school-based mental health organisation Place2Be and the Consortium of Emotional Wellbeing in Schools have highlighted a lack of training in child development. There is evidence to suggest that though there is a widespread perception amongst teachers in England that, although they believe they have a duty to help identify and support pupils with mental health problems, they feel inadequately prepared to do so (Rothi and others, 2008). Our review of course materials similarly found that while child development was generally well-covered on primary courses, it lacked coverage on secondary courses.

Recommendation 1e: Child and adolescent development should be included in all age phases within a framework of core ITT content.

Behaviour Management

3.3.23. Our discussions with trainees and NQTs have confirmed that learning how to manage behaviour effectively in their classrooms is one of their highest priorities. In the 2014 NQT survey (NCTL, 2014), behaviour management training was one of the most highly rated aspects of training. We note, however, Owen and others' (2009) longitudinal study that looked at how teachers' perceptions of their training changed from the beginning of their first posts and five years into their careers. The study found that teachers' perceptions of their training on behaviour management and dealing with indiscipline deteriorated the most between completion of training and two months into teaching. It dropped from around three quarters to around half of NQTs being satisfied with the training they had received.

3.3.24. In our discussions with ITT providers, however, some have told us that "behaviour management cannot be taught" and "trainees need to develop their own strategies – we can't tell them what to do". We agree that behaviour management is not a straightforward area where we can give trainees simple answers. We do, however, feel that in all programmes there is a need for more practical and specific advice on managing behaviour – what strategies are likely or unlikely to work. This would include classroom presence, use of voice, body language, as well as how to develop and establish classroom routines and defuse situations. We believe new teachers should start their careers armed with tangible strategies and techniques to draw upon. We have seen some excellent practice in this area, where trainees are given practical advice which they appreciate at the start of their teaching career, as well as an initial understanding of common causes of misbehaviour. We believe that this practice should be more systematic and widespread.

Recommendation 1f: Managing pupil behaviour should be included in a framework for ITT content, with an emphasis on the importance of prioritising practical approaches throughout programmes.

Special Educational Needs and Disabilities (SEND)

3.3.25. Throughout this review, a number of organisations have raised concerns with us about how ITT inadequately prepares new teachers to address SEND in the classroom. In our call for evidence, several responses highlighted findings from the Salt Review (Salt, 2010) which reported that:

- Coverage of SEN and disability within ITT programmes is varied, with particular pressure on the time available one year ITT programmes

- The provision of school-based training for trainees in special schools and settings also varies and there is a need to increase the opportunities for school-based training and placements in those settings

3.3.26. The Communication Trust also highlighted that there is evidence that new teachers do not have the skills, knowledge or confidence to identify children who are struggling or address their speech, language and communication needs. Our review of course materials suggested that speech, language and communication needs are only covered in a small minority of courses. The British Dyslexia Association has similarly highlighted a lack of coverage in ITT on dyslexia.

3.3.27. In the 2014 NQT survey (NCTL, 2014) the percentage of primary trainees who rated their training for teaching pupils with special educational needs as good dropped by 5%. There has been a longer term increase in the proportion of positive responses since 2010, but SEND remains one of the lowest rated aspects of training for primary trainees.

3.3.28. We have identified training in how to work with other professionals to support children with SEND (SENCos, social workers, educational psychologists) as an important characteristic of effective ITT – however, we only found evidence of this in course materials in just over a third of courses.

3.3.29. We acknowledge that it can be challenging to address SEND within ITT programmes, particularly those which are one-year-long. However, we feel there is too much variability across the system in what is covered on SEND.

Recommendation 1g: Special educational needs and disabilities should be included in a framework for ITT content. This should prepare all new teachers to support SEND in their classrooms, providing a solid grounding in the most pertinent issues and setting an expectation for on-going high quality professional development.

3.3.30. Given the challenge of addressing ITT comprehensively within shorter ITT programmes, we believe more providers and alliances should make use of special schools and mainstream schools with specialist resourced provision to provide specialised learning experiences for trainees. We also welcome the development of a SEN in ITT pathway pilot, which allows trainees to specialise in SEND during their training.

Recommendation 10: Wherever possible, all ITT partnerships should build in structured placements for trainees in special schools and mainstream schools with specialist resourced provision – ideally, trainees should have opportunities for assessed placements.

3.4. ITT course delivery across the system

Mentoring

3.4.1. As highlighted in section 1, we know that the quality of mentoring is critically important. However, evidence suggests that mentoring across England is not as good as it should be (Hobson and Malderez, 2013). One study has criticised the inconsistent quality of ITT, noting that not enough policy attention is given to the role of mentors and that poor retention and recruitment of mentors impacts significantly on quality of training (Margo and others, 2008). These findings were confirmed by our visits to ITT providers, where the methods for identifying or recruiting mentors, training and quality assuring mentoring were variable. Ofsted reports identify variations in the quality of mentoring and where specific aspects of mentoring are a weakness. They also highlight that providers should pay greater attention to mentor training. They should also measure the impact of mentor training on the quality of mentoring and trainee outcomes more rigorously.

3.4.2. Given the importance of mentoring, we feel that it should have much greater status and recognition, within schools and within the ITT system as a whole. We have found that the ITT system seems to rely on the good will of mentors themselves. It is true that the mentors benefit from the process of mentoring – many mentors have told us that mentoring provides an excellent opportunity for professional development. We also know that many mentors undertake mentoring because of a sense of professional duty and because they enjoy it. However, the system should not rely purely on this good will or limited time to fulfil the role effectively.

3.4.3. Given our evidence of variability in how mentoring is funded and resourced, how mentors are selected and how mentors are trained, we make the following recommendations to ITT partnerships:

Recommendation 11: ITT partnerships should ensure all trainees experience effective mentoring by:

- i. **selecting and recruiting mentors who are excellent teachers**, who are able to explain outstanding practice (as well as demonstrate it)
- ii. **providing rigorous training for mentors** that goes beyond briefing about the structure and nature of the course, and focusses on how teachers learn and the skills of effective mentoring
- iii. **considering whether they are resourcing mentoring appropriately**, either through ensuring mentors receive sufficient time to perform the role or by offering remuneration – the resource allocated to mentoring should reflect the importance of the role

3.4.4. We stop short of recommending that DfE should make any of these processes mandatory. We are wary of central government requirements that could become bureaucratic burdens for ITT partnerships. We do think, however, that the role of the mentor should have greater status and that the qualities of effective mentors should be better understood across the system. As such, we make the following recommendation:

Recommendation 12: DfE should commission a sector body, for example the Teaching Schools Council, to develop some national standards for mentors. These would be used for self-evaluation and would not be mandatory. These would be designed to create a shared understanding of good mentoring.

Partnership

3.4.5. Our consultation with ITT providers and schools has highlighted the benefits to all partners in being involved in an ITT partnership. There are particular benefits for schools in partnering with one another: opportunities to bring fresh ideas; opportunities to evaluate school performance through peer-to-peer review; opportunities to employ new teachers; opportunities for succession management; and a mechanism for staff to contribute their expertise beyond their own school. In addition, by working together schools can create an education community of thought and practice emphasising that ideas can, and should, be shared for the good of all children.

3.4.6. One of the key decisions made by any school is the employment of staff. Working together on ITT can create a threat-free environment from which genuine alliances thrive and even the smallest school can access these benefits.

3.4.7. There are a number of ways that schools can work together in partnership. Teaching School Alliances (TSAs) offer a tremendous opportunity for schools to work together to create the learning communities outlined above. There are already around 600 teaching schools with a good geographical spread. Besides ITT, TSAs are also responsible for professional development, supporting other schools, identifying and developing leadership potential, deploying specialist leaders in education and research and development. Many are now mature alliances that support schools in difficulty whilst at the same time supporting and initiating research into best practice. The breadth of experience that has, and is, developed in TSAs makes them ideal partners for all schools.

Recommendation 13: All schools should, whenever practically possible, seek out and participate in robust local partnership arrangements, such as Teaching School Alliances. In a school-led system, this recommendation is naturally the responsibility of schools.

Academic Awards in ITT

3.4.8. We have seen many strong, robust partnerships across the system. These are characterised by an emphasis on a common sense of purpose, clear management structures and equality within the partnership with every member contributing and being valued for their contributions.

3.4.9. As set out in the ITT criteria, partnerships should be led by schools or include schools as part of the leadership team alongside universities or others. Ofsted has found that more should be done to ensure the engagement of partnership schools in steering the strategic direction of some ITT partnerships.

3.4.10. In a school led system, schools must be at the very heart of ITT and should play a leading role in course design and delivery. It is important that schools that choose to work with a university make this decision based upon the genuinely recognised potential that pooling expertise and experience brings.

3.4.11. The highest quality courses equip trainees to be critically reflective and this is not exclusive to either PGCE or QTS- only routes (or any other academic award). We have seen evidence that the best courses, be they PGCE based, undergraduate or QTS only, offer an academically rigorous and highly effective introduction to the classroom. However, we have found graduates perceive PGCE courses (and other academic awards) as having more status and are more likely to be academically rigorous. They also prefer them because more often they come with Masters credits and are more easily transferable to teach abroad. We are concerned that there may be a misconception among trainees that perceive the gaining of a PGCE as more important than gaining QTS when, of course, it is the status of QTS that qualifies a teacher.

3.4.12. It is important to be clear that there is a distinction between an academic award, which has academic credits associated with it and a status, which is a licence to practise, achieved through demonstration of the ability to successfully meet the Teachers' Standards. University provider ITT programmes will therefore have both academic and professional components and awards.

3.4.13. For many years there was no need to disentangle the two kinds of entity as they were all ultimately delivered by a single institution - the university. When other bodies that were not universities (such as School Centred Initial Teacher Training providers (SCITTs)) were introduced it became necessary for some providers to more formally separate QTS (the status) from PGCE (the academic award) for post-graduate ITT (there is no school-led option for undergraduate ITT). This was necessary for those SCITTs that wanted to offer a PGCE - see below for more on this. In order to do this they needed to work with a university partner who could, in some form, award the academic award while the SCITT ultimately held responsibility for supporting and recommending QTS.

3.4.14. A further degree of complexity is found in the fact that PGCE is a term that needs to be explicitly and comprehensively defined as it can be at both level 6 and level

7. At level 6 it is the equivalent of graduate level - the highest level achieved on most undergraduate degrees. This award is entitled 'Professional Graduate Certificate of Education'. At level 7 it is at Masters level and is entitled 'Postgraduate Certificate of Education. Confusingly both awards have the same acronym - PGCE. The situation is made even more confusing by the fact that the PGCE (at both levels) has very varied amounts of academic credit associated with it, depending on the awarding university. We have found that these vary from 30 to 120 credits, with the majority being 60. This variation makes it very difficult for schools and potential ITT applicants to understand what are the consistent components of a variety of awards with the title PGCE regardless of the university or SCITT/university partnership that is offering it.

3.4.15. As SCITTs have developed their expertise and experience and as current policy has encouraged the creation of more SCITTs it has become increasingly apparent that the university system has responded to this in a wide variety of ways.

3.4.16. As much of the evidence we have surveyed has indicated - there are great potential benefits to schools and universities working together and sharing the distinctive types of expertise they bring to the maximum benefit of trainees, and ultimately of pupils. We have seen many examples of this creating a very powerful learning experience for all involved.

3.4.17. In some cases, however, the involvement of the university in the delivery and assessment of the PGCE is extremely minimal. While this is likely to be because the university in question has robust evidence that the SCITT provider is very capable of delivering all aspects of both the QTS and PGCE elements, it has created an anomaly and potential barrier to the school-centred system. It is clearly unsatisfactory if a SCITT feels compelled to work with a university simply for the sake of being able to award a PGCE without feeling they benefit from the partnership in any other way.

3.4.18. We have learnt from the Quality Assurance Agency (QAA) that institutional audits do not closely focus on ITT programmes in detail because they are subject to Ofsted inspections. However, Ofsted inspections focus on QTS. There could therefore be a potential weakness in the quality assurance of Masters credits that has led to this inconsistency across the system. We feel this needs to be addressed. We would prefer to see a level playing field in ITT which supports genuine partnerships between schools and universities.

Recommendation 14: Building on the development of school-led ITT, DfE should work in collaboration with the sector (all those involved in ITT) to consider the way in which teachers gain qualified teacher status (QTS) with a view to strengthening what has become a complex and sometimes confusing system. We would like applicants to understand that QTS is the essential component of ITT and that a PGCE is an optional academic qualification.

Selecting trainees - Professional Skills Tests

3.4.19. Many providers have argued that the professional skills tests (skills tests) are not useful tests of subject knowledge. We note that the tests are not, in fact, intended to examine subject knowledge but are supposed to consider applicants' aptitude in literacy and numeracy for performing the wider duties of a teacher. Many providers and trainees, however, have argued that these tests are not fit-for-purpose and can lead to otherwise good candidates being lost.

Recommendation 15: DfE should undertake a review of the effectiveness of the skills tests in selecting high quality trainees.

Linking ITT with professional development

3.4.20. We are clear that ITT without further professional development is not sufficient to create excellent teachers. Schools, teachers, former trainees and providers have all told us that the link between ITT and professional development is often weak in the system. Ofsted has also found that insufficient attention is paid to a smooth transition between initial training, induction and employment. We have found that new teachers' on-going areas for development are rarely systematically identified and developed over the NQT year and into early career development. We hope that Ofsted's two-stage inspection of ITT, where the quality of former trainees' teaching is considered once they have started teaching, will support the strengthening of this link. We also welcome the recent announcements by the DfE in relation to professional development and hope the on-going work particularly considers early professional development and the critical link between ITT and further professional development.

4. Making informed choices

4.1. Clarity of information for applicants to ITT

4.1.1. Applicants must have access to clear information about routes into teaching and the range of courses available in order for them to be intelligent consumers of ITT provision. It is clear from the evidence we have gathered from potential applicants, trainees, schools and ITT providers that the current picture is confusing. This is a concern - not only because it prevents applicants choosing the best courses for them but also because a confusing entry point could deter strong applicants.

4.1.2. It is clear from the evidence we have gathered that some trainees have been confused about the difference between the various routes into teaching, despite having sought information from the “Get into Teaching” website. There is a lot of information about courses and providers but it is difficult for people to compare measures of success and quality between them.

4.1.3. The Fellowship Programme of National Leaders of Education (NLEs) contributed to our call for evidence. They also noted the issues around the lack of availability of information.

4.1.4. Conversations with trainees and NQTs the review group met while visiting ITT providers and schools across the regions show that:

- Choice of school and provider were often made on the basis of location (with travelling distance and affordability highly interlinked), followed by whether the school or provider had a good reputation
- Some candidates had investigated the routes in great detail and were certain their chosen route was the most suitable for them, but some candidates were generally confused by the differences
- Applicants value the opportunity to speak to providers face to face, and often many take the opportunity to visit on open days

4.1.5. There are misconceptions about the experience that various routes into teaching may provide. For example, some applicants assumed that university-led courses are more academically rigorous (this is not necessarily the case as both university and school-led programmes are governed by the same regulations and all work towards the same Teachers’ Standards). Other applicants held a misconception that choosing a School Direct course meant they would only be trained in one school (in fact, all courses are subject to the same requirement to ensure all trainees have taught in at least two schools).

4.1.6. We believe that applicants should be making informed choices about their ITT programmes. In order to do this, they should have a clear understanding of the routes on offer; they should also be able to compare easily providers against a range of factors.

These factors should include those we know they are interested in (for example, location and any qualifications offered) as well as other factors that can support informed choices, including: quality of provision (defined by Ofsted), NQT survey results, employment data and trainee completion data.

4.1.6 We welcome the improvements to the “Get into Teaching” website which has made the different routes into teaching easier to understand. We also welcome the work NCTL are undertaking more generally to correct misconceptions in the system. A helpful myth-busting document can be accessed [here](#).

Recommendation 16: In order for applicants to make well informed decisions when choosing a course, **we recommend the development and expansion of the NCTL’s “Get into Teaching” website**. This should signpost information that applicants might consider when choosing a course, for example: provider Ofsted rating and inspection report; completion rates; NQT survey results; and employability rates.

4.2. Clarity of information for schools choosing to work with ITT providers through School Direct

4.2.1. It is important that all schools are able to access information about how to get involved with ITT to improve choice in the system. It is also important that all School Direct schools are able to access information about the full range of providers when looking to identify a partner, so they can make well informed choices about whom they work with.

4.2.2. In our conversations with schools, they have told us it can be difficult to find information about providers of ITT. Schools have also told us that they are not always aware of the presence of new and smaller providers in their localities.

4.2.3. Based on conversations we have had with schools seeking to work with ITT providers through School Direct and the responses to the call for evidence:

- many schools seeking a partner ITT provider have said that information available is confusing and partial
- some respondents described information about cost and finance particularly difficult to access
- schools value having face-to-face discussions with partner providers
- identifying partners who will be flexible and willing to be genuine partners is important
- some said that providers should be required to publish set information in a set format on their websites

4.2.4. We received a contribution to our call for evidence from a working group who interviewed 300 headteachers in the East of England, with varying degrees of involvement in ITT. The consultation aimed to determine the critical information that schools would want when searching for a possible partner. Their results chime with our findings. Information that schools said would be most helpful include:

- Performance and data of schools
- Location and details of partners
- Finance
- Course content
- Ethos and trainee support

4.2.5 Some of the information schools seek to support their choices about partner providers is best sought through direct communication with providers and certain types of information could not be held centrally. We do believe, however, that more could be done to support schools in signposting helpful information.

Recommendation 17: In order for schools to find out how to get involved with ITT and make well-informed decisions about the partners they work with, **we recommend that the DfE develop a page on the Gov.uk website to signpost information that schools should consider when making choices about a partner provider**, including, for example: provider Ofsted ratings and inspection reports; completion rates of trainees; and employability rates.

Promoting ITT

4.2.6. Schools are an important focal point for ITT and they can all play a role in supporting the recruitment of trainees. We have seen some examples of innovative practice in this area; the New Essex Teaching School Network delivers a “Teacher Apprentice Scheme” where young adults are recruited to a two-year advanced level apprenticeship before their undergraduate degree. This scheme allows those interested in teaching to gain some practical experience before their studies. We are not suggesting that all schools should offer schemes like this but every school should see recruitment to the profession as part of their responsibilities. At the very least, schools should ensure that clear information about how to train is readily available.

Recommendation 18: Schools should make clear information about how to train readily available on all school websites and at other public communication points (such as school reception areas). It would be for schools to take this recommendation forward.

Summary of Recommendations

Recommendation 1: DfE should commission a sector body (for example, the Teaching Schools Council, a future professional body (College of Teaching), or another sector body) to develop a framework of core content for ITT. We believe that a framework of the essential elements of core content would build a stronger shared understanding of good ITT content meaning that trainees will have a more consistent experience. We also feel it is critical that a framework is developed by the sector, rather than by central government. Though we have not aimed here to set out exactly what should be in the framework, we feel that the areas outlined in section 1 offer a good starting point (we have included this as an Annex in this report). We would like the framework to be informed by the areas for improvement we outline in this report, as highlighted in the following sub-recommendations:

1a: Subject knowledge development should be part of a future framework for ITT content.

1b: Issues in **subject-specific pedagogy**, such as pupil misconceptions, phases of progression in the subject as well as practical work, should be part of a framework for ITT content.

1c: Evidence-based teaching should be part of a framework for ITT content.

1d: Assessment, including the theory of assessment and technical aspects of assessment, should be part of a framework for ITT content.

1e: Child and adolescent development should be included within a framework of core ITT content.

1f: Managing pupil behaviour should be included in a framework for ITT content; with an emphasis on the importance of prioritising practical advice throughout programmes.

1g: Special educational needs and disabilities should be included in a framework for ITT content.

Recommendation 2: All ITT partnerships should:

- i. rigorously audit, track and systematically improve subject knowledge throughout the programme
- ii. ensure that changes to the curriculum and exam syllabi are embedded in ITT programmes
- iii. ensure that trainees have access to high quality subject expertise
- iv. ensure that trainees have opportunities to learn with others training in the same subject

Recommendation 3: Schools should include subject knowledge as an essential element of professional development.

Recommendation 4: DfE should make funded in-service subject knowledge enhancement courses available for new primary teachers to access as professional development.

Recommendation 5: Universities should explore offering “bridge to ITT” modules in the final years of their subject degrees for students who are considering ITT programmes.

Recommendation 6: The Teachers’ Standards should be amended to be more explicit about the importance of teachers taking an evidence-based approach.

Recommendation 7: A central portal of synthesised executive summaries, providing practical advice on research findings about effective teaching in different subjects and phases, should be developed. A future College of Teaching would be well placed to develop this.

Recommendation 8: There are many universities that are home to world-leading research and assessment organisations – yet in our experience it can be the case that these organisations are either not involved in ITT or are involved in a superficial way. **ITT partnerships should make more systematic use of wider expertise outside university departments of education.**

Recommendation 9: Alongside a central portal on evidence-based practice, **a central repository of resources and guidance on assessment should be developed.**

Recommendation 10: Wherever possible, all ITT partnerships should build in structured and assessed placements for trainees in special schools and mainstream schools with specialist resourced provision.

Recommendation 11: ITT partnerships should ensure all trainees experience effective mentoring by:

- i. selecting and recruiting mentors who are excellent teachers, who are able to explain outstanding practice (as well as demonstrate it)
- ii. providing rigorous training for mentors that goes beyond briefing about the structure and nature of the course, and focusses on how teachers learn and the skills of effective mentoring
- iii. considering whether they are resourcing mentoring appropriately – the resource allocated to mentoring should reflect the importance of the role.

Recommendation 12: DfE should commission a sector body, for example the Teaching Schools Council, to develop some national standards for mentors.

Recommendation 13: All schools should, whenever practically possible, seek out and participate in robust local partnership arrangements. In a school-led system, this recommendation is naturally the responsibility of schools.

Recommendation 14: Building on the development of school-led ITT, DfE should work in collaboration with those involved in ITT to consider the way in which teachers qualify with a view to strengthening what has become a complex and sometimes confusing system. We would like applicants to understand that QTS is the essential component of ITT and that a PGCE is an optional academic qualification.

Recommendation 15: DfE should undertake a review of the effectiveness of the skills tests in selecting high quality trainees.

Recommendation 16: In order for applicants to make well informed decisions when choosing a course, we recommend the development and expansion of the NCTL's "Get into Teaching" website. This should signpost information that applicants might consider when choosing a course, for example: provider Ofsted rating and inspection report; completion rates; NQT survey results; and employability rates.

Recommendation 17: In order for schools to find out how to get involved with ITT and make well-informed decisions about the partners they work with, we recommend that the DfE develop a page on the Gov.uk website to signpost information that schools should consider when making choices about a partner provider, including, for example: provider Ofsted ratings and inspection reports; completion rates of trainees; and employability rates.

Recommendation 18: Schools should make clear information about how to train readily available at all school reception areas and a link to recruitment appointments on all school websites. It would be for schools to take this recommendation forward.

Annex: The beginnings of a framework for ITT content

We have recommended that a sector-body should be commissioned to develop a framework of core content for ITT. Though we have not aimed here to set out exactly what should be included in a framework, we feel that our review has identified some areas that could offer a strong starting point. These are set out below:

- **Subject knowledge development** – ITT should address core content knowledge in teaching subjects with appropriate rigour, including the definition and scope of the subject, why it matters and the concepts that underpin it (at both primary and secondary level).
- **Subject-specific pedagogy** – ITT should address subject-specific issues such as: phases of progression within the subject; common misconceptions in the subject; linkages between subjects; and, most importantly, how to make it accessible and meaningful to learners at different abilities and stages of development.
- **Evidence-based teaching** – ITT should instil an evidence-based approach to teaching by inducting new teachers in where and how to access relevant research, how to evaluate and challenge research findings, how this can be applied to classroom practice, as well as why using research matters.
- **Child and adolescent development** – ITT should provide new teachers with a grounding in child and adolescent development, including emotional and social development, which will underpin their understanding of other issues such as pedagogy, assessment, behaviour, mental health and SEND. ITT should also introduce new teachers to strategies for character education and supporting pupil wellbeing.
- **Behaviour Management** – This should be a central element in any ITT programme, equipping new teachers with practical strategies and knowledge to deal with pupil behaviour effectively and create a positive climate for learning.
- **Planning** – This is a central element of any effective ITT programme, which should equip trainees to plan effectively from day one, teaching them evidence-based and established techniques in planning and how to plan efficiently by using and building on existing resources.
- **Assessment** – ITT should equip new teachers to be confident in assessing pupil progress, using summative as well as formative approaches. ITT should also introduce new teachers to important concepts in assessment (such as validity, reliability, norm referencing and criterion referencing). New teachers should be taught how to work with pupil data (for example, using data in their planning or target setting).
- **Differentiation** – ITT should equip teachers so they can ensure that all pupils in the class, including lower and higher achievers, should make progress and keep pace with the curriculum.

- **Special Educational Needs and Disabilities (SEND)** – ITT should prepare all new teachers to support SEND in their classrooms, providing a solid grounding in the most pertinent issues and setting an expectation for on-going high quality professional development.
- **Professionalism** – As implied by the Teachers' Standards, ITT should cover the professional role of the teacher explicitly, covering the wider responsibilities of a teacher, including important issues such as working with parents and carers as well as other professionals. We believe it is also important that ITT includes explicit content on resilience and time management.

Glossary of Abbreviations

BERA	British Educational Research Association
DfE	Department for Education
EAL	English as an additional language
EEF	Education Endowment Foundation
IFS	Institute for Fiscal Studies
ITT	Initial Teacher Training
ITE	Initial Teacher Education
NAHT	National Association of Head Teachers
NCTL	National College for Teaching and Leadership
NQT	Newly Qualified Teacher
Ofqual	The Office of Qualifications and Examinations Regulation
Ofsted	Office for Standards in Education
PGCE	Postgraduate Certificate in Education
PRU	Pupil Referral Unit
QAA	Quality Assurance Agency
QTS	Qualified Teacher Status
RI	Requires Improvement
RSA	The Royal Society for the encouragement of Arts, Manufactures and Commerce
RQT	Recently Qualified Teacher
SCITT	School Centred Initial Teacher Training
SENCo	Special Educational Needs Coordinator
SEND	Special Educational Needs and Disabilities
SKE	Subject Knowledge Enhancement
SLE	Specialist Leader in Education

TIMSS Trends in International Mathematics and Science Study

TSA Teaching School Alliance

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List of References

- Allen R, Belfield C, Greaves E, Sharp C, and Walker M. (2014) '[The Costs and Benefits of Different Initial Teacher Training Routes](#)' (Viewed on 11 December 2014)
- Association of School and College Leaders (ASCL). (2014) '[Response to the Carter Review of Initial Teacher Training](#)' (Viewed on 11 December 2014)
- Association of Teachers and Lecturers (ATL). (2014) '[Carter Review of Initial Teacher Training \(England\): Call for Evidence](#)' (Viewed on 11 December 2014)
- Barmby PW. (2006) 'Improving teacher recruitment and retention: the importance of workload and pupil behaviour' Educational research, 48 (3), pages 247-265
- BERA. (2014) '[Research and the Teaching Profession](#)' (Viewed on 11 December 2014)
- Buch P. (2014) '[Neuromyths and why they persist in the classroom](#)' (Viewed 11 December 2014)
- Burn K and Mutton T. (2013) '[Review of 'research-informed clinical practice' in Initial Teacher Education](#)' (Viewed on 11 December 2014)
- Coe R, Aloisi C, Higgins ST and Major LE. (2014) '[What makes great teaching? Review of the underpinning research](#)' (Viewed on 11 December 2014)
- Coffield F. (2004) 'Learning and Skills Research Centre (Great Britain), and others Should we be Using Learning Styles? What Research has to say to Practice' Learning and Skills Research Centre.
- Dekker S, Lee NC, Howard-Jones P and Jolles J. (2012) 'Neuromyths in Education: Prevalence and Predictors of Misconceptions among Teachers' Front Psychol. 2012; 3: 429
- DfE. (2011) '[Teachers' Standards](#)' (Viewed on 11 December 2014)
- DfE. (2013) '[Evaluation of Subject Knowledge Enhancement Courses, Annual Report – 2011-12, Research Report](#)' (Viewed on 11 December 2014)
- DfEa. (2014) '[Initial teacher training: trainee number census - 2014 to 2015](#)' (Viewed on 11 December 2014)
- DfEb. (2014) 'SEND Code of Practice' (Viewed on 11 December 2014)
- Dudley P. (2011) '[Lesson Study: a handbook](#)' (Viewed on 11 December 2014)
- Geake J. (2008) 'Neuromythologies in education' Educational Research 50.2, Pages 123-133
- Goldacre B. (2008) 'Bad Science' Fourth Estate

Hill HC, Rowan B, and Ball DL. (2005). 'Effects of Teachers' Mathematical Knowledge for Teaching on Student Achievement' American Educational Research Journal 42(2), Pages 371-406

Hobson AJ and Malderez A. (2013) 'Judgementoring and other threats to realizing the potential of school-based mentoring in teacher education' International Journal of Mentoring and Coaching in Education 2(2), Pages 89-108

Hobson AJ, Malderez A, Tracey L, Homer MS, Patricia A, Mitchell N, McIntyre J, Cooper D, Roper T, Chambers GN, and Tomlinson PD. (2009). [Becoming a Teacher. DCSF Research Report Number DCSF-RR115](#) (Viewed on 11 December 2014)

Howard-Jones P. (2014) 'Neuroscience and education: myths and messages' Nature Reviews Neuroscience. Advanced Online Publication, published online 15 October 2014

Kratzig GP and Arbuthnott KD. (2006) 'Perceptual learning style and learning proficiency: A test of the hypothesis' Journal of Educational Psychology; 98: 238–246.

Lee W. (2013) [A Generation Adrift](#) The Communication Trust (Viewed on 11 December 2014)

Margo J, Benton M, Withers K, and Sodha S, and Tough S. (2008) 'Those who can?' Institute for Public Policy Research

Mullis IVS, Martin MO, Foy P, and Arora A. (2012). [TIMSS International Results in Mathematics](#) International Study Center, Boston College (Viewed on 11 December 2014)

NAHT. (2014a) [Appendix 2 – NAHT teacher recruitment survey](#) (Viewed on 11 December 2014)

NAHT. (2014b) [Report of the NAHT Commission on Assessment](#) (Viewed on 11 December 2014)

NCTL. (2014) [Newly Qualified Teachers: Annual Survey 2014](#) (Viewed on 11 December 2014)

OECD. (2002) [Understanding the brain: Towards a learning science](#) (Viewed on 11 December 2014)

Ofsted. (2014) 'Initial teacher education inspections and outcomes, Sept 2013 - Aug 2014' (Viewed on 11 December 2014)

Owen K, Broadhurst K and Keats G. (2009) ['Sink or Swim? Learning Lessons from Newly Qualified and Recently Qualified Teachers: A study examining how initial teacher training and in-school support prepares teachers for their careers'](#) (Viewed on 11 December 2014)

Pashler H, McDaniel M, Rohrer D, and Bjork R. (2008) 'Learning styles concepts and evidence' Psychological science in the public interest 9.3: pages 105-119

Reeves RV, Venator J and Howard K. (2014) '[The Character Factor: Measures and Impact of Drive and Prudence](#)' (Viewed on 11 December 2014)

Riener C, and Willingham D. (2010). 'The myth of learning styles' Change: The magazine of higher learning 42.5: pages 32-35

Rothi DM, Leavey G, and Best R. (2008). 'On the front-line: Teachers as active observers of pupils' mental health' Teaching and Teacher Education 24, pages 1217–1231

Sadler PM, Sonnert G, Coyle HP, Cook-Smith N, and Miller JL. (2013). 'The influence of teachers' knowledge on student learning in middle school physical science classrooms.' American Educational Research Journal 50(5), pages 1020-1049

Sahlberg P, Broadfoot P, Coolahan J, Furlong J, and Kirk G. (2014) '[Aspiring to Excellence, Final Report of the International Review Panel on the Structure of Initial Teacher Education in Northern Ireland](#)' (Viewed on 11 December 2014)

Salt T. (2010) '[Salt Review: Independent Review of Teacher Supply for Pupils with Severe, Profound and Multiple Learning Difficulties \(SLD and PMLD\)](#)' (Viewed on 11 December 2014)

Smithers A and Robinson P. (2013) '[The Good Teacher Training Guide](#)' (Viewed on 11 December 2014)

Sharp JG, Bowker R and Byrne J. (2008) 'VAK or VAK-uous? Towards the trivialisation of learning and the death of scholarship' Research Papers in Education 23, pages 293–314

Stigler J and Hiebert J. (1999). 'The Teaching Gap' The Free Press

The Wellcome Trust. (2014) '[How neuroscience is affecting education](#)' (Viewed on 11 December 2014)

The Wellcome Trust. (2012) '[Summary Report: Subject Knowledge in Secondary Science Initial Teacher Training](#)' (Viewed on 11 December 2014)

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