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Teaching on insecure foundations? Pre-service teachers in England's perceptions of the wider curriculum subjects in primary schools

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ABSTRACT

Subject marginalisation is an on-going concern across the primary education sector, particularly for the arts and humanities. This poses issues for pre-service teacher partnerships and for higher education institutions (HEIs) evaluating the role of subjects within their teacher training courses as they reform their curricula to prepare students to teach across diverse educational contexts. Through the interpretation of student voice, we disseminate a case study with primary initial teacher education (ITE) students that investigates learner perceptions of their training in under-represented foundation subjects. Emerging themes include tensions between university and school-based practices, and between curriculum models, together with the need to develop student adaptability and self-direction. The authors propose that if ITE students explore and take on the dispositions of changemakers, they will become equipped with the self-efficacy and adaptability needed to develop secure bases for teaching foundation subjects as they begin their careers.

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Introduction and rationale

This study examines the development of student expertise in teaching the foundation subjects within a university-based initial teacher education (ITE) course. Subject marginalisation is an on-going concern across the education sector, particularly for the arts and humanities (Barnes & Scoffham, 2017; Duncombe, Cale, & Harris, 2018; Griggs & Randall, 2019; Hall & Payne, 2018). From September 2019, English schools have been working to a new Ofsted inspection framework, which requires that they consider their curriculum in terms of breadth and depth (Ofsted, 2019c). It is therefore timely to consider how ITE and school partnerships can better facilitate opportunities for students in the foundation subjects, and to increase the synergy between national frameworks, schools and higher education institution (HEI) partnerships. Whilst acknowledging that there are many routes into teaching, this study focuses upon a university-based training route. The ITE student voice is analysed to explore the opportunities presented in schools

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and at university to teach and learn about foundation subjects. Data is drawn from a final-year student cohort on a three-year undergraduate BA Primary Education (QTS) programme for teacher education. The data is examined in relation to curriculum content literature and policy in the national context (Foster, 2019; Rollnick & Mavhunga, 2016), and positioned alongside some international perspectives that highlight the need to transform teacher education in light of current cultural, social and political shifts (Lopez & Olan, 2018; Mutton, Burn, & Menter, 2017). We evaluate student perceptions of the impact of these opportunities in relation to their subject content knowledge (SCK) and pedagogical content knowledge (PCK). Emerging themes include tensions between university and school-based practices, and between curriculum models, together with the need to develop student adaptability and self-direction (Granziera, Collie, & Martin, 2019). The development of changemaker attributes and dispositions amongst ITE students is recommended to facilitate such transformation, taking the view that changemakers are students who take initiative to explore problems sustainably and with the interests of all at the centre (Alden Rivers, Armellini, & Nie, 2015).

Aims and objectives

Focusing on a three-year undergraduate primary education degree course with specialisms, this study aims to explore opportunities to learn to teach foundation subjects.

Objectives:

(1) To investigate opportunities for ITE students to teach the foundation subjects of geography, history, art, computing and physical education.
(2) To examine ITE student perceptions of their opportunities to teach foundation subjects.
(3) To evaluate the impact of these opportunities and perceptions in relation to broader contexts.

As a matter of process within our university, we analyse how often ITE students teach the curriculum subjects during each year of their course. This data provides an overview of their engagement in teaching foundation subjects in schools. Our baseline data informing this study is drawn from a review of undergraduate ITE students in 2016/17. In 2016/17, 39% (n = 126) of students responded to a curriculum audit. The results indicate that the percentage of students who taught foundation subjects was generally low, ranging from 40% who taught computing, 45% geography and 52% history. In contrast, 100% of students taught mathematics. This highlights students' lack of experience in applying the research-informed subject teaching principles gained at university within the classroom, prior to entering the profession. The data differs from other international models of primary pre-service teacher education. For example, in Singapore, all primary pre-service teachers train to teach one or two specialist subjects (Ministry of Education [MOE], 2020) and encounter subject specialist teacher expertise and specialist teaching opportunities throughout their in-service training. However, despite a focus on specialisation in the training phase and regulation of teacher distribution by the Ministry of Education, teacher shortages in certain subjects and schools still occur in Singapore, as with other international locations.

Building on this preliminary analysis, we undertook a more detailed explorative study of the Year 3 ITE student cohort in 2018–19. The aim was to review student opportunities and perceptions in relation to teaching and learning the foundation subjects. We also sought to examine underlying issues such as cross-curricular teaching and student teacher confidence, and to share students' potential solutions to the issues they identified.

Conceptual framework

Since the implementation of the English National Curriculum in the United Kingdom in 1988, primary school teachers have been called upon to deliver over 10 different subjects (DfE, 2013). Within each school setting, they typically take responsibility for leading one or more subject areas. After the introduction of primary league tables in 1996, the three core subjects – mathematics, English and science – gained significance, whereas that of the foundation subjects diminished (Barnes & Scoffham, 2017). This trend was exacerbated by the phasing out of Local Education Authority (LEA) support for subject leaders through a team of LEA advisory teachers (Griggs & Randall, 2019). Another influence on foundation subject expertise was the phasing out of the requirement for ITE students to have a subject specialism in addition to their general training (DfES, 2002). As a result, the gap between the foundation and the core subjects widened, leaving the foundation subjects with a low and marginal status and a reduced time allocation within pre- and in-service training (Duncombe et al., 2018). Much research documents how this gap has led to low teacher confidence in the foundation subjects in England and often a reduced teaching space for them on the school timetable (Caldecott, Warburton, & Waring, 2006; Duncombe et al., 2018). Subject specific problems such as low status and marginalisation will undoubtedly present consequences at many levels for how subject provision within the English education system is distributed and perceived. For example, parental attitudes towards subject prioritisation may exacerbate the issue and international audiences may view the adequacy of our educational quality differently. Thus a study such as ours, which speaks honestly about the tensions in subject coverage in English pre-service teacher education, is timely.

Foundation subjects in teacher education

To understand how ITE students develop subject knowledge through their teacher training in England, it is necessary to take into account the context and rationale underpinning the process. During the 1970s ITE was characterised by institutional autonomy, coupled with division between a theoretical preoccupation at universities and practical application in schools. However, since the 1980s there has been a progressive development of neoliberal policy in education, meaning education has seen an increased shaping by political, economic and often capitalist trends with focused agendas towards spend reduction, privatisation and centralised control. Educational policy such as the ITE National Curriculum was introduced with inspection of competencies and standards (Ellis & McNicholl, 2015; Furlong, 2013). Alongside this, an increased focus on partnerships occurred between universities and schools, and on school-based expertise, including the assumption that school mentors, as well as university lecturers, provide subject content and pedagogical knowledge (Ofsted, 2019a).

This has created a tension for providers in producing reflective and autonomous teachers and meeting a top-down government agenda which forefronts neoliberalism (Vassallo, 2013). While HEIs attempt to meet both of these imperatives, questions are raised with respect to this research when considering the structure and scope of what is provided in developing foundation subject expertise, both at university and on school placement. At the same time, there has been pressure on both universities and schools to emphasise core subjects for utilitarian measures, such as teaching towards improved assessment scores and teaching with practicality measures in mind such as cost, resource and space saving, at the expense of the foundation curriculum (Catling, 2017; NSEAD, 2016, 2019). However, this may soon alter given Ofsted's (2019b) revised focus on the overall quality of education and the importance of a broad, rich and balanced curriculum. We are also seeing hints internationally of changing times. For example, in Singapore a new focus on embracing and valuing the joy and attitudes of learning in primary schools has emerged alongside reduced formal assessments in the primary phase.

ITE student perceptions provide a starting point to reflect on these issues and present a challenge for how we respond to their voice. Fostering student adaptability is particularly relevant at a time when the revised Ofsted agenda (2019c) for schools and ITE in England provides for greater flexibility of approach and a renewed emphasis on the whole curriculum (Granziera et al., 2019). In addition to ITE student perceptions, studies recommend alignment between mentors' views of subject-specific SCK and PCK, and HEI visions for teacher education pedagogy (Becher & Orland-Barak, 2018). The potential for repositioning schools' and universities' perspectives through mutual engagement is thus an additional factor for consideration during this time of reform.

Current debates in the teaching of foundation subjects

Ofsted's new education inspection framework comes into effect in 2021. One of the main purposes of the revisions is to tackle social justice issues related to attainment, and the framework seeks to make judgements based on overall effectiveness by using 'all the available evidence to evaluate what it is like to be a learner in the provision' (Ofsted, 2019c, p. 8). Through this approach, it hopes to afford all pupils, regardless of background, with the opportunity to succeed. It also aims to address concerns regarding what has become an increasingly narrow curriculum, with too much focus upon test and exam results, and insufficient breadth and balance. The 2002 Education Act requires schools to offer a 'balanced and broadly based curriculum which . . . prepares children at the school for the opportunities, responsibilities and experiences of later life' (Education Act, 2002, p. 73). Nevertheless, in recent years, this narrowing of curriculum opportunities has seen precedence being given to the core subjects of mathematics, English and science at the expense of the foundation subjects (Barnes & Scoffham, 2017). In an attempt to redress the balance, the new Ofsted inspection framework plans to judge schools on a coherently planned curriculum that consists of a 'full range of subjects for as long as possible, specialising only when necessary' and suggests that teachers have 'good knowledge of the subjects they teach' (Ofsted, 2019c, p. 9). Since September 2019, schools in England have been working to this framework and as such must reflect upon their curriculum in terms of breadth and depth. Furthermore, assessment against the Teachers' Standards (DFE,

2011) similarly requires a strong subject knowledge to plan and deliver an engaging curriculum.

It is therefore timely to consider the role of ITE and school partnerships in shaping curriculums and driving change in the field. This study debates the scope, role and status of the foundation subjects in primary schools through the ITE student voice. It examines undergraduate ITE student teachers' experiences and perceptions of teaching the foundation subjects, in terms of opportunities provided in schools and at university. It also presents the reflections of ITE student teachers on their preparedness to teach the foundation subjects based upon their ITE and school placement experiences.

Methods

Our research is based on an interpretive case study of the voice of a sample of final year BA (QTS) Primary Education 5–11 students graduating in 2019. The analysis provides 'fuzzy generalisations' (Bassey, 1999; Yin, 2009), which are both context and time specific, informing the foundation subjects debate. The focus is ITE student perceptions of their development of subject expertise and teaching opportunities in art, physical education, computing, geography and history. The selection of focus subjects was based on subject expertise within the research team of senior lecturers in education, which included a curriculum leader for each foundation subject. The sample student cohort received 22 hours of teaching time for each of these foundation subjects across years one and two of their degree. In comparison, the core subject of mathematics has approximately double the hours allocation.

Data consists of semi-structured interviews with five individual students and one focus group interview consisting of five additional students in Spring 2019. Selection for interviews was undertaken through systematic sampling across all teaching groups. This was triangulated with our initial data from student subject tracking records that indicated school placement provision was greater for core subjects in 2016/17. The methodological approach sought to capture student voice, regarding this as seminal to the redevelopment of curricular practices that align with the collaborative, student-centred, interdisciplinary and critically reflexive pedagogies that are now required in ITE provision (Hall, 2017; Wilks, Snow, Lasczik, & Bowling, 2019).

Semi-structured interview prompts were designed to elicit responses relating to perceptions and opportunities to learn to teach the selected subjects. In designing the questions, we sought to contribute to the academic debate about subject marginalisation (Barnes & Scoffham, 2017; Duncombe et al., 2018; Griggs & Randall, 2019; Hall & Payne, 2018). We also aimed to determine the opportunities and barriers which the students faced in developing their subject expertise in the university and school contexts. Mathematics was chosen a basis for comparison with the foundation subjects given that, as a core subject, it has a more substantial provision within the course. The interview prompts were as follows:

> What factors affected the development of your expertise in teaching these subjects at university and in school?
>
> How far did your experiences in mathematics differ from those in foundation curriculum subjects?

Which subjects did you have the most/least opportunities to teach?

How far has your teaching in school been through cross-curricular themes? Did this influence the development of your subject discipline expertise?

Did you experience any other relevant issues?

Do you have any recommendations?

The interview and focus group prompts were piloted with three Year 2 students to test for validity and clarity, however no changes were made. On occasions, follow-up questions were added during the interviews to ensure the intended meaning was clear, for example, 'Was the issue the same for each subject?'

Potential sample bias was addressed by selecting students from each of the specialisms offered in the course using specified intervals for selection in the register list. Potential inconsistency between six members of the research team was addressed by undertaking all interviews in pairs, with each member of the team working with two different members during the interview schedule.

Ethical approval was obtained from the university and British Educational Research Association [BERA] (2018) ethical guidelines were followed. ITE students were invited to take part in the study, anonymity was guaranteed, and they had withdrawal rights throughout.

All decision making throughout the research, including purpose, planning, research, analysis and output was based on discussions between the six project researchers. Interview and focus group transcripts were analysed through an iterative process of open inductive coding undertaken by the six members of the research team to identify perceptions and opportunities related to the research questions. This process was repeated and modified by team members to ensure consistency and shared understanding of data findings (Strauss & Corbin, 1998). It was then augmented by axial coding to identify relationships between the codes and record emerging concepts. The axial coding resulted in a set of overarching concepts describing students' positive and negative perceptions of the development of their foundation subject expertise at school and at university, as well as the opportunities they had to teach the selected foundation subjects.

Findings

For our participants, their university course provided opportunities to explore the whole primary curriculum, with an emphasis on the core subjects of English, mathematics and science. Foundation subjects were taught in Year 1 and Year 2, whereas the teaching of core subjects continued into Year 3. Students selected a specialism option from one of the three core subjects, PE or history. The findings from the thematic analysis of interview and focus group data reveal a complex range of issues, such as restricted curriculums, that contribute to variability in confidence, application and understanding related to the selected foundation subjects. The overarching concepts identified by the axial coding are variability of experience, restricted curriculums, practical experience, cross-curricular teaching and confidence. We will consider each of these in turn.

Variability in ITE experience

At university level, ITE students welcomed the opportunity to learn to teach across the whole primary curriculum, especially for subjects that were marginalised on school placements:

> [E]specially in the first year … even if you don't teach it in school you have music lectures and geography and whatever else.

However, students identified the dominance of the core subjects of English, maths and science in their undergraduate programme. These core subjects were delivered across all three years of the programme, and students suggested that this spiral approach facilitated their understanding of aspects of teaching and learning such as pupil progression and differentiation. Foundation subjects, with the exception of specialisms, were not delivered in the final year of the undergraduate programme and ITE students identified this as a barrier to their own delivery of these subjects:

> At university I'd say it's a real shame that you don't get to take the foundation into third year.

This imbalance in ITE provision was further compounded by the ITE students' experiences on placement, where they experienced a range of different ways in which the curriculum was organised and prioritised:

> My first mentor was a PE specialist but he didn't teach PE. They have someone come in.

> My second mentor didn't really have any specific expertise on any of those foundations subjects and computing was taught by somebody else.

Restricted curriculums

The impact of a narrow curriculum was identified by ITE students as the greatest barrier to teaching the foundation subjects. At school level, ITE students identified a number of inhibiting factors. One factor relates to the dominance of the core subjects of English, mathematics and science within the school timetable. The consequence of this dominance is the subsequent marginalisation of the foundation subjects:

> I don't see these subjects being taught a lot … they take a back seat.

Where teaching sessions were planned for foundation subjects, students reported they were sometimes overridden by the need to complete unfinished work in English and maths. Foundation subjects were reported to be more likely taught during afternoon sessions. The overall organisation of the school curriculum also resulted in some foundation subjects being taught every other half-term. This meant that ITE students did not have the opportunity to teach certain subjects, as they were not allocated to the class timetable for the duration of the school placement. For example, when interviewed the following four students commented on timetabling issues:

> There's not the slot in the timetable.

> It's the timetable restraints.

> No timetable space.
>
> Subjects get lost.

Other organisational factors related to schools' use of specialist teachers and the wider workforce, preventing ITE students from having the opportunity to deliver lessons themselves:

> I think you learn more when you are on placement, but when there's outside people teaching it is harder.

ITE students identified that the use of peripatetic teachers was most often seen in physical education, music and modern foreign languages.

A lack of teaching resources was also identified, particularly in relation to art and computing:

> So often you get the laptops out and half of them are broken.

These findings suggest that there is a complex set of circumstances at play that limit ITE students' opportunities to teach the foundation subjects. There is a disconnect between what students are being taught at University and what they are experiencing on school placement. Both contexts are part of the ITE experience, yet the following two students perceived inconsistent messages and opportunities:

> Yeah we had some of them. I just say it wasn't as much and it wasn't as much contact time for me. Art was dropped I think and we didn't do any computing I believe. I don't remember doing geography either.
>
> The least I would probably say was geography. I don't really recall teaching geography. Computing I've done within other lessons. I might have done computing within science on teaching them how to do it on the iPads and things but I've never done that as a standalone subject and RE I haven't ever taught in schools either.

This situation was echoed across participants, identifying a variability in experience and a hierarchy within subjects that is represented not only by the hours afforded at University but also by the opportunities to teach the subjects on school placement. This can be compared with international contexts such as Singapore. Whilst subject hierarchies do exist, Singaporean students and trainee teachers have access to specialist expertise both in the universities and in schools, who continue to develop their specialist subject training. Subject time is also protected by a requirement for primary schools to teach a detailed and comprehensive subject syllabus overseen by the MOE (2019). Aspects of this model are similar in some UK ITE offerings, but the commitment to breadth of subject provision in unison and at different levels, including the governing body, university, school and student, appears to strengthen the Singaporean ITE model.

Practical experience

In general, in our research there was a positive response to the university's emphasis on practical experiences. ITE students felt that the university provided a 'safe' environment for practising teaching foundation subjects:

> We do what the children would be doing if we were teaching them.

Alongside this, most students acknowledged that their university sessions helped them to make links between theory and practice, with just one ITE student calling for more theory. ITE students also alluded to the fact that they had more autonomy and creative freedom when teaching the foundation subjects, and some saw themselves as changemakers who felt able to identify a need and make a difference. Changemaker competencies are interdisciplinary and are intended to be sustainable. In education they centralise around learning, practising and sharing moral and socially just principles and philosophies, locally and globally, to instigate change, both personally and within communities (Heaton & Crumpler, 2017; Maxwell, 2019; Rivers, Nie, & Armellini, 2015). Students can build changemaker principles into their own teaching personas, rationales, curriculum and pedagogical approaches to make an active contribution to educational reform. This suggestion is further supported by the fact that we saw in our participants recognition of a similar positive attitude towards active, practical teaching in schools, with ITE students identifying a synthesis between the modelling they experienced at university and their school placement:

> It was Australia Day and because it was my only ever (art lesson) I went all out. I did loads! So it was actually one of the best lessons. I still remember it to this day because it was so fun and the children loved it and I loved it.

> I learn best by doing it.

> They had freedom so they weren't confined. I feel like that's really important as they need to be able to branch out.

If changemaker competencies are embedded, through action and practical experience, at pre-service teacher level then it is likely this will influence learners in schools. For example, Heaton and Crumpler's (2017) study demonstrates this integration between university teaching and student competency within pre-service art education.

Cross-curricular teaching

When asked about teaching using a cross-curricular approach, ITE students were equally split on its advantages and disadvantages, and appeared to be influenced by their school placement experiences. Some students felt that cross-curricular teaching provides opportunities for genuine links between subjects that are more likely to engage pupils:

> If it's linked to something they find exciting then they are more excited to learn.

However, they also recognised that meaningful learning relied on the development of genuine links between subjects that could be clearly identified:

> When it worked it worked really well but when not it was a bit tenuous.

Linking some subjects such as geography and science were identified as causing confusion for some children.

ITE students who had a positive recollection of cross-curricular teaching recognised that it helped ensure that foundation subjects received more coverage, and this was also reflected in their opportunities to teach foundation subjects:

> Most of my opportunities to teach the wider curriculum have come through cross-curricular links.

> You're teaching in a more efficient way.

However, the planning of cross-curricular teaching was recognised as a significant area of difficulty:

> Planning cross-curriculars can be very stressful.

> We're doing history but we're writing a non-chronological report.

> When I'm a teacher I don't want to do it that way.

ITE students felt that thematic approaches required more planning time than was available to ensure that subjects were taught in sufficient depth.

Confidence

There were two strands to the concept of confidence: students' confidence to plan and teach the foundation subjects and mentors' confidence to support them in this. The main factor influencing reduced confidence was the lack of opportunities to teach foundation subjects whilst on placement:

> I didn't know where to start.

> It would be once every three weeks and the technician would teach it.

Reference was made to the way in which foundation subjects were timetabled in schools and to lacking the subject knowledge to teach the foundation subjects. There were occasions where ITE students demonstrated a proactive attitude to researching a foundation subject topic, and some recognition that they have the skills and knowledge that allow them to demonstrate competence:

> I'd have to teach myself to be able to teach it.

> Mentors that have been in the job years are more nervous about teaching computing.

There were other instances where ITE students felt that they did not have the appropriate knowledge or skills to teach foundation subjects:

> I feel overwhelmed.

> I feel like there is more emphasis in being an expert in the core subjects rather than the creative ones.

School mentor expertise was another identified issue:

> Mentors can influence how you use ideas.

Reference to needing appropriate modelling and guidance from mentors was cited as a reason for low confidence. School mentors therefore have an influential role in acting as gatekeepers to the delivery of the curriculum.

Solutions

Students suggested several solutions with respect to developing their foundation subject expertise. A key consideration was the need for foundation subjects to be undertaken through all three years of their degrees: Embedding foundation subjects throughout the course.

This is the case in Singapore, where time is afforded to input and practice across all subjects throughout all years of university provision. This would raise the subjects' profiles and reduce the gap between the provision for core and foundation subjects. It was also felt that opportunities for teaching children within the university environment should be developed. This could be enhanced through events focused on developing foundation subjects such as Black History Month or Safer Internet Day:

> You see technology being used to teach but you don't see technology for the children being celebrated as much as you see World Book Day.

Within schools, opportunities for teaching foundation subjects could be enhanced through directed activities that students are required by the university to complete, including the necessity to teach a sequence of lessons, as is standard within the core subjects. Finally, there was a developing awareness that ITE students might take responsibility for developing their own expertise, which required going beyond their preferred subjects:

> I think you can be a limit to yourself how much you are willing to put in the effort as well as the opportunity to teach it.

The developing understanding of the ITE students' personal role in their teacher education is an important indication of a mind-set change. This was not seen universally across the participants; however, it raises the issue of how to prepare students to be autonomous learners and agents of change. Preparing teachers to be adaptable and therefore future proof is an important part of the changemaker philosophy (Heaton & Crumpler, 2017; Maxwell, 2019):

> When I've been on placement I've been able to say, actually, I'm teaching this afternoon and I would really like to teach them French. And they've gone it's great, you can teach French. I don't want to teach French.

> The ones I had the most opportunity to teach were English and maths. I only had the opportunity to teach art because I put that forward … I made sure I taught it all.

Discussion

These findings highlight the need to address the imbalance of foundation and core subjects in teacher education. Understandably, ITE students displayed more confidence in teaching their specialist subjects and in the core subjects that receive more university

time. To overcome this, we suggest increasing our university provision to achieve a better balance across the full range of subjects. This echoes Ofsted's (2019c) recent renewed need for a broad and balanced curriculum that allows children to experience the range of curriculum areas available and removes the historical emphasis on the core subjects. Findings from research conducted by Ofsted also point to a need to redress the narrowing of the curriculum both at university and in schools that restricts the amount of time given to foundation subjects (Ofsted, 2019d). Perhaps here aspects of international ITE models, such as those in Singapore, could inform curriculum developments. Within this context there are regulatory and monitored hours to achieve breadth of subject specific offerings at and across ITE providers, training institutions and schools. As a consequence, there is consistency across sectors.

Our research also provides a mixed picture as to the preparedness of students to undertake cross-curricular teaching. The foundation subject focus may not be evident in cross-curricular planning and our students feel insufficiently prepared to teach in an interdisciplinary way. The tension between discrete and cross-curricular teaching has been identified by Ofsted as an issue (Ofsted, 2018, p. 35). It is a challenge in itself. However, based on the findings of this study, university provision can be adapted to reflect a more healthy balance between the core and foundation subjects as would be expected to take place in schools over the next few years. This includes auditing and identifying in its most simple format the hours afforded over the three years of the degree to each subject area and providing balanced provision that takes into account both approaches.

The introduction of the Early Career Framework in September 2020 offers a further layer of complexity with regard to where the responsibility lies for providing ITE students with adequate coverage of the curriculum. It is timely to review foundation curriculum provision in schools in view of the latest Ofsted framework and international developments. In this changing situation our university recognises the need to strengthen partnership links with schools. Positive ways forward might be to share expertise through visiting schools with students, or having pupils visit the university. This is in contrast to top-down models of curriculum implementation and responsibility that appear to occur in contexts like Singapore; however, we would argue that a partnership model provides a more joined-up experience for our students.

A more difficult task to address is the variability seen across school placements in both the quality and amount of foundation subject teaching. Our research demonstrates a hierarchy of subjects, even within the foundation subjects. This requires sensitive and methodical work with partner schools. This is a multifaceted dilemma, as schools will approach teaching and learning differently through their ethos, values and individual philosophies. They will deploy their workforce in a way that best suits their setting and the children and staff who work there, and it is therefore unrealistic to expect uniformity. Although perhaps this readdressing of balance is where neoliberal policy implementation could actually prove useful, if Government agencies acknowledge and implement a focus on subject parity. Working with head teachers, school-based mentors and policy is crucial for HEIs, not only in sharing the emphasis on a broad and balanced curriculum but also in the effective teaching of the foundation subjects. Mentor training and sharing expertise offers a means to address the theory-to-practice gap and develop the confidence

of mentors in supporting ITE students with subject, pedagogical and policy knowledge in the foundation subjects.

What is evident is that those ITE students who are self-directed and who recognise the limitations that ITE can offer them are the ones who will develop the skills to adapt and learn from changes to curriculums, pedagogies and policies. It is a challenging endeavour to design school and university ITE provision that will address student dispositions and prepare them to become the school teachers and leaders of the future. This is a timely national opportunity to reflect on our own philosophies as ITE educators and to challenge historically patchy and fragmented time and presence for the foundation subjects in schools and in university. To refer to our own context, our new course at the University of Northampton, which went live in 2019, addresses this with cross-curricular approaches embedded in our ITE provision as well as subject-focused sessions in the foundation subjects that develop subject, curriculum and pedagogical knowledge. We have used our own agency to influence course content and design, to create university provision that embeds the changemaker philosophy and aims to empower our ITE students to be confident agents of change in their teaching contexts. Students are encouraged to adopt a 'can do' attitude and develop the disposition to take responsibility for developing their own expertise in the transition from ITT to their NQT years and beyond. 'Expertise' modules replace 'specialism' modules in our revised course, and this new set of modules aims to develop the independence and confidence needed for students to research and test pedagogic strategies across all subjects for themselves. This approach, however, remains dependent on a strong team of specialist foundation tutors who share a joint vision for the development of pedagogical content knowledge alongside their own subject knowledge.

Schools have faced the issue of a lack of inset provision in the foundation subjects for a substantial period of time. The introduction of the new Schools Inspection Framework (Ofsted, 2019c) means that they are now required to address curricular and subject provision, particularly in the foundation subjects. This reinforces the need for HEIs to work more closely with their partner schools. However, our results indicate that many mentors do not have the knowledge and skills to support our students in teaching the foundation subjects, which mentors do mostly have in the Singapore context. Similarly, there are subjects which have over recent years relied heavily upon the wider workforce and support staff to deliver. Schools are seeing changes to funding and restrictions on funding such as the PE Sports Premium and capital budgets, which could see changes to the workforce teaching physical education. Universities therefore need to work closely with schools to make sure that their teaching and advocacy reflects local needs, whilst maintaining awareness of international developments.

Moving forwards, we anticipate the new ITE inspection framework to align with the schools inspection framework, and we also welcome recent guidance related to the early career framework for newly qualified teachers. These national initiatives, together with our own university team philosophies and agency will guide the future direction of our ITE provision. Careful consideration of the priorities of the partnership and the level of accountability placed on schools and universities are relevant to this discussion. Universities are well placed to build capacity with schools, subject associations and other providers. Communities of practice built from a self-sustaining group of individuals and subject leaders have the subject and curricular expertise to work with schools in

a CPD capacity and in supporting the early career framework. We do, however, acknowledge a lack of control on school practice and as yet limited information about the content of the early career framework. Becher and Orland-Barak (2018) suggest providing opportunities in ITE to engage with these types of tensions to recognise the challenges in learning to teach, the range and complexity of subjects and the nature and importance of partnerships in ITE. It is thus important to reflect moving forwards upon how the student voice, university ITE provision, schools and the national and international picture interact with each other in both a complimentary and supportive manner. Furthermore, it is important to consider how such entities frame the current and future provision for ITE (Hall, 2017; Wilks et al., 2019).

Conclusion

The findings from this study reflect the need for universities and schools to work more closely together to ensure that they are moving towards the same outcomes, and have shared aims and philosophies regarding ITE. Part of this joined-up thinking requires a joint audit of their respective curriculum offers to establish that a broad and balanced curriculum is being exemplified to ITE students to enable them to develop the SCK and PCK needed to deliver effective lessons. Opportunities to teach foundation subjects in schools have been sparse and varied in comparison to core subjects, and combined input from both schools and universities, as seen in some international models of ITE provision, is needed to ensure greater consistency.

Our ITE students expressed positive views about the benefits and importance of practical teaching experience in schools and in university, suggesting that a well-planned programme of school experiences and other opportunities to work with young people is a must for both partners. Students are also clear in their response that this should be distributed across foundation and core subjects so that they have opportunities to acquire the skills required to future-proof success in their teaching career. Many students recognised the need to become proactive, adaptable and well disposed to change. This includes considering their own role and responsibilities during ITE, and acquiring dispositions that will support their own subject expertise development during their early careers and beyond, as they move into leadership roles.

Disclosure statement

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