Does engaging in action research support trainee teachers in forming and reflecting on values?

Education 3-13.

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This paper reports on findings from a two-year project, which explored whether undertaking small-scale action research, supported the development and articulation of the values of trainee teachers in England. Underpinned by a conceptualisation of teacher professionalism which prioritised research literacy, it used questionnaires to collect data from a sample of 220 third year undergraduate students. Analysis utilised themes relating to *research literacy* and *teacher formation.* Findings demonstrated that students saw the relevance of empirical practitioner research. This process also appeared to afford opportunities for students to reflect on, and articulate, values and consider their impact at both a personal and pedagogical level.

Does engaging in action research support trainee teachers in forming and reflecting on values?

Introduction

The idea that teachers should be able to research their own practice has long been embedded in English educational discourse, seen as a way in which teachers could generate meaningful knowledge about their classroom pedagogy (Stenhouse 1975; Elliott 1991; Cochran-Smith, and Lytle 1993; Crawford-Garrett et. al. 2015). More recently the focus has been on teachers becoming *research literate*, that is able both to apply research findings to their practice and carry out their own empirical research (Orchard and Winch 2015; Winch et.al. 2015).

This need for teachers to be research active has influenced the Initial Teacher Education (ITE) they receive (Byman et. al. 2009; British Educational Research Association (BERA) / Royal Society for the Encouragement of the Arts, Manufacturing and Commerce (RSA) 2014). One of the ways in which trainees might be supported in becoming research literate is through carrying out practioner- focussed action research, a method of social enquiry well established in education research (Carr and Kemmis; 1986; Noffke 2009). Key components of this process are the idea of reflection and the principle that the findings will lead to an improvement in practice (Schon 1983; Hopkins 2002; Pollard and Black-Hawkins 2014).

The notion of improvement necessarily raises questions about educational quality and judgements regarding the attributes and values of those who deliver it (Gellel 2012; Medwell and Wray 2014; Brady 2011). Moreover, whilst the Teachers

Standards in England (Department for Education (DfE) 2013) make explicit reference to trainees being able to evidence positive values, commentators have noted that if these values are not made explicit it can difficult for student teachers to understand both what they are and the impact they may have on teaching and learning (Capel 2016). This paper argues that supporting students in carrying out practitioner focussed classroom research is one way in which ITE can guide trainee teachers in identifying, reflecting on and articulating their values.

Literature review

Research informed teaching

Stenhouse (1975) put forward the theory that teachers should not be the subject of research by outsiders but needed to initiate it themselves, to be 'teacher-researchers' empowered to design and deliver a curriculum based on principles, processes and teaching interventions rather than on specified subject matter (Elliott 2015). Stenhouse's perspective was informed by a contemporary view that much research was carried out at a remove from teachers and the world of the school, and it might be argued that this view of a hierarchal relationship in educational research still retains some currency (Bridges and Watts 2009). There is also ongoing debate regarding which sort of curriculum best suits the needs of the children we teach, what knowledge this curriculum should draw on and who should be responsible for its creation and implementation (Alexander 2009; Young 2009).

Worryingly, it might be argued that that these long held principles regarding the

importance of theoretical research- based perspectives informing classroom practice are at risk because teachers are increasingly trained to respond unthinkingly to current educational imperatives rather than being taught to engage critically with proposed initiatives (Smith, Hodson and Brown 2013).

Relevance to ITE

The idea of trainee teachers being enabled to find, critique and carry out research appears to have clear implications for University based ITE. Indeed, Byman et al. (2009) outline a conceptualisation of research-based teacher education which has four key elements: the programme is structured on a systematic analysis of education; all teaching is based on research; activities are organised so that students are active in the creation of knowledge and all students are taught formal research skills during their studies. The BERA/RSA report also stressed the need for a research-informed teaching profession, suggesting that teachers should be equipped to be discerning consumers of research and additionally able to conduct their own research in order to critique more fully the impact of education interventions (BERA/RSA 2014:5).

Medwell and Wray (2014) highlight that at its most simplistic the process of carrying out some form of empirical research allows trainee teachers to understand and make explicit the links between theory and practice. Burn and Mutton (2015:219) agree stating, '*For beginning teachers […] 'clinical practice' allows them to engage in a process of enquiry: seeking to interpret and make sense of the specific needs of particular students, to formulate and implement particular pedagogical actions and to evaluate the outcomes'*.

However, Orchard and Winch (2015:5) argue that recent developments in teacher education are built on reduced conceptions of teachers as technicians and craft workers, the former seen as being competent to deliver externally imposed initiatives, the latter trained primarily in the classroom through observing experienced teachers. They argue that teachers should instead be understood as professionals, a conceptualisation in which teachers needed to actively engage with educational research, *'In addition to subject knowledge and technical know-how, the theory teachers need includes (i) conceptual understanding, (ii) knowledge of empirical research, and (iii) a developed capacity for ethical deliberation'*.

Action Research

One of the key aspects of action-research is that educational theory is used to both initiate and underpin the process of enquiry Cochrane-Smith and Lytle (2001) and Kemmis and McTaggart (1988) highlight the opportunities this approach provides as a means of further knowledge generation.

Elliott (1991) saw an action research pedagogy as underpinned by ideas of social justice which ensured that teachers provided the best possible educational experience for their pupils. This aspect of improvement appears to be common in many conceptualisations, for example Hopkins (2002) states that action research is a personal attempt at understanding while engaged in a process of improvement and reform.

Carr and Kemmis (1986) saw action research as being underpinned by three possible perspectives, the *technical* with a focus on externally imposed measures, the *emancipatory* the purpose of which is to empower the research participants and the

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practical which aims to promote personal wisdom and change. Noffke (2009) also conceptualises three dimensions, the *practical,* the *personal* and the *political*. The *practical* dimension focuses on contributing to the professional knowledge base, whilst the *personal* focuses on the growth and development of those who engaged in it, particularly in the areas of agency and identity. Whilst both these dimensions have aspects of the *political* in its truest sense this dimension is theorised as social action for emancipation.

Gibbs (2014) notes that this aspect of improvement within action research may, or may not, be subject to extrinsic criteria. Hargreaves and Hopkins (1991) were among the first to align research activity to school improvement, and Medwell and Wray (2014) argue that this research pedagogy has been increasingly drawn on to support an extrinsic culture of performativity in response to externally set goals, rather than the more personal school-centred intrinsic response it originally supported. Colucci-Gray et al. (2013) agree and suggest that much research evidence is primarily being used to regulate the performance of educational institutions, with practitioners increasingly judged against extrinsic targets. This focus on the extrinsic has implications for the kind of evidence considered valuable and additionally appears to place little importance on teachers' intrinsic beliefs and values.

Reflection

A key component in the process of action research is the idea of reflecting on practice. As Norton (2009:23) comments, reflection and improvement are inextricably linked, *'...reflecting on practice as part of an action research cycle is essential if any enduring change is to be effected'*. This idea of the reflective practitioner is a long-

standing concept in ITE first gaining prominence through the work of Schon

(1983). Key aspects of Schon's approach are the terms *reflection in action*, that is

reflecting on the situation whilst changes can still be made and *reflection on action*,

reflection which occurs after the event. There have been many other conceptualisations

of reflective practice e.g. Kolb's (1984) four stage cycle and Boud et al.'s (1985)

recursive cycles which focus on experience, reflection and outcome. More recently

Pollard and Black-Hawkins's (2014) conceptualisation of a reflective practitioner is one

able to identify issues and subsequently gather and reflect on relevant information. This

may then result in a change in thinking or practice. Norton (2009) however highlights

that reflection does have its limitations as it can be difficult to challenge established

beliefs and values, and Gibbs (2014) adds that at an intrinsic, individual level,

opportunity for personal change through reflecting on judgements and values, is subject

to both intrinsic motivation and an individual capacity for change.

The context of, support given to, teachers researching their own practice can

also impact on the knowledge gained in the process. Cain and Harris (2013) highlight

that teachers who received little support or direction in the process of research appeared

to only develop their knowledge about the more technical aspects whilst those who

benefitted from more support developed additional pedagogical knowledge about their

educational aims and values.

Values

Elliott (2015) states that whilst teacher research can be viewed as simply a methodology

for assessing the practical utility of theory, it is better seen as a philosophical attempt to

develop practical understanding to guide what he terms 'virtuous' action. This idea of virtuous action links to values which Passy (2012:1064) defines as a layer within one's psyche containing culturally borne ideas of right and wrong upon which *'...action, behaviour, attitudes and beliefs rest'*.

Additionally, ITE is underpinned by the need for trainees in England to demonstrate that they can meet a set of externally imposed standards or values (DfE, 2013). Standard 1 states that trainees must *'...demonstrate consistently the positive attitudes, values and behaviour which are expected of pupils'* and must also: *'...maintain high standards of ethics and behaviour, within and outside school'*.

Capel (2016) argues that if beliefs and values are not made explicit it is difficult for student teachers to understand their impact on their own learning, practice and the curriculum they provide for their pupils. Others such as Tannehill and MacPhail (2014) highlight the need for trainee teachers to be challenged in order to explore and articulate their values though meaningful experiences. Action research can perhaps be seen as a meaningful experience in this regard because as Nofke and Somekh (2011:96) comment, *'Action research is always rooted in the values of the participants'*.

Brady (2011) notes that there have been several attempts to identify the ideal values and attributes of a teacher. She highlights the work of Rodgers (1969) who conceptualised the teacher as an emotionally and psychologically stable individual who is empathetic and could generate trust, and Freire (1998) who sees a teacher as an individual who is emotionally responsive, courageous and has a passion for tolerance and democracy.

The discussion above regarding the current reductive conceptualisation of the teacher Orchard and Winch (2015) is echoed in a wider debate regarding the purpose of education more generally. Gellel (2010) argues that current conceptualisations appear to be primarily driven by economic demands and concerns about social cohesion, and that this framing can lead to a restrictive vision of education in which the idea of personal fulfilment is devalued. He also suggests that ITE should play a key role in the inculcation of a teacher's own values.

He proposes a teacher formation programme, drawing on ideas of professionalism and vocation, arguing that this would support both the teacher in training and beyond and additionally have a positive impact on pupils in the classroom. He suggests that the key values of respect and dignity should underpin any ITE programme, the content of which should inculcate the following values:

- Nurturing an appreciation of the teacher's self, including self-esteem, initiative and care for others.

- Fostering a respect for the uniqueness of individuals.

- Encouraging an understanding of the teacher's role and relationships in society, particularly with the local community and parents.

- Focusing on the valuing of people and a commitment to their betterment.

- Promoting an awareness and responsibility for the teacher's role in 'touching' the lives of students.

- Creating a passion for knowledge and an appreciation that such knowledge is not neutral.

- Attaching an increased importance to relationships.

It might therefore be argued that practitioner focussed action research provides the perfect opportunity for trainee teachers to be supported to reflect on, and articulate, their own values and consider the impact these have on their pedagogy and practice.

Methodology

This research was undertaken by the researcher with a group (n=220) of ITE undergraduate students over the second and third years of their undergraduate degree. After an introduction to the general principles of educational research students chose an aspect of practice to focus on (from a wide range of topics). They then received taught input on research methodology and methods, with a focus on action research, and ethical research practice. It must be acknowledged that the action research undertaken by the students was not generally the iterative model suggested by Elliott (1991), but a one-turn model as most undertook only one turn of the planning, acting, observing and reflecting cycle Cain et al. (2007).

Over two years students were supported by a University tutor with relevant subject and research expertise. This support included approving a research proposal, overseeing data collection in the field and supervising a final written research report. Students generally undertook the research as part of their normal second year placement in school although the setting (but not the timescale) was negotiable.

The research design used a non-probability sample because the aim was to produce a representative overview of the population studied Punch and Oancea (2014). The questionnaire was administered to the whole cohort of students. Whilst

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this might be termed a convenience sample as students were undertaking compulsory modules, it was also purposive in that it did represent the population of interest Ornstein (2013).

Students were asked to complete three questionnaires over this two-year period: at the start of the process; at the end of the second year when they had a proposal for their own research approved but before they had carried out their research and at the end of their third year after they had written up their report. This longitudinal research design was chosen as it was essential to attempt to measure changes in confidence, skills and understanding across a whole cohort over a set period of time, Vignoles (2017).

The final questionnaire was introduced personally by the researcher to the whole cohort. Participants filled in a hard copy and placed in collection boxes. The response rate was 86%. Whilst this high response rate might signify lower bias, it must be acknowledged that bias was still possible in that some students who felt negatively about carrying out research might have chosen not to complete the questionnaire Ornstein (2013).

Questions were worded to be easily comprehensible and as the project progressed, and participants became more knowledgeable, additional opportunities were offered for qualitative open-ended responses, Blair, Czaja, and Blair (2014). In terms of structure the three questionnaires focussed on students' general views on the importance of research in education, with additional questions which probed individual skills and confidence in accessing, undertaking and carrying out research. In this paper qualitative data in response to the following questions in the final questionnaire is presented:

- *What is your view of the value of research in education?*

- *Please identify any impact your study had on the children's learning.*

- *Please identify any impact your study had on your professional practice as a teacher.*

At the time the final questionnaire was administered the students were at the end of a two year process and, it could be argued, had both the practical experience and theoretical understanding to consider and respond to these questions. The questions also provided a thematic coding framework, supporting a *typographical* analysis, in which data was put into groups or categories on the basis of clearly defined criteria Cohen, Manion and Morrison (2007). Drawing on this large data set extracts from individual student responses were selected only if they were representative of the wider student population McNiff and Whitehead (2011). It needs to be acknowledged here that the choice of particular individual extracts was subject to the personal interpretation of the researcher Newby (2014).

Drawing on the same data set, and through a process of analytic coding Richards (2015) Gellel's (2010) headings were then used to explore what, if any, this experience of carrying out research had on the reflection on and articulation of values. Although respondents were not answering a direct question regarding their beliefs and values, the open-ended nature of the questions seemingly enabled relevant and considered responses. These in-depth responses perhaps also justified the use of a questionnaire as an appropriate method Punch and Oancea (2014). In this second phase of data analysis, equal weight was given to all responses i.e. views were considered significant whether

expressed by one or many students, a stance which highlighted the importance of 'learner voice' Baumfield, Hall and Wall (2013). However, it is recognised that this positioning perhaps limits the generalisability of the findings Coe et.al. (2017).

Awareness of ethical issues, in particular the power imbalance between researcher and students, was essential BERA (2018). Therefore, it was made very clear that all questionnaire responses were voluntary, anonymous, might be used in published research and additionally drawn on to improve the experience of future students. It was stressed that none of the data gathered had any connection with, or impact on, individual student grades.

Findings

Students were asked: *What is your view of the value of research in education?* Responses were all positive, however a small number highlighted that whilst the research experience had been affirmative as a well-scaffolded student, time constraints and a lack of support might be a barrier to carrying out further research when working as a full-time teacher.

A possible reason for these positive views of research in education may have been the choice given to the students to select their own research focus. This element of choice arguably contrasted to the widespread externally imposed agendas governing research in school which focus on improvement and performativity Medwell and Wray (2014). Student responses highlighted four key themes, the first being that students saw ***research and teaching as inseparable.*** This finding links to the work of Winch et al.

(2015) and Orchard and Winch (2015) who stated that being research literate was an essential part of teacher professionalism:

- *The outcomes of research allow aspects of the education system to be reviewed and improved, therefore improving the quality of teaching and learning.*
- *Undertaking the research has allowed me to see the direct link between conducting studies in the classroom, existing research and the implications for teaching.*
- *It made me more aware of how research can influence practice.*

Aligning with Burn and Mutton (2015) who stated that research allowed trainees to see the links between theory and practice the second finding was that students could identify that their small-scale project had an ***impact on children's learning:***

- *From conducting my research, I have come to appreciate how important it is to reflect on areas of practice, so we can strive to make it better to support children's development.*
- *I believe it is extremely valuable as it allows teachers to continually develop their practice to ensure it is most beneficial for the children in their class.*
- *My study has impacted on my knowledge of action research and the benefits it has on improving practice, which in turn has a positive effect on children.*

Interestingly in terms of the performativity and improvement debate mentioned above, and perhaps because students drove the research focus, they could clearly see how the carrying out of research had ***improved their own practice*** (Elliott 1991; Hopkins 2002).

- *It is essential! In order for professionals to continue their development, they must learn from others and also experience researching for themselves.*
- *It is vital as I feel that my small-scale study has made me a better teacher.*
- *I really think it helps to assess and change your own practice*
- *I learnt about the importance of ethics and confidentiality which will continue to remain as an important part of my practice.*

The final theme identified was that students saw the importance of being research literate (BERA 2014; Orchard and Winch 2015), in particular in ensuring that teachers *kept up to date* with research findings:

- *I think that it's very important. Theories are changing all the time and teachers need to stay on top in order to be using the best ideas and pedagogy in their classrooms.*
- *I think research is highly valuable in knowing about new teaching pedagogy and how it can have an impact in the classroom.*
- *It is so important and ensures that teaching is current and the best it can be!*

Students also saw this engagement with research as a *continual, ongoing* process and not just something experienced as part of their initial training:

- *I feel it is an integral part of staying the best educator you can be. I now understand that without research you cannot develop as a practitioner. I aim to continue researching throughout my time in education.*
- *I plan to carry out further research when I am a qualified teacher to support in improving my practice*
- *I am now more aware of the nature of qualitative research and how I could potentially use this in future in my own class*

It can be perhaps argued that that these responses exemplify a professional response to,

and an in-depth engagement with, 'clinical practice' Burn and Mutton (2015) in which teachers seek to interpret the specific needs of pupils, devise interventions and assess the effectiveness of these. Additionally, student comments clearly highlighted the importance of this ongoing synthesis of research and practice as essential in a conceptualisation of professional practice. The need for and value of reflection was also highlighted:

- *The research encouraged me to develop my skills as a reflective, critical and analytical practitioner.*
- *Since carrying out me study I have identified how important it is to reflect on your own practice as a teacher to identify things that work and things that don't.*
- *It has made me realize the importance of reflection on teaching-this is the way we can improve our practice.*

Values

The main focus of this paper however was to explore whether this process of research and reflection had any impact on the formation of student values Gellel (2010). Gellel' s first value was that of ***Nurturing an appreciation of the teacher's self, including self-esteem, initiative and care for others.*** In terms of practitioner research, this value might be aligned with the *practical* perspective of Carr and Kemmis (1986) which aimed to promote personal wisdom and the *personal* dimension in Noffke's model (2009) which focussed on the growth of those who engaged in research. This value also links to opportunities for personal change through reflection on personal judgements and values (Norton 2009: Gibbs 2014). It was clear that the opportunity to carry out research had supported the students' *confidence and self –esteem:*

- *It has given me great confidence in the area I researched, and I can use my research as a guide for my future professional practice.*
- *It has altered the way I view my abilities and I know I can be as good as I want to be with effort and motivation.*
- *Helped me to develop my own teaching style and feel confident.*
- *I have developed my understanding of behaviour management strategies and I feel much better equipped to step into the classroom.*

For others the increase in confidence was in terms of *subject knowledge*:

- *It has supported my development in teaching reading and promoting comprehension.*
- *It has definitely had an impact on my practice in terms of using questioning and discussion in mathematics.*
- *Having carried out a research study in the area of primary foreign languages my view of language learning has developed in terms of how to teach it effectively in the primary classroom.*

For some students this increased subject knowledge appeared to support *initiative* in terms of making the best pedagogical choices:

- *I used this as a way of improving my practice, it helped me to understand how different creative techniques can be used to support children's writing.*
- *I am much more willing to let the children choose and use their freedom of choice ...as a teacher this will allow me not to completely control the children's learning but allow them to learn in the best way possible.*
- *This study has made me more aware of different engaging activities I could use when teaching history, using drama and 'teacher in role' as the children really enjoyed this and learnt a lot from it.*
- *Using child centred learning and giving them ownership of their learning is fantastic to watch.*

Finally, the idea of *care for others* was also very evident:

- *The study has made me more aware of children's needs and I am able to carry on helping children to develop confidence to interact at playtimes.*
- *This study has encouraged me to look at the whole child and notice that I need to focus on their wellbeing before asking them to complete a task or participate in some learning.*
- *The study has impacted on my knowledge of social and emotional aspects of learning-this knowledge will be very useful in the future.*

The second value identified by Gellel (2010) was that of **Fostering a respect for the uniqueness of individuals.** It might be argued that this value links to Carr and Kemmis's (1986) *emancipatory* perspective as seeing pupils as individuals may lead to more appropriate teaching and learning experiences. Similarly, Noffke's (2009) *personal* growth dimension might be evident here in terms of the research participants. Responses indicated that students identified the need for pupils to be seen as *individuals*:

- *It highlighted the need to consider individual difference.*
- *It helped me to see children as individuals and appreciate that not every child learns in the same way and some things will only benefit certain children.*
- *The study taught me that research in the classroom has a wide range of benefits in understanding individual children's needs.*
- *I think my study positively impacted on children's learning as it allowed them to work in the way that suited them best.*

Students also articulated that their research had in many cases raised their awareness of, and confirmed their beliefs in, *inclusive* classroom practices:

- *It helped establish an environment for learning where all learners are embraced and supported to follow individual paths.*
- *This research can go some way in showing that every child, including those hardest to reach, can be communicated with and enjoy being around others.*
- *I feel I am more aware of an inclusive classroom environment.*

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Responses also highlighted that students saw removing barriers for *individual* children as part of the teacher's role in providing this inclusive learning experience:

- *It has helped provide me with teaching ideas that would remove barriers to learning for children with EAL or those who struggle with reading and writing.*
- *Really helped me see the barriers in terms of teaching styles and illustrated how these can be overcome to support enjoyment, behaviour and motivation.*
- *The children were able to learn better as barriers were removed in order for them to access learning.*

Gellel's (2010) third value was that of ***Encouraging an understanding of the teacher's role and relationships in society, particularly with the local community and parents.*** Once again in terms of the research process this might be lined to both Carr and Kemmis's (1986) *emancipatory* perspective but also to the *political* dimension in Noffke's (2009) work particularly in terms of societal relationships. Responses indicate that carrying out their research had made students far more aware of how their role as teachers had implications for *relationships* which extended beyond the school and classroom. This included their knowledge of the different worlds the child moved in and how they might draw on this in the classroom:

- *I am able to create lessons that encourage the children in my class to feel like they can draw on and share the knowledge they gain in their everyday lives/personal experiences and use them in the classroom.*
- *My study has made me reflect on the types of contexts used in the classroom and how I might use real-life contexts to enhance engagement in the future.*

They were also more aware of the impact that the child's home environment had in the

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classroom:

- *Understood how life outside of school affects life in school.*
- *I now have a better understanding of the impact of the home environment on reading development.*
- *Much more aware that…home life has a big impact on children's knowledge*

This new understanding underpinned the desire to establish good relationships with

Parents:

- *I am now much more aware of parental partnership.*
- *I feel parents were impressed and liked the idea of using PECs to communicate.*
- *I will now ensure my relationships with parents are strong.*

They also understood their role in establishing relationships with the *Local community:*

- *I understand the importance of collaborating with the wider community.*
- *I am more aware of how my choice of geographical resources can restrict or enhance children's local knowledge.*
- *Children recognised how the residential trip would help them in the transition to secondary school.*

Interestingly some students were also able to reflect on how their role as teacher might best support the children they taught in terms of *Relationships in society* both currently and in the future:

- *I want to make sure that gender is not stereotyped in my classroom.*
- *I am now much more aware of the importance of teaching children to become global citizens.*

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- *It had made me reflect on the importance of understanding any stereotypes I may hold of distant places and ensuring I do not present children with a one-sided view.*
- *I discovered the unspoken need for children to discover the reasons for (usually depressing) current affairs.*

Focusing on the valuing of people and a commitment to their betterment was Gellel's fourth value. This value is clearly aligned with key values in action research such as social justice (Elliott 1991) and a commitment to improvement and reform (Hopkins 2002). It was clear that becoming research literate, in order to provide the best possible educational experience for pupils, was an essential aspect of the teacher's role for many respondents:

- *We should all be striving to improve our practice to allow the children to achieve the best they can.*
- *Research provides teachers with insights into children's perceptions of their learning which can then be used to create an improved learning dynamic within the classroom.*
- *I believe that every child has the right to an outstanding education.*

In terms of *valuing people,* the idea of pupil voice was explicitly mentioned by several respondents:

- *My study had a huge impact on my professional practice due to listening to the child's voice and understanding how important their perspective is.*
- *I would like to ensure that I implement pupil voice strategies in my classroom and show children that I value their opinions.*
- *I understand the importance of gathering children's views opinions and ideas.*
- *It has given me the opportunity to gain an insight into children's views on behaviour, and how important it is to make sure they are aware of what positive and negative behaviour is, before expecting them to meet school and classroom expectations*

It was also clear that this *valuing of people and a commitment to their betterment* went beyond a narrow academic focus and encompassed a more holistic vision:

- *My study highlighted the importance of extra-curricular participation and how it can positively impact on many aspects of children's educational, physical, mental and social development.*
- *It is important we look at the individual as a whole rather than just on academic development.*
- *It taught me how effective pedagogy can increase children's motivation.*
- *I will ensure I praise all children fairly and consistently.*

This holistic vision of education and the teacher's role in promoting this was also very evident in responses the Gellel's fifth value that of ***Promoting an awareness and responsibility for the teacher's role in 'touching' the lives of students.*** Again, links with action research were evident, such as the development of personal wisdom (Carr and Kemmis 1986) and to Noffke's (2009) *personal* dimension in particular ideas of agency and identity. Students were very aware of issues related to children's Personal, Social and Emotional Development (PSED):

- *I have also become aware of the impact that creating something can have on a child's pride and confidence.*
- *I have learnt the value of encouraging children to take ownership of their own learning by enabling them to identify their own strengths and weaknesses from an early age.*
- *Made me aware of the impact the teacher can have on children's emotional reaction to being tested.*
- *I am aware of ethical issues when teaching.*

They were also able to articulate how being aware of PSED impacted on teaching and learning strategies:

- *My study had an impact on children's comprehension skills, and they were so motivated and engaged they spoke to the class teacher about wanting to do it again.*
- *I now understand the impact that the language I use can have on the children.*

- *This research has provided me with a valuable insight in to how ability grouping can affect a child's self-esteem.*

Gellel's sixth value was that of ***Creating a passion for knowledge and an appreciation that such knowledge is not neutral.*** This links to the *practical* dimension in Noffke's model (2009) in terms of contributing to a professional knowledge base, and to the idea of knowledge generation (Kemmis and McTaggart 1988). It might also be argued that the idea that knowledge is not neutral can be aligned to Elliott's (1991) view that action research is a useful tool to improve practice. Student responses considered both their own knowledge and that of the children. Reference to their own increased knowledge base was in two main areas. The first area was *subject specific knowledge*:

- *I now feel confident in using drama as a pedagogical tool for English as I have seen the positive effect it can have on the children's first-person creative writing.*
- *This study has allowed me to identify what a mini- artist is. In future practice this is a concept I would share and encourage in my own classroom.*
- *I have explored inclusive teaching approaches in PE to use in the future and studied how to increase physical activity levels for all children in different ways.*

The second area was *pedagogical knowledge*:

- *I understand the need for creativity for teachers in terms of planning, preparation, delivery and assessment.*
- *I now fully understand the different elements of assessment and the many strategies which can be adopted to ensure it is as effective as it can be. Variation is key, so it can benefit every child.*
- *The use of questioning-my research highlighted the importance of the type of question I ask in order to get the right kind of thinking out of the children.*
- *I have learnt the true value of teacher scaffolding of discussions.*

Additionally, many students could identify how their increased knowledge directly befitted the children's knowledge:

- *The importance of demonstration and exploration-allowing children time to explore a method/concept themselves allows for them to form their own knowledge through trial and error and practice.*
- *I have been able to recognise key teaching strategies that helped developed children's understanding noticeably.*
- *During the study the children appeared to have learnt the true meaning of self-assessment and what it is used for.*
- *The study indicated that children developed their critical thinking and language skills.*

In some cases, they were also able to identify where this had ignited motivation and *passion for knowledge:*

- *Following the activity, the children immediately told me how much they had learned.*
- *The children learnt new skills and were free to explore and develop them further in their free play time which they did.*

Students' understanding of the concept that *knowledge is not neutral* was primarily evident in responses which evaluated different curricula:

- *I feel a lot more confident that children learn best in a creative environment and that should be implemented in the curriculum.*
- *I found out that play has a massive impact on children's learning and should be encouraged more across all age groups.*
- *In the future I wish to promote cross curricular learning in school, the children saw the benefit of combining subjects by identifying that one subject's skills supported the other.*

However, others did seem to critique the idea that *knowledge is not neutral* and that in particular teachers have a key role in mediating what is taught:

- *I believe it is extremely important to find ways of ensuring that children are being taught in the best possible way and that the current educational system and ideas are not hindering child development.*
- *It highlighted the need to consider the child as opposed to just the curriculum.*

Gellel's (2010) final value was ***Attaching an increased importance to relationships.*** Earlier relationships with society, in particular with parents and the community, were discussed. Here we focus on classroom relationships. Students highlighted how carrying out their research had impacted on their relationships with children in the classroom, an aspect of research linked to Noffke's (2009) *personal* dimension:

- *I believe the action research significantly changed pupils' perception of pupil voice and the relationships pupils and teachers can have. This was because the boys realised that it was possible to be taken seriously by an adult and that their ideas and concerns acted on.*

Others commented how the process had heighted their understanding of the importance of this area both for the children and themselves:

- *I believe my study helped children understand how to work in a group, respect others and communicate ideas whilst listening to others, which are all necessary qualities for further learning and life.*
- *The children considered the other children's happiness and whether they were lonely/needed a friend.*
- *The children developed confidence in each other for support and self-esteem in themselves.*
- *Allowed me to consider how complex children's relationships are and that time needs to be made to talk about differences.*
- *The children really developed. Their understanding of many things increased, acceptance, kindness, unfairness to mention a few.*

Conclusion

ITE has a key role to play in the creation of a generation of teachers who are both research literate and able to carry out their own research to critique educational initiatives (BERA/RSA 2014; Byman et. al. 2009). This formal research training should ensure that students gain more than just technical knowledge, it should also enable the development of pedagogical and subject knowledge. Even more importantly it should encourage reflection on, and interrogation of, their personal educational aims and values (Cain and Harris 2013).

Supporting students to be aware of, and be able to critique, their behaviour, values and beliefs is an important part of the role of the teacher educator (Passy 2012). Practioner action research appears to offer a particularly valuable opportunity, rooted as it is in the values of the participants and subject to explicit ethical considerations (Nofke and Somekh 2011; BERA 2018). This process of making values explicit, through a meaningful but challenging experience, can help trainee teachers understand how they impact on their own learning but also on the curriculum they provide for their pupils (Tannehill and MacPhail (2014; Capel 2016).

As education continues to be influenced by contemporary social, political and cultural issues teachers need to feel confident in reflecting on and voicing their own values. They also need to be able to interrogate those of others, a result of which might be an educational system which places higher value on issues such as personal fulfilment, dignity and respect (Gellel 2010).

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