This paper was downloaded from

The Online Educational Research Journal
(OERJ)

www.oerj.org

Title

Developing and enhancing a student teacher's practice by incorporating the views of children about their learning into her teaching in the classroom.

Abstract

This enquiry was conceptualised as a single case study and the pilot of a subsequent larger scale research project. It incorporated a piece of action research designed as an iterative spiral of research, evaluation and development in classrooms where a student teacher was teaching children. New learning accumulated in one cycle was intended taken into the next.   A mixed-methods approach was designed including the use of bespoke pedagogical tools which were also used as research data collection techniques. They were intended to enable the student teacher to better understand children's learning from a socio-cultural perspective. These tools enabled children to reflect on their learning and then feedback to the student teacher about what they had learnt; how they had learnt it and what would enable them to learn better.

The issues addressed in this study were:
- what pupils thought helped and/or hindered their learning in classrooms with student teachers
- how understanding and acknowledging pupils' views of barriers to/facilitators of their learning in classrooms can be used by student teachers for lesson evaluation and planning and reflective practice
- the extent to which drawing on pupils' experiences in classrooms can support student teachers' understanding of pupils' learning and the development of their pedagogical practices (this includes both curriculum planning and teaching).
- the development and learning of initial teacher education students as student teachers engaged in reflective work-based learning

The conclusions indicated:

Any assumption that the outcomes of a single case study can be generalised is highly problematic. More research around the focus of this study is required. However, if the study was to be replicated at scale and the results were also replicated, there are implications that:

- Primary age children have the potential to express their learning needs and rationalise what they require to learn best when appropriate scaffolds are designed to enable them to articulate sometimes quite abstract concepts

- Student teachers respond to sharing power with children by receiving their feedback and developing their practice accordingly through ongoing reflection and evaluation, improve their practice in a very short time

- Mentors require development in understanding the impact children can have in supporting a student teacher's developing understanding of planning for effective learning

- Teacher training requires reconstruction to support the planning, reflection and evaluation of student teachers in order to enhance children's learning. Initial Teacher Education should model the importance of children's voice as a means of supporting student teachers to explore their pedagogy.

Research questions

How can children's views on their learning be used to inform the development of a student teacher's practice?

How could a school-based mentor support the development of a student teacher's understanding about learning?

Background

Importance of learning in school as an integral part of an ITE course

Student teachers spend a significant percentage of their time on Initial Teacher Education (ITE) courses in school (up to 80% in the case of the PGCE). The quality of this experience is therefore crucial to the overall quality of the education provided by the University. Student teachers' teaching practices as well as their overall grade can be influenced by the kind and quality of experience the students receive in schools. There is now a great deal of evidence to suggest that teachers' school experiences can make a strong impact on the quality of children's learning (Alton-Lee, 2003; Rutter et al, 1979). So from a course perspective and with the children's learning firmly in mind, it is important for the course to develop teachers with the right understanding to face the challenges in education today.

Children's voice

It is part of the pedagogy of a social constructivist view of learning that children need to talk about their learning in order to scaffold their cognitive development (Vygotsky, 1978). Language and thought are related. The issue in school is that talk is transitory unless it is recorded, therefore it is hard to scrutinise after and therefore practitioners can tend to be less reflective about what children say (Alexander, 2010). The principles behind taking deliberate account of children's voice have come to the forefront both since UN Children's Rights Charter was published (Flutter, 2007, Halsey et al., 2006) and since educators became interested in socio-cultural understandings of learning. In the United Kingdom (UK) this was followed by the Government push towards inclusive education for all through the Every Child Matters (ECM) agenda and Children's Act (2004) and the subsequent changes to Ofsted (2013) (Hopkins, 2008). This, coupled with New Labour's 'Active Citizenship' agenda (Davies et al., 2006), meant that children's voice was more publicly emphasised.

Many children through being heard and having their views respected may become increasingly more engaged and involved in their learning (Teaching and Learning Research Programme, 2004). This in turn may lead to a more enhanced curriculum (Davies et al., 2006, Ruddock & Flutter, 2004, Macbeath, Frost & Pedder, unknown). Through listening to children's views, a teacher's understanding of learning and teaching is increased (Ruddock & Flutter, 2004), leading to them transform their practice and pedagogy for the learners with whom they are working (Halsey et al., 2006, Hopkins, 2008, Davies et al., 2006, Macbeath, Frost & Pedder, unknown). The 'knock-on' effects of this may be a more positive learning culture in the classroom (Halsey et al., 2006) and transformed relationships between teacher and child (Davies et al., 2006, Macbeath, Frost & Pedder, unknown). This dialogic discussion enables all who participate to collaborate along shared lines of enquiry and therefore learning is reciprocal (Alexander, 2010). The learning is socially constructed.

To use children's opinions effectively, feedback needs to be reflected upon carefully, being aware that this can be an uncomfortable process for the teachers involved (McIntyre, Pedder & Ruddock, 2005). There may also be a need for continuing professional development (CPD) activities for the teachers who have not worked in this way before (Flutter, 2007, Macbeath, Frost & Pedder, unknown, McIntyre, Pedder & Ruddock, 2005); some staff may be anxious and wary of this power change (Cheminais, 2008). Training for the children in giving feedback (Macbeath, Frost & Pedder,unknown) is useful to ensure that they have the skills required to give valid

responses (Cheminais, 2008). One way that this may be achieved is through embedding dialogic practice into teaching and learning from ITE onwards.

Dialogic engagement in learning

The culture of a classroom, like the traditions of many cultures is orated in many ways before ever being written (Alexander, 2001). Alexander (ibid.) found that the UK culture views language as a tool for social interaction, whereas many other cultures in his study, valued language as a cognitive tool for learning, thus adopting a Vygotskian underpinning to their teaching and learning (Kozulin et al., 2003). More recently, Littleton & Mercer (2013) support the view that spoken language should be used for people to think creatively together. Therefore, talk for learning should be an ethos in the classroom (Alexander, 2010).

'Thinking aloud' (Mercer & Hodgkinson, 2008) conceptualised by Barnes in the 1970s is one way that a person's thoughts can be represented to another person (McGregor, 2007). This process enables others to build their understanding of children's thinking about their learning (Smith, 2010). Smith (ibid) adds that in furthering thinking a learner experiences further educational success. From a social constructivist perspective, Vygotsky (Kozulin et al., 2003) explains that these processes equate to the interpersonal and intrapersonal dimensions in his theory; simply 'doing, talking, thinking, inter-understanding' (McGregor, 2007).

The pedagogy underpinning the research

This project is underpinned by the notions of Vygotsky (1978) as a pedagogical approach to learning and teaching. With a focus on the importance of socially constructing learning through concept formation with the teacher as the mediator.

The human mediator bridges a 'gap' between what a learner can do by alone and their learning potential. This 'gap' is named the 'Zone of Proximal Development' (ZPD) by Vygotsky (Kozulin, 2008). Chaiklin (2008, in Kozulin et al) asserts that in the ZPD, it is the relationship between instruction and learning that is developed. Successful mediation in the ZPD will depend upon what the learner can do with the assistance offered, how the MKO and learner interacts, as well as the readiness of the learner. Understanding is then internalised through practical external activity initially, followed by interpersonal processes between people in the context with the learner and finally by the learner making intrapersonal cognitive changes and so moving forward (Vygotsky, 1978). Therefore in collaboration with an MKO the learner is able to do something which their level of psychological maturity would not have enabled them to complete on their

own. The ZPD therefore is a theoretical basis for pedagogical interventions (Chaiklin, 2008, in Kozulin et al). It should be acknowledged that at different times in different situations the size of the ZPD and the learner's position within it varies.

Figure 1 (below) demonstrates how this might work in this project. Whilst the mentor scaffolds the learning of the student teacher through their ZPD, on an interpersonal plane by discussion, feedback, questioning, modelling and so on, so the student teacher can reflect and internalise their learning. At the same time the mentor is learning about, and perhaps also from the student teacher as the learning is reciprocal. In addition, the student teacher uses interpersonal processes to engage with the child's learning and scaffold them through their ZPD. At the same time the student teacher is learning about, and from the child as the learning is reciprocal. Therefore the grey arrows in figure one indicate respective zones of potential development for student teacher, mentor and children. The ZPD is negotiated in this instance through the student teacher/mentor/children's discussions (Prawat, 1999) using mediation as a tool to transform the thinking of the student teacher (Eun, 2008).

The reflective teacher

The course within which the study took place has a strong focus on the development of student teachers as reflective practitioners. There is no one definition of what it means to be a reflective teacher. Dewey (1964) suggests that it is ordered and logical. Bolton (2010) concurs that it is a constituent part of being a teacher and both Calderhead & Gates (1993) and Ghaye & Ghaye (1998) recognise that there are ordered processes of analysis, discussion, evaluation that are utilised in the reflective process. Boud (2006) describes the process of reflection as a way of making meaning of experiences. Taking Bolton's (2010) notion of support during the process of reflection of this kind, it is clear that mentors in a school where a student teacher is learning have a role to play in supporting the student teacher to reflect as a means of further developing their practice. Bolton (ibid.) describes this as helping the student teacher to 'step outside the box' to critique and empathise together. The learning conversation that is had between mentor and student teacher in this capacity is to support and guide the student teacher towards autonomy as a practitioner (Swim, 2007, Zwozdiak-Myers, 2012). Zwozdiak-Myers (2012) advocates the use of pupil's voice as an alternative window on the experience on which is being reflected by the student teacher. What is clear is that the principles of Vygotsky's social constructivist learning theory are enacted here as the mentor guides the student teacher through their ZPD. The processes of reflecting individually (on the intramental plane) and with the MKO in the form of the mentor (on the intermental plane) are explicit. Ultimately, this intramental reconstruction can be

seen as the student teacher enacting metacognitive practices in learning about learning to become a teacher – knowing what to do and how, when and why to deploy different strategies (Woolfolk, Hughes & Walkup, 2008). McGregor (2007) states scaffolding may be need to structure the student teacher's thinking. Scaffolding is an important consideration in the construction of the tools for data collection during the research.

The study

Participants

This study required participants at different levels in the education system:
- At classroom level there are the pupils. These are selected through a stratified, purposeful, criteria based sampling and total six. The student teacher, in discussion with their school-based mentor selected children with a range of abilities and a mix of gender to form the focus group. The children were aged 9-10 years and were from a primary school in the east of England.
- From the University there are the student teacher and myself as researcher. The student teacher was a volunteer who had an interest in developing her own practice from listening to children's views.

The over-riding factor with the participants chosen was for ease of access. This created time, resource and financial savings (Cohen, Manion and Morrison, 2005). In this case the study population is the primary PGCE cohort of student teachers. The sample size for the pilot was one. Bias could be conceived here, and findings may not be generalisable and nor truly representative (Kumar, 2011). However, for this study it is important to select a sample that can 'best' answer (Kumar, 2011) in order to ensure that enough information is yielded to best describe the phenomena.

A case study approach

The research outcomes in this case study were an attempt to provide warranted assertions about pupils' experiences of learning in the classroom and ways in which an understanding of this can help student teachers to develop their teaching practices. The research approach therefore is that of a case study, using interpretation and ethnography to get inside the situation and make sense of the phenomena; beginning with individuals and focussing on the action taken

from a variety of perspectives to provide a rich set of data to use to describe the situation. This approach enables developing an understanding through holistic, in-depth exploration (Kumar, 2011) of real situations and attempts to understand them more clearly (Cohen, Manion & Morrison, 2007). The focus is on individuals (as the pilot) or a group (as the main study) and it is intended to gain insight into the events of a situation (Kumar, 2011). Interviewing and observations are common methodologies of this approach, however, it is *"distinguished by the subjects rather than the methodologies"* according to (Cohen, Manion & Morrison, 2007, p181). Cohen, Manion & Morrison (2007) posit that the rich, narrative and the researcher involvement in the case makes the data collected demonstrate 'what it is like' to be in this situation which is of real value as the results are demonstrated through the eyes of the participants.

Position of the research

This research is conceived within an interpretative paradigm. Direct knowledge of the classroom was not possible and so accounts and observations from mentors, student teachers and children provided indirect indications of the phenomena interpreted which unfolded over time. The researcher and the participants are interdependent and developed their knowledge of the phenomena in tandem throughout this research. In doing so, this research utilises multiple realities from a variety of individuals to construct the meaning – constructivism (Crotty, 1998). This connects closely to the underpinning pedagogy (discussed above) of the research and the learning and teaching practice of the individual participants, including reflective practice.

Social constructivist thinking invites reflexivity both from the intra-personal and inter-personal planes. Etherington (2004), p21) refers to this as *"listening to voices".* In this research the 'voices' are those of student teacher, child and mentor. The notion from these reflections therefore is to understand the situation at a deeper level and make those understandings explicit. Reflexivity in this research could therefore be seen as a bridge between the research approach and the practice of the participants. Meaning is made in this situation through the use of language as tool for sharing understanding between participants. Using reflexivity in this way enables findings to be used to inform other people in a similar position (Etherington, 2004), through triangulation, so even if generalisations cannot be drawn, perhaps the insight provided is useful to those also questioning their involvement and understandings in a similar position, and as such sits well with an ethnographic, interpretive paradigm.

The research process and data collection

This is a case study of one student teacher's practice in the context of her first teaching practice on the PGCE course, in a primary school with a class of approximately thirty Year Five children. The data collection took place over one week's five one-hour literacy lessons. She worked alongside her mentor in the classroom who was there to assess the teaching and feedback on the practice observed, commenting on aspects that helped/hindered the children's learning and behaviour and so on. Throughout this period, the student teacher planned a lesson and taught it and the mentor observed the whole taught lesson. During each lesson she planned activities and used teaching strategies in order to develop the children's literacy understanding, and the mentor observed what was happening. Table 1 outlines the process followed, showing each iterative cycle undertaken by the student teacher within the whole study. The left hand column shows the actions taken by the researcher and the right hand shows the actions taken by the student teacher. Simultaneous action is taking place where the columns match together.

After each of the lessons, four events happened, although not necessarily in this order, and it was from these activities that the data was gathered:

- The student teacher reflected from her own perspective on the learning and teaching in the literacy lesson. The data was collected through the standard course proformas which scaffold the reflections on the lesson, plus a series of reflective questions to support the student teacher's thinking around this teaching and learning process. This consistent model of scaffolding was provided by the course developers in order to support the student teacher's developing thinking as a teacher practitioner.

- The mentor fedback to the student teacher about what they had observed during the lesson, identifying strengths and development in their practice. Again data was collected through the standard course proformas which scaffold the mentor's feedback (Bleach, 1999) on the teaching and learning in the lesson. The proforma covers behaviour management, resources, planning, subject knowledge, assessment and so on. This proformas was developed by the course team over time from the criteria laid out for the Standards for QTS as well as the criteria provided by Ofsted for trainee teachers. Mentor feedback was intended to contribute to the student teacher's development as a reflective teacher.

- The children provided feedback to the student teacher about their learning experiences after each lesson through a discussion in a focus group made up of children of mixed ability and gender. During the focus group the children undertook two activities which provided feedback to the student teacher; the sorting activity and the thinking fish.

  - The first activity was to 'warm up' the children's thinking about their learning in the lesson and what had helped/hindered that. There was a discussion before this activity began which set the expectations of the focus group. The sorting activity consisted of pairs ('talk partners' (Kagan & Kagan, 2009)) of children having a set of six statements to discuss and order according to the importance for their learning in the lesson, for example, "other children helped my learning" could have been placed at top or bottom of their list of six. Reasons for these positions were identified in the discussion in the next activity. These statements were developed from the work of the Teaching and Learning Research Programme (2004) and particularly the work of McCallum et al (2000). The data was collected from this activity by taking photographs.

  - Immediately after the children moved into the thinking fish activity (Figure 2). The thinking fish consisted of a skeleton image of a fish with prompts around the outside, for example, children, teacher, activity and so on. It is based on the work of Hopkins (2008) and acts as a 'talking frame' (DfE, 2008). As a group together the six children considered the prompts and how they influenced their learning and how their learning could be better supported. There was one fish for the group and the children annotated the prompts together. The data was collected from this activity by taking photographs.

  Finally, the student teacher took all of the feedback received and planned her next lesson in the sequence and demonstrated that she had taken account of the children feedback. For example, the children might have said that they wanted to talk with a friend and the student teacher would then have planned talk partner work in a subsequent lesson.

Ethical considerations

All research participants gave informed consent, ensuring that all participants are adequately aware of the purpose, role and potential effects of the research (Cohen, Manion and Morrison, 2005), entering into it voluntarily, without pressure or incentives. The research was structured so that the student teacher and the children would not have to do any more than their normal working practice, thus minimising harm, discomfort, anxiety etc (Kumar, 2011). All materials were kept confidential and anonymous. Ethical approval was sanctioned by the University.

Results and discussion

In order to analyse the student teacher's learning, responses to the reflective prompts in the scaffolds provided were compared to the notions of Vygotsky's theory. The language used to explain events was considered in terms of techniques/strategies associated with teaching practice or understanding/utilisation of learning theory, for example 'I spent too long on the carpet' to 'the children need greater scaffolding as they can't access this learning autonomously'.

The mentor provided both qualitative comments and quantitative grades in their observations. From the grades, progress of the student teacher's learning was measured from satisfactory to outstanding. The qualitative comments were reviewed to identify changes of focus from teaching to pedagogy in the same way was the student teacher's own reflections were reviewed. The mentor's feedback intended to both develop teaching practice (techniques and strategies) and understanding of the children's learning process.

In order to evaluate the data collected fixed categories were identified. These were developed from a visual representation of Vygotsky's social constructivist learning theory produced by Pollard (2002) and mapped on a grid (table 2). To see progress in the children's learning overall, the comments that were made in focus group were mapped onto this critical framework and themes were identified demonstrating their movement through their ZPD from dependence to self directed learning.

Data from the student teacher's reflections

It is clear from the evaluations made by the student teacher that there is reflection on practice (Moon, 2000) and is recognising changes to practice as a result. Indeed there is deeper understanding shown here through the utilisation of the scaffold of prompts to consider the

learning of the children as part of the reflection, indicating that the student teacher is utilising reflection to enhance practice to impact on others and change practice as a result, albeit that she is supported to do so. This may in turn lead to reflexive practice as advocated by (Moore, 2007). Possible explanations for the changes in the children's and the student teacher's thinking have to be understood within the context of the activities of the student teacher which are discussed further above and below.

Subsequent to the lesson evaluations the reflections by the student teacher demonstrate clearly the reflexivity in practice (Moore, 2007) as it clearly demonstrates the changes and developments made to impact directly on the children's learning. At the start of the week, the student teacher is concerned more with the mechanics of teaching, for example, pace, children needing to understand about sharing resources; however, as the week progresses the comments are differently focused towards the underlying principles of learning, for example work being well scaffolded for learners to be successful and supporting children who were 'stuck', although in this instance not verbalising her role as MKO. What is also clear is that it is not a linear progression towards increased understanding of learning and when this data is compared to the children's and mentor's feedback for example, it is clear that their roles as MKOs have influenced her reflections here. This indicates that the role of the MKO is important to learners as it enables the shaping of intrapersonal thinking through interpersonal exchanges and thus progresses learning through the ZPD towards autonomy. In addition there is recognition here by the student teacher that the process of planning and teaching is more engaging as the children are more collaboratively engaged with their process of learning (Littleton&Mercer, 2013, Mercer, 2008). Possible explanations for the changes in the student teacher's thinking have to be understood within the context of the activities of the student teacher which are discussed further above.

Data from the mentor's observation feedback

What is clear from the mentor's observations is that the focus of the feedback is on teaching practices rather than deepening pedagogical knowledge. The process is focused towards the attainment of the Standards and the qualification of QTS. This is evidenced through the qualitative comments made by the mentor, for example behaviour was good, resources prepared ahead of the session. The requirements of the PGCE course state that these observations are to be supported with oral feedback, and therefore these may only represent the 'minutes' of an

observation and meeting between student teacher and mentor. However, there is no indication here that the feedback deepens the understanding of the process of learning and teaching but rather supplies evidence towards a competence model of teacher training. However, as we note from (Moore, 2007) this process can be useful when used in conjunction with other reflective models where the student teacher reflects on the children's learning and their own practice and emphasises the intra and interpersonal relationships in the classroom. This data therefore should not be considered alone, but in conjunction with the powerful data collected from the children in discussion about their learning and from the student teacher's reflections of the process. However, the mentor could also be seen here as the MKO of the student teacher brokering the way for the student teacher to join the current teaching community of practice which is focussed towards the competence model at all levels of education. Possible explanations for the changes in the student teacher's thinking have to be understood within the context of their activities which are discussed further above and below.

Data from the focus group of children

It is clear, from the data collected during the sorting activity that the children were facing new challenges in their learning which was causing disequilibrium in their ZPD. This is evidenced in the data from the changing importance placed on 'working together, student teacher stood at the front and readiness to learn'. These statements fluctuate position a lot, indicating that the children have very different needs in their learning at different times during the sequence of lessons and as such the value to them of receiving support from an MKO changes depending on their learning needs. In comparison to Vygotsky's learning theory this would indicate their movement from the intra to inter personal planes and back again depending on support required to move from dependence towards autonomy. Further, during this activity the children recognised an increased importance for more challenge and more autonomy in their work which would indicate their movement through their ZPD towards autonomy of their own learning. Possible explanations for the changes in the children's and the student teacher's thinking have to be understood within the context of the activities of the student teacher which are discussed further below.

It is clear from the data collected from this thinking fish activity that children recognise and can verbalise the need for a changing role of the MKO in their learning. They recognise the increased want to be independently working over-time, which indicates their progress through their ZPD towards autonomy. They also make suggestions about the less able children requiring more support from the student teacher, thus evidencing their understanding of the importance of

an MKO to their learning. However, what this data also indicates is that the role of the MKO changes depending on the level of challenge faced and their perceived feelings of confidence. This indicates that the role of the MKO as determined by (Vygotsky, 1978) is influential to the hierarchy suggested by (Maslow, 1979) in that in order to achieve self efficacy first certain levels of 'safeness' need to be achieved by learners and the MKO has a role in developing that feeling of 'safety' in order to progress learning, in other words the MKO scaffolds the children's learning experience in the ZPD. In addition, the children recognise that they can do more in that they comment early on that the work is 'easy'. This indicates that the children have an understanding of their level of abilities and that they recognise that challenge is and aspect of learning. Therefore the children understand that disequilibrium in their ZPD is essential to learning. Further, the request for a reward for their efforts diminishes during the week indicating that success becomes the motivator thus fulfilling the drive towards a satisfaction intrinsically of self, rather than extrinsically. In addition, the children can be seen to scaffold the student teacher's learning by suggesting strategies from their own experience of learning situations which would help the student teacher to help them learn for effectively. Examples of this would include a big clock to show the amount of time left and anyone who was stuck sitting on the carpet. These are examples of the children as the MKOs scaffolding the student teachers development through their ZPD. The value of this process to the children and the importance of children's voice being heard and responded to, is heralded here in that one child comments that compared to the student council, this feels more useful because it is directly affecting her learning. Possible explanations for the changes in the children's and the student teacher's thinking have to be understood within the context of the activities of the student teacher which are discussed further below.

Data from lesson planning demonstrating utilisation of interpersonal and intrapersonal feedback

The significance of this data is the action taken by the student teacher to incorporate the children's views about their learning into future lessons. This indicates that the student teacher is be prepared to learn from the children as MKOs in some instances in the classroom, but also that the student teacher recognises the importance of harnessing the children's understanding of their learning needs in further in their learning in subsequent lesson and the future. In addition, the planning demonstrates an increasing understanding of the learning of the children through the scaffolding of their learning experiences. This indicates not only an increased awareness of her role as MKO to the children but also how her reflective practice is supporting the development of the learning of the children. Possible explanations for the changes in the

children's and the student teacher's thinking have to be understood within the context of the activities of the student teacher which are discussed further above and below.

Conclusion

Overall the data from this pilot study supports the value of social constructivist learning theory as the underpinning pedagogy in teacher training in developing reflectively professional teachers who listen to children's views about their learning. Further the value of dialogic learning, at all levels of education, is evidenced as a means of supporting learners move through the inter- and intrapersonal planes of their ZPDs. Moreover, the role of an MKO is highlighted as a guide through the ZPD but this position of the MKO within the learning context may be fluid as learning is reciprocal and children can be as expert on their learning needs as other professional adults. In addition it also raises questions about the value of the competence model for teacher training if this not supported by a reflective practice model. It is clear that reflecting on learning by all those involved and from all perspectives increase learning because mentor, student teacher and children are all focused on achieving the same goal.

Considerations for the Main Study

- The sequencing activity has been discarded as the 'thinking' fish provides a richer depth of information about the same areas due to its semi-structured but qualitative nature. The student teacher in the pilot study commented on this and on reflection it lacked specific connection to teaching.
- The sample size is increased. A sample of the student teacher cohort is required as defined by the Ofsted requirements understanding the needs of and tracking progress of individual groups by sex, ethnicity, age and teaching phase. The whole lesson will still be considered due to the nature of the type of teaching undertaken by the student teacher as a requirement of their course at this time.
- Further consideration needs to be paid to consider how could mentors support this process of teaching and learning for student teachers and it is hoped that a larger sample in the main study data may provide greater insight into good practice in this area.

References

Alexander, R. (2010) *Towards dialogic teaching: Rethinking classroom talk.* 4th edn. UK: Dialogos.

Alexander, R. (2001) *Culture and pedagogy.* London: Wiley-Blackwell.

Alton-Lee, A (2003) *Quality teaching for diverse students in schooling: Best evidence synthesis,* Wellington: Ministry of Education

Bolton, G. (2010) *Reflective practice.* 3rd edn. London: Sage.

Boud, D. (2006) *'Creating the space for reflection at work',* in Boud, D., Cressey, P.& Docherty, P. (eds.) *Productive reflection at work.* London: Routledge.

Calderhead, J. & Gates, P. (eds.) (1993) *Conceptualising reflection in teacher development.* London: Falmer.

Cheminais, R. (2008) *Engaging pupil voice to ensure that every child matters: A practical guide.* London: Routledge.

Cohen, L., Manion, L. & Morrison, K. (2007) *Research methods in education.* 6th edn. London: Routledge.

Crotty, M. (1998) *The foundations of social research: meaning and perspective in the research process,* London: Sage

Davies, L., Williams, C., Yamashita, H. & Ko Man-Hing, A. (2006) *Inspiring Schools Impact and Outcomes - Taking Up the Challenge of Pupil Participation.* Carnegie UK Trust: Esmee Fairbairn Foundation.

Dewey, J. (1964) *'Why reflective teaching must be an educational aim from "how we think" 1933',* in Archambault, R. (ed.) *John dewey on education.* Chicago: University of Chicago Press.

Etherington, K. (2004) *Becoming a reflexive researcher: Using ourselves in research.* London: Jessica Kingsley.

Eun, B. (2008) '*Promising practice: Making connections: Grounding professional development in the developmental theories of Vygotsky*', *The Teacher Educator,* 43 pp.134-155.

Flutter, J. (2007) '*Teacher development and pupil voice*', *The Curriculum Journal,* 18 (3), pp.343-354.

Ghaye, A. & Ghaye, K. (1998) *Teaching and learning through critical reflective practice.* London: David Fulton.

Halsey, K., Murfield, J., Harland, J. & Lord, P. (2006) *The Voice of Young People: An Engine for Improvement? Scoping the Evidence.* CfBT Education Trust: National Foundation for Educational Research.

Hopkins, E. (2008) '*Classroom conditions to secure enjoyment and achievement: The pupil's voice. listening to the voice of 'every child matters'*', *Education 3-13,* 36 (4), pp.393-401.

Kagan, S. & Kagan, M. (2009) *Kagan Cooperative Learning,* New York : Kagan KCL:BKCL

Kozulin, A., Gindis, B., Ageyev, V. & Miller, S. (eds.) (2003) *Vygotsky's educational theory in cultural context.* Cambridge: University Press.

Kumar, R. (2011) *Research Methodology: a step-by-step guide for beginners ,* London: Sage

Littleton, K. & Mercer, N. (2013) *Interthinking.* London: Routledge.

Macbeath, J., Frost, D. & Pedder, D. *The influence and participation of children and young people in their learning (IPiL) project.* Available at: http://www.gtce.org.uk/research/commissioned_research/pupil_learning/influence_participation/ (Accessed: 11/16/2009).

Maslow, A. (1979) '*Humanistic education versus professional education*', *Journal of Humanistic Psychology,* 19 (3), pp.14-16.

McCallum, B; Hargreaves, E; Gipps, C (2000) *Learning: The pupil's voice* Cambridge Journal of Education, 30 (2) pp. 275-289

McGregor, D. (2007) *Developing thinking: Developing learning.* Maidenhead: OUP.

McIntyre, D., Pedder, D. & Ruddock, J. (2005) '*Pupil voice: Comfortable and uncomfortable learnings for teachers*', *Reseach Papers in Education,* 20 (2), pp.149-168.

Mercer, N. (2008) *The guided construction of knowledge: Talk amongst teachers and learners.* 5th edn. Bristol: Multilingual Matters.

Mercer, N. & Hodgkinson, S. (eds.) (2008) *Exploring talk in schools: Inspired by the work of douglas barnes.* London: Sage.

Moon, J. (2000) *Reflection in learning and professional development.* London: Kogan.

Moore, A. (2007) *'Beyond reflection: Contingency, idiosyncracy and reflexivity in initial teacher education',* in Hammersley, M. (ed.) *Educational research and evidence based practice.* London: Sage. pp. 121-138.

Ofsted (2013) *Grade criteria for the inspection of initial teacher education 2008-11 Revised November 2009,* http://www.ofsted.gov.uk/resources/grade-criteria-for-inspection-of-initial-teacher-education-2008-11

Pollard, A (2002) *Readings for Reflective Teaching,* London: Continuum

Prawat, R. (1999) '*Social constructivism and the process-content distinction as viewed by Vygotsky and the pragmatists*', *Mind, Culture and Activity,* 6 (4), pp.255-273.

Ruddock, J. & Flutter, J. (2004) *How to improve your school: Giving pupils a voice.* London: Continuum.

Rutter, M; Maughan, B; Mortimore, P; Ouston, J (1979) *Fifteen Thousand Hours ,* London: Paul Chapman

Smith, J. (2010) *Talk, thinking and philosophy in the primary classroom.* Exeter: Learning Matters.

Swim, T. (2007) '*Documenting pre-service teachers' work: A tool for influencing reflections about developmentally appropriate practices*', *Teacher Education and Practice,* 20 (4), pp.376-394.

Teaching and Learning Research Programme *Consulting pupils about teaching and learning - ESRC network project newsletters- May 2001 to April 2004.* Available at: http://www.consultingpupils.co.uk/welcome.html (Accessed: 28/9/2009).

Vygotsky, L. (1978) *Mind in society: The development of higher psychological processes.* USA: Harvard.

Wood,D, .Bruner, JS. and Ross, G (1976). '*The role of tutoring in problem solving'* Journal of Child Psychology and Psychiatry, 17 pp. 89-100.

Woolfolk, A., Hughes, M. & Walkup, V. (2008) *Psychology in education.* Harlow: Pearson.

Zwozdiak-Myers, P. (2012) *The teacher's reflective practice handbook.* London: Routledge.

Figures and tables

Title of Figure
Figure 1 Dual orientation of teacher education and role of school within it (adapted Schon, 1987)
Figure 2 The Thinking Fish (adapted, Hopkins, 2008)

Title of Table
Table 1 Outline of one cycle of work to be undertaken by the co-participants in the research process in chronological sequence
Table 2 A categorical model of Vygotsky's learning theory and framework for analysis of data collected (adapted from Pollard, 2002)

Figure 1 Mentor – Student Teacher – Child Dynamics

Mentor   Student Teacher

↕ ZPD   ↕ ZPD

Student Teacher   Child

Figure 2 The "Thinking Fish" (Adapted Hopkins, 2008)
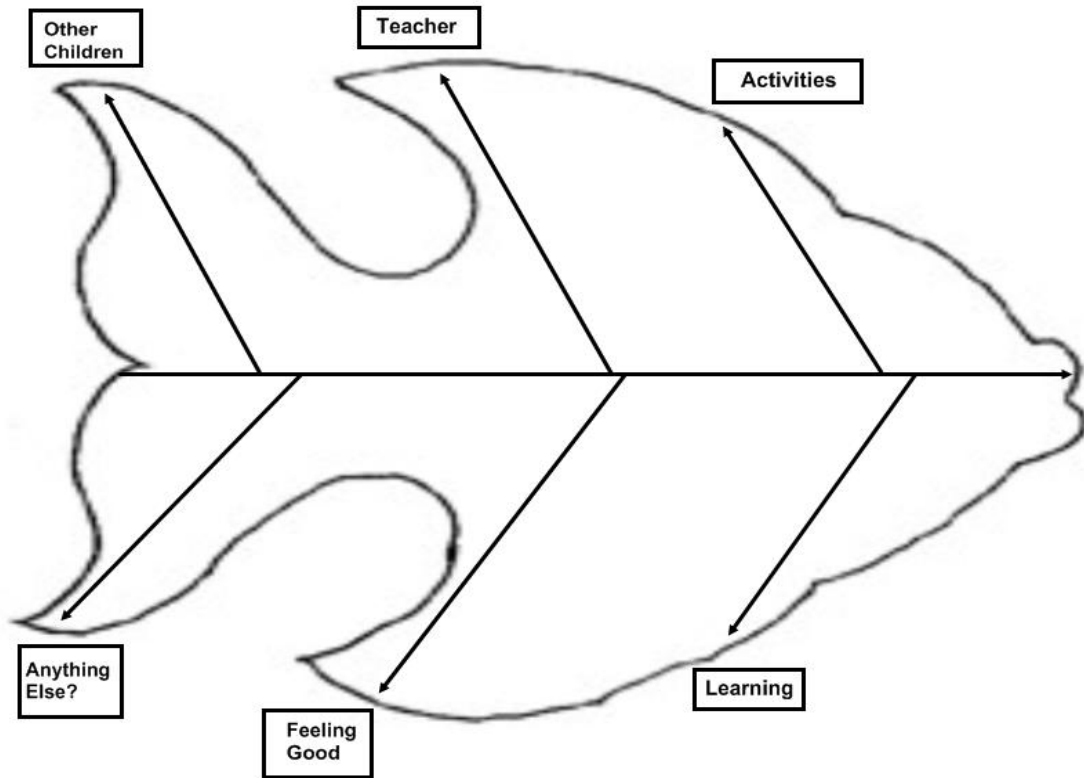
Myself as researcher conducting my this project	Student teacher conducting his/her action reflective project
Researcher to keep a informal log of reflections as the project develops	Teach a lesson Complete lesson evaluations and reflective log questions Be observed and receive feedback from the mentor Review that lesson with a focus group of children
	Plan the next lesson taking into account all of the above
Repeat this cycle five times	
Researcher to review student evidence, that is, observations by mentor, reflections, lesson planning and evaluations, notes from focus groups as the data for the case study	

Table 1 Outline of one cycle of work to be undertaken by the co-participants in the research process in chronological sequence

Stage 0	Stage 1 Assistance by More Knowledgeable Other (MKO)	Stage 1/2	Stage 2 Assistance by self	Stage 2/3	Stage 3 Internalisation , automatisation and appropriation	Stage 3/4	Stage 4 Deautomatisation. Recursive loop begins as required
Personal	Interpersonal			Intrapersonal			Cultural
Feelings of boredom				Feelings of anxiety		Feelings of success and/or elation	
Cannot do unaided	Facilitated, collaborated, time for re-explanation. Can do but dependent.	Potential to do Moving towards autonomy Increasing challenge				Can do unaided	
	ZONE OF PROXIMAL DEVELOPMENT – Vygotsky (1978) What can be achieved with assistance (Real versus Potential) Scaffolded by assistance from MKO – Wood et al. (1976) Developing level of autonomy and competence						

Table 2 A categorical model of Vygotsky's learning theory and framework for analysis of data collected (adapted from Pollard, 2002)