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HRAMIAK, Alison

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Alison Hramiak

Using the Dynamic Model of Educational Effectiveness to explore development of practice by Teach First beginning teachers

Abstract

Pressures on pupil achievement, alongside a rigorous inspection regime in English schools has arguably led to an increased interest in demonstrating the impact of beginning teachers on pupil attainment. Routes into teaching have come under intense scrutiny, not least the Teach First route (TF), which is seen as an expensive training model. Several impact studies have attempted to evaluate TF and its' teachers, with mixed results (Darling-Hammond, 2006; Reynolds, Hopkins, Potter, & Chapman, 2001). This research builds on these findings and investigates the impact by TF beginning teachers using the Kyriakides, Creemers, and Antoniou (2009) dynamic model of educational effectiveness as a framework for analysis. Findings indicate that these teacher level factors are interrelated and not isolated characteristics. Participants move between these levels as the year progresses, and may do so in a non-linear, and non-sequential way. This study has added to an existing body of knowledge and indicates that further exploration of teacher impact is necessary, especially in terms of enabling teachers to assess their own impact on pupils, and to understand what it is they are doing that is making a difference.

Das Dynamic Model of Educational Effectiveness als Grundlage für eine Untersuchung zur Praxisentwicklung bei beginnenden Teach-First-Lehrkräften

Zusammenfassung
Erfolgsdruck bei Schülerinnen und Schülern entlang eines strengen Inspektionssystems in englischen Schulen führte zu einem erhöhten Forschungsinteresse

Dr. Alison Hramiak, Sheffield Institute of Education, Charles Street Building, Sheffield Hallam University, Sheffield S1 2HN, United Kingdom
e-mail: A.Hramiak@shu.ac.uk

am Einfluss beginnender Lehrkräfte auf Schülerleistungen. Damit rücken Ausbildungsgänge für Lehrkräfte, nicht zuletzt das kostspielige Ausbildungs-modell Teach First (TF), in den Fokus. Verschiedene Studien haben versucht, das TF-Programm und die Wirksamkeit der betreffenden Lehrkräfte für den Unterricht zu evaluieren, was gemischte Ergebnisse hervorbrachte (Darling-Hammond, 2006; Reynolds, Hopkins, Potter, & Chapman, 2001). Der vorliegen-de Artikel greift diese Erkenntnisse auf und untersucht den Einfluss beginnen-der TF-Lehrkräfte auf das Lernen von Schülerinnen und Schülern auf Grundlage des Dynamic Model of Educational Effectiveness nach Kyriakides, Creemers und Antoniou (2009). Die Ergebnisse zeigen, dass die verschiedenen Stufen der Lehrwirksamkeit in wechselseitigen Beziehungen miteinander stehen und nicht isoliert betrachtet werden können. Die teilnehmenden Lehrkräfte bewegen sich im Laufe des ersten Lehrjahres zwischen den Stufen in nicht-linearer und nicht-sequenzieller Weise. Die Studie bringt neue Erkenntnisse in ein bekanntes Forschungsgebiet und verdeutlicht die Notwendigkeit weiterer Erforschung von Lehrwirksamkeit, insbesondere im Hinblick auf Reflexionsmöglichkeiten des eige-nen Lehrerhandelns.

Schlagwörter
Auswirkungen; Lehrerbildung; Teach First; Pädagogische Wirksamkeit

1. Introduction

Pressures on the achievement of pupils, alongside a rigorous inspection regime in schools in the England has arguably been partly responsible for an increased interest in being able to demonstrate the impact of our teachers on the pupils they teach, in terms of attainment and progress. Routes into teaching (Smithers, Robinson, & Coughlan, 2012) have come under intense scrutiny, not least the Teach First (TF) route, which is seen as an expensive model for training teachers. A number of studies have been conducted in England and America which attempt to evaluate this type of programme (the Teach First route in England and the Teach for America route in America are similar but not the same) and the teachers in it, in terms of their efficacy and impact as teachers (Darling-Hammond, 2006; Darling-Hammond, Holtzman, Gatlin, & Heilig, 2005; Muijs, Chapman, Collins, & Armstrong, 2010; Reynolds, Hopkins, Potter, & Chapman, 2001). The results are mixed for both routes, thus, further work is needed in this area to build on pre-vious research and clarify the situation further where possible for TF in England.

The purpose of this study was to build on the findings from previous stud-ies that investigated the impact of TF beginning teachers, area using the dynam-ic model of educational effectiveness (Kyriakides, Creemers, & Antoniou, 2009) as a framework for analysis to determine the level of teacher effectiveness, and type of impact these beginning teachers demonstrated. The research adds to the body

of knowledge of the impact of teachers (Muijs, Chapman, & Armstrong, 2012) and demonstrates that this model can be used to measure the development of impact in TF beginning teachers.

2. Theoretical underpinning: Categorising teacher behaviour

Research into teacher impact typically focusses on the relationship between teacher efficacy and pupil achievement, with a one size fits all approach. What is needed is an approach that embraces a differentiated teacher behaviour analysis, one that avoids existing models that explain teacher caused learning (Cox, 2014). It is with this in mind that Kyriakides's dynamic model of educational effectiveness was used in this research, as I would argue that this model most closely fitted the needs of the study enabling a more detailed examination of the context rich data to be conducted using it as a framework for the analysis of teacher effectiveness.

Previous research has also indicated that it is possible to identify different teacher profiles. Research in Australia using primary and secondary teachers, identified three distinct types of teachers:
- Highly engaged persisters;
- Highly engaged switchers;
- Low engaged desisters (Watt & Richardson, 2008, p. 416).

I would argue that some TF participants might resemble the switchers, who were already contemplating another career path as they completed their teacher education – something that is supported by the statistics for retention in TF which indicates that nearly half of these teachers leave the school in which they were trained at the end of their two-year period there (Muijs et al., 2010). Others might resemble the persisters, committed to teaching, and who form over half the TF teachers who stay in schools. Although useful, these profiles were not felt to provide a detailed enough analytical tool for the purposes of this study.

In other research, a model for differentiated teacher effectiveness has been developed, defining it as the power of a teacher to realise socially valued objectives agreed for their work, particularly (but not solely) those involved with helping pupils to learn (Campbell, Kyriakides, Muijs, & Robinson, 2003). Within this definition, five possible elements of differential effectiveness were proposed, referring to differences in activity, subjects, pupil background, pupil personality, and cultural differences. The model recognises that differentiated teacher effectiveness develops, and was further developed, resulting in the Kyriakides et al. (2009, p. 19–20) model. This model has been used in studies that were conducted to validate the teacher factors of the dynamic model (Kyriakides, Christoforou, & Charalambous, 2013). It is this developed and tested model that was used in this research, as it was felt to be the most appropriate tool for the analysis of the context rich data collected in this study.

In the model, the role of the teacher moves from instructing to coaching and modelling learning, and teaching skills are grouped into five types of teacher behaviour as follows:

- *Type 1: Basic elements of direct teaching*: Teachers effectively use the daily routines in teaching, such as keeping pupils on task, structuring the lesson content, asking questions and giving pupils tasks to do, including assessments.
- *Type 2: Putting aspects of quality in direct teaching and touching on active teaching*: Teachers are able to put quality into the basic elements associated with Type 1, but are also able to encourage interactions among pupils, to potentially encourage active involvement of pupils in learning.
- *Type 3: Acquiring quality in active teaching and reaching out*: Teachers at this level are not only able to effectively use strategies related to direct and active teaching, but can also use constructivist techniques in their teaching.
- *Type 4: Differentiation of teaching and putting aspects of quality in new teaching*: Teachers at this level are able to differentiate their instructions and are able to incorporate some qualitative characteristics of teaching modelling and orientation.
- *Type 5: Achieving quality in and differentiation in teaching using different approaches*: Teachers effectively use a variety of teaching approaches, and incorporate the qualitative characteristics of these approaches into their teaching practice.

Kyriakides et al. (2009) found that teachers at Level 5 were found to be the most effective teachers, and that the movement of teachers from one step to another was not always linear, and indeed may not always be sequential from Level 1 to 5. Using the above characteristics as a tool for analysis, this research explored how impact was evidenced (using data from both the participants and their mentors to justify these claims) in terms of the type of teacher, they had developed into during the academic year, and how this had affected their practice. This study thus builds on previous research conducted by Muijs et al. (2012) that reported on a theory-based evaluation of the TF programme, and determined that the dynamic model of educational effectiveness provided a useful framework for analysing the impact of TF.

3. The Teach First initiative and teacher effectiveness

TF is an employment-based route for training teachers that aims to address educational disadvantage through the use of high quality graduates (Blandford, 2008). It targets people who might not otherwise have thought of teaching as a career, and are often broadly middle class (Muijs et al., 2010) outstanding university graduates (TeachFirst, 2016). Participants may arguably be lured by the promise of impact on pupils, the TF web site reporting that excellent teachers can increase the number of pupils who pass their *General Certificate of Secondary Education* (GCSE) (Gray &

Whitty, 2010). Those who successfully complete the course meet the standards for *Qualified Teacher Status* (QTS) and gain a master's level certificate in education, and do so while being employed as unqualified teachers with a 75-percent timetable of teaching in school.

Following a six week summer training programme at a university, TF trainees are assigned to and employed by a challenging school (a school where behavioural management might present difficulties, and where aspiration and motivation are often low amongst pupils) (Reynolds et al., 2001), and are given the support of professional and subject mentors in school, along with professional and subject tutors in university. TF is intended to address wider issues of poverty by improving outcomes for pupils in these challenging schools (Scherrer, 2014). This is a demanding route into teaching, thus only those judged to be capable of success are taken on to the programme (Muijs et al., 2010).

The TF mission statement states that it should address educational disadvantage through the use of exceptional graduates, transformed into inspirational teachers (Blandford, 2008). Policy research in the England has shown, however, that the ideal of 'giving something back' for which many graduates enter TF, merely exemplifies the socio-economically inequitable system as participants return not to challenge the lack of meritocracy, but, rather to assist others to cope with it (Harding-DeKam, 2014). The ethos of TF combines the expertise of business, schools, government and Higher Education Institutes (HEIs) to educate and develop teachers for challenging urban schools such as those involved in this research. TF, therefore, arguably responded to a need to encourage a different kind of graduate into teaching. TF also establishes a change in the way we train teachers (Gray & Whitty, 2010), arguably down-grading the importance of a university based specialist professional development in favour of training on the job.

This type of teacher training programme is not uncommon in other parts of the world, particularly in America and Asia – but it has received mixed reviews (McConney, Price, & Woods-MConney, 2012; Sleeter, 2001). Examinations of the effectiveness of teachers on the American equivalent of the Teach First programme, Teach for America (a similar programme from which Teach First in England developed) (Darling-Hammond et al., 2005), have indicated that the uncertified recruits in Houston were significantly less effective than certified teachers, and performed about as well as other uncertified teachers (Darling-Hammond, 2006). For TF trainees, the problems they encounter of not being able to support student learning may be increased, arguably, by their own personal lack of experience of struggling in school. If we agree that teachers are more effective when they can empathise with their pupils, then this is when they can make learning most accessible by joining their subject knowledge to their understanding of how pupils learn that subject.

The core of pedagogical content knowledge is arguably that of knowing how pupils both conceive and misconceive specific topics, with effective teachers having a range of strategies at their disposal that enable pupils to engage with, and to learn (understand) these topics (Darling-Hammond, 2006). Research on classroom teacher effectiveness in Australia supports this view, advocating that a learning en-

vironment should encompass teaching strategies – differentiation – that cater for all types of students no matter how diverse, with teacher care and pupil trust forming very substantial elements of pupil achievement (Skourdoumbis & Gale, 2013). I would argue that this is reflected in the findings in this study, with differentiation being emphasised by participants as something in which they were very keen to develop their skills.

Evidence from the participants and their mentors supports the claims made by this research that TF beginning teachers become more effective as the academic year progresses, and so have an increasing impact on their pupils as they do. Data from this research will illustrate how the five types of teacher can be evidenced, and how the teachers move between types as they progress through the academic year, at the end of which they arguably demonstrate the capabilities of Type 5 teachers who have made an impact in the school and on their pupils.

4. What is effective teaching?

Methods of teacher education arguably have a tendency to focus on the implementation of technical skills, with programmes emphasising behaviour management, lesson planning, classroom management, and so on, with only some countries including topics such as knowledge in child development and cognitive and behavioural sciences (Mussett, 2010). Effective teaching, however, involves more than the ability to plan and control lessons, as Sachs (2004) identified in her research with urban teachers in America. She identifies five attributes of effective urban teachers as follows:
- Socio-cultural awareness,
- Contextual interpersonal skills,
- Self-understanding,
- Risk taking,
- Perceived efficacy.

Collectively these lead to a classroom in which there is effective teaching (Gupta, 2013) as evidenced by the impact on progress and attitudes of pupils. Teacher effectiveness is also partly dependent on moral and social well-being and the ability to establish positive relationships with colleagues and parents (Campbell et al., 2003). Self-belief, personal values and morals can also serve as indicators of a teacher's potential success in terms of impact (Sachs, 2004). Effective teachers demonstrate enhanced self-understanding which in turn facilitates the development of positive self-ethnic identity and self-inquiry into the relationship between their basic values, attitudes, beliefs and teaching practice (Gupta, 2013). However, their effectiveness as teachers can only be enhanced if their personal knowledge and self-belief are formally recognised in their training: These shape their cognitive frameworks and thereby influence their relationships with their pupils. In this research, I argue that, how; it is through their relationship with pupils, that teachers feel they have a significant impact on their pupils, as evidenced in this study. Previous

research with secondary teachers in Canada reinforces this view, identifying that for professional development to have a greater impact on beginning teachers, there needs to be a focus on teacher learning and teacher capacity building that enables them to build effective relationships with pupils (Hinds & Berger, 2010).

Other research has also shown that limited time is devoted to professional studies (with beginning teachers), with more emphasis on generic management and leadership skills (Gray & Whitty, 2010). TF represents perhaps the most extreme example of this, with training being limited to a few short weeks in summer before participants are given a 75-percent timetable in September in school with sole responsibility for their classes.

Also significant in an effective teacher is the ability to address the misconceptions of pupils (Hinds & Berger, 2010). Effective teachers are able not only to teach specific concepts to their pupils, but can also understand the perspective of the pupils being taught, and so develop strategies that enable pupils to access learning by anticipating common (and uncommon) misconceptions. An effective teacher must be able to understand what it is like *not* to understand a topic, and then be able to formulate ways to enable a pupil to make progress towards understanding (Entwistle, 2009).

Teacher efficacy can be defined as the self-belief of a teacher in terms of their capacity to do what is required to successfully accomplish a specific teaching task in a specific context. It is contributed to by both the self-perception of teaching competence (an assessment of internal resources and constraints) and also by self-belief regarding the task in had (an assessment of external resources and constraints) (Tschannen-Moran, Woolfolk Hoy, & Hoy, 1998). Bandura (1997) proposed a model of efficacy that encompassed four sources of efficacy expectations: (a) mastery experiences (perceptions about the success of a performance); (b) physiological and emotional states (the level of emotional and physiological arousal in a person); (c) vicarious experiences (observing the teaching of others to gain information about the teaching task); and (d) social persuasion (verbal feedback on the nature of teaching). None of these are necessarily uniform across the different tasks teachers undertake (Bandura, 1997). Bandura's model suggested that efficacy might be most malleable early on in learning (Woolfolk Hoy & Burke Spero, 2005) and thus the first years of teaching, as explored in this study, could be critical to the long-term development of teacher efficacy. In this study, I have added to this research and used Kyriakides et al.'s (2009) dynamic model of educational effectiveness as a tool for analysis for this study. This model was chosen for this research, as I would argue that it focuses on the differential ability of teachers to undertake tasks such as differentiation and behaviour management, and thus the context rich data from the study could be examined appositely in the light of this model.

A sense of self-efficacy in a teacher is one which leads them to believe that they can make a difference in the lives and learning of their pupils, and indeed have an impact (Darling-Hammond, 2006). This belief in themselves is seen as a powerful predictor of teacher effectiveness (Tschannen-Moran et al., 1998). Previous lon-

gitudinal research with Australian trainee teachers has indicated that teacher efficacy rises during teacher training, but falls with actual experience as a teacher (Woolfolk Hoy & Burke Spero, 2005). The idea of self-efficacy in beginning teachers, leading to increased confidence and greater impact, is felt to be a neglected area in terms of research involving interviews which can provide rich context (Tschannen-Moran et al., 1998), and is explored here in relation to the dynamic model of teacher effectiveness (Kyriakides et al., 2009) in this study of beginning teachers as they progress through the academic year. This research includes a variety of methods that includes interviews and surveys that yield the context rich data that I would argue is necessary to explore this area of research further, and thus add to the body of knowledge therein. This study builds on the work of others which suggests that qualitative investigations are required if we are to better understand how teachers develop efficacy.

In terms of a research question, this research aimed to investigate the impact by TF beginning teachers using Kyriakides et al.'s (2009) dynamic model of educational effectiveness as a framework for analysis, to determine the development of efficacy by these teachers.

5. Methods

A multi-method, qualitative approach was used for this research. The design aimed to provide depth, using a combination of methods to add rigour to any claims made from such data (Gorard & Taylor, 2004). The evaluations drew on qualitative and plural approaches, rather than positivist approaches (Coldwell & Simpkins, 2011), providing an appropriate framework and focussing on the detailed responses of the participants. The case study approach was particularly suitable because of the specificity of the contexts (Bassey, 1999). Using a reflective practitioner model enabled the research to investigate teachers' practice by asking them to reflect, and draw on their experiences and beliefs (Sachs, 2004). A small case study provided an authentic evaluation of the issues being explored, and was felt to be the most useful in "uncovering the workings of well-defined development programmes with clearly identifiable participant groups" (Coldwell & Simpkins, 2011, p. 154), in this case, TF beginning teachers in specific schools.

The trainees in this research were selected on the basis of opportunity (Robson, 1993) at the start of the academic year. As an opportunistic sample, there was no scope to generalise from this study, although the insights if offers are useful more widely to the training of teachers. All were placed in challenging schools assigned to the author in their role as a TF tutor, across a large geographical region in the North of England, Yorkshire and Humberside (the TF mission requires that only schools described as challenging by Ofsted (Reynolds et al., 2001) are used to place trainees). All trainees (n = 12) took part in the research, teaching subjects including Mathematics, Computer Science, English, Geography, History, French and

Physics. All were graduates to first level with an age range of 21–28, there were six male and six female teachers, all graduating with at least an upper second class degree (two also had masters degrees, Level 2) from university (all but one from leading universities). Details of the trainees and their schools are given in Table 1 below:

Table 1: Summary of trainees and schools in the study

School	Trainees
S1 Urban 97 % pupils of ethnic background	P1, female, age 23, 2.1 class degree P2, female, age 26, 2.1 class degree and MA degree P3, female, age 23, 2.1 class degree P4, male, age 23, 2.1 class degree P5, male age 23, 2.1 class degree P6, male, age 28, and MSc degree
S2 Urban 3 % pupils of ethnic background	P1, female, age 25, 1st class degree P2, male age 23, 2.1 class degree
S3, Urban 18 % pupils of ethnic background	P1 female, age 22, 1st class degree
S4 Urban 4 % pupils of ethnic background	P1 male age 24, 1st class degree
S5 Urban 3 % pupils of ethnic background	P1, female, age 23, 2.1 class degree
S6 Urban 75 % pupils of ethnic background	P1, male, age 21, 2.1 class degree

The author was responsible for the trainees in the role of academic tutor. The relatively small sample size meant that in-depth context rich data could be obtained throughout the year. At the start of the academic year, all trainees were informed about the nature of the research and invited to participate. All gave informed consent for, and participated in the research. Participant names have been changed to protect their identity, as have the names of the schools and any teachers associated with them.

With respect to my own positionality, as their university tutor I was their link between the university, and the school, and my role focussed on supporting their professional learning through their first year in the school, through a series of regular visits to the school. Each participant completed three surveys, and participated in a focus group for the research. I was mindful of possible ethical issues arising from my dual role throughout the research, and for the potential for some blurring of boundaries between that of research and tutor as moderator/researcher. As such, I took great care to maintain a professional distance during the research to avoid bias or over familiarisation with participants.

Qualitative data were collected through a series of surveys completed by the trainees over the course of the year. The questions used in the surveys (and interviews) were developed by the researcher. The first survey was distributed and collected during September, 2013. This contained a mixture of generic open and closed questions. This survey concentrated on participant views as they approached the academic year, how well prepared they felt, their main worries, how well sup-

ported they felt and what they hoped to achieve. Questions in subsequent surveys focussed more directly on impact aspects as perceived by the participants on their pupils and in their school.

In the second survey, which was distributed and collected during December, 2013, greater emphasis was put on investigating impact, with a series of open and closed questions that explored these issues in terms of the impact they were having on pupils and on the school. The final survey was distributed and collected in June, 2014, near the end of the academic year, with a series of open and closed questions that allowed the trainees to reflect on and to describe how they felt their teaching had impacted on the pupils in school.

At the end of the academic year, focus groups were conducted with all trainees in their school or in the university in an informal, private setting to investigate some of the issues brought to light in the surveys conducted throughout the year. This allowed for an in-depth gathering of data – focussing on the impact trainees felt they had throughout their first year of teaching. Focus groups permitted the trainees to share and reflect on different viewpoints, developing their responses to issues they had previously only reflected on in private (Elton-Chalcraft, Hansen, & Twiselton, 2008). They allowed participants to explore as a group how practice had changed over time through this fourth point of data collection in the year. Three focus groups were held, each with at least two trainees, but with no more than six as a maximum. Where trainees were unable to attend a focus group (two in total), they were interviewed on a one-to-one basis using the focus group questions. Discussions were recorded by audio device and transcribed by a professional transcriber.

Semi-structured interviews were also conducted with school mentors at the end of the academic year. Three school mentors (the teachers in school responsible for all the progress and training of the participants in school) were interviewed in total. All trainees were made aware that these interviews would take place. Semi-structured interviews allowed freedom in the order of questions and in the amount of time and depth given to following up on responses (Robson, 1993). Questions focussed on the mentors' views on the trainees in school, and what impact they felt the trainees had had in school. The outcomes of the analyses of the survey data were used to inform the content and structure of the interview, allowing the interviewer freedom to explore issues related to impact, as identified in the trainees' survey responses. As described earlier, in the dynamic model of educational effectiveness, five teacher types were identified by Kyriakides et al. (2009): Type 1: Basic elements of direct teaching; Type 2: Putting aspects of quality in direct teaching and touching on active teaching; Type 3: Acquiring quality in active teaching and reaching out; Type 4: Differentiation of teaching and putting aspects of quality in new teaching, and Type 5: Achieving quality in and differentiation in teaching using different approaches. Using this model as a basis for analysis and interpretation, that is, as a lens through which the data was interpreted, the results of the study are presented in terms of the positioning of the participants with respect to these teacher types, and the progression between them to arrive at level five, the

most efficient, and therefore arguably the most impactful, type of teacher, by the end of the academic year. Thus analysis was conducted by comparing participant responses against the teacher type characteristics and is described in detail in the following section.

6. Findings and discussion: Applying the teacher type characteristics as a tool for analysis

6.1 Characterising early type teachers at the start of the academic year

The responses from the first survey indicated that many of the participants had entered the teaching profession to have impact on pupils in terms of passing on their subject knowledge to give pupils a good education (Harding-DeKam, 2014). They believed that all children, particularly those in challenging and less affluent schools as served by TF, deserved a good education, and so had gone into teaching through this route in order to influence this. They wanted to be that person who provides a good education, in profession where they could make a difference, teaching pupils to the best of their abilities, and helping pupils to improve.

They were, however, also mindful of their inability to deliver this right from the start and expressed a desire that their pupils should not be disadvantaged by their own lack of experience and skill in teaching. They were very honest about their lack of teaching skills at this point, and over a third commented on differentiation in a way that would put them as a Type 1 teacher at this point in the year, citing this as their biggest challenge, and worrying if they were actually differentiating enough for their pupils.

This resonates with the Type 1 teacher characteristic of having got the basics right, and of effectively using daily routines in teaching, such as keeping pupils on task, structuring the lesson content, asking questions and giving pupils tasks to do, including assessments. They are not however, able to differentiate in class, as characterised in Type 4 teachers, and in this case are very aware of this lack of skill on their part. This resonates with the findings of an earlier Australian study which indicated that the ability of teachers to meet the needs of all pupils was pivotal to a learning environment (Skourdoumbis & Gale, 2013).

Another main concern evidenced in the first survey, was behaviour management, their ability to control pupil behaviour in class – this is a concern for all beginning teachers, independent of the route by which they chose to enter the profession. Without this, they felt that their pupils would not get a good education as they as teachers could not deliver it. Comments from participants in relation to the question on their biggest challenge as they faced the coming year reflected this concern. Over half the participants commented on how they felt that behaviour management was a major concern for them, citing that they were worried about

progress in class, and not having enough of a presence around school to manage behaviour effectively.

Without establishing control in class, it is difficult for teachers to progress from the early types to the higher ones of Type 4 and 5. One can see how a teacher must first get control of the class routinely and effectively, before they feel confident enough to develop their teaching and begin to exhibit the characteristics of higher types, as has been indicated in the work done by Kyriakides et al. (2009).

6.2 Starting to have an impact by the end of the first term in school

The data from the second survey indicated that most participants felt that they had had an impact on the pupils they were teaching. They cited various reasons for this, some of which centred on the progress their pupils had made. Comments also centred on how pupils were talking to them outside normal class times – enabling them to feel more like a member of staff in school: "Yes, because I developed a good relationship with the vast majority of pupils I feel they increasing come to talk to me about their concerns and problems and to ask for advice and share their worries" (P1, S1).

This resonates with the research in Australia which found that teacher care and pupil trust form highly significant components of pupil performance (Skourdoumbis & Gale, 2013). It was also borne out in the focus group data in which participants commented:

> I feel like I have built good relationships with a lot of pupils and you know there are a lot of pupils who always seem to want to come and talk or tell you what their issues are, their problems, and things that they're proud of. … there are some very loyal kids who are very happy just come and talk to you which is nice. (P1, S2)

A number of participants mentioned that the stability they had brought to the pupils by being there – rather than a succession of supply (temporary) teachers – had also had a positive impact on the pupils, and had in some cases positively affected their attendance at lessons. As one participant commented:

> With my year 10 class I feel they have benefitted from stability in having me as their teacher, they have mentioned they used to have substitute teachers a lot and they constantly had new teachers. The work tracker also shows that since I have been there the work has much fewer gaps in it. (P1, S6)

This was also supported by data from the focus groups in which participants felt that their being present in school had added consistency for pupils, saying that

improvements had been made in their classes by virtue of the fact that they were there "every day, day-in, day-out."

A number also commented that while they might have had an impact academically, in terms of results (see example comments above), they did not feel they were having an impact on the attitude and motivation of pupils overall, for example, commenting that "in terms of motivation and aspirations, I feel I have not made any impact whatsoever. … most pupils have quite negative attitudes which I am struggling to turn around" (P1, S3).

This from the same participant, who at the start of the academic year was worried about behaviour management, and who, from the comments above, was still struggling with the pupils in terms of negativity. It is interesting that, even though they felt that they were positively affecting the progress and outcomes of pupils in class, as indicated above, participants were also acutely aware that this did not mean that they had somehow miraculously converted their pupils to being positive about education overall, and that affecting attitude and motivation were much longer, harder goals, as one participant said:

> … I think the reality that not all children can be saved is slowly taking an understanding in cases where students don't attend, have no clear aspiration to learn and are consistently in behaviour units. Although with every child I will try to bring them to the right path it is not always possible … (P1, S4)

This level of reflective realisation in the participants is arguably indicative of their development into a higher type of teacher (Kyriakides et al., 2009) using constructivist techniques (Type 3) to encourage pupils to participate in lessons (Type 2). This better understanding of disadvantage was also borne out in other studies on TF participants (Hutchings, Maylor, Mendick, Menter, & Smart, 2006).

In terms of their impact on the school, they are teaching in, fewer participants felt that they were having an impact on the school than they were on the pupils at this point, however, the majority returned positive replies to this question in terms of their own positive attitudes being reflected in school, and its impact therein. Various reasons were cited, though as with the response to their impact on pupils, pupils seeking them outside lessons for advice, and so on, was felt to be an indicator of impact. When pupils seek teachers outside lessons, the teachers feel more like members of staff and less like trainees: "… numerous pupils do come to see me with queries and concerns and so I am beginning to feel like a respected and trusted member of staff" (P1, S2). And: "… I try to have positive conversations with pupils outside of lessons whenever I see them and show that I care about their education which I think has resulted in some positive results in the classroom" (P5, S1).

Interview data supports the notion of impact in the school, with school mentors commenting that the trainees "think outside the box" and are willing to take risks with their teaching saying that participants do things differently and bravely so (S2) and had a "massive" impact, influencing their departments and their pu-

pils (S1), arguably developing towards the higher level teacher type. Data from the second survey indicated that some participants also thought they had an impact on their school through their extra-curricular, non-teaching roles in school, examples of this ranged from helping at school discos and other after school events (P1, S6), to setting up an achievement leader board for their form group (P5, S1).

6.3 Continuing to have an impact: Achieving teacher Type 4 and 5 as the academic year progresses

Participants responded positively when asked what had the biggest impact on pupils they taught in terms of their practice. Responses were varied with some participants commenting on how they had changed from subject based to skills based lessons, and several thought that their improvements in terms of assessment and feedback of their pupils had made the biggest impact. As one participant said: "My marking is very interactive, requiring pupils to respond to my comments and to respond to each other's work. I want to improve this further to have a bigger impact next year" (P1, S3). This same participant (P1, S3) can be shown to have developed their confidence tremendously as the year progressed, moving from worries about behaviour management and negative pupil attitudes, to a place where they were much more positive about their impact on pupils.

Another commented similarly:

> The classes which I have taught which have made the most progress have been the classes which have had the most quality feedback on their work and were most aware of what they needed to do to improve – this is something that I will seek to improve and develop with next year's classes. (P5, S1)

And:

> Purely in terms of my practice, the way in which I assess my pupils has had a great impact on them ... I think I have found a way that particularly caters to their needs ... the difference in how it asks students to demonstrate this knowledge has greatly improved their performance ... (P4, S1)

A number of participants said their efforts with literacy had had the biggest impact on their pupils by promoting literacy in class outside English lessons, and introducing text books to encourage pupils to write more.

At this point, over a third of the participants had moved from worries about differentiation in the first part of the year to much more positive comments concerning impact through literacy as the year progressed.

There were also more generic comments in terms of pupil self-confidence, by building good relationships with their pupils, and setting high expectations, they

were able to improve the self-esteem and self-confidence of their pupils, which they felt had had the biggest impact:

> I have spent a lot of time focussing on building pupils' confidence in themselves … I do believe this has had a positive impact on my pupils as we have had a big increase in the number applying to do GCSE [subject] this year. (P1, S2)

The data supports the notion that the teachers were developing and exhibiting the characteristics of Type 5 teachers, using a variety of teaching approaches, and incorporating the qualitative characteristics of these approaches into their teaching practice (Kyriakides et al., 2009), whether this be in the form of improvements in assessment, in literacy or through increasing pupil confidence. This is indeed the model of teaching aspired to in other research where teachers would have a thorough subject knowledge, address misconceptions, help pupils relate to each other and participate actively in school life (Hinds & Berger, 2010).

The impact of non-teaching roles in school was explored more formally in the third survey. Despite the pressure the trainee teachers all felt, combined with busy workloads, all except one had other roles in school, and many of these were voluntary. Some of the participants had several extra roles and were doing a great deal beyond their teaching timetable to integrate successfully into their wider role in school. Research by Muijs et al also supports this notion of participants making a real difference to pupils in school (Muijs et al., 2010).

One participant cited their work as literacy co-ordinator as having a more profound impact across the whole department rather than just with their classes: "… I am having a positive impact because of the way I contribute to wider school training … and through promoting good practice with my Literacy Coordinator role" (P1, S1).

The data evidenced that all participants had contributed to the school beyond their classroom. Those that had led clubs of various kinds felt that this had had a very positive influence on their relationship with pupils and on the self-confidence of the pupils who went to these clubs: "I run an extra [subject] class and a [subject] club and this has enabled me to build a positive relationship with certain pupils … I have noticed an increase in confidence in those who attend this extra class and club" (P1, S2). And: "[subject] club and [subject] club have been fantastic for building relations with pupils and infusing students with self-confidence" (P3, S1).

This, from the same participant, who in the first term, had expressed clear concerns about their ability to manage classes. Thus demonstrating how well they had progressed in terms of their abilities with pupils and with their self-confidence as teachers within and beyond the classroom.

The role of form tutor was also particularly important for many in terms of having a positive impact on the relationship with pupils:

> Being a form tutor has been hugely important to me – I feel like I am important part of keeping the school ticking over and that I have had a positive impact on most of my pupils. I look forward to getting another group of year 7's next year and bedding in routines from day 1. (P5, S1)

And: "My role as form tutor has really allowed me to get to know pupils in my form better … I have been able to show how much I genuinely care about their experience in this school" (P4, S1).

Interview data also indicates that participants had significance impact in school, bringing new experiences to people, as one school mentor said: "… [participant] is very enthusiastic about her subject every single day – this way [participant] can affect 200 kids every week" (S2).

Mentors also identified that participants tried to make subjects more practical for pupils, which was not often seen in school, by being "willing to take risks with pupils and the activities they do" (S3). This ties in with similar research with TF trainees, which demonstrated that school managers were very positive about the contributions made by beginning teachers (Muijs, Chapman, & Armstrong, 2013; Muijs et al., 2010). This model of teaching, described as being aspirational in other research, of one where teachers would have a thorough subject knowledge, address misconceptions, help pupils relate to each other and participate actively in school life (Hinds & Berger, 2010) can arguably be likened to the Type 5 teacher characteristics identified in this study. Other research has also indicated that TF teachers had a positive impact in schools delivering high quality lessons, and undertaking extra-curricular activities (Hutchings et al., 2006; Muijs et al., 2010).

In several cases, participants believed that taking part in school trips had positively helped their relationship with pupils, whether it was to the theatre to inspire them (P1, S3); to a robotics competition and winning a trophy (P2, S2); or on a field trip to the sea with pupils dipping their hands in the water for the first time, as this participant said: "… these are the times when you have the biggest impact" (P2, S1).

To become a teacher that has an impact on pupils, as evidenced in this study, one must also be able to understand the perspective of the pupils being taught. Indeed, a teacher must be able to understand what it is like *not* to understand, and then be able to formulate ways to enable a pupil to make progress towards understanding (Entwistle, 2009). This idea is applicable to teaching in all sectors, schools and universities alike, and if we take this further to encompass the notion of the scholarship of teaching, the participants in this study, I would argue, could be thought of as having exhibited characteristics of such teaching. As comments above indicate, over the course of an academic year, the participants attained characteristics of the level five teachers of the model – they demonstrated a deep knowledge of their subject, developed pedagogy that was specific to their subject, were reflective, and engaged in sharing good practice and peer review (Entwistle, 2009). These claims are justified not only by the data from the participants but

also underpinned by the comments from their mentors in school who were so very positive about the impact these TF beginning teachers had made.

7.   Conclusions

Comparing the characteristics exhibited by the participants in this study with the five stages of teacher development purported by Kyriakides et al. (2009) in their study I would argue that to have maximum impact a teacher would have reached Type 5, "achieving quality and differentiation in teaching using different approaches" (p. 20). This demonstrates that teachers moved towards engaging in the scholarship of teaching. It should be acknowledged, however, as other research has done (Kyriakides et al., 2009), that these teacher level factors are interrelated and not isolated characteristics. Participants move between these levels as the year progresses, and may do so in a non-linear, and non-sequential way.

Change, however, is contextual and influenced by a myriad of factors, and so the changes themselves may impact in different ways, taking into account individual identities, dispositions and roles as well as the settings in which teachers work, as King demonstrated in her study of five urban primary schools (King, 2014). Such differences in impact were demonstrated here, with participants reaching the different levels at different times and in different ways.

This study has added to an existing body of knowledge, and has further tested the model developed by Kyriakides et al, as other studies have done (Kyriakides et al., 2013). The study indicates that further exploration of teacher impact is necessary, especially in terms of enabling teachers to assess their own impact on pupils, and to understand what it is they are doing that is making a difference. I have arguably tried to focus on the way in which beginning teachers make sense of their practices to positively impact their pupils, and on the way they try to balance their assessment of negative and positive experiences, as was indicated as a requirement for further research by Kyriacou and Kunc in their study of beginning secondary teachers (Kyriakou & Kunc, 2007). In doing so, I have answered the initial research question and determined the development of efficacy by these teachers using the Kyriakides model.

It is important that these results are not taken out of context in terms of generalising too far from the participants to trainee teachers more generally. TF participants are all strong graduates with a record of academic success and high motivation (Muijs et al., 2013). Previous studies support the findings described here in terms of their strong self-efficacy beliefs (Muijs et al., 2010), and it may be that teacher training needs to take this into account creating a more holistic overview that encompasses the broader role of the teacher in school, the teacher beyond the classroom, which, as demonstrated here, does have an impact on pupils. Further studies of this nature, conducted on a longitudinal, larger scale in a quantitative study, involving greater numbers of schools nationally, and greater numbers of

participants would be useful in order to allow generalisability from the findings, and to further verify this model. This would thus build further on previous work done in this field to to examine the impact of the dynamic approach and the sustainability of its effects on teacher behaviour and student outcomes.

While it has been demonstrated through this research that these participants can and do have an impact on their pupils, and the schools in which they teach, as reported in other similar research (Muijs et al., 2010; Reynolds et al., 2001), it should be noted that this impact may in fact be fleeting. Nearly half the TF participants leave their initial school after the two-year period of their training (Muijs et al., 2010). Such transience must surely affect their ability to sustainable build relationships (Gray & Whitty, 2010), and thus affect their impact overall in school. Research by Sachs (2004) also indicated that teacher education which developed positive attributes for teaching in an urban environment (as the schools used here) may lead to an increased retention of effective teachers in these schools. Perhaps then, what should be addressed, having established impact, as described in this study, is further research leading to policy change that will ensure these teachers stay in school and continue to positively affect their pupils and colleagues. In addition to this, it is vital that teacher education and subsequent employers of these teachers, take into account the different types of beginning teachers and their different aspirations and characteristics when planning a model of teacher education (Watt & Richardson, 2008).

Acknowledgements

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