Teacher Professional Development: An inquiry into the effectiveness of using experienced teachers to mentor new teachers and the impact upon classroom identity

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A Research & Development Project

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Abstract

This research and development project builds on earlier work conducted in a comprehensive school in South Gloucestershire, England, looking at how experienced teachers use agency in the classroom to express different identities for classroom management. This research extends this observation to investigate if using experienced teachers, with ten or more years of teaching experience, to mentor early career teachers, with five years or less teaching experience, is a practical approach to improving early career classroom experiences.

The research investigated how early career and experienced teachers approach their classroom management and how undergoing cognitive load inhibits the early career teachers from developing their classroom identities. Three pairs of teachers with the relevant experience took part in a short mentoring programme that could be implemented school-based professional development. A baseline survey of teachers was used to confirm the participants were representative subjects.

This research revealed fundamental differences in teacher thinking relative to their experience. It highlighted how early career teachers progress slowly after their initial teacher education. This study shows how early career teachers would benefit from mentoring by experienced colleagues, that would benefit their teaching by undertaking classroom-based professional development. The outcome of the study provided a set of recommendation for extending the research into a longer-term study of school-based professional development to improve teacher retention.

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Acronyms and Abbreviations

BASRC	Bay Area School Reform Collaborative
CPD	Continuous Professional Development
CUREC	University of Oxford's Central University Research Ethics Committee
DfE	Department for Education
HE	Higher Education
ITE	Initial Teacher Education
NAO	National Audit Office
NFER	National Foundation for Educational Research
NQT	Newly Qualified Teacher
NWP	National Writing Project
OECD	Organisation for Economic Co-operation and Development
QTS	Qualified Teacher Status
UK	United Kingdom
USA	United States of America
TSM	Teacher Supply Model
UCET	Universities Council for Education of Teachers

Introduction

Background

Teacher recruitment and retention is a significant and growing concern for England's state-supported school sector (Carmichael, 2017; Foster, 2017; Hilton, 2017; Morse, 2017; Worth & De Lazzari, 2017). Schools have no direct influence upon some more fundamental causes. For example, since 2012 the United Kingdom Government has not reached its recruitment targets for Initial Teacher Education (ITE) (Carmichael, 2017). Additionally, evidence exists of a growing scarcity of teachers for core subjects such as science, mathematics, and modern languages (Worth, 2017; Ross & Hutchings, 2003), and a steady shortfall of teacher recruitment in specific geographic locations in England, such as the North East, North West and South West England (Foster, 2017). Currently, schools rely on Newly Qualified Teachers (NQTs) to compensate for teachers leaving the profession and to cope with the rising numbers of secondary students (Morse, 2016). However, the increased proportion of NQTs entering the profession equals the growth of teachers leaving the workforce (Foster, 2017). Also, an increasing percentage of experienced teachers are leaving the profession (Worth & De Lazzari, 2017). Consequently, teaching shortages in England are attracting policymakers to look at changing the existing national policies to place a greater focus on improving teacher retention and sustaining the teaching workforce (Worth & De Lazzari, 2017). In line with this, in early 2017, the United Kingdom (UK) government's House of Commons Education Committee suggested that the

Department of Education (DfE) should 'place [a] greater emphasis on improving teacher retention' (Carmichael, 2017, p. 2).

Research Relevance

This research aimed to shift a school's professional development program to enable experienced and inexperienced teachers to work together to improve the classroom confidence of early career teachers. Many studies have shown a significant proportion of teachers leave the profession within five years of qualifying (referred to as early career teachers) (Weale, 2016; Gray & Taie, 2015; Hong, 2012; Ross & Hutchings, 2003). Hong (2012) suggests these teachers are leaving before they have developed their classroom identity and if early career teachers leave before achieving their full potential, the quality of teaching will decline (Buchanan et al., 2013; Gorard et al., 2007).

The causes of teachers leaving the profession have been the subject of debate. However, classroom management and burnout are found to be recurring reasons for teachers leaving before retirement (see Buchanan et al., 2013; Beltman, Mansfield, & Price, 2011; Boyd et al., 2011; Waterman & He, 2011; Castro, Kelly, & Shih, 2010; Brill & McCartney, 2008; Day et al., 2006; Ingersoll, 2001). Also, research conducted by the Organisation for Economic Co-operation and Development (OECD) determined engagement with professional development reduce with increasing teaching experience (OECD, 2009). Hence this study will

also consider the impact and views of experienced teachers as they collaborate to mentor early career teachers in developing their classroom identities. Consequently, this study could inform how to improve collaboration in professional development by both experienced and less experienced teacher and improve individuals' classroom identity.

Personal Interest

The theme for this research originated from my observations during my initial teacher education and during my NQT induction year, which I completed in the summer of 2017. During my training, I became aware of, and interested in, how teachers use their agency to invoke a range of personalities in the classroom which I will refer to as their 'classroom identity'. I explored this awareness with a small-scale research project which looked at how I used my classroom agency during my training (Moore, 2016). During my induction year, I completed further research, which identified distinct developmental stages of classroom identity as teachers' become more experienced (Moore, 2017).

This project extends my interest in classroom agency and introduces a programme of adult collaboration from the findings of my earlier research. I conducted my research in the same school as my 2017 research, a state-funded converter academy, which educates students aged from five to eighteen years old. The school is also the lead teaching school in a multi-academy group that provides

school-based training to fifty new teachers each year. My research has received the support of the school's senior management team, and this research could continue to expand within the school following this research.

Personal Position

I have seen many expressions of teacher identity, which I notice changes in response to a teacher's situation and experience. From these observations, I have seen two fundamental forms of identity expressed by teachers. There is a professional identity, which I consider being an identity originating in Initial Teacher Education (ITE) and is external to classroom teaching, which is further influenced by a schools' culture and is the subject for most of the teachers' professional development training. My views are based upon my teaching experience and gathered from informal observations of teachers and seeing changes to their identity in and out of the classroom. So, I differentiate professional identity from expressions of the teacher's identity occurring in the classroom. In the classroom, a teacher uses a variety of classroom identities while professional identity occurs outside the classroom and is concerned more with the administrative and operational aspect of teaching. By using their agency, I have noticed an experienced teacher selects an appropriate identity from a repertoire of identities in response to the dynamic classroom-teaching environment. These classroom identities seem to develop over many years and become more robust and engrained with increasing teaching experience. Therefore, my research

explored teachers' belief in self-efficacy and the ability to analyse their teaching effectiveness in the classroom. It is my view the maturity of identity corresponds to a teacher's classroom experience, which I looked at in some detail in the literature review. I suggest from my personal experience the ability to express and deploy an appropriate classroom identity with confidence could have a significant impact on early career teachers' resilience. Also, evidence from The Organisation for Economic Co-operation and Development (OECD, 2009) suggests the experience of generic professional development programmes in schools has the potential to disengage experienced teachers who have formed secure professional and classroom identities.

Research Focus

Central to this enquiry is the proposition that teachers with ten or more years of teaching experience have gained a range of classroom identities and strategies which can be used to aid early career teachers in developing their classroom identities. Hargreaves (1992) states developing teaching strategies is not an individual pursuit, but that many experienced teachers have encountered problems and have developed 'ways of doing things along with whole networks of associated educational beliefs and values in response to the characteristic and recurrent problems and circumstances they face in their work' (Hargreaves, 1992, p. 217). Also, teachers name their colleagues as the most valuable source of career development (Thiessen, 1992). Considering Hargreaves' findings, this

qualitative study used biographical research methods to show how the participants perceive their collaboration in this research.

The choice of a biographical research method enabled me to reflect upon the impact this research might have on professional and classroom identity in a collaborative problem-solving context. Using collaborative development has shown to have positive implications for encouraging 'individual and collective teacher ownership' (Raymond, Butt, & Townsend, 1992, p. 155). However, there may be limitations to this study due to the use of a voluntary mentoring program. Ingersoll and Kralik (2004) argue individuals who take part in voluntary mentoring programs may be more committed to teaching than those who do not volunteer and, therefore, may not represent teachers who could benefit more from this inquiry.

Literature Review

Introduction

This review begins by assessing the main topics surrounding teacher retention in England's state-sponsored schools; the challenges experienced by early career teachers in developing classroom identities and how collaborating with experienced teachers within a professional development framework might help early career teachers to create their classroom identities. In the literature review, I concentrated on the first two research aims listed below. The third aim was evaluated following data collection, and the fourth aim was considered after assessing the previous three aims.

1. Explore how focusing on classroom identity is likely to improve early career teacher retention

2. Establish the extent to which the use of experienced teachers to mentor early career teachers impact the development of classroom identity

3. Evaluate the extent to which both experienced and early career teachers perceive the usefulness of experienced teachers mentoring early career teachers.

4. Formulate proposals for staff who prepare school professional development programs

The literature review considers the first two research aims to assess how using collaborative professional development techniques might aid early career teacher

development. Also, this review will consider how experienced teachers can help early career teachers to develop their teaching identities in the context of the current problems of keeping early career teachers in England's state-funded schools. At the end of this review, the reader will access the critical issues that have informed the design of this research

Teacher Retention

Background

Traditionally, England's policymakers have attached little significance to keeping experienced teachers in the profession due to the perception that Higher Education (HE) institutions had been primarily responsible for national teacher recruitment strategies (Allen *et al.*, 2016). Since the release of the UK government's white paper 'The Importance of Teaching' (DfE, 2010), policymakers have continued to focus on providing more routes into teacher training, which has resulted in the expansion of school-based teacher training. This approach raises concerns for some observers such as Roberts and Foster (2016) who claim the various routes into England's ITE programs are growing causing experienced traditional HE providers to close their teacher training.

There are concerns that the enlargement of school-based teacher training includes 'considerable variability in ITT course content and potentially significant gaps in a range of [ITE] courses' (Roberts & Foster, 2016, p. 5). Also, The National

Audit Office (NAO) credits the various avenues into teaching for confusing potential recruits and contributing to insufficient newcomers into ITE (Hilton, 2017). To add to this, the spread of school-based ITE by many competing providers may well affect the quality of teacher training (Noble-Rogers & Hollis, 2017). The Universities Council for Education of Teachers (UCET) revealed a concern about the existing training methods in school-based ITE. In a letter to the UK government, the UCET named these concerns as inconsistency with implementing school-based routes for achieving Qualified Teacher Status (QTS) (Ibid.). In reply, the UK government acknowledged there would be more importance placed upon providing school-based teacher training with increasing partnerships between HE and school-based training providers aimed at standardising the quality of teacher training (Roberts & Foster, 2016).

The commitment to uphold school-based teacher training sets the responsibility for schools to change their professional development programmes to enrich teachers' resilience. Schools could achieve this, for instance, by using experienced teachers as advisors or mentors 'who are able to explain outstanding practice (as well as demonstrate it)' (Carter, 2015, p. 12). This research contributes to refining the prevailing trends in teacher professional development from a process that is 'done to teachers' (Clark, 1992, p. 75) to a process done for teachers within the context of the school's culture (Day, 1999; Hargreaves & Fullan, 1992).

Research into Teacher Attrition

The current state of UK research offers few solutions for reducing teacher dropout rates in UK schools. There is also limited international research into strategies or other methods to help improve retention (Borman & Dowling, 2008). However, Day et al.'s (2006) sizeable longitudinal study into 'Variations in Teachers' Work Lives and Effectiveness' (the VITAE project) is widely cited in UK research for its contribution to understanding factors affecting UK teachers' resilience (Beltman et al., 2011). The VITAE project compares with earlier research conducted by the author in the same school, where classroom identity correlated with distinctive phases of teaching experience (Moore, 2017). Notably, the first three phases described by the VITAE project have strong similarities with the stages of career development seen in my earlier research. While my earlier research recognised the first five years to be where the growth of classroom identity is most significant, the VITAE project found that the first three years teachers focused on 'a developing sense of efficacy in the classroom' (Day et al., 2006, p. xi). Also, the second stage is characterised by '4-7 years [of developing] identity and efficacy in the classroom… [with] …increased confidence about being effective teachers…' (Ibid., p. xi). For the third career stage the VITAE project found most experienced teachers lose career engagement and yet they have sufficient experience to assist early career teachers. The VITAE project suggests that after '8-15 years [of] managing changes in role and identity 76 per cent were judged to have a sustained engagement, with 24 percent showing

detachment/loss of motivation.' (Ibid., p. xi). By drawing on the concept of teacher career stages, the VITAE project suggested there is a good correlation between the developmental stages of a teachers' career and a propensity to drop out of teaching. In a similar Swiss study, Huberman (1992) found comparable trajectories correlating to teachers career stages and identified the first stage took several years before teachers gain a 'basic pedagogical repertoire' (Huberman, 1992, p. 129).

Katz's (1972) earlier research recognised the stages of teacher development in the United States of America (USA). These findings have shown it could be beneficial to consider a teacher's career stage when preparing a professional development programme. Therefore, I suggest that the experienced teachers might have developed a resilience that enables them to stay in teaching long enough to have developed their repertoire of strategies in the classroom.

Day (1999) reported on a study of teacher' professional development programmes and considered it to be 'crucial to the interests of both individual teachers and school to identify and relate to these key phases and stages of transition… [and] …the need for planned professional development at particular key stages in their careers.' (Ibid., p. 65). There is, therefore, enough evidence to consider using the pedagogical repertoire held by experienced teachers to assist early career teachers who are seeking to develop their sense of efficacy in the classroom. Regrettably, the trend of UK research is limited to informing policy stakeholders of the

consequences of teacher attrition and not the causes (Day & Gu, 2009). To better understand the influences of teacher attrition, which there are only a few studies done in the UK (Beltman et al., 2011), we must look more at international research which has investigated factors that cause the teacher to leave the profession so soon after qualifying.

In 2005, the OECD published research derived from twenty-five countries and identified 'extensive research gaps considering teachers, their preparation, work and careers' (McKenzie & Santiago, 2005, p. 12). Research into teacher retention has been ongoing in the USA since the late 1970s. For example, Gaede recognises the significance of receiving early support and the 'reality shock' experienced by new teachers when support structures and following initial training (Gaede, 1978, p. 407). Chapman (1984) determined there is a significance relating to a teacher's initial commitment and the increased likelihood of disillusionment occurring from their initial classroom experiences. From the mid-1980s, American researchers (Westman & Bergmark, 2014; Ingersoll & Strong, 2011; Beltman et al., 2011; Wood & Lieberman, 2000; Adler, 1991; Wildman, Niles, Magliaro, & McLaughlin, 1989) have considered how professional development programs improve a teacher's sense of personal identity and reduce teacher attrition rates. Researchers placed greater emphasis on determining how educators learn to teach and the effectiveness of initial teacher programmes. For example, Feimann-Nemser (1989) recognised there was a limited body of evidence into the effectiveness of applying pedagogical theory

during and after initial teacher education. In recent decades, researchers in Australia have also increased their interest in teacher attrition, which has become an increasing problem in Australia in recent years (Buchanan et al., 2013; Beltman et al., 2011; Le Cornu, 2009). Buchanan (2015), for example, recognises developing teacher identity, and the fragility of a teacher's long formed identity, during the earliest years of teaching, Buchanan also showed useful teaching identity is formed in the presence of students and not enacted through well-meaning policy initiatives in professional development.

Early studies into teacher resilience by Gaede (1978) recognised the benefits of providing what he referred to as 'supportive supervision'; which is Gaede's term for mentoring. Gaede proposed extending new teacher mentoring beyond the first year and proposed that a programme of extended mentoring would also attract more graduates into ITE. Gaede recognised forty years ago how the support from experienced ITE administrators could support NQTs beyond the transition into their first year. However, Gaede did not acknowledge how experienced teachers could be an available resource in schools.

As the demographics in the USA changed from a surplus of teachers in the late 1970s, researchers recognised the need to find the principal factors that impact teacher resilience, such as class sizes, low salaries, and lack of support in the first five years of teaching (McCreight, 2000). Chapman (1984) produced a detailed multivariate analysis which showed early career teachers negative classroom

experiences, more than any other factor, correlated with a subsequent reduction of teacher resilience. Chapman's findings also suggest that teachers most susceptible to leaving the profession began their teaching career with a higher commitment to teaching, and so experienced a higher drop in their sense of job satisfaction. Consequently, teachers, who have entered the profession bringing with them a high commitment, could receive help from taking part in a supportive mentoring programme. Also, Chapman's finding implies that a reduction in job satisfaction is a critical early indicator of the susceptibility of increased rates of teacher attrition, an observation not explored in the literature.

UK Policymaker's Approach to Teacher Attrition

England's state-funded schools are experiencing increasing difficulties recruiting and keeping the necessary teachers to meet current and future teaching demands (Carmichael, 2017; Foster, 2017; Hilton, 2017; Morse, 2017; Worth & De Lazzari, 2017). Research has shown there is a shortfall of teachers within the state schools workforce 'with fourteen out of seventeen schools failing to recruit to target' (Hilton, 2017, p. 80). Also, the enrolment of new teachers has not met national recruitment targets for five years, and from 2016 to 2017 the number of graduates recruited into teacher training decreased (Carmichael, 2017). Furthermore, the population of secondary students in state schools are expected to rise nineteen percent by 2025 (Carmichael, 2017; Morse, 2017).

There are several criticisms of the UK's education policymakers for not recognising the extent of the problem of teacher retention (Foster, 2017; Hilton, 2017). The DfE's approach to teacher recruitment and retention has received notable criticism from the National Audit Office (Morse, 2017), the House of Commons Education Committee (Carmichael, 2017) and the House of Commons Library (Foster, 2017). For example, DfE has been criticised by the NAO for its 'small-scale' (Morse, 2017, p. 8) support for retaining the current teaching workforce, and for having a weak understanding of teacher shortages (Ibid.). As the DfE continues to concentrate upon teacher recruitment and training (DfE, 2016a) as 'the profession becomes less attractive to potential recruits' (Hilton, 2017, p. 83) and while recruitment challenges continue to advance in England's schools (Foster, 2017). Presently, research into recruitment problems in the UK's state-funded schools focuses on producing quantitative data to inform policyholders of the outcomes of teacher recruitment and retention (Foster, 2017; Morse, 2017; Worth, 2017; Worth & De Lazzari, 2017). The 2016 DfE's white paper 'Educational Excellence Everywhere' addressed recruitment and retention with the following statement: 'Educational excellence everywhere means improving recruitment and retention of new and experienced teachers in areas of greatest need. Our improved approach to ITE allocations will support this…' (DfE, 2016a, p. 34), which, for schools, offers no insight into how the government will improve its policies for improving teacher retention other than maintaining the current ineffective ITE recruitment policies.

In addition to the literature showing the high attrition rate of early career teachers, there is additional evidence emerging from the National Foundation for Educational Research (NFER) showing that in the past seven years an increasing number of experienced teachers are leaving the profession (Worth & De Lazzari, 2017). Regrettably, attention to the increase of experienced teachers leaving the profession is not receiving enough consideration by national stakeholders. The changing demographics relating to declines in ITE recruitment and increasing losses of experienced teachers raise concerns about the future of attrition rates in England's state-funded school sector. There is enough evidence to show that there could be complex undercurrents affecting teacher retention in the UK state school sector, which needs further investigation. The UK education sector should develop a sense and understanding of teacher attrition to learn how to improve the current unsustainable situation (Gorard et al., 2007).

A Sense of Teacher Attrition

It is helpful to review the literature to understand teacher attrition and to develop a sense of what it is. The term teacher attrition is preferable to the inappropriate use of phrase teacher resilience, which is a characteristic of an individual teacher who can survive in stressful situations (Beltman et al., 2011). An added difficulty with referring to resilience is that it might also encompass teachers unable to leave the profession due to external factors, such as financial or family reasons, yet are likely to leave the profession before retirement. Kelchtermans (2017) reflects

upon how recent literature pays little consideration to define teacher retention before examining its causes. He draws attention to how definitions of teacher retention are taken-for-granted and presented in a tone of self-evidence. Also, Kelchtermans reflects on how researchers do not give their interpretation of teacher retention and swap retention and turnover. In his analysis of the sense of attrition, Kelchtermans states: 'teacher attrition refers to qualified teachers, leaving the profession, for reasons other than having reaching the age of retirement' (Kelchtermans, 2017). While not offered as a perfect definition, this is a good start to understanding the sense of teacher attrition. Hence, we can build upon this to relate the sense of teacher attrition to the current problem of teacher supply in England's schools.

Billingsley (1993) showed that teacher retention impacts specific groups of teachers. Stinebrickner (1998) expanded on Billingsley's ideas to consider how location, subject or specialisms affected teacher retention. A decade after her initial research, Billingsley (2004) used Stinebrickner's ideas to construct an analysis of teacher demographics to identify potential factors which affect specific groups of teachers. Unfortunately, the ideas of discussing or concentrating research on study groups seldom occur in the UK's research literature, so using the research is difficult to apply for creating practical solutions. One example of this is the research by NFER (Worth, 2017) which found higher levels of turnover occurring within a UK multi-academy trusts, yet does not a identify which teaching groups were the subject of their study. It is, therefore, difficult to apply

their research to assist specific groups potentially vulnerable to teacher attrition. This dissertation considers two teacher demographics:

1. Working state-funded secondary school teachers who have taught for less than five years: early career teachers, and

2. Working state-funded secondary school teachers who have taught for ten years or more: experienced teachers.

The next section discusses the first demographic for this research.

Assisting Early Career Teachers

Teachers meet many challenges while teaching during their induction year. The first year of teaching, also referred to as the probation or NQT year, is a mandated administrative process requiring formal assessment of teachers in the UK state-funded school sector. A new teacher must complete the induction to further their teaching career in UK state schools. Added to these challenges, the NQT faces added challenges of classroom management and discipline, coping with student differentiation strategies and building relationships with parents and colleagues (Zuljan & Požarnik, 2014; Sikes, 1985).

During the early stage of a teacher's career, the primary concern of the teacher is surviving their first solo teaching experiences (Katz, 1972) and the incidents which challenge a new teacher's identity (Mesor, 1985). To help the NQT to cope with these experiences Feiman-Nemser (2012) cites Conant's

recommendation for improving new teachers' introductions. Conant recommends paying attention to 'specialized instruction concerning the characteristics of the community, the neighborhood, and the students he [or she] is likely to encounter.' (Feiman-Nemser, 2012, p. 10), which they could achieve in schools by assisting early career teachers during classroom-based professional development sessions.

Conant published his recommendations over half a century ago and suggested deploying experienced teachers to aid early career teachers, which seldom occurs in later literature. Also, there is little suggestion for using experienced teachers to give professional development to less experienced teachers in the UK literature. However, there are opportunities for both teaching cohorts to receive benefits within professional development. Experienced teachers are unlikely to have their needs met from occasional professional development that reflects technical or generic approaches to improving teaching skills (Hustler et al., 2003; Wood & Lieberman, 2000). So, if it is possible for early career teachers to enjoy receiving professional development help from their experienced colleagues, so we should consider what contribution this collaboration might bring by implementing changes to school-based professional development.

Collaborative Professional Development

Collaborative approaches to professional development have been the focus of several studies in the USA which have considered implications for developing

'communities of practice' (Wenger, 1998) and learning communities (Campbell, McNamara, & Gilroy, 2004). For example, one long-term project, which used the experience of senior teachers, was the National Writing Project (NWP). The NWP set out to create a community of practice by encouraging professional collaboration that allowed teachers to articulate their dilemmas and used the inside knowledge of teachers within the school to share and receive ideas. Support and review were the topics implemented to enrich classroom practice (Lieberman & Wood, 2001). While the central aims of the NWP were to place literacy at the heart of the schools, the success of the project was the impact which occurred on classroom practices by 'transforming the experience for many teachers [by] becoming part of a local community at their particular site' (Lieberman & Wood, 2001, p. 186). However, the NWP had implemented a school-wide approach which risked causing participants to feel compelled to change their teaching through a sense of peer pressure, possibly before they were prepared to do so.

The focus on learning communities within school-based professional development has shown benefits. An example from San Francisco is the Bay Area School Reform Collaborative (BASRC) reform project, which lasted for five years starting in 1995. BASRC introduced a program of classroom enquiry using learning communities at the faculty level. Their aim was to develop iterative processes of self-analysis, reflection and change using other teachers as a source for learning and to focus on best practice to enable teachers to question their classroom practice and to share their results within a community (McLaughlin & Zarrow, 2001). The outcome saw teachers examining established school practices

and traditions which give further strength and confidence to the learning community to implement changes in classroom curricula. Consequently, the BASRC project showed professional development within a learning community to be a social process for teachers and concluded that 'teacher education must be situated in classroom practice' and apply to teachers' professional development (McLaughlin & Zarrow, 2001, p. 99).

A cause of concern for these collaborative approaches to teachers' professional development is the possibility that individual teachers might feel that their abilities become exposed to the focus group's scrutiny. For an early career teacher, who might not yet have formed strong or confident classroom identities, having a faculty or school-wide learning community involved in their development could have a negative impact on their confidence. Goodson (1992), for example, argues that focusing on teachers practice is strategically flawed. Also, Goodson tells us that professional development consideration should involve the teacher's life experience with their work life to produce a meaningful dialogue and advance the teachers engagement with the development process. In addition, Goodson suggests that such an individual approach would allow the teacher to share their experience openly and will, therefore, achieve a higher motivation to engage with the process. However, including aspects of someone's life as part of his or her professional development needs careful ethical consideration that cannot be conducted in group scrutiny, but could be implemented, with care, on a one-to-one basis between a mentor and mentee. The implications of Goodson's study for this research are to prevent the disclosure of

the participant's verbal statements to guarantee their anonymity and to enable the participants to engage in the process of individualised collaboration without feeling exposed (BERA, 2011). Goodson showed the importance of allowing the participants to include life experiences in their conversation, and there is likely to be personal discussions about the sense of agency and identity. Thus, this study uses an autobiographical approach to data collection from each of the participants in a weekly log.

Experienced Teachers as Advisors

For this research, I consider experienced teachers as having ten years or more experience in teaching; this duration originates from the results of my previous study (Moore, 2017). Ten years of teaching practice is the minimum experience teachers consider is needed to form a full repertoire of classroom identities (Ibid). However, one study involving six thousand teachers in the USA showed that teachers continue to improve student outcomes for the first seven years of their career (Berliner, 2004), which suggests there may be regional variation and different methods to measure teacher's performance. Advancing a teacher's experience should help to change teachers' perspectives from their early career experiences. Therefore, understanding differences between novice and experienced teachers should assist experienced teachers to know how to provide advice for early career teachers to develop their classroom identities (Showers, 1984). Also, by looking at the literature on how a teacher's development evolves with experience, it might reveal more of where and how teachers derive

experience which facilitates them to stay in the profession beyond their formative years.

Teachers' Experience

Completing ITE should provide new teachers with the knowledge that enables them to plan and to conduct lessons during their first year of teaching. At the end of ITE training, the new teacher will have met the minimum level of practice required to achieve Qualified Teacher Status (QTS) and meet the Teachers Standards (DfE, 2013). Since September 1990, NQTs in the UK are expected to complete a year of induction 'in demonstrating that their performance against the relevant standards is satisfactory by the end of the period and equip them with the tools to be an effective and successful teacher' (DfE, 2016b). However, the induction year does not enable the new teacher to continue to reflect upon their experiences or to develop to their full potential (Bleach, 1997, 1999). As teacher's experience develops over several years and at different rates for individual teachers (Elliott & Calderhead, 1993; Sikes, 1985), yet there is no reason individual support should not continue beyond the end of the induction year in an individualised professional development programme. Also, the stages of early teacher development identified by Maynard & Furlong (1993) (Table 1), should be familiar to an experienced teacher who has developed their strategies and evolved their practical classroom skills; broadly, they have gained a full repertoire of classroom identities from their classroom experiences.

Teachers Career Stage	Characteristics
Early Idealism	• Pre-teaching stage • Trainees have an idealistic view of the teacher they want to be
nmjSurvival	• Training experience begins • Idealism fades with the realities of classroom life and becomes concerned with their survival • Classroom management and establishment as a teacher become a preoccupation • Dependent on others to make sense of classroom environment • Confidence is low
Recognising Difficulties	• Self-assessment starts to predominate • Keen to impress their teaching performance • Seeks reassurance and feedback • Focus begins on teaching methods, resources and materials
Hitting the Plateau	• Basic management and control processes established • Fixed approach to deploying know teaching method • Using fixed teaching routines • Less concern with learning impact
Moving on	• Self-sufficient teaching • Experimentation used to develop student learning • Over time deploying a less reflective approach to student learning • Disengagement with CPD

Table 1 Stages of Teacher Development. Adapted from Maynard and Furlong (1993)

There are, however, difficulties in defining the expert teacher. Contrary to expectations, Berliner (2001) found that teaching experience does not automatically impart knowledge of pedagogical expertise. His research shows teaching ability is considered as a behaviour that develops from novice through to advanced beginner in

stages, then onto a competent performer stage. Berliner's findings imply few teachers will develop into proficient and expert stages if teacher attrition occurs in the first five years of experience. However, Berliner also recognised that observing expertise from teacher behaviour is limiting. Therefore, it should be viewed as a change to the teacher's agency. Where the teacher's expertise is limited, and where the teacher depends upon external support, a transitional stage occurs leading to achieving expertise as a self-regulating performer. Berliner brings together these ideas and names a set of characteristics to determine teacher expertise, listed below. First proposed by Robert Glaser, these characteristics recognise teacher agency as a precondition applying to expertise in pedagogy:

- '*expertise is specific to a domain, developed over hundreds and thousands of hours and continues to develop*
- *development of expertise is not linear. Non-monotonicities* [variability] *and plateaus occur, indicating shifts in understanding and stabilization of automaticity*
- *expert knowledge is structured better for use in performances than is novice knowledge*
- *experts represent problems in qualitatively different ways than do novices. Their representations are deeper and richer*
- *experts recognize meaningful patterns faster than novices*
- *experts are more flexible, are more opportunistic planners, can change representations faster when it is appropriate to do so. Novices are more rigid in their conceptions*
- *experts impose meaning on ambiguous stimuli. They are much more ''top down processors.'' Novices are misled by ambiguity and are more likely to be ''bottom up'' processors* [interpreted as the expert having a less cognitive load, allowing more thought to occur to stimuli, while a novice will react instinctively to classroom situations]
- *experts may start to solve a problem slower than a novice, but overall they are faster problem solvers*

- *experts are usually more constrained by task requirements and the social constraints of a situation than are novices;*

- *experts develop automaticity in their behaviour to allow conscious processing of more complex information; and,*

- *experts have developed self-regulatory processes as they engage in their activities.'* (Berliner, 2001, pp. 464–465)

Glaser's characteristics of expertise point toward experienced teachers altering how they do their thinking as they develop their expertise. Developing expertise results in a reduction in cognitive load during teaching (Kwo, 1994; Wolff et al., 2015), which allows the teacher to be more perceptive in the classroom. By focusing on evolving classroom expertise, a teacher's learning experience becomes set on the teacher's day-to-day work of teaching. This approach to teacher training was employed by the Colorado Assessment Project which used Lave and Wenger's (1991) ideas of legitimate peripheral participation to 'focus on the kinds of knowing each approach addresses' in classrooms to help teachers to reduce their cognitive load (Putnam & Borko, 2000, p. 6). They found that a teachers' expert knowledge would develop in the classroom as a social experience, which also provided the context for teachers to develop their practice in appropriate settings. It is by concentrating on 'situated learning' (Lave & Wenger, 1991) within the classroom that will assist early career teachers to develop their teaching expertise; by moving their knowledge from the abstract of 'what' to teach in to the practical skill of 'how' to teach (Rovegno, 1992). The mentor could consider using Glaser's characteristics of expertise to reveal the progress of an early career teacher's development. For example, identifying and

witnessing the increasing ability of an early career teacher to perceive classroom events sooner and regulating classroom management sooner (Wolff et al., 2015) and by using expressions of classroom identity to influence the social practice of learning within a classroom.

Perceptions of Expertise

Teachers should be the best judges of their sense of teaching ability. My observation of three developmental stages in teachers' classroom identities (Moore, 2017) originate from a survey of teachers who were asked to reflect on their classroom expertise, and their results showed their teaching identity was forming in the first five years of teaching, maturing in the next five years and established after ten years in teaching. These developmental stages could contribute to understanding teachers' knowledge when considered with the descriptions of expertise offered by Hoffman et al. (1995). The first five years of a teacher's career to be a difficult time, with teachers forming their classroom skills and identities with a minimum level of supervision and help during the most vulnerable stage of their careers. This early stage is similar with a 'Journeyman's' skill which is the corresponding level of experience that could remain constant throughout the career of an individual (Hoffman et al., 1995, p. 132). From five years to ten years of teaching experience, the teacher might achieve an 'Expert' level of skill. An expert teacher can show sound judgement that is accurate, reliable and the teacher can show skills with 'economy of effort'

(Hoffman et al., 1995, p. 132). After ten years of experience, we might consider the teacher to be a 'Master' teacher, who can 'teach those at a lower level' and is 'regarded by their peers to be "the" expert' (Hoffman et al., 1995, p. 132).

There are many shortcomings with research into teacher expertise. Few researchers have investigated this aspect of teacher development, so there is little quantitative or qualitative analysis into developing teachers' expertise and how to foster or advance professional development strategies to improve the sense of expertise within the profession. More research is needed into teacher expertise to uncover any resonance between early teacher attrition and the sense of poor classroom identity or teaching efficacy. Existing research does not analyse the consequence of teachers who struggle to develop their expertise beyond a Journeyman's skill set and who then might leave the profession before achieving the Expert teachers' characteristics.

Classroom Identities

The practical experience gained during teacher education provides a new teacher with the minimum experience needed for starting a career in teaching. However, ITE does not give the new teacher with the emotional intelligence needed to achieve success in a professional role which is considered being a prerequisite for teachers to manage their pupils' emotional states (Cherniss, 2000; Mesor, 1985). ITE gives enough skills to achieve the minimum requirements for the DfE

Teachers' Standards to show 'clear rules and routines for behaviour in classrooms' (DfE, 2013). However, the new teacher risks starting their career having knowledge of only a conservative approach to classroom management that emphasises 'strong teacher control, structure, convergence on learning activities, less pupil freedom, less exploration of ideas, and less experimental teaching activities' (Thomas, 1980). Such approaches to classroom management are suitable for establishing initial routines and expectations but become simplistic, repressive and counterproductive as long-term strategies (Sikes, 1985). They could consider this approach as a one-dimensional classroom identity, which needs further refinement to create added dimensions of classroom identities. More attention must support early career teachers to develop their classroom skills to go beyond the limited ambition of the Teachers' Standards.

Teachers should be able to cultivate a repertoire of strategies to manage the complexities and practicalities of teaching situations (Le Maistre & Paré, 2010). Long (2009) illustrates the impact of classroom intricacies on early career teachers and describes their feelings of frustration, hopelessness and inadequacy experienced during the first year of teaching. Doyle (1977) examined the success of strategies in the classroom environment and suggested a teacher's skills become a significant factor once a teacher has mastered classroom demands through developing additional strategies to manage classroom complexities beyond their initial training skills. Many studies have investigated the struggle experienced by early career teachers by comparing how experienced teachers' classroom interactions differ from novice teachers, for example, Beijarrd's (1995;

2004) meta-analyses found experienced teachers use situation-specific strategies to increase stronger relationships with their students. Also, Chandra (2014) noted how teachers deploy a range of interrelationships by witnessing how teachers use variations to their identity in the classroom. These studies show the turbulent changes that confront a novice teacher's identity as they develop their early careers. However, few studies use these data to advance earlier career teacher development or to influence professional development programmes (Izadinia, 2012).

Overall, there are many studies support the view that teachers achieve greater success once they have evolved their strategies to manage their classroom agency alongside consideration of their students' identity (Heikonen *et al.*, 2017; Charteris, 2016; Biesta *et al.*, 2015; Soini *et al.*, 2015; Edwards, 2015; Van Lier, 2008; Day *et al.*, 2006; Ewald & Wallace, 1994). Also, these studies show the need to develop individualised approaches to professional development by implementing the professional development practice to occur in classrooms with students (Hargreaves & Fullan, 1992).

Classroom Agency and Identity

In recent years, there has been a quantity of research investigating agency in education which shows how a teacher's agency or identity can be used as indicators to show the impact upon the individual's professionalism and accountability (for example, Heikonen et al., 2017; Biesta et al., 2015; Buchanan, 2015; Edwards, 2015; Eteläpelto, Vähäsantanen, & Hökkä, 2015; Pantić, 2015; Quinn & Carl, 2015; Soini et al., 2015; Stillman & Anderson, 2015; Toom, Pyhältö, & Rust, 2015; van der Heijden et al., 2015; Cohen, 2010; Joseph & Heading, 2010; Van Lier, 2008; Day et al., 2006; Beijaard, 1995; Ewald & Wallace, 1994; Thomas, 1980). These studies imply that agency and identity are inherent and immutable traits. Thus, many researchers do not consider how teachers can use their agency to develop and deploy various identities for teaching. It is, therefore, relevant for this study to consider both agency and identity as a practical concept for their application in the classroom. While there is ample social research into the theory of agency and identity explored by me (Moore, 2017), it is useful to consider agency and identity as separate yet related concepts. Central to this study is an idea of a teacher's classroom identity, which I shall demonstrate using an example of a hypothetical classroom below.

Consider a hypothetical empty classroom. An observer recognises the environment, yet without people in the classroom the classroom is static; the environment is constant. Next, consider a single student entering the classroom.

The student takes a book from a shelf and reads it. The room is no longer static; there is variability occurring, and the agent (the student) is interacting with the environment. Since the student has control over their chosen action, the student has shown agency through their ability to interact with and to change to the environment (Giddens, 1979, 1993; Bandura, 1989; Chisholm, 1971). Also, the student is an agent implementing their free will and who can determine a course of action within the classroom environment (Bandura, 2006, 1999; Giddens, 1993). Next, consider a second student entering the classroom. The observable complexity in the classroom has increased; so, the environment has become more variable. By being within the same environment, the two agents know of each other and will interact or change their behaviour in response to each other's presence (Cole, 1985). The interaction between these agents is 'involving a stream of actual or contemplated causal interventions' between agents (Giddens, 1979, p. 55). Next, add to the classroom twenty or thirty students who have studied as a group for some time. The level of variability and interactivity becomes complex and might appear chaotic. However, the students' interactions become structured by the students' classroom culture (Van Lier, 2008; Bhabha, 1996). Another agent walks into the classroom that stands silently at the front of the room. The students recognise this agent's identity and respond by ending their conversations and wait silently for instructions from their teacher; the teacher has revealed an example of one classroom identity deployed as an agent for change (van der Heijden et al., 2015; Coldron & Smith, 1999). This scenario is an example of how teachers and students make use of their ready-made knowledge to give out expressions of a 'working consensus… [that]… will be

different in content from the working consensus established in a different type of setting' (Goodson, 1992, p. 21). Furthermore, the behaviour exhibited in this example has occurred within a social-cultural community formed from the full participation of all the agents involved, including the students and the teachers. It is in this context in a community that most early career teachers find themselves, in what is the most vulnerable stage of their career, having to learn to manage a learning community without the help of a teacher who has a full repertoire of classroom identities.

Applied Classroom Identities

Most literature considers 'identity' to be a singular concept, however, in more recent thinking recognises identity is formed from multiple constructs (Charteris, 2016). These multiple constructs are characterised by Holland et al. (1998) as 'Figured Worlds' which are 're-formed in relation to the everyday activities and events' (Holland et al., 1998, p. 53). Noteworthy events, such as learning to teach, also invoke and might have significant implications for an identity. Such events contribute to forming new identities that can change a person's sense of worth. These events referred to as 'critical events' by Measor (1985) also have important implications for identity formation and a teacher's resilience.

In the hypothetical classroom illustrated above, the teacher had established a classroom practice apparent to the students when entering the room, forming a

'safe place' for the teacher and the students to conduct their practice (Connelly & Clandinn, 1990, p. 13). Hence, a constructed relationship exists between the teacher and the students. The classroom has formed a working consensus or mini-community for successful social interactions to occur (Clandinin, 1986). To achieve this, the teacher will have to use a full repertoire of identities that reflect the complexities associated with building the relationships to form the learning community with the students. How a teacher applies their identity is related to their pedagogical knowledge, for example, they can expect the time to develop the classroom mini-community to take less time for a more experienced a teacher.

Kwo (1994) suggests cognitive load decreases as teachers develop more teaching experience which will enable teachers to think more in the classroom. Also, Kwo found early career teachers are less capable, in the first five years of teaching, of using their intuition to sense from the classroom when, or how, to portray an appropriate identity. Furthermore, an early career teacher experiencing a higher cognitive load will find their ability to reflect and evolve their problem-solving skills to be limited (Kwo, 1994). The early career teacher would, therefore, benefit from cooperative support to help them reduce their cognitive load and release them to develop their teaching and increase their attention on their students learning.

Literature Review Observations

The overall aim of this enquiry is to advance an understanding through the impact of extending mentoring to early career teachers by experienced teachers and how this process might benefit both parties ongoing professional development. Day (1999) questions whether short-term professional development opportunities fulfil the longer-term intellectual needs of teachers. It is, however, beyond this study to show whether there are any long-term benefits for the participants due to the timescales available for this study.

I began by considering the relevance this study has in ongoing teacher retention problems in England's state-sponsored schools. I have shown there is a significant and growing difficulty with recruitment and retention of teachers in England. While policymakers continue to focus on recruiting new teachers into the profession, there is increasing evidence of experienced teachers are also leaving at increasing rates. Few researchers in the UK have a sense of teacher retention and are engaged in investigating causes for the recruitment problem and establishing the extent of the problem. However, there is a body of research from USA, Australia and other countries that have researched and conducted enquiries to advance ideas for improving teacher retention, which has been informative for developing a mentoring programme for early career teachers.

The literature has also shown that there is a higher risk of early career teachers leaving the profession than their more experienced colleagues who could be supported by receiving individual collaborative advice from their more experienced colleagues. By looking at research into the career life of teachers and the stages of development and phases of experience, the literature has shown a positive correlation with my previous study (Moore, 2017). Also, in my previous study, there was evidence that teachers with less than five years' experience do not believe they have established a strong presence in their classrooms, while teachers with ten or more years of experience though they had developed their classroom expertise.

The literature suggests that forming a collaboration with early career teachers and their experienced colleagues increases the opportunity for early career teachers to develop their classroom identities and to build their confidence in creating learning communities in their classrooms, yet there is little research into individualised professional development for teachers in English schools. Although one recent study in England found that teachers CPD does not meet individual needs (Hustler et al., 2003), there is evidence that suggests there is a benefit to providing professional guidance in a private relationship to explore personal impact upon an individual's agency and identity (Ingersoll & Kralik, 2004). In this environment, participants could discuss strategies and ideas in privacy to prevent embarrassment or concerns if revealing personal feelings within the study.

I have shown how little research considers using teacher agency to develop and deploy a range of classroom identities. Typically, the literature discusses the importance of agency and identity as an outcome to assess professional development in learning communities. However, the literature suggests that using experienced teachers in school-based professional development has the potential to benefit both parties.

The literature review has informed the first research question to 'explore how focusing on classroom identity is likely to improve early career teacher retention'. Also, the literature has been explored to review the 'extent to which the use of experienced teachers to mentor early career teachers impact the development of classroom identity' is a new approach that has the potential to aid in the development of early career teachers.

I have recognised the potential benefits experienced teachers can give to support their early career teachers' colleagues. Also, I have highlighted the context of this study is when England's state-funded schools are experiencing teacher retention difficulties. I have also discussed how experienced teachers use a repertoire of identities in the classroom to inform their agency in the classroom and explored the difficulties early career teachers have developing their agency in classrooms, which has implications for many teachers' who leave the profession before they have reached their full teaching potential. However, an assessment is needed to

understand whether early career and experienced teachers perceive any benefit to taking part in a mentoring programme within the context of a teachers' professional development programme.

Methodology

Introduction

This research study has the four aims repeated below:

1. To explore how focusing on classroom identity is likely to improve early career teacher retention

2. To establish the extent to which the use of experienced teachers to mentor early career teachers impact the development of classroom identity

3. To evaluate to what extent do both experienced and early career teachers perceive the usefulness of experienced teachers mentoring early career teachers.

4. To formulate proposals for staff who prepare school professional development programs

The first two research questions have been dealt with in the literature review; the evaluation for the third question is studied within an English comprehensive school, and analysis of the data obtained from the school-based intervention addresses the fourth aim. This section describes the design of the method used to collect the data used to address the third research question.

Central to this investigation is my belief it is possible to develop early career teachers' classroom identities by using experienced teachers within a programme of professional development, and further, that developing an early career teachers' classroom identity would improve a sense of teaching effectiveness and reduce

the attrition of early career teachers in England's schools. Although early teacher attrition has been a concern for many years in Britain (Carmichael, 2017; Foster, 2017; Hilton, 2017), the literature review uncovered little research into deploying experienced teachers to assist early career teachers using a professional development framework. Consequently, to address the third research question I designed my research to ensure that no harm occurred to the people studied. I used the data to test the usefulness of using experienced teachers to support early career teachers development of classroom identities.

The subjective nature of this intervention into teachers' opinions, attitudes and interaction require a qualitative approach in conducting this social research (Grix, 2010). As the aim of this study is to understand rather than explain social phenomena, so, I did not consider quantitative methods to be appropriate for this study. In the design of the research, I considered several systems for data collection, but the approach chosen introduced a trial-mentoring programme to gather a range of qualitative data from each of the participants. I designed the intervention for three experienced teachers to mentor an early career teacher for two months. I gathered data from both mentors and mentees in the form of a weekly log. I chose a biographical method to collect a personal response from the participants as they undertook their role in the mentoring study to enable their retelling to reveal the participants self-identity (Roberts, 2002). Also, baseline data was gathered using a questionnaire completed by early career and experienced teachers from a variety of schools across the UK. Finally, unstructured interviews with the participants sought their views, following their

participation in the mentoring of early career teachers to understand the value of extending the research into a more extensive professional development study.

Research Design

The design of this investigation developed a method of practitioner research that recorded the opinions and insights of teachers before and after as they took part in a mentoring programme. The methods used needed to yield useful data within a limited timescale available. Robson (1993) identifies several disadvantages to using observational techniques, such as the time required for someone to accept the observer, or the presence of the observer, which is likely to affect the situation under observation. The approach to data collection for this enquiry uses three qualitative approaches; interviews, questionnaires, and biographical data collection from recipient logs and unstructured interviews. Using three approaches to data gathering permits the data analysis to be 'triangulated' (Coe, 2017; Bell, 2010) to enable a comparison of data which will inform of the validity of the individual data sources.

Method of Investigation

Participant Selection

There are two overarching principles that this investigation sought to maintain throughout the study; to protect the participants from any disadvantage or discomfort from taking part in the study and ensure interactions between the mentor and mentee remained private. Before beginning the study, the head teacher of the school provided permission to conduct the school-based intervention; also the University of Oxford's Central University Research Ethics Committee (CUREC) provided ethical clearance. After receiving the approvals, the school provided a list of teachers who had been teaching for ten years or more and a list of teachers who have been teaching for up to five years. Each member of these two cohorts received a written account of the research and invited to volunteer to take part as either mentors or mentees. I sought six participants to undertake the mentoring study; comprising of three mentors and three mentees. I considered six volunteers to be enough participants to allow the investigation to continue if a someone left the study early and to still enable the completion of the data collection within the timeframe available.

Following the request for volunteers, four experienced teachers offered to be mentors, and twice as many early career teachers volunteered to take part in the study. I randomly selected three early career teachers and three mentors from the list of volunteers. Following the participant choice, the mentors were randomly

matched to each mentee. I chose the random selection process in accordance with Ingersoll & Kralik's (2004) meta-analysis research that recommended using random selection in mentoring research programmes to avoid researcher selection bias. Also, the participants were unaware of who else was contributing to the study, which was a pragmatic approach to limit any unknown variables influencing the results by unrecorded discussions between participants and to ensure the results were derived from individual perspectives. The instructions for the mentoring process were provided in a document (Appendix III). The participants were allowed to run their own mentoring process however they were asked to concentrate on classroom practice and to attempt to observe each other for fifteen minutes each per week.

Questionnaires and Baseline Questionnaire

The purpose of the baseline questionnaire for this research is to collect data from teachers who are not taking part as mentors or mentees in this research. Using a questionnaire is an appropriate method to make generalisations about a population (Hart, 2005). The literature review identified several sources who examined how experience reduces the cognitive load of teachers as knowledge becomes more structured with practice (Wolff et al., 2015; Berliner, 2001; Putnam & Borko, 2000; Kwo, 1994). In addition, the literature shows teachers experience different stages of development as their career advances: this was described, for example, in the VITAE project (Beltman et al., 2011) and in my earlier research (Moore,

2017). The difficulty that occurred was how can a determination be made to understand whether the subjects of this study share the same perceptions as 'typical' early career or experienced teachers, and what causes differences of opinion occurring in relation to acquiring teaching experience. Teacher surveys require validation with multiple sources of data to expose errors in survey measurement (Burstein et al., 1995). Hence a baseline survey was answered by teachers from different schools across the country. To validate the subjects, both the early career teachers and the experienced teachers completed an electronic questionnaire (Appendix II). Producing and publishing the survey electronically with Google Forms enabled the participants to complete the survey privately and in their own time. Also, the questionnaire was published electronically in a national teaching forum for computer science teachers to obtain a set of baseline data. The baseline survey was published twice, one survey was dedicated for early career teachers to complete, and a second survey was published for experienced teachers to complete. The responses from both baseline surveys were recorded separately to enable a comparison teacher expertise to be undertaken. In addition to validating the subjects of the study, the baseline survey was used to validate the hypothesis of this study. For example, if responses received from the range of teaching experiences are similar, or if the answers from the questionnaires did not correspond with the literature, then a flaw with the central proposition of this research could be identified, or, more likely, the reliability of the questionnaire data could have introduced unexpected outcomes (Supovitz & Turner, 2000). Differences between the early career teachers' and the experienced teachers' responses would uncover phenomenological differences

that exist between teachers in their different stages of a career. Alternatively, if the responses from the respective cohorts under study correlated with the baseline survey results, then there could be reasonable confidence that would validate the study of the subjects involved in the mentoring study.

The questionnaires had open-ended, and multiple-choice questions designed to obtain responses associated with the themes identified in the literature review; these are professional development, initial teacher education, classroom identity and perceptions with growing experience of teaching. The multiple-choice questions were answered using identical Likert scales. The consistent use of the same scales was chosen to assess the strength of attitude to each question or statement (Bell, 2010) and to allow results of the questionnaire to be easier to compare. Using an odd number of responses in the Likert scale enabled participants to show an impartial response, which separates those who have a strong 'feelings from those who have leanings' to a specific research question (Robson, 1993, p. 248). Also, each multiple choice question was designed to be precise and to ensure the respondents understood the questions uniformly so that I can compare their responses (Grix, 2010). While the use of electronic questionnaires had advantages regarding ease of data collection; the disadvantage is that those who agree to take part in the mentoring study might have similar views or wish to provide information they believe I (whom they know) am seeking to uncover (Ingersoll & Kralik, 2004). With this potential bias in mind, sharing the same questionnaire with a broader population of external teachers in

the baseline survey provided a reference used to enable a comparison for potential bias (Berg, 1989).

The final questions of the questionnaire asked a series of open questions to provoke participants to create a narrative regarding their perceptions of teaching with increasing experience. Although some open questions break the guidelines for limiting one question for one answer (Munn & Drever, 1990), these were added intentionally to allow the teachers to include a narrative. Colleagues who were not participating in the study evaluated and tested each of the questionnaires. By testing the surveys, I received some feedback which improved the clarity of some questions and enabled the participant anonymity to be checked and verified.

Biographical Method

This biographical research is concerned with analysing the experiences of teachers as they took part in the mentoring study by interviewing and considering the logs created by the participants. To accomplish this, the contributors produced a weekly log that provided data used to prepare the questions for the unstructured interviews completed once the mentoring had ended. The ‘diary-interview’, or private log, is a method used by Zimmerman and Wieder (1977) and was considered being a compatible method of participant observation to use and is an ideal method to use considering the limited time available (Bell, 2010). The private log provided the material used to analyse the participant's attitudes,

feelings, and to allow me to understand whether the mentoring process was helpful for the participants. However, a potential concern for introducing a written log is how the process becomes a participant-managed method which places the responsibility on the respondent to produce sufficient data (Robson, 1993). However, to get a genuine reflection, I considered it to be essential to allow the participant to decide what information to add. Therefore, teachers entered their thoughts into the log once each week in a private Google Drive folder. Also, during the mentoring process, no communication occurred between the participants and me to avoid introducing researcher bias into the mentoring process, and I allowed planning of the mentoring process to occur in privacy between the respective mentor and mentee.

Unstructured Interviews

Inherent in the design of this study is the private relationship between the mentor and mentee. The method designed for this study prevented my direct observation. My only involvement with the subjects under study occurred during informal interviews after they had completed the mentoring process. To minimise my impact, and considering I am also an early career teacher, I decided that the interview should be conversational without me expressing my findings or views with the participants. Using a bricolage process for the interviews allowed me to use an unstructured approach and a suitable qualitative method to understanding different attitudes to the research (Kvale, 2007).

Outline for Data Analysis

The purpose of the research method, outlined in Figure 1, is to obtain enough data to triangulate and validate the information received from all the data sources used in this study. There is a potential problem with the research design if little data is received from the mentoring process. Due to the timescale available, more emphasis was given to the findings from the alternative sources of data, which still produced an analysis of the findings that can test the aims of the research. Triangulation from different accounts and different data sources have enabled validation of the same phenomenon from different sources, enabling the assessment of the presence of classroom identity and uncover attitudes toward professional development as teachers gain teaching experience.

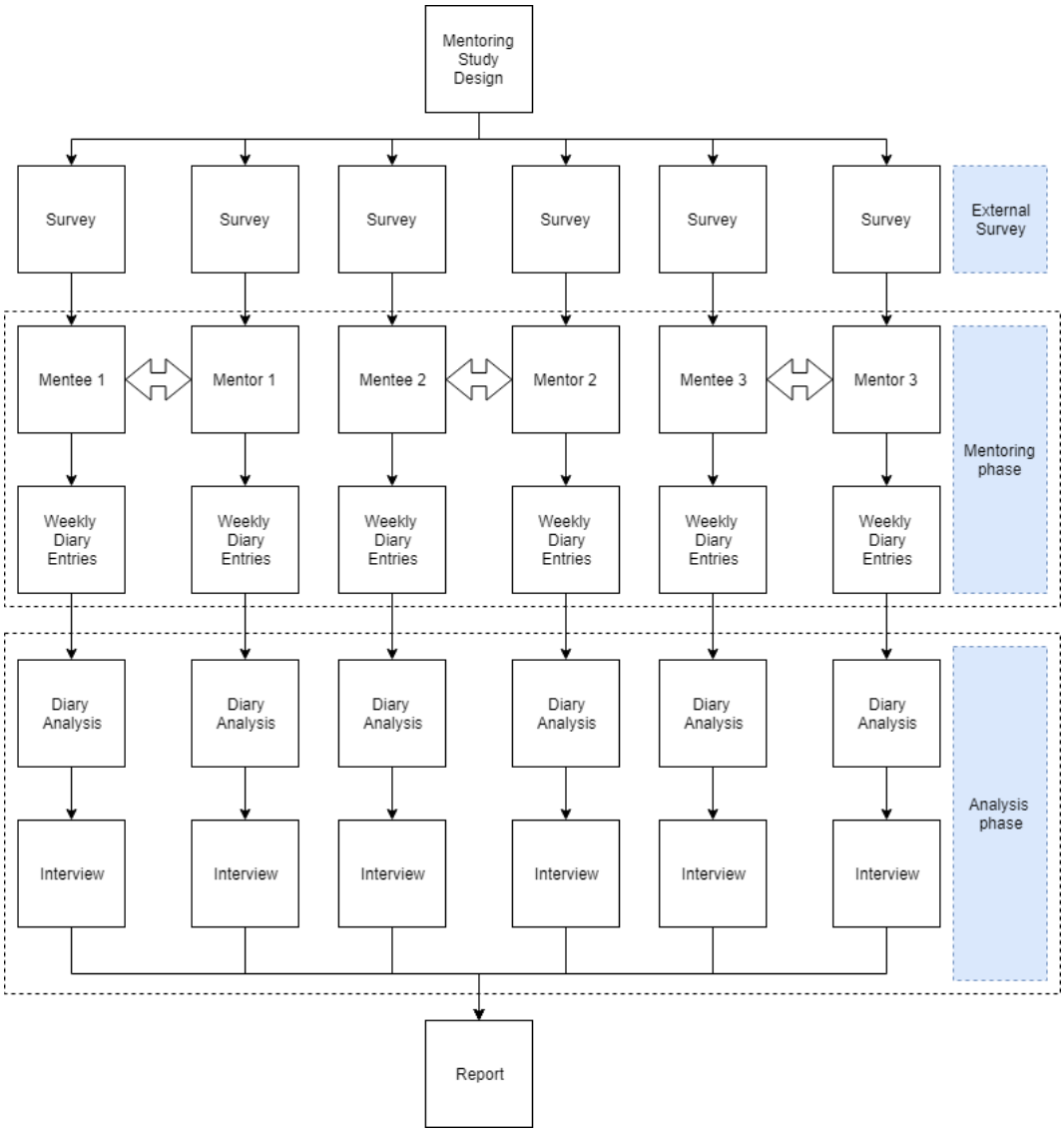


Figure 1 Research outline for a school-based mentoring study.

Findings and Discussion

Introduction

This research focusses on the agency of two groups of teachers defined by their perception of their classroom identities (Moore, 2017). The volunteers of this research are teachers from both post-sixteen and secondary phases of a comprehensive school in South Gloucestershire, England. My research compares the characteristics of the two groups' approach to classroom teaching. I discuss the findings to consider whether there are any specific characteristics to help with the development of early career teacher's classroom identities within a school-based professional development programme.

Baseline survey findings

Teachers who were not participants in the mentoring programme completed the baseline survey. The respondents of the baseline survey were unknown and replied to an invitation placed in a national computing teachers forum. I chose this forum to access views from a range of teachers from across the country. Teachers completed two matching baseline questionnaires, one for experienced teachers and one for early career teachers. Four sections of the questionnaire contained questions relating to initial teacher education, classroom identity and

perceptions of increasing teacher experience (Appendix II). The questionnaire received responses from twenty-six experienced teachers and eleven early career teachers (Appendix IV).

Professional Development Data from the Baseline Survey

The professional development section of the questionnaire (Appendix IV) asked the respondents to answer twelve multiple-choice questions related to their experience of school-based continuous professional development (CPD). Results from the teachers showed differences of viewpoint between experienced and early career teacher attitudes, which corresponds with the characteristics of differences suggested by Robert Glaser (Berliner, 2001). The most significant result came from a question that asked if school-based CPD assisted the teacher in maintaining their administrative and legal requirements (Figure 2). The results showed that early career teachers gained more benefit from CPD which helps with legal and regulatory provisions of teaching. I asked the respondents to show whether their schools provided them with information on the latest educational research theories. The replies from experienced and early career teachers produced a similar result that suggested there is variability in schools giving information on recent educational research. Experienced teachers produced neutral responses when assessing if school-based CPD improved their classroom practice. However, the early career teachers showed they found that school-based CPD improves their classroom practice.

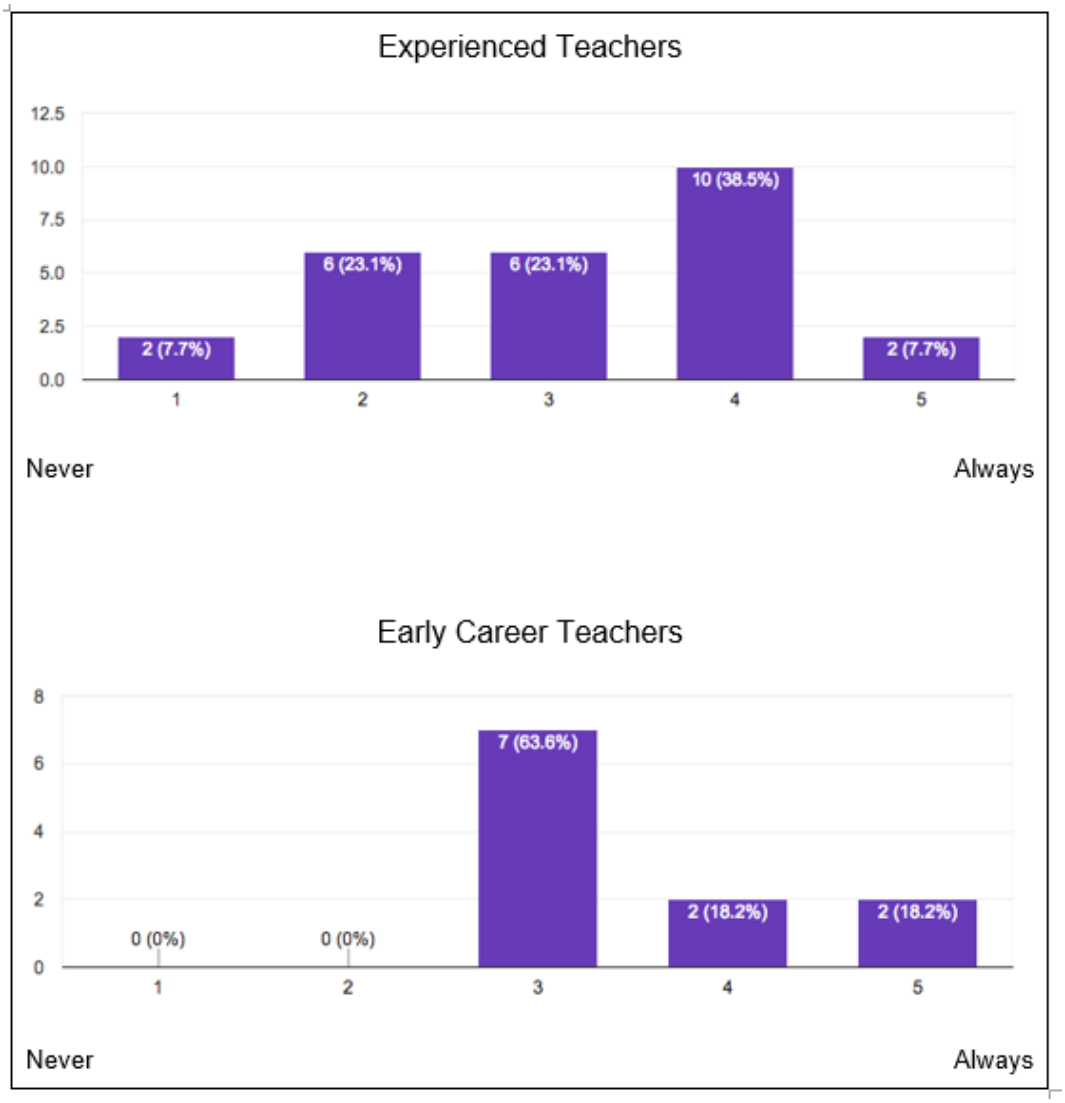


Figure 2 Responses to 'does your school based CPD help you with maintaining administrative and legal requirements?'

Experienced teacher responses show they are less likely to receive CPD that provided them with the development they need to improve their classroom teaching, yet early career teachers see more benefit from the CPD they receive in this area. When asked to reflect on the impact CPD has on their personal development, both cohorts' answers suggesting that their CPD is not relevant to their personal development, however, a more sizable proportion of experienced

teachers, thirty-eight percent, believe CPD is never relevant compared to eighteen percent of early career teachers. Also, to understand the relevance of their CPD, the respondents were asked if they sought CPD from beyond the school and there is a clear difference showed by the data.

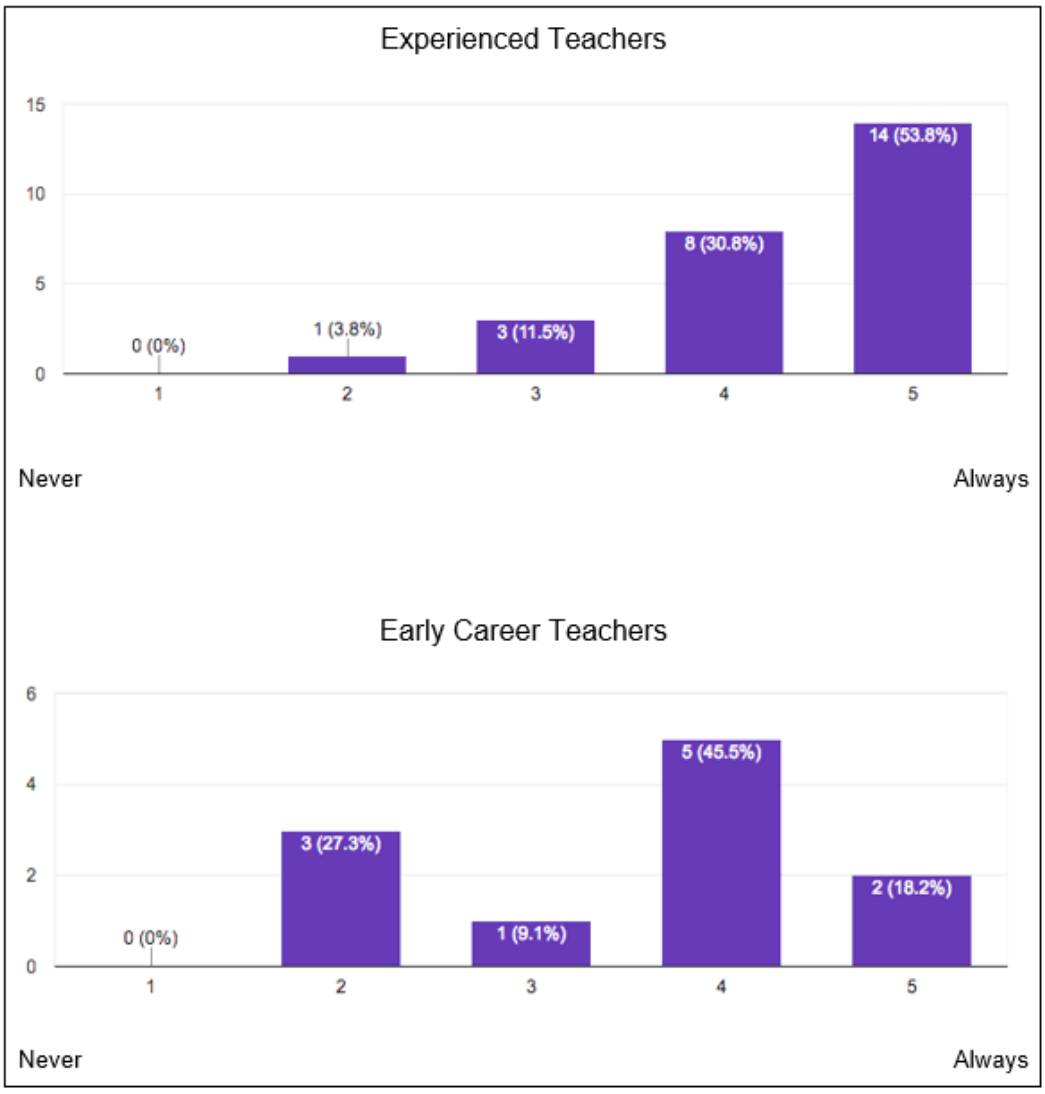


Figure 3 Responses to 'do you seek CPD beyond that which is offered from the school-based CPD?'

Most experienced teachers (almost fifty-four percent) are always seeking CPD from outside the school-based CPD, and a significant proportion of the early

career teachers are also seeking development from outside their school CPD. However, fifty-four per cent of the early career teachers never believe they do not need the school-based CPD due to having enough experience, yet a third of experienced teacher results show they believe they do not need their school-based CPD.

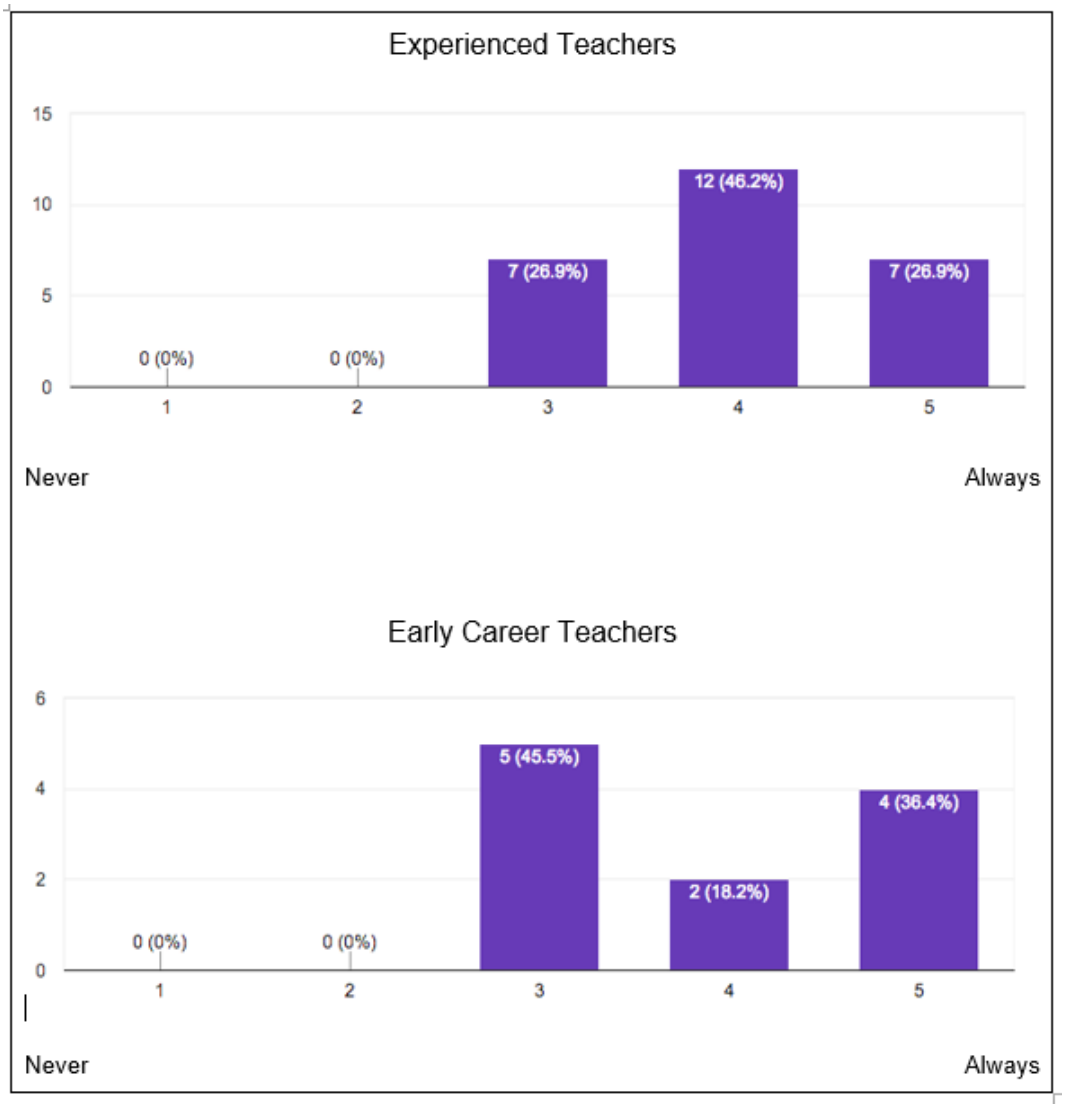


Figure 4 Responses to ‘do you wish you could choose the subject of school-based CPD?’

There is an agreement from both cohorts when asked if the school-based CPD differentiates between classroom practice and other teaching duties. Most of both groups agree differentiation rarely occurs in CPD between classroom practice and other teaching responsibilities. So, it is unsurprising that the responses from the teachers strongly suggest that they would like to choose the subject of the school-based CPD (Figure 4), and many early career teachers show their CPD has little relevance for everyone who teaches. Consequently, it is predictable that most of both groups strongly agree that CPD would be more suitable if it related to their specific teaching needs and it is, therefore, reasonable the respondents showed school-based CPD neutrally influences improving their impact in the classroom.

Analysis of Professional Development Results

A study by the OECD (2009) showed a decline with CPD engagement as teachers become more experienced. However, the OECD's study omitted data from British schools. As discussed in the literature review, there is limited information from British schools showing how teachers' perceptions of CPD change with increasing experience. Accordingly, one purpose of the baseline questionnaire is to learn how early career and experienced teachers view their CPD in British schools.

The findings from the questionnaire (Appendix IV) are broadly consistent with the view that experienced teachers in British schools are less engaged with

school-based CPD compared to early career teachers. One explanation proposed by Wood and Lieberman (2000) suggest teacher education programs do not provide sufficient information for the teacher to be successful, which could cause early career teachers to desire to engage more with CPD. The baseline questionnaire results show early career teachers are more involved with their school-based CPD than their more experienced counterparts which shows the reliance that early career teachers place on their CPD and who are 'negotiating their way through the school organisation and staffroom culture as a process to establishing their own [professional] identity' (Schuck et al., 2017, p. 2). There are, however, other explanations for the difference in the engagement if some experienced teachers are in the 'moving-on' stage identified by Maynard and Furlong (1993) where disengagement with CPD is a defining characteristic (Table 1). The results of the questionnaire suggest there is evidence of the moving-on stage from the written response of an experienced teacher who stated: "CPD is far too general, more like team-briefings and are CPD in name only".

What is surprising is that the proportion of experienced teachers whose responses show they are seeking subject-specific CPD and who are also seeking CPD from beyond that offered by their school. These results agree with the findings of the VITAE project (Day et al., 2006) which found a third of the experienced teachers, with over eight years of experience, believe they do not require school-based CPD. The responses from the baseline questionnaire show that school-based CPD does not motivate almost a quarter of the experienced teachers. The apparent unimportance of school-based CPD showed by the experienced teachers means a

significant proportion of skilled teachers are not engaged in extending their teaching knowledge. One would expect experienced teachers have extensive knowledge. Therefore an engagement could improve by allowing the experienced participants to select the subject of CPD that will extend their knowledge. However, the results from the baseline survey give support to Clark's (1992) view that both cohorts should be able to choose their CPD content. For example, allowing teachers to propose exploring CPD content or theory is of value to them, this could include, for example, mentoring early career teachers. Poor engagement from a teacher with experience has further implications for cultivating the benefit that both cohorts if 'propositional knowledge' is not shared by experienced teaching professionals (Day, 1999). Consequently, a baseline survey question seeking data on the effectiveness of CPD (Figure 5) shows a desire from a significant proportion of the teachers who would like their CPD to relate to their needs. These factors could have significance for retaining teachers from both groups by offering a self-governing and collaborative approach to school-based CPD.

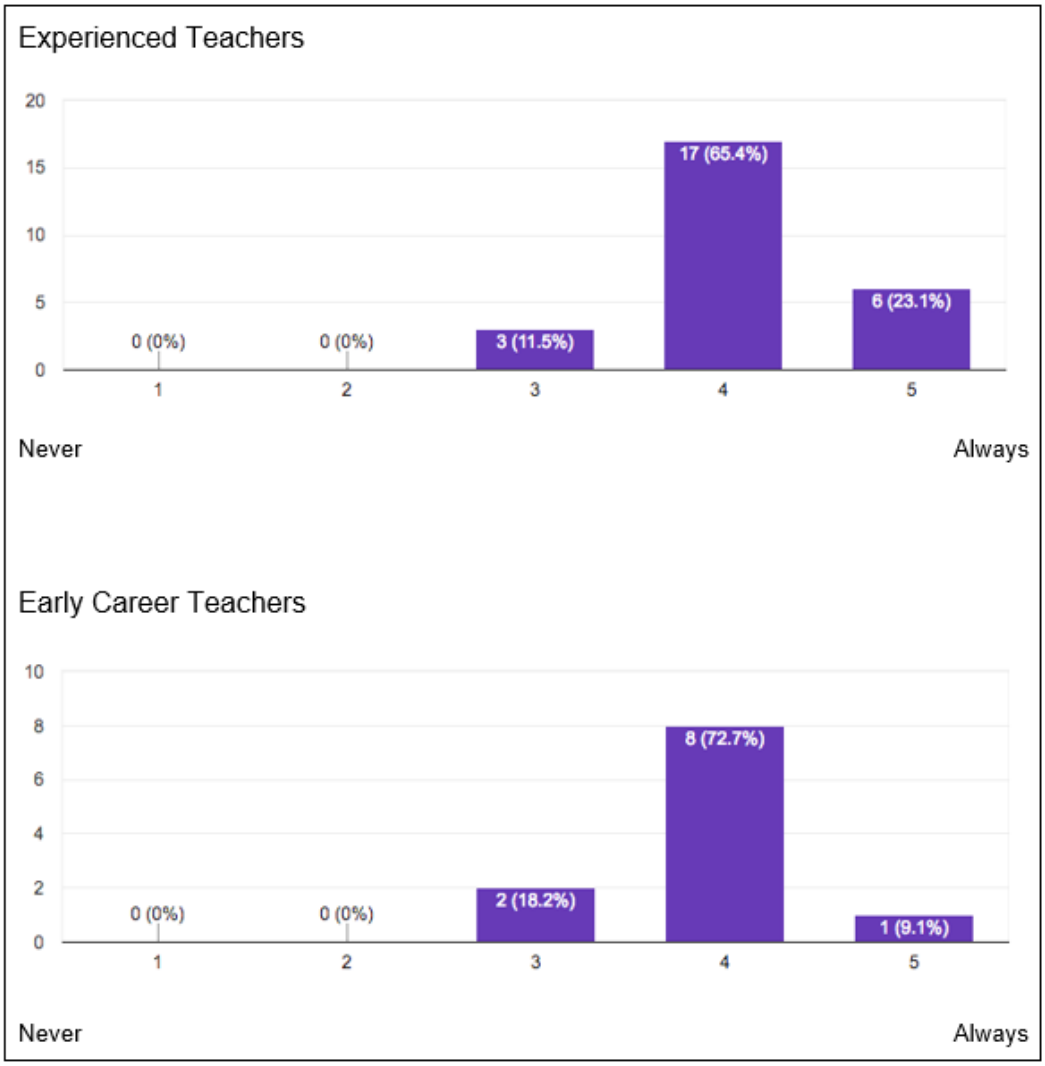


Figure 5 Responses to 'would school-based CPD be effective if it were developed for specific teaching needs?'

Initial Teacher Education Data from the Baseline Survey

The literature review examines the development of teacher experience (Appendix IV). Several stages of teacher career development are recognised, for example,

Maynard and Furlong's (1993) study of teacher characteristics that shows how teachers attitudes alter from an idealised concept of teaching to hitting a plateau when sufficient knowledge has been established and then becoming disengaged with teaching and CPD (Table 1). Also, other writers have suggested characteristics of expertise changes a teacher's pattern of behaviour (Berliner, 2001) and how a teacher's cognitive load reduces with experience (Wolff et al., 201; Putnam & Borko, 2000; Kwo, 1994). This section of the baseline questionnaire explores these concepts with seven multiple-choice questions to understand the perceptions of the teaching knowledge gained during ITE and how an understanding of this knowledge changes as teachers develop their experience. However, the survey data must be considered with caution because there could be considerable differences in the ITE provision experienced by the two cohorts. However, it is still valid to examine the teacher's perceptions to observe their experience of teacher development and the implication of their views on this research.

The first question of the ITE section asked the teachers to rank how confident they felt in the classroom after receiving their initial training. Most experienced and early career teachers responded neutrally to this question, which is not remarkable. However, there is a difference that shows that forty-two per cent of experienced teachers were less confident in the classroom when they completed their teacher training compared to eighteen per cent of early career teachers. The following question sought to understand perceptions of classroom confidence after completing the first year of teaching, referred to as the NQT year.

Predictably confidence from both cohorts shows an increase in confidence occurred; this is not a surprising result. However, once more, there is a lower level of confidence showed by the experienced teachers. After the NQT year, fifty-seven per cent of the experienced teachers suggested their confidence was neutral or lower which compares to eighteen per cent of early career teachers (Figure 6).

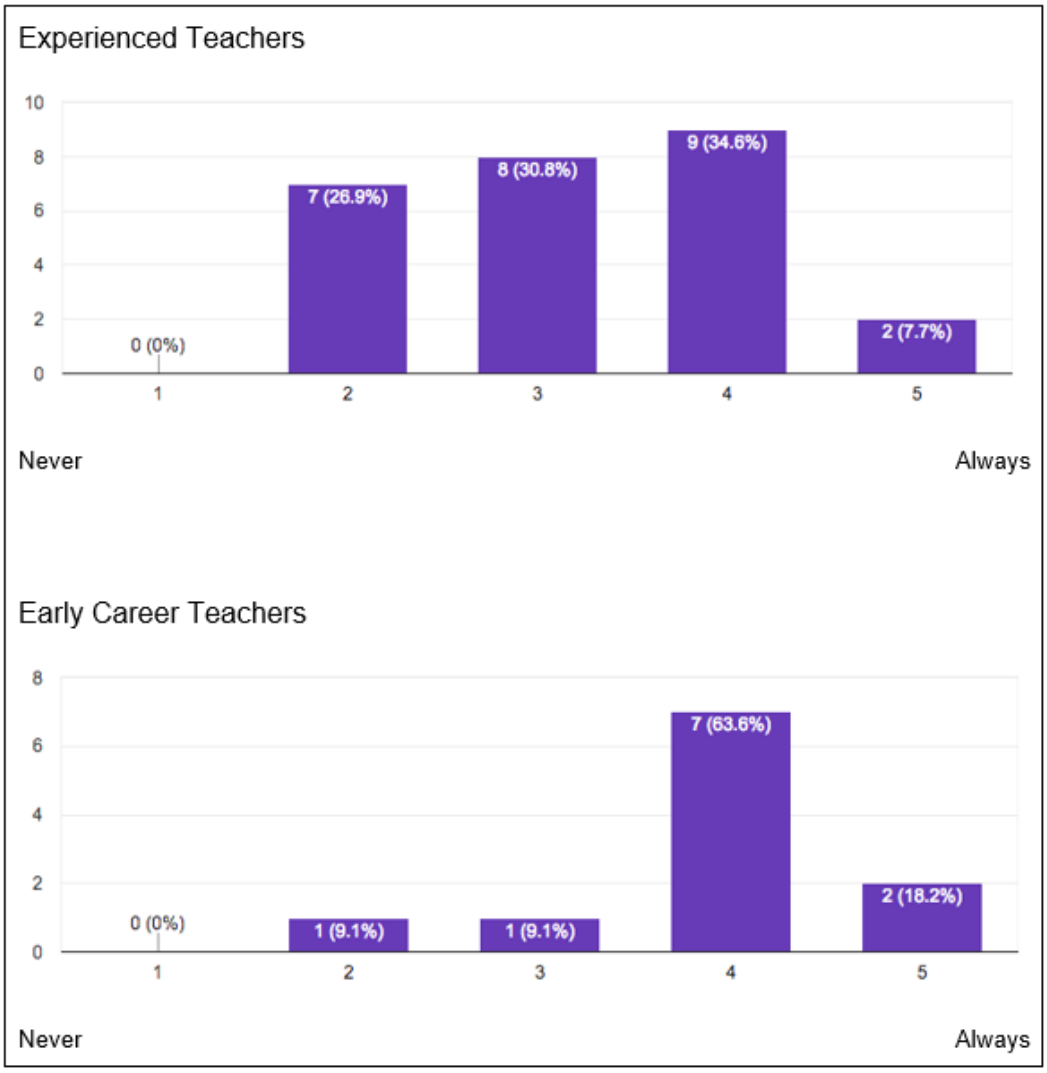


Figure 6 Responses to 'how confident in the classroom were you when you finished your induction year?'

In contrast to the earlier years of teaching, the survey asked the participants to rank their current confidence in the classroom. While both cohorts produced responses that show every respondent expressed their increased confidence in the classroom today, there are differences where confidence always occurs. One would expect a sizeable proportion of experienced teachers are confident when teaching and the results reflect this with sixty-five per cent of experienced teachers stating that they are always confident in the classroom. However, twenty-seven per cent of early career teachers suggested they are always confident in the classroom.

The remaining questions in the ITE section of the questionnaire asked the teachers to reflect on the impact ITE has on their current practice. When asked how often techniques learned during ITE is used in the classroom, none of the experienced teachers reported being always using techniques they learned in their ITE, which compares with almost a third of the early career teacher who always used techniques learned in their ITE. Fifteen per cent of experienced teachers stated that they never use techniques learned during ITE, while no early career teachers reported they never use techniques learned in ITE. A similar trend occurred when the participants responded to how often they reflect upon the teaching theory they learned during ITE in their current teaching. Thirty-eight per cent of experienced teachers declared they never consider their ITE teaching theory, yet a fifth of experienced teachers still reflected on ITE teaching theory. Also, a sizeable

proportion of early career teachers, thirty-six per cent, are reflecting less on their ITE teaching theory. A comparable outcome occurred when the teachers were asked of any aspect of ITE is reflected upon in current teaching practice. Finally, the participants were asked to reflect on which aspects of their ITE they found useful. One of the few responses from an experienced teacher suggested ITE training taught them what not to do, and another experienced teacher could not think of anything they did in ITE that they use now. One early career teacher noted it was most useful to observe well-taught lessons during ITE and then to put this into immediate practice.

Analysis of Teacher Training Results

By distributing the survey in a professional development forum for computer science teachers has potentially introduced a bias in the results from the early career teachers engaging in external CPD, so possibly do not represent the views of the general teaching population. One unexpected result came from early career teachers results showing they always have high confidence in the classroom. The literature review, found many early career teachers leave the profession within the first five years citing classroom management as one of the main factors (Weale, 2016; Gray & Taie, 2015; Hong, 2012; Ross & Hutchings, 2003). However, there is evidence suggesting that experienced teachers who reflect on their early years change their perceptions with experience (Calderhead, 1991), which is also reflected in the results showing experienced teachers use less of their ITE with

experience. These changes in approach are identified by Feimann-Nemser (1989) who noted there should be a further consideration due to the limited evidence of the effectiveness of teaching theory after ITE training. Also, the results provided by the experienced teachers show how little reflection occurs from their ITE training and their results agree with Buchanan's (2015) findings that teaching identity is formed in the classroom over time and do not form from ITE or other policy initiatives. These results suggest that teacher thinking develops from experiences in classroom practice and does not originate from external professional development sources. The results from experienced teachers professional development implications for improving the CPD of early career teachers by focusing on their classroom experience. It might be a case of it is not what you know, but what you do not yet know about teaching that will develop into the classroom identities demonstrated by experienced teachers. If we consider the stages of career development suggested by Maynard and Furlong (1993) the responses from the early career teachers could reflect the early stage of 'recognising difficulties' (Table 1), where inexperience manifests as an eagerness to 'impress their teaching performance'. Fortunately, the responses from the experienced teachers are consistent with developing self-sufficient teaching, which is typical of experienced teachers who have developed teaching confidence in a range of classroom identities (Cohen, 2010; Coldron & Smith, 1999; Day, Kington, et al., 2006). Classroom identity was investigated in more detail the next section of the questionnaire.

Classroom Identity Data from the Baseline Survey

This section of the questionnaire (Appendix IV) investigated differences in classroom experiences between early career and experienced teachers. Responses from the two cohorts show differences in attitudes that might reflect how developing experience affects teachers' practice, agency and approaches to teaching.

The first questions in this section asked the teachers to reflect upon their experiences in the classroom and how often their students inspire them. The multiple-choice results show how both experienced and early career teachers receive inspiration from their students. However, seeking written responses highlighted how the teachers receive their inspiration. Experienced teachers receive inspiration from successes in the student's learning, such as their curiosity, desire to extend their knowledge and students enthusiasm. Conversely, early career teachers were inspired by their students' perseverance with completing tasks. It is possible these results show differences in how teachers assess their students with experience. For example, how experienced teachers are more responsive to student socialisation situations and less task-oriented (O'Neill & Stephenson, 2011). Although both teaching cohorts claim to maintain and apply routines equally in the classroom, the results show a difference in taking risks in the classroom.

To asses teacher's confidence, respondents were asked to indicate if they experimented by taking risks with their classroom teaching. The results showed that experienced teachers are more likely to take risks in the classroom. Almost fifty per cent of experienced teachers are prepared to take risks in the classroom compared to twenty per cent of early career teachers who do, and nearly ten per cent of early career teachers never take any risks with their teaching. Some authors have speculated that managing the classroom is more difficult for early career teachers and those who do not develop these skills from ITE are more likely to leave the profession (Oliver & Reschly, 2007). Taking risks in the classroom is how a teacher will learn their classroom skills and expose themselves and gain experience in different classroom situations (Clandinin, 1986).

Further differences in classroom perception were exposed when teachers were asked to reflect on how teaching events have not gone to plan. The experienced teachers reflected more on how their lessons are subsequently and quickly adapted to meet the needs of students, for example, analysing how students are learning and how experienced teachers are extending teaching to respond to student misconceptions (Ericsson & Charness, 1994). In contrast, the early career teachers discussed changes needed to the lesson plan to adapt to their misunderstandings about expectations of student engagement. These responses imply experienced teachers are concerned with refining, adapting and building a learning setting that is concentrated on improving the situated learning environment (Lave & Wenger, 1991). Consequently, when asked how often the teachers should have conducted a lesson differently, almost twenty per cent of the

experienced teachers indicated they are more likely to reflect upon how the lesson could be improved (Figure 7).

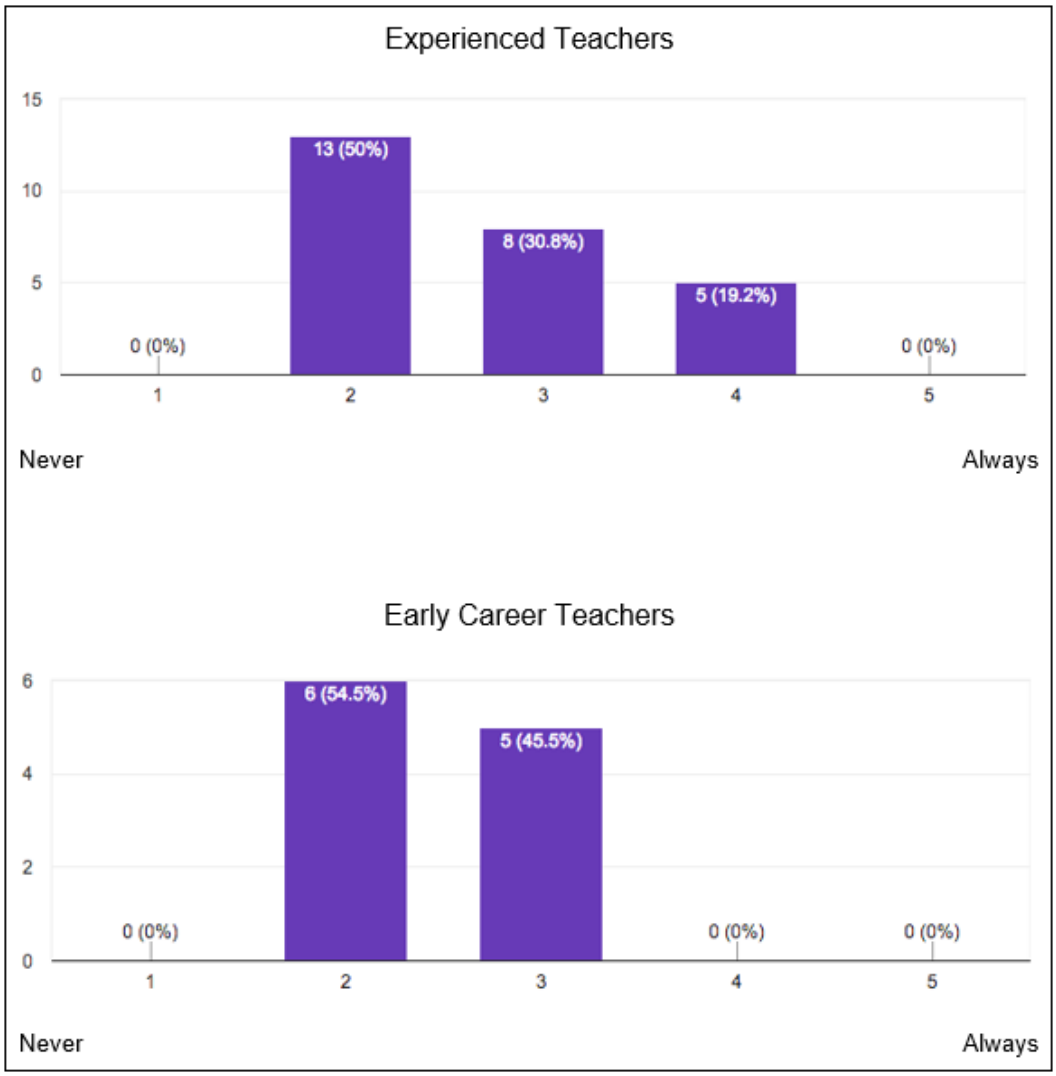


Figure 7 Responses to 'how frequently do you realise that you should have conducted a lesson differently once that lesson is over?'

In a further question relating to a teacher's reflection, the survey asked the participants to consider how often they use a skill which they have developed themselves in the classroom. Written responses showed how experienced

teachers recount developments to communications skills and social interactions with the students, while the early career teachers' statements are concerned with functionality and classroom management methods to teaching. It is interesting that experienced teachers found it more challenging to recall examples of solutions they used that impacted teaching, while early career teachers give precise views of the changes that helped them to develop their teaching impact. Experienced teachers could explain this using knowledge and competence while early career teachers are still adapting and developing their teaching.

The single, most striking observation to emerge from the results showed both experienced, and early career teachers believed they have a developed range of identities in their teaching (Figure 8), which contradicts the expectation of only experienced teachers having a confident sense of identities to use in the classroom, so it was surprising how early career teachers also believe they have developed a full repertoire of classroom identities. However, it would be interesting to have experienced teachers assess the repertoire of early career identities.

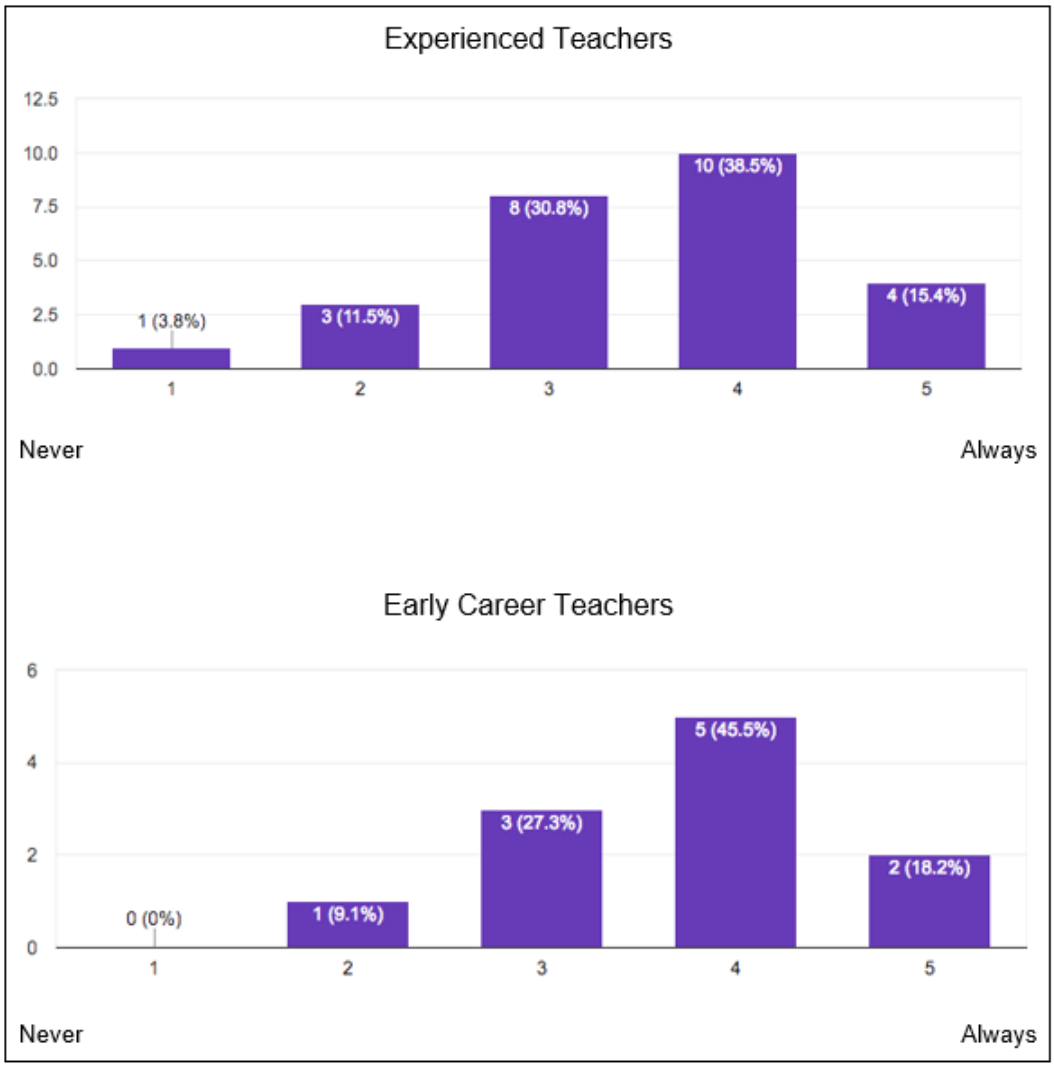


Figure 8 Responses to 'do you feel that you use a range of personalities or identities in your teaching practice?'

Analysis of Classroom Identity Results

The most striking finding from the classroom identity section of the baseline questionnaire (Appendix IV) is the unexpected result that contradicted my earlier research showing early career teacher has not developed a full repertoire of classroom identities within the first five years of their teaching experience

(Moore, 2017). Research into teacher survey methodology has shown that anomalous results can occur from questionnaires and so require validation with other sources of data (Burstein et al., 1995). As discussed above, the sample of early career teachers who undertook this survey was sourced from a computer science CPD forum and, as Ingersoll and Kralik (2004) argue, might not represent a typical early career teacher population when participants are volunteering to take part. Alternatively, when teachers have ten or more years of experience, they form different views of their early career expertise as their knowledge about effective teaching grows (Fenstermacher, 1994), and so this result does not resolve if early career teachers have the same range of classroom identities.

How experienced teachers received inspiration from their students correlates with Putnam and Borko's (2000) concepts of teaching knowledge occurring from developing social experience in the classroom. In contradiction to the experienced teachers, the early career teachers were inspired by students compliance to the processes of teaching, which resonates with Rovegno's (1992) findings that suggested early career teachers are preoccupied with the practical aspects of teaching, which the literature has shown is evidence of experiencing a higher cognitive load while teaching.

Berliner (2001) discusses how experts have more flexibility with lesson structure and are more opportunistic planners, who can change faster with circumstances than less experienced practitioners. The results demonstrate where the

experienced teachers will alter their lessons to meet the students learning needs. The survey aims to uncover the dynamic planning process by probing the teacher's reasons for changing their lesson plans, which showed that experienced teachers have more awareness and concern for adapting the students experience within 'situated learning' (Lave & Wenger, 1991). From assessing the classes learning effectiveness, experienced teachers are regulating classroom management in response to their perception of live classroom events (Wolff et al., 2015). This phenomenon was also clear in the experienced teacher's feedback, which showed how they are more likely to change their lessons after reflection, which is in contrast to the relative rigidity to staying within routines and maintaining lesson plans as indicated by the early career teachers. These results were consistent with the literature suggesting teachers begin their careers with a conservative approach to teaching (Thomas, 1980) and have to develop situation-specific strategies to for success (Beijaard, 1995). There are perceivable differences in the results indicating differences in the approach to teaching and how thinking occurs between experienced and early career teachers.

Analysis of Increasing Experience of Teaching Results

The concluding section of the baseline questionnaire had three open questions to explore the central themes from the literature review (Appendix IV). The first of the questions sought commentaries about experiencing changes to cognitive load as teaching experience increases. Experienced teachers were unanimous in

substantiating the research from Wolf et al. (2015), Putman & Borko (2000) and Kwo (1994)who proposed teachers' cognitive load decreases with increased teaching experience. So these results could update the planning of a CPD framework that focuses on reducing cognitive load and allow an early career teacher to develop their expertise (Berliner, 2001) to free teachers to form a repertoire of classroom identities sooner (Bandura, 1999). One experienced teacher discussed how '… as a reflective practitioner, you have a multilayered approach to analysing successes and areas to improve in your lessons and are perhaps doing this at a deeper cognitive level than you might have in the early days of your teaching.' Another experienced teacher reflected on their experience, and how reducing cognitive load changed their approach to teaching, stating: 'as an early practitioner, you spend more time thinking about lesson structure and simply 'getting through the plan'. Being flexible is the key to the successful lesson and having the confidence to stray from the plan comes with experience'. The results from early career teachers were less expressive and discussed how their experience allowed them to 'ignore certain things and stay on track'. The responses showed how experienced teachers, experiencing reduced cognitive load, are free to explore strategies during their teaching, and the early career teachers are inhibited by concentrating on getting through their lessons.

Glaser's characteristics of expertise predicted how experience reduces the cognitive load to enable teachers to 'recognise meaningful patterns of events' in the classroom and can 'impose meaning on ambiguous stimuli' (Berliner, 2001, p. 464). The questionnaire explored this idea and asked if teachers have experienced

a ‘lighthouse effect’ to sense changes in the classroom dynamic and to adapt their classroom teaching. Again, there is an agreement between this theory from the answers provided by the experienced teachers. For example, an experienced teacher described how they could ‘diffuse situations before they arise easier/quicker’. Another teacher described how they have ‘become more adept at following the mood of the class… [and]… adapting to things as they happen’. This is summarised by a response from an experienced teacher who wrote, ‘I no longer need to devote much conscious thought to subject concepts and ways to present them, most of my attention can be devoted to the classroom dynamic, allowing rapid response when necessary’. In contrast, the responses from early career teachers were unable or unwilling to engage with this question. The lack of responses from the early career teachers with this questions implied there is little or no experience of a ‘lighthouse effect’ in their teaching.

The final question sought further insights into teacher retention and required the teachers to provide their insights into their classroom teaching experience, which produced most comments from all groups. The results from experienced teachers showed they continued to enjoy working in the classroom, yet one teacher who still ‘enjoys their job’ cannot see themselves retiring as a teacher. Another teacher, who ‘still loves being a classroom teacher’ after sixteen years in teaching, recently returned from childcare leave and has lost their ‘drive’ to continue. Another experienced teacher discussed how changes to teaching curriculum, specifications, exams, priorities, and workload were identified as factors which ‘does not get easier as you become more experienced’ and as an ‘older teacher’ it

is ‘harder to find the energy reserves’ as their greatest challenge, which are indicators identified in the literature as significant for determining a teacher resilience (Hobson & Maxwell, 2017). The same teacher continued to describe how they peaked in their eighth to the tenth year of teaching and now feel they are losing their ‘reserves’ to teach due to the regulatory and data-driven approach to teaching. There was also the view raised that experience is undervalued in teaching; one teacher commented by stating that ‘new teachers are cheaper and get jobs’. Another interesting response from an experienced teacher supported this research by stating: ‘I felt I only started learning when I ‘conceded’ that my teacher training was just the start of my journey as not the destination. Experienced teachers are worth their weight in gold, and if more of them were given the space to mentor, the education system would be a much better place to work.’

The responses from the early career teachers provide less thoughtful responses and raise the difficulties they experience with their immediate teaching concerns. Early career teachers discuss insufficient training or support yet appear to be satisfied with their CPD provision. Also, early career teachers refer to situation-specific difficulties, which is echoed in the literature, such as challenges of classroom management. Also, one early career teacher stated they are considering leaving teaching due to the lack of social life and the poor work-life balance. The results give further support to the hypothesis that early career teachers are more bogged down by their higher cognitive load and need help to develop strategies to

support them to overcome the immediate difficulties they are experiencing in creating their classroom identities.

Participant Survey Findings

Participants in the school-based mentoring programme completed a multiple-choice questionnaire containing the same questions as the baseline survey. The results from the participant survey (Appendix V) enable comparison with a broader teaching population from the baseline survey to confirm if the subjects of the mentoring programme were representative subjects. The terms ‘mentors’ and ‘mentees’ used for comparisons in the findings below relate to the teachers who took part in the mentoring program, while the terms ‘early career teachers’ and ‘experienced teachers’ relate to the teachers who replied to the baseline survey.

Similarities between Professional Development Responses

The results from both surveys found most teachers were unconcerned with the information provided in school-based CPD to meet administrative and legal requirements. However, the baseline survey found the experienced teachers were more satisfied with the legal provision given in their CPD. The results from both surveys are consistent with the findings of OECD (2009) that showed experienced teachers found their school-based CPD provided fewer ideas or offered a

development to improve their classroom practice. In parallel with the baseline survey, experienced teachers valued their school-based CPD more than their experienced colleagues. Both surveys corroborate with the ideas in Clark (1992) who suggested that most teachers would prefer to choose the subject of their school-based CPD. The results further support the ideas of Hargreaves and Fullen (1992) that teachers believe their school-based CPD would be more useful if developed for their specific teaching needs.

Differences between Professional Development Responses

When asked if their school-based CPD gave information on the latest educational theory, there was a difference in the results between the participants of the mentoring programme compared to the experienced teacher's responses in the baseline survey. More mentors suggested they received the latest research in their school-based CPD programmes. Additionally, in contrast to the baseline survey, the mentors showed their school-based CPD was less relevant to their personal and professional development. Results from the participant survey showed both mentors and mentees produced neutral responses concerning seeking added non-school based CPD, yet the early career teachers in the baseline survey showed they are less proactive in seeking external CPD. In contrast to the baseline survey, the mentees showed their school-based CPD differentiated less between developing their classroom practice and other teaching activities. Comparing the findings from mentors and mentees who experienced the same

programme of CPD with a range of different CPD programmes experienced by the participants of the baseline survey should be done cautiously.

Similarities between Initial Teacher Education Responses

Both the early career teachers and the mentees had good classroom confidence after their NQT year, yet the mentors showed slightly less confidence compared to their counterparts in the baseline survey. The surveys were consistent in showing experienced teachers and mentors have more confidence in their classrooms compared to the less experienced teachers. Both surveys found the less experienced teachers were implementing techniques learned from their ITE while the experienced teachers had stopped using ITE knowledge.

Differences between Initial Teacher Education Responses

The survey found the mentors had more confidence in teaching after receiving their ITE, and the mentees showed they are less likely to reflect on their ITE teaching compared to the early career teachers in the baseline survey. These differences could be due to positive participant bias, which is discussed in more detail below.

Similarities between Classroom Identity Responses

Both surveys produced comparable results from all teachers regarding how they maintain and apply routines in their classroom practice. A surprising result from both surveys found that most teachers rarely reflect on conducting their lessons once the lesson is over. An explanation for this result might be due to teachers working in isolation in the classroom with current CPD not working in communities of practice, which Lieberman and Wood (2001) suggested is significant for transforming classroom experience.

The results agree with the findings from studies citing workload as a reason for leaving teaching, for example, the surveys found agreement from the majority of teachers who find themselves busy with aspects of teaching was not in their teaching plan. It is interesting how these results found how early career teachers and mentees are more likely to seek help or advice to help develop their classroom skills and was reflected by the surprising number of early career teachers who volunteered to take part in this research. By seeking advice and help, this could be a sign of emerging issues relating to teacher retention and needs to be more clearly understood in the context of teachers changing experience and cognitive load.

Differences between Classroom Identity Responses

In several respects, the mentors' results formed a greater variation compared to the experienced teachers' results. The participant's survey found that mentors are more likely to receive inspiration from their students than mentees and are more prepared to take risks with their teaching compared to all other groups surveyed. These results show mentors are more likely to allow their students to divert them from the teaching plan compared to all other groups surveyed. In addition, the mentors are more likely to allow classroom dynamics to force them to change their teaching and deploy classroom skill they developed themselves. Added to this, the mentors gave a stronger indication of using a variety of personalities in their classroom compared to teachers from any other group. There is a possibility of positive participation bias in these results, which is discussed further in the analysis.

Analysis of Participant Survey Findings

Validating participant selection was completed by seeking similar trends between the baseline survey and the participant survey, and the results showed remarkable similarity. Therefore, I believe the mentors and mentees were good candidates for this research.

The most significant variation in the survey responses came from the mentors who produced results showing they were strongly suited to taking part in the research. There are two possible reasons for the strength of their view. The first might be due to the candidates being selected to take part before completing the survey which gave them the opportunity to overemphasise their mentoring suitability. Secondly, before the survey, the candidates had read a participant document (Appendix I) describing this research and its aims. In addition, the subjects of this study were my colleagues, which might have caused them to demonstrate their suitability to participate. It is also possible they are genuine results which might reflect on how volunteering mentors could enter a CPD programme with enthusiasm. These results did not make the mentors incompatible with the research and were considered as suitable candidates.

Other variations in the survey results are striking, for example, the mentors and mentees had taken part in the same school-based CPD programme, yet there are different phenomenological perceptions of their CPD. This raises the question of how experience changes people's perception. It was not anticipated to find teachers with different expertise would perceive the same CPD differently, which might be worth investigating in future research using a larger sample.

Evaluation of Participant Logs

This research planned to conduct the mentoring over a six-month period. However, due to my unforeseen health complications, I could not begin the mentoring study until I returned to work, which reduced the time for the mentoring data collection period to two months. Ingersoll and Krinaik (2004) accurately highlighted how unexpected factors could impact a school-based mentoring programme, however, conducting the mentoring over two months was enough time to uncover potential improvements and recommendations for a more extended study. The mentoring produced enough data from the participant's to contribute their views from taking part in the mentoring process.

Findings from Participant Logs

Within each participants' Google Drive folder, a mentoring participant form (Appendix VI) was provided for each the participants to use to enter their weekly log information. The mentoring participant log document, with an additional guidance document (Appendix III), was provided to give operational support to each teacher involved in the mentoring process.

There were two unforeseen difficulties experienced during the mentoring process which reduced the time available for data collection. First, the duration of the mentoring had to reduce to eight weeks, and then during the eight-week period,

the school received an unexpected visit from the Office for Standards in Education who spend two days inspecting the school which further reduced the mentoring duration a further week to seven weeks. In addition, one of the mentees became unwell and was absent for the duration of the study. However, the remaining four participants produced useful data.

After paring the mentors with the mentees, the respective partners met and began the process. The meetings during the first week were used by all parties to introduce each other and to discuss individual interests. No classroom observations occurred in the first week. From these discussions, the mentees shared their concerns and difficulties with the mentors, which focused on the pressures associated with ensuring students in the final year succeed. In addition, the initial meetings discussed experiences of managing groups of students that the mentees were experiencing. Initial meetings also took longer than expected as the partnered teachers took time to get to know each other and discuss each other's careers. Each group also decided not to set a focus at once until they have completed the first classroom observation. The mentees also expressed how they were looking forward to participating in the mentoring process.

The classroom observations began in the second week with timetables arranged for each mentor and mentee to observe each other's lessons for fifteen minutes. From the outsets mentors and mentees had identified different aspects to their respective partners teaching they wanted to focus on. The mentees were

interested in the techniques used by mentors for classroom management, whilst the mentors were interested in the how the mentees interacted with the students. One mentee noticed a wide range of methods used by a mentor during teaching and noted how the mentor discussed using 'different expectations in different lessons' and how the mentor had used 'different skills' and considered how to adopt these techniques for their own teaching. However, it was also interesting for one mentor to see how a mentee had created a relaxed atmosphere and would try to experiment in their own lesson to use the mentees approach in their lessons. By the third week, one mentee was directing a mentor to observe their performance in a specific lesson which was interesting because the mentor teaches a different subject, yet the mentee did not believe after reflecting on a specific area they needed more help because they were not experiencing any improvement. By week four, the fifteen-minute joint observations were developing ideas for focus with the mentees expressing in some detail the areas they wished to receive support from the mentors. At this stage, there is a sense from the logs that the mentees are clear in the areas they wish to receive help with and were in more control of the areas under consideration. One mentee states 'I have wanted to improve my questioning throughout the lesson and to use questioning to extend learning. I previously had an observation with that as a focus, so it is an area I am working on to improve'. In the fifth week, there were frustrations occurring with the school's administrative process inhibiting the rhythm of the observations. Unavailable support staff meant cover teachers were not available for the teachers as they observed each other, so they could not set observations for the lessons that the partners wished to view. One comment in the log expresses the frustration: 'It

has been so much more difficult to arrange than expected. I think mentoring is a great source of help for teachers at all stages of their careers. However, I think it might have to build into the school CPD structure to work!'

It is interesting how by week five that one mentor continued to focus on how their partner mentee is interacting with students and building relationships and is interested in the 'engagement of the group'. The mentoring partners had focused on a theme considering techniques for developing a relaxing environment, which the mentee has found to be challenging to achieve. By week six, more experimentation had begun in one classroom to introduce methods of managing the timing of activities and drawing attention to the teacher, which included introducing musical sequences to indicate when a specific task time had ended for a post sixteen class. Finding cover teachers for lessons still inhibited some observations. However, the mentoring pairs still met to discuss ideas and thoughts to support each other.

Observations from Participant Logs

It was evident by the final week that the mentoring process had not had sufficient time to produce any perceptible improvement in teaching, and some participants apologised for this outcome. However, achieving perceptible differences in teaching was not the focus of this research. It was apparent from this process how important it is for early career teachers to have access to experienced

mentors. There was a strong demand from the early career teachers who wished to take part, and those who were involved produced the most enthusiasm and drove the relationships with their mentors. In addition, one early career teacher arranged with an experienced teacher ongoing mentoring process between them to continue. Also, one of the mentees who took part asked if they could volunteer again if there was further research.

There was a difference in approach of administration of the logs between the mentors and the mentees. The mentors produced less information in their logs compared to the mentees. Mentees were more open and prepared to express their thoughts, whilst mentors produced a simple style of writing saying noting they did and observed, which was less insightful information than the mentees.

Unstructured Interviews

Analysis of Interview findings

Following the mentoring programme, I held an unstructured interview with each of the four remaining members of the mentoring programme. I was interested to know their thoughts after taking part in the mentoring programme and seek to understand why the experienced teachers gave less information in their logs compared to their mentee counterparts.

Overview

Each of the mentors and mentees discussed how they all still enjoy teaching. It was interesting how each interviewee expressed an interest in improving their teaching. The enthusiasm was expressed more by the mentees, yet it is interesting to note how the mentors also are interested in finding methods to improve their teaching. One mentor had a negative comment about the central pressures occurring outside teaching and how they had considered leaving. It interested two of the mentors in how the mentoring process could assist them to develop ideas for improving their students' experience. One mentee described how they left one teaching role due to changes in staff and higher expectations in workload and considered leaving the profession, however, enjoying the culture of the school has allowed them to re-engage and to enjoy teaching and are growing their confidence.

Mentee discussions

Katz (1972) highlighted one of the concerns of an early career teacher is managing solo teaching. This has been demonstrated by one of the mentees who is finding their classroom management difficult. They described how they do not yet have a strong sense of the classroom dynamic and confirmed they are still occasionally surprised by events in the classroom. This is an indication of an

approach to classroom management relying on simple routines identified by Sikes (1985) as too simplistic that can be counterproductive in the long term. However, Long (2009) implies if a teacher expresses concerns with their success in the classroom, the teacher could have more profound concerns of frustration and hopelessness. Two mentees stated that they relied less on what they learned in their ITE and begun to deviate and experiment in the classroom, with one of the mentees feeling more 'able to teach responsively'. The responses imply that two of the early career teachers involved in the mentoring program has started to move from the 'journeyman' level of expertise.

From the start of the mentoring process, two of the mentees decided to concentrate on improving their classroom management techniques, whilst the third mentee chose to focus on developing 'differentiated responses' in the classroom to develop a lesson that 'you know will work'. These responses suggest that the three mentees are at three different developmental stages of teaching. One mentee expressing a desire to focus on developing their 'differentiated responses' shows an understanding of different expressions of teaching agency and the need to develop their repertoire of classroom identities.

The conversations with each of the mentees were all centred on developing the skill of the mentee to help them manage their classrooms. None of the early career teachers discussed the potential benefits the mentoring programme would have for their students. The results of this study have demonstrated how

experienced teachers teach as a social practice. Had the mentoring programme continued, the mentors through observing the mentees in their situated classroom practice should direct the mentees to focus on developing a learning community as a social process with the students. The literature review has demonstrated through a range of studies in the USA how CPD within a classroom situation as a social process has been successful (Ingersoll & Kralik, 2004; McLaughlin & Zarrow, 2001).

Mentor Discussions

The mentors were much more interested in discussing the development of CPD and how CPD should be presented rather than discussing their views of the mentoring. As this was an area that each of them felt was important to discuss, I allowed them to express their views. One mentor believed mentoring their less experienced colleagues had merit and were interested to see how their mentee approached challenges in the classroom. During this conversation, I became aware mentors should have been provided with research from Wolff et al. (2015), Berliner (2001) and Kwo (1994) to inform mentors of the cognitive load theories to refresh their awareness and perception of how less experienced teachers might struggle in the classroom. For the mentoring to be effective, the mentors need a process to evaluate the success of the CPD they are providing (Guskey & Yoon, 2009).

Introducing mentoring for one experienced teacher roused their interest in exploring their own classroom pedagogy and expressed how interested they were to use some of the techniques they had seen their mentee use. Another mentor was interested in the operational methods that could be used to allow the mentoring process to occur successfully in a CPD programme and suggested teachers could select mentoring from a range of activities to allow teachers to choose their individualised CPD. It became clear that the mentors were engaged and were keen to make suggestions for improvement. Within the context of their experience of CPD, the mentors were keen to share their ideas to improve school-based professional development. Each of the experienced teachers would like to mentor staff within their current CPD programme, however, when asked about limited notes in their logs, two of the three mentors apologised for the poor log keeping and explained that other responsibilities had taken precedence.

Research Ethics

The design of this research undertook the ethical considerations of researching within a real school environment. As part of my planning, I considered the ethical implications faced at different stages of the enquiry starting with obtaining permissions, then informed consent from each of the participants of the mentoring programme. I started by emailing the head teacher of the school to seek permission, which was received in a corresponding email. After receiving the school's permission, Oxford University's Central University Research Ethics Committee provided approval for this research.

Prior to the research occurring, each participant was made aware of the ethical issues by providing an electronic document (Appendix I) via email to confirm the purpose of the study, to explain the ethical guidelines, and to give informed opt-in consent for their participation (Hammersley, 2017; Thomas, 2016). Therefore, each participant knew of the implication for taking part in the research and how they would be asked to contribute their involvement through surveys, logs and interviews (Ashley, 2017). Likewise, the use of an internet-based and private storage location for the logs ensured participants could not see each other's comments and guaranteed that their entries were private and remained anonymous. Each Google Drive folder contained a copy of the participant document to provide access to ethical guidance and to let the respondents know

what to do, why and when (Robson, 1993) (Appendix I) and a document containing help for completing the weekly log (Appendix III).

Once data collection had begun, I managed the confidentiality and the anonymity of the participants to be consistent with the ethical guidelines published by the British Educational Research Association (BERA, 2011) by ensuring only the school's Assistant Head and I knew of the names of the participants involved in this study. Also, only the participants and I could access the log provided by each participant by creating a Google Drive folder structure for each mentor and mentee. Therefore, I am the only person who could link the participant's logs to its author. The mentor and mentees held their meetings on a one-to-one basis to allow the conversations between both parties to remain private. Also, to allow the early career teachers to engage in private discussions regarding their life experiences, the autobiographical data remained private (BERA, 2011). The anonymity of participant responses from all the questionnaires ensured participant responses could not be identified. So any sensitive topic given by a participant could not be traced to an individual. I considered this to be essential for the safeguarding of the participant and also for the information provided by the participants have honesty and truth. Therefore, I could only determine from the surveys whether the participants were early career or experienced teachers. Similarly, the participants from the baseline survey could not be named, and all the data from the surveys and logs were deleted when this dissertation was submitted.

Whilst I made every effort to minimise harm to the participants; there is the possibility of embarrassment or other hidden concerns with taking part in this research. To ensure I minimised this concern, all the data collected in this research was deleted permanently. Also, to ensure there is no harm with the working relationship with the participants and me, I have not published or transcribed the comments received in the unstructured interviews, so the participants cannot be attributed to any of their comments. I have also destroyed all my written notes from the interviews.

Conclusion and Evaluation

This is an exploratory study that has discovered how teachers of differing career experience perceive and approach classroom teaching. The study has also identified differences that early career teachers experience in the classroom compared to experienced teachers. Revealing the differences between early career and experienced teachers' experiences has implications for increasing teacher retention and forming individualised school-based professional development.

The first aim of this research aimed to explore the use of classroom identity by exploring the literature, which has shown how experienced teachers have a lower cognitive load during teaching. A reduced cognitive load enables the experienced teacher to extend their classroom teaching and to develop an encouraging teaching environment to meet the abilities and characteristics of their students. The experienced teachers focus on developing relationships with their students and are prepared to experiment more in the lessons to create the teaching dynamic they seek. Results from all the survey provided examples of early career teachers who are preoccupied with the need to complete the lesson to plan and ensuring students complete their tasks. Suggesting early career teachers focus on their situated learning environments might allow early career teachers to be able to use classroom identity to increase their confidence to experiment and find new approaches that work for them and their students.

The second aim of this research used the literature to show if using experienced teachers would be a valid resource to help early career teacher to develop their classroom identity. The first five years of teaching is a vulnerable stage in a teacher's development. The literature has shown mentoring beyond the NQT year can reduce the attrition of early career teachers, and there is evidence from the result that shows the differences in the outlook and thinking between experienced and early career teachers. The literature shows a sizeable proportion of early career teachers become despondent with teaching and leave the profession due to poor teaching experiences in the classroom, and the results showed the impact teaching has on their social life. Whilst it may be more natural to organise a programme of CPD for all teaching staff, there is evidence that early career teacher would advance with more individualised CPD tailored to meet teacher's specific needs, and all schools have experienced teachers as an available resource to utilise.

For the third aim of this research, a school-based enquiry examined the extent to which experienced, and early career teachers gain from introducing mentoring in professional development. The strong desire from potential mentees was the first impression of a need that early career teachers' sense. Using a baseline survey provided more insight than expected and showed the differences in teacher behaviour and thinking in relation to teaching experience. The results of the surveys were consistent with the literature and found that early career teachers

who have good confidence still show the same behaviour in the classroom processes as other early career teachers, suggesting confidence might not be a reliable indicator of real progress. This study has shown that early career teacher development should focus on classroom activity. Whilst the study did not produce improvements in teaching, the process of mentoring has been shown to work and has produced recommendations implementing a school-based CPD for early career teachers; these are:

- Conduct an extended research study to examine how using experienced teachers to mentor early career teachers in a school-based CPD impacts teaching and learning in the classroom.
- Limit the use of logs to mentees to use as a self- reflective document, and shared with mentors to show progress over the duration of the study/CPD.
- Mentors should use observation to assess mentee progress and not rely on mentees expressions of confidence.
- Provide mentors with the latest research in cognitive load theory to enable them to assess mentees
- Specific criteria for the observation should be developed with experienced teachers to record the mentee's progress.
- The potential candidates for research should complete a survey as a tool to select the candidates.
- The baseline survey should be developed further, to identify participant demographics, gender, experience and age of student taught from a broader audience

Implications for My Professional Practice

After completing two years of teaching, and as an early career teacher myself, I now have a better insight into the characteristics of an experienced teacher and how they use student relationships to set up learning communities. I recognise many characteristics for developing my teaching from this study, which will enable me to experiment in my own classrooms and become more focused on forming stronger relationships with my students. I will also find more time to observe many experienced teachers in the classroom and engage in discussions with colleagues regarding professional practice. I will also share my ideas and findings with senior staff at the school to improve the school-based CPD for all involved. Ultimately, I hope I gain the abilities of an experienced teacher sooner than the ten years and to stay in teaching for many more years.

Wider Implications

The consequences of the high attrition of teachers in England is significant and places a burden on school administrators and staff. The national government is still struggling to find answers and seems to have placed the burden on schools to recruit, train and retain teachers. Working in a teaching school, which recruits teachers for all phases of school, there is an excellent opportunity to develop a study of best practice for school-based CPD that can contribute to reducing

teacher attrition. By assisting early career teachers and giving experienced teachers a new dynamic in their CPD, results can be published to inform the broader teaching community and improve national teacher retention.

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Appendices

Appendix I

Research Participant Document

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Master of Science in Teaching and Learning

Participant Information

Introduction

Thank you for your interest in participating in this study.
This document will provide you with the information required for this study to comply with Oxford Universities Central University Research Ethics Committee (CUREC) Approval

The name of the study:	To what extent does implementing experienced teachers to mentor less experienced teachers develop classroom identity and improve confidence in teaching and learning?
Name of researcher and contact information	[redacted]
Name of researcher's supervisor and contact information	Dr Gill Boag-Munroe gill.boag-munroe@education.ox.ac.uk

Rationale, Purpose and Value of the Study

Many teachers who are have been teaching for a short time choose to leave the profession. There is evidence that suggests up to thirty percent of teachers leave the teaching profession within five years of teaching, and in some locations, the attrition rate is higher. This pattern repeats in other western countries such as Australia, New Zealand, and the United States of America. This high attrition rate of early teachers places a significant burden on the profession which has to sustain a high student-teacher recruitment rate to compensate. There has been ample research into the causes of early career attrition, which identifies work-related stress as a common and important factor associated with the decisions to leave, however, there are few studies which consider strategies to alleviate pressures experienced by early career teachers.

My provisional research has looked at the use of classroom identity formation as an indicator of teacher confidence and how they perceive their efficacy in the classroom. This research identified three distinct phases for the development of teaching confidence in the classroom; each occurring in approximately five-year phases. In the first phase, teachers are stressed by a high cognitive load and which gives less opportunity to experiment using a range of teaching identities in the classroom. The next phase is a period of formation, taking a further five to ten years, where teachers start to develop their classroom experience and hone their classroom identities. The final phase, occurring after approximately ten years, is when teachers have developed the expertise to engage a range of classroom identities to manage most complex classroom events. Also, experienced teachers have been shown to be less engaged by most CPD.

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This study will therefore look at how experienced teachers, who have been teaching for ten years or more, can advise teachers who have been teaching for less than five years. The study will look qualitatively at the impact upon both the values and benefits experienced by both the mentor and the mentee over approximately two months. The aim is to establish if participants believe there is merit to develop a longer-term mentoring programme for early career teachers.

Why have you been invited to take part in the research?

If you have been teaching for less than five years, or have been teaching for more than ten years, then your contribution could be valuable for this study as either a mentor or mentee. This study will require no more than three pairs of participants, yet no less than two pairs, however, a mentor can assist two colleagues if volunteers are limited.

What is involved?

This study is a biographical study, which will ask each participant to develop a log of his or her experience throughout the study. The narrative will be a self-reflective log consisting of a few sentences written each week giving your reflections on how the study process might impact improving teaching and learning experiences. You will be asked to store a log electronically in Google Drive, which will only be accessible by the researcher. All participants will remain anonymous during the study and also in the subsequent report.

An initial baseline survey will be conducted electronically to assess your initial thoughts concerning the value of CPD sessions, to assess the value you perceive this study might have, and to assess areas where you feel such a process might add value. A short narrative of your experience in teaching so far will be requested at the outset to give your data some context. The researcher will not intervene during the mentoring process to avoid any possibility of researcher bias.

Also, towards the end of the research, the researcher will engage you in brief non-structured interviews to assess your outlook on the research, to answer any of your questions, and to determine how your contribution is progressing to assess if any amendments to the study are required.

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Before deciding to participate

If you are interested in participating in this study but wish to ask questions before committing, please feel free to contact the researcher or the researcher's supervisor using the above contact information. Any questions will be treated in confidence.

Withdrawing from the study

If at any stage of the study, for whatever reason, you will be able to withdraw without causing any concern or consequence to you or the research. Your participation is entirely voluntary, and so it is for you to decide if you wish to continue to contribute to this study. Please advise the researcher as soon as possible if you wish to withdraw by contacting them using the email given above.

Information regarding participation

- Written permission from the head teacher has been granted for this study.
- There is no intention to obtain personal information that is required outside of the study.
- Data produced by the participants will only be visible to the researcher and will therefore not be made available to the supervisor, the university or the school.
- Data access will be restricted to the researcher and the contributor alone.
- All the information and data obtained from this study, including the identity of the participants and school will be anonymised in the report.
- There will be no risk to the participants of this study.
- The project has received formal ethics clearance through the University of Oxford's ethical approval committee for research involving human participants before the start of the study.
- The research will be written up as a student's dissertation.
- The dissertation will be deposited in the Bodleian Library.
- The data derived from the data collection will be stored in Google Drive with restricted sharing for the duration required to complete the dissertation.
- All data provided by the participants will be permanently deleted once the dissertation has been submitted.
- Any concern concerning the study or complaints can be addressed to University of Oxford Department of Education:

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Appendix II

Baseline Survey

Assisting Early Career Teachers

The aim of this questionnaire is to get an idea of your opinions prior to beginning the mentoring phase. It is to establish your views on certain areas as a baseline survey, so there are not right or wrong answers here, it's just about your experiences as a teacher so far.

*Required

1. **Are you participating as a mentor or mentee? (I am unable to identify these responses to any individual)** *
   Mark only one oval.
   - ◯ Mentor (10 or more years in teaching)
   - ◯ Mentee (5 or fewer years in teaching)

Professional Development Experiences

This section is interested in determining your views and experiences with Continuous Professional Development (CPD).

2. **Does your school based CPD help you with maintaining administrative and legal requirements?** *
   Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Always

3. **Does your school based CPD provide you with the latest educational research and theory?** *
   Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Always

4. **Does your school based CPD provide you with ideas for improving classroom practice?** *
   Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Always

5. **Does your school based CPD provide you with the development you need to improve your teaching?** *
   Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Always

6. **Do you find school-based CPD to be relevant to your personal professional development?** *

Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Always

7. **Do you seek CPD beyond that which is offered from the school-based CPD?** *

Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Always

8. **Do you believe that you don't need the school-based CPD because you have sufficient experience?** *

Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Always

9. **Does your school based CPD differentiate between classroom practice and other teaching duties?** *

Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Always

10. **Do you wish you could choose the subject of school-based CPD?** *

Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Always

11. **Do you believe that your school based CPD is relevant to everyone who teaches?** *

Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Always

12. **Would school-based CPD be more effective if it were developed for specific teaching needs?** *

Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Always

13. **Does school-based CPD improve your impact in the classroom?** *

Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Always

14. **Do you have any further thoughts on how CPD could be used more effectively for improving teaching and learning?**

Initial Teacher Training

This section aims to identify the significance that your Initial Teacher Training (ITT) has on your current teaching practice.

15. **How confident were you in the classroom immediately after receiving your ITT?** *

Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Always

16. **How confident in the classroom were you when you finished your induction year (NQT).** *

Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Always

17. **How often are you confident now in the classroom?** *

Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Always

18. **How often do you use the techniques for classroom management you learned during ITT?** *

Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Always

19. **How often do you reflect on teaching theory provided during your ITT in your current teaching?** *
Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Always

20. **Do you reflect on any aspect of your ITT for your current teaching practice?** *
Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Always

21. **Which aspects of your ITT experience you find to be most useful for your current teaching practice. How do these impact your classroom impact today?**

Classroom Identity

The idea of having various teaching identities is the social framework that this research is investigating. The proposition is that more experienced teachers develop a wider repertoire of identities and deploy them routinely in situations that early career teacher finds difficult to predict.

22. **How frequently do students inspire you in the classroom?** *
Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Always

23. **Give some examples of how students surprise or inspire you in the classroom.** *

24. **How often do you maintain a proven routine to your classroom practice?** *
Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Always

25. **How often do you apply a lesson routine to all your classes?** *
Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Always

26. How regularly do you take risks with your classroom teaching style? *

Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Always

27. How often do you allow students to divert you from your teaching plan? *

Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Always

28. How often does the dynamics in the classroom force you to change your teaching plan? *

Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Always

29. Provide some examples where lessons have recently not gone to plan *

_____

30. How frequently do you realise that you should have conducted a lesson differently once that lesson is over? *

Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Always

31. How often do you find that you are busy with aspects of your classroom teaching that was not in your teaching plan? *

Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Always

32. How often do you deploy classroom skills that you developed yourself? *

Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Always

33. Give some examples of classroom skills you developed yourself and now rely upon. *

_____

34. How often in your current teaching do you seek assistance or advice to help develop your classroom skills? *

Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Always

35. How often are you surprised by events that occur in the classroom? *

Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Always

36. How often do you find that you have depleted all your skills and knowledge in the classroom? *

Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Always

37. What do you feel could help you to have more impact on your teaching? *

_____

38. How often do you rely on your own personal resilience to get through a lesson? *

Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Always

39. Do you feel that you use a range of personalities or identities in your teaching practice? *

Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Always

40. Stress is a common reason teachers give for leaving the profession. How often are you mostly stressed by classroom teaching? *

Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Always

41. **Stress is a common reason teachers give for leaving the profession. How often are you mostly stressed by non-teaching responsibilities as a teacher?** *

Mark only one oval.

	1	2	3	4	5	
Never	◯	◯	◯	◯	◯	Always

42. **Do you have any additional comments you would like to add concerning improving teaching and learning experiences in the classroom?**

Increasing experience of teaching

In this final section, you have the opportunity to discuss your experiences so far and to suggest how this study could add value.

43. **Many studies into developing expertise note how experienced practitioners have a lower cognitive load than novices. I am interested to know if you have experiences of this in teaching, where classroom practice becomes easier as you draw on your experience and have time to 'think on your feet' more. What would you say about this theory?** *

44. **Do you find with increasing teaching experience that you have developed a 'lighthouse effect' where you can sense changing dynamics, predict changes in behaviour or attitudes, and can then adapt classroom teaching sooner? Do you agree with this? What are your thoughts of this idea?** *

45. **Finally....if you wish to, please give some insight into how you have found your classroom teaching experience so far. Have you had to learn on your feet? Has teaching been difficult and unpredictable experience for you? Are there times that you genuinely feel like giving up for a different career? Have you found you are becoming more effective as you gain experience?**

Appendix III

Thoughts for the log document

Thank you for your support of this research. I appreciate the time and contribution you are giving to support this.

This research is interested in the value you place on a trial professional development programme. Over the next two months, or so, you will keep a weekly log of your activities during your participation in this research. This log will be your reflection of the activities that have taken place, a reflection of the advice you have given or received, and any thoughts on any impact the participation is having so far. I will be the only person who reads the log. Your comments will be kept anonymous and will be permanently deleted once the dissertation is published. For this research to have value, I will not discuss any of your comments to anyone. Any quotes in the dissertation will not be identified as yours, so I hope you will feel comfortable expressing your views.

There is no prescribed way of conducting this process, so you and your colleague should decide how you wish to conduct your meetings and observations. I request that you should both meet weekly for a duration that you both find valuable to set up what your specific focus will be. There should also be a weekly observation of each other's teaching for a minimum of 15 mins each, where possible. Each group will have a different focus on the advice given, which is fine. However, I will be looking primarily at how this process aids the early career teacher in the classroom. So, please try to focus on events in the classroom and not the school's administrative processes.
Below is a list of suggestions to consider for your log for both mentors and mentees. Please feel free to add anything you feel is relevant.

- What is the approximate duration given each week to this process?
- How does this break down into observations, meetings and thinking about the impact?
- Which classroom practice is a consideration?
- What advice has been given, how relevant was this advice?
- To what extent has giving or receiving advice has caused some reflection? What are you thinking of changing?
- Have you acknowledged something that has not previously been obvious about your approach?
- How different is the teaching approach to your colleagues?
- What are you noticing about your colleagues teaching?
- How frustrating or helpful is this process been during the week?
- Does your colleague seem to find managing the classroom easier or more difficult than you do, if so, in what way does this seem apparent?

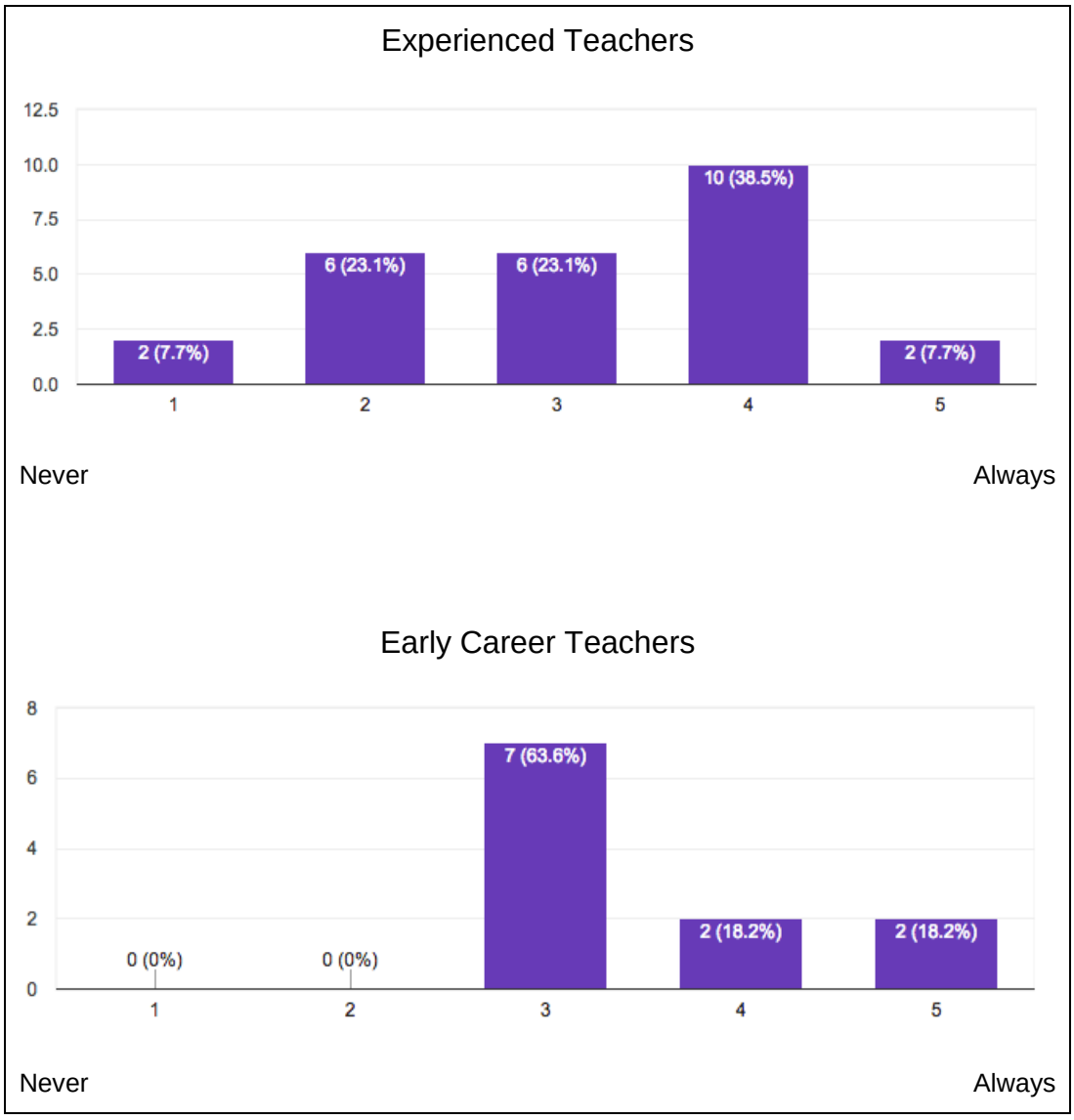
Please provide as much information as you can, but also, I am not looking for an essay from you, just a paragraph or two is fine.

Thank you again for your support

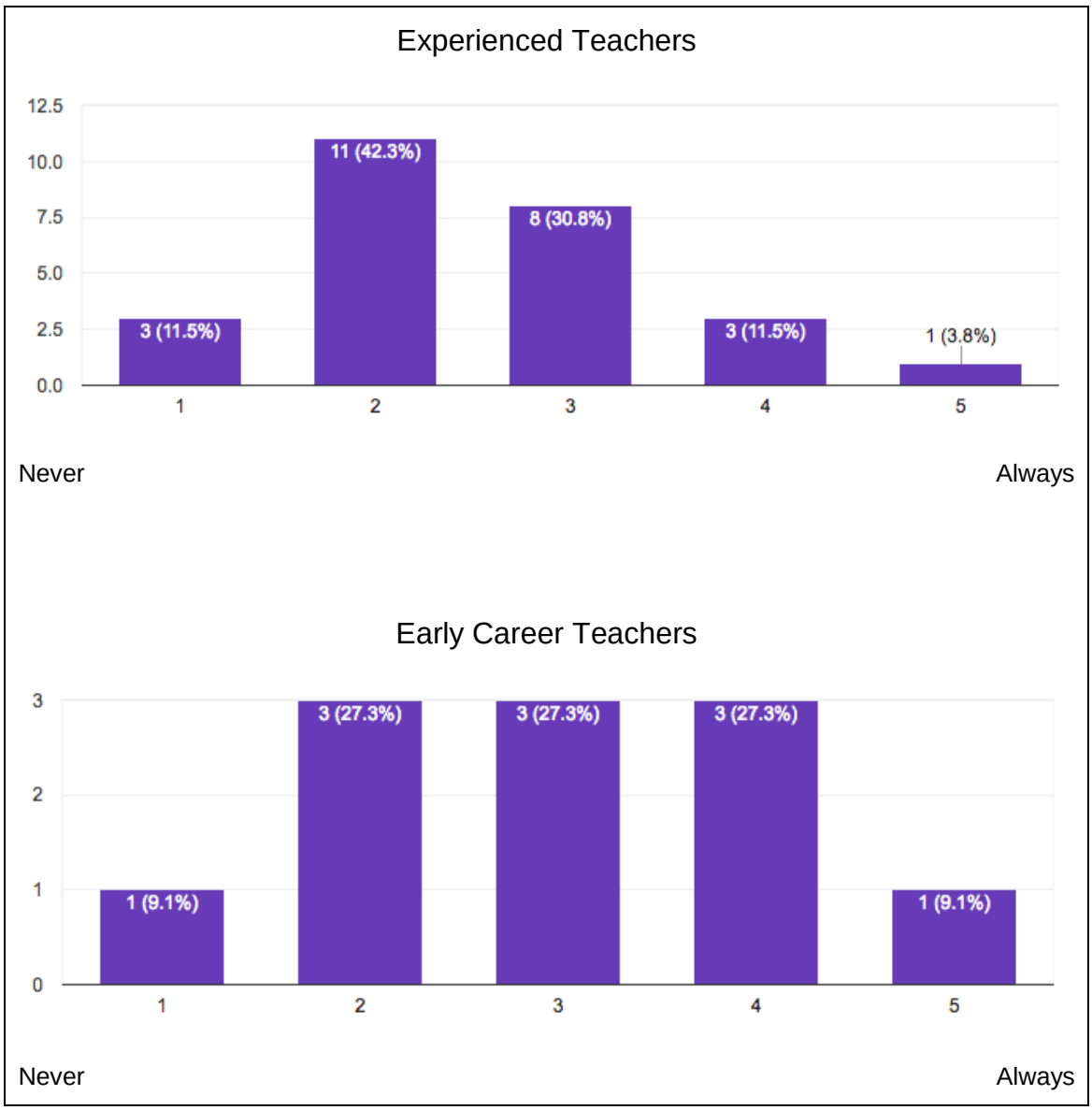
Appendix IV

Baseline Survey Responses - Professional Development

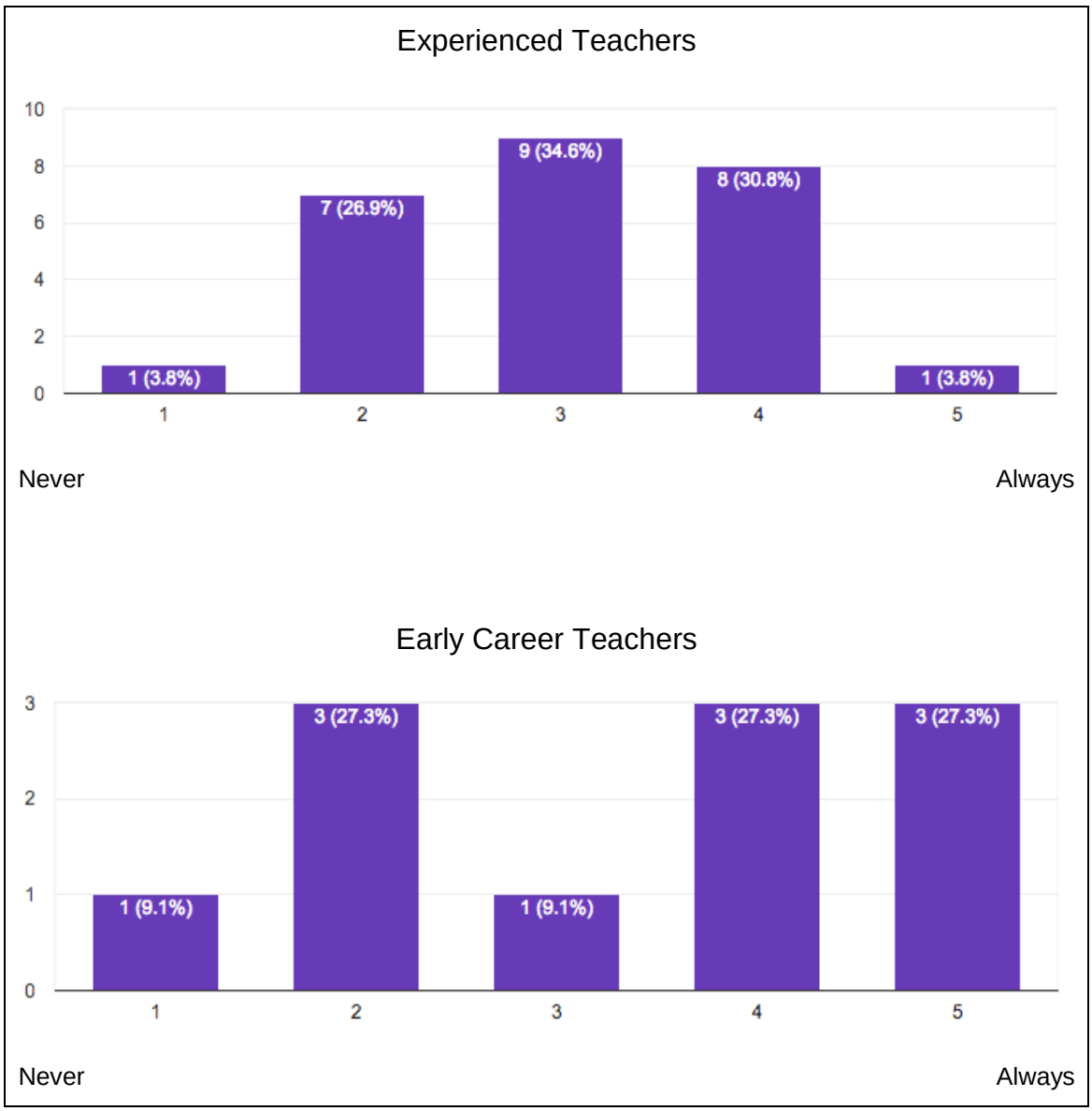
Does your school-based CPD help you with maintaining administrative and legal requirements?



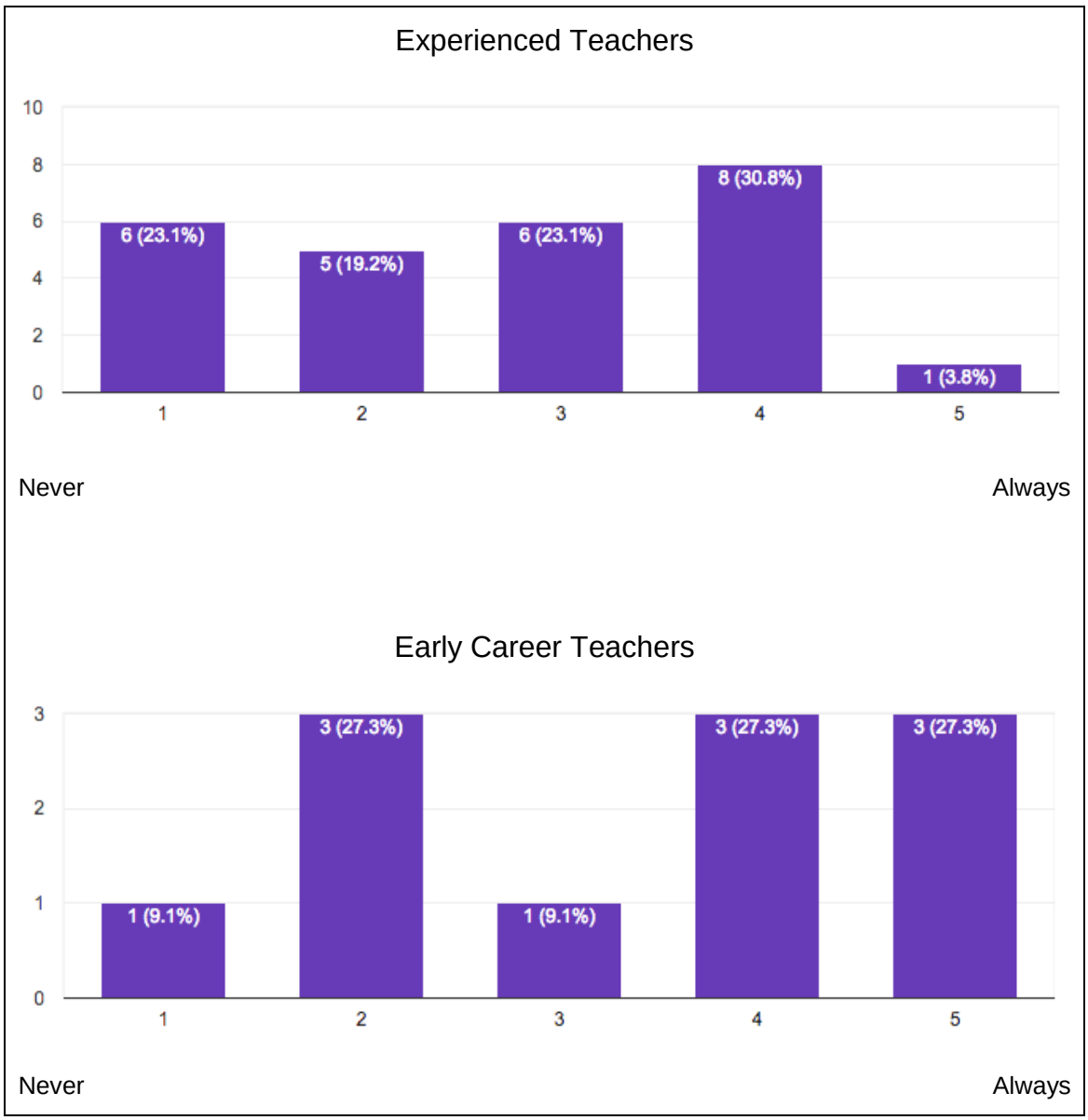
Does your school-based CPD provide you with the latest educational research and theory?



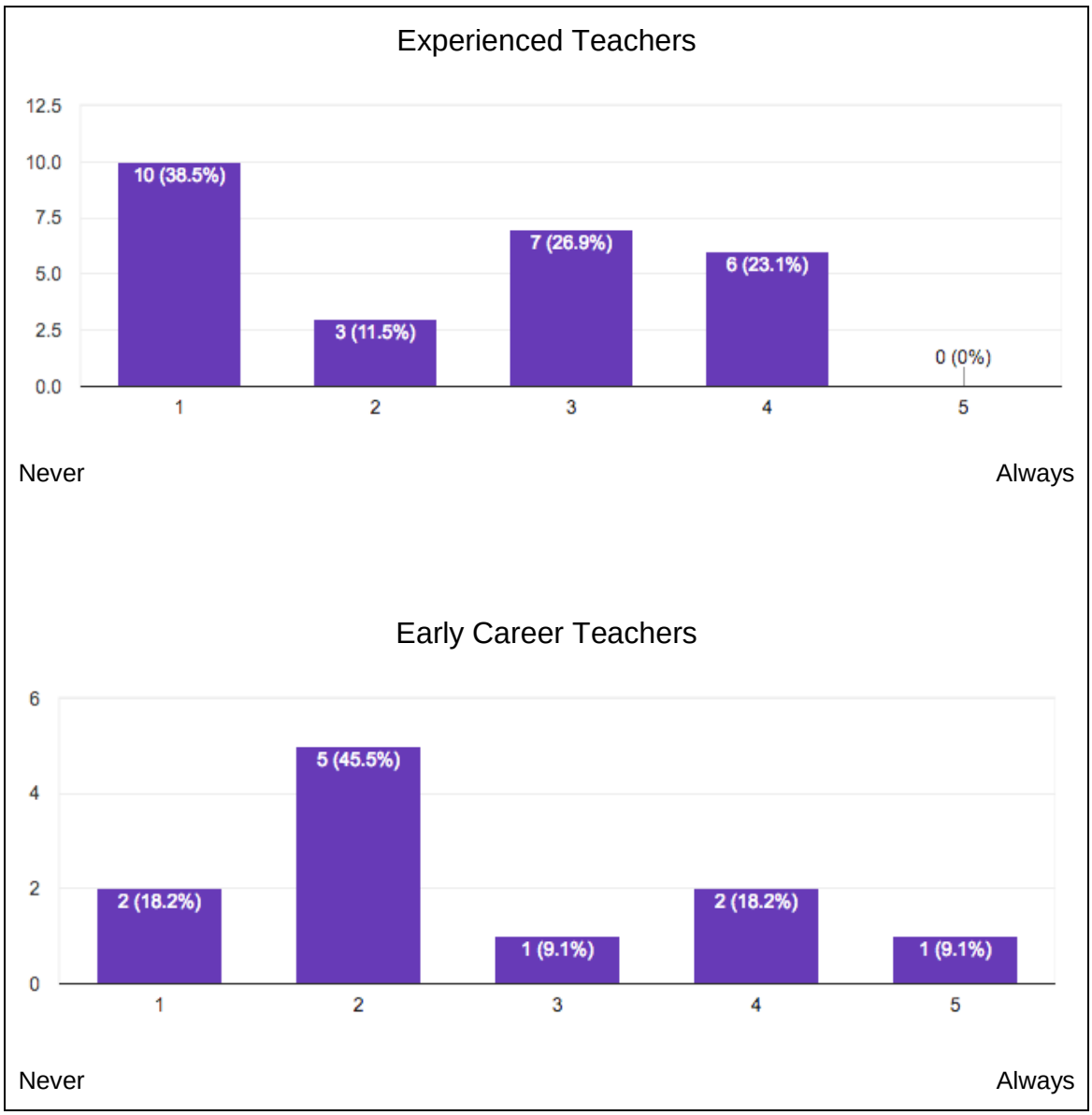
Does your school-based CPD provide you with ideas for improving classroom practice?



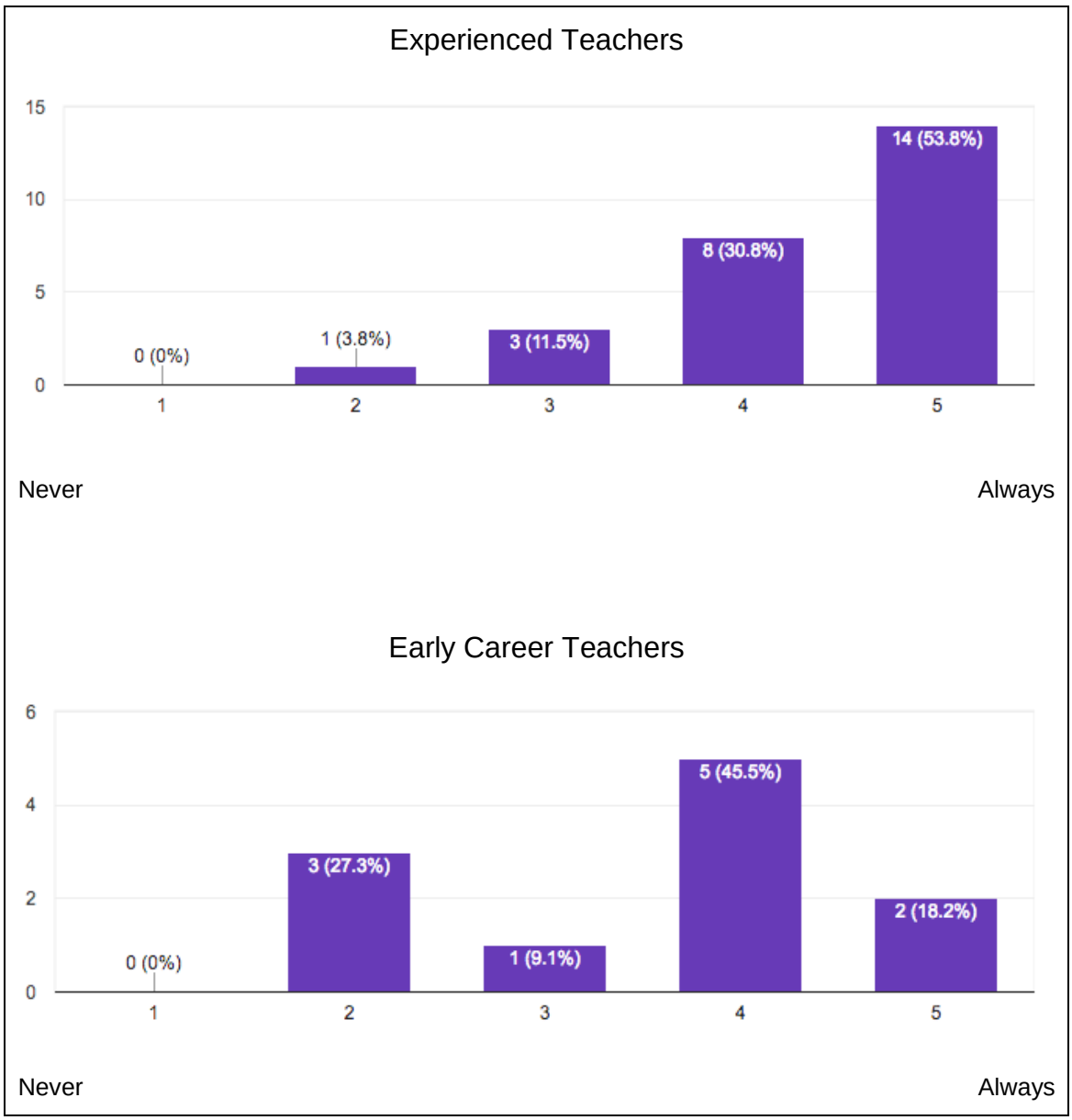
Does your school-based CPD provide you with the development you need to improve your teaching?



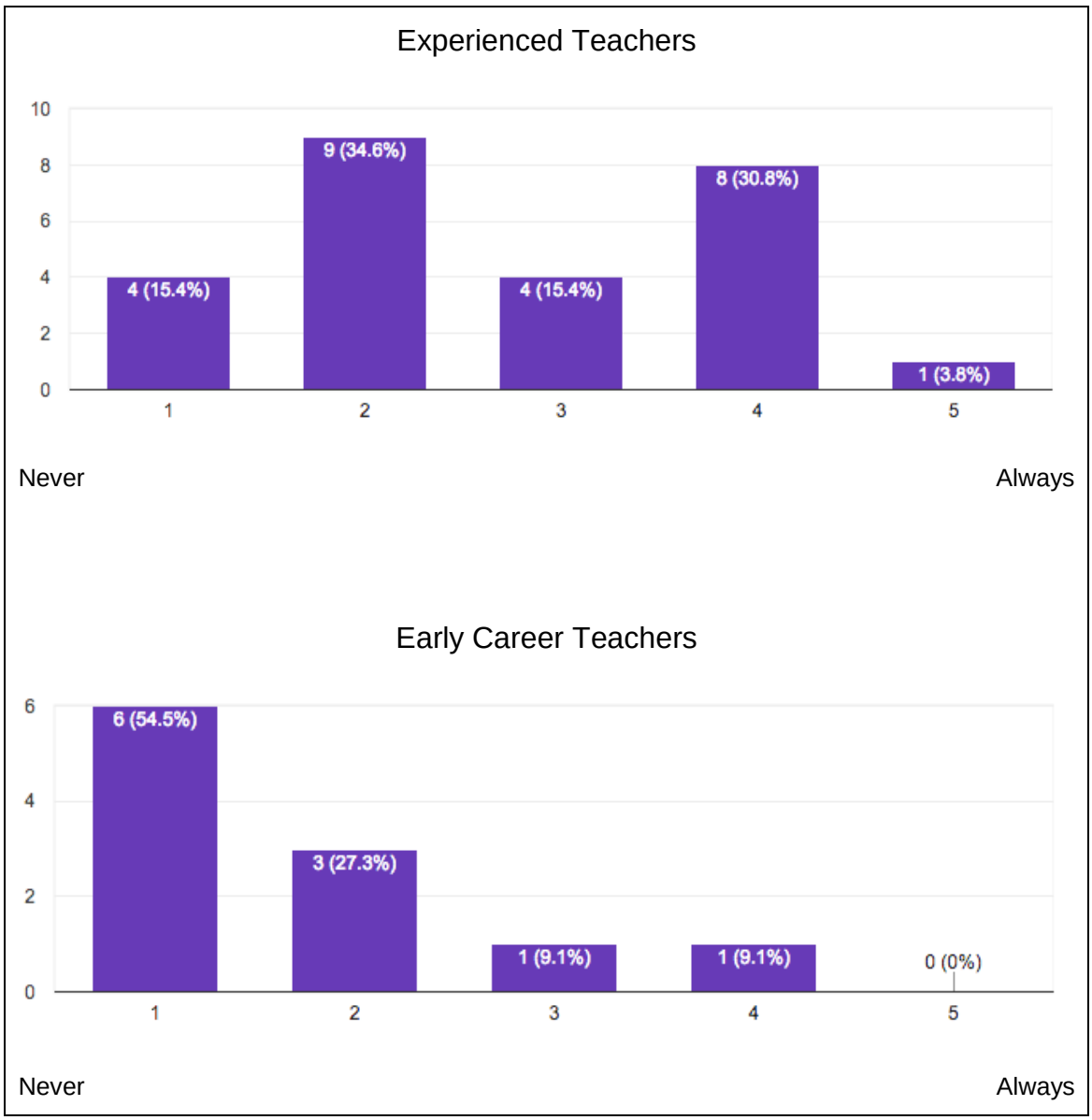
Do you find school-based CPD to be relevant to your personal, professional development?



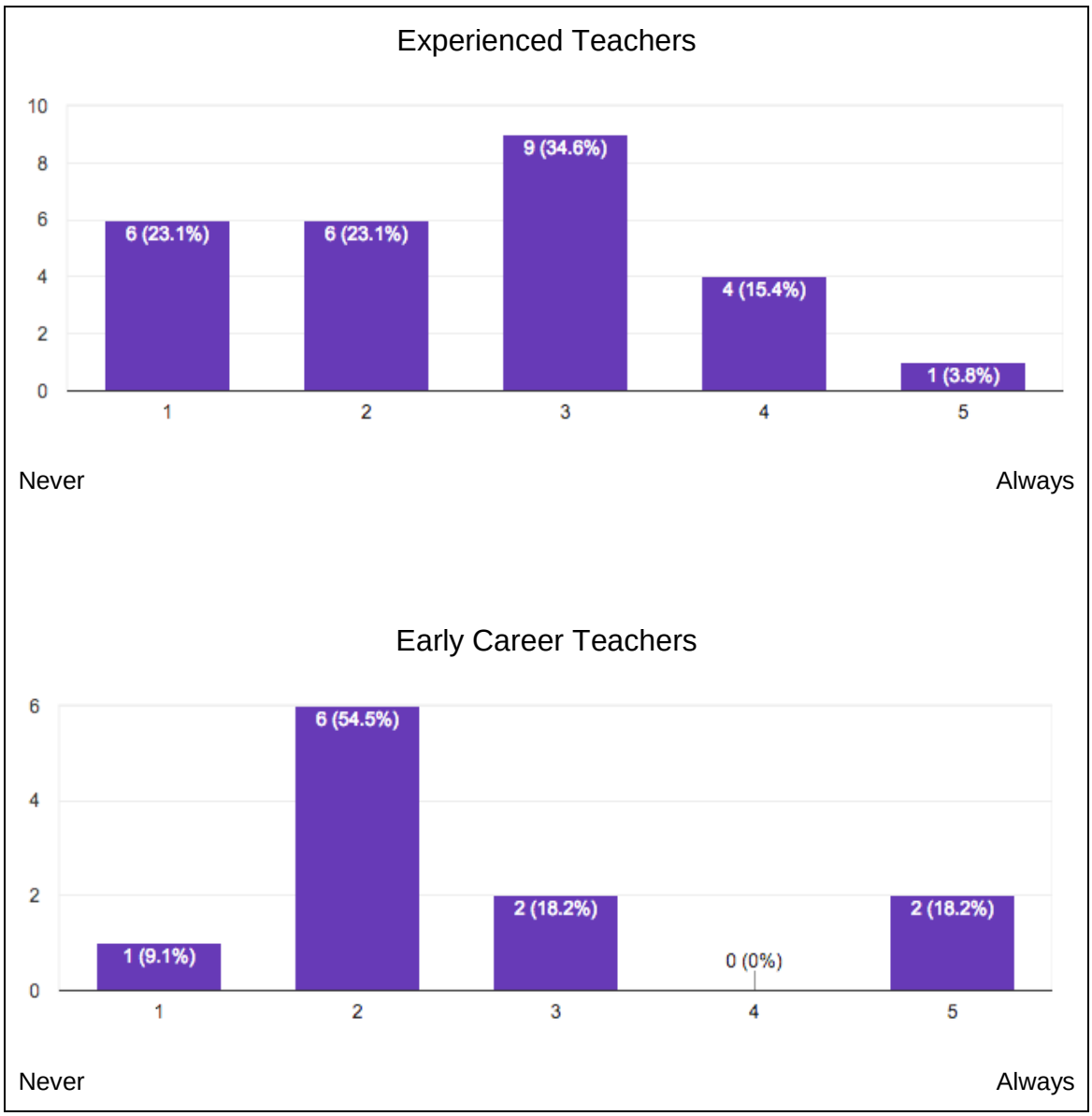
Do you seek CPD beyond that which is offered from the school-based CPD?



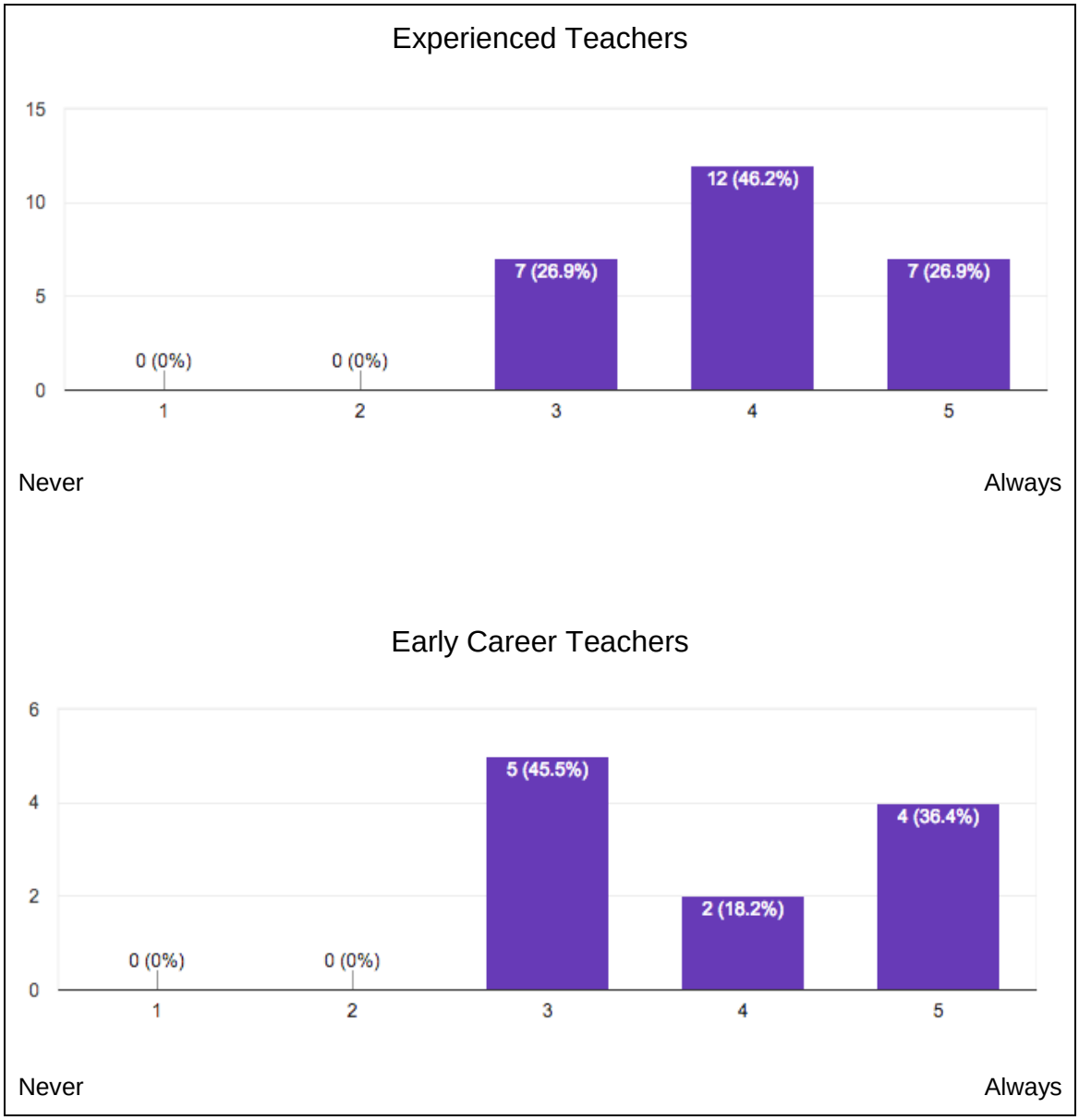
Do you believe that you don't need the school-based CPD because you have sufficient experience?



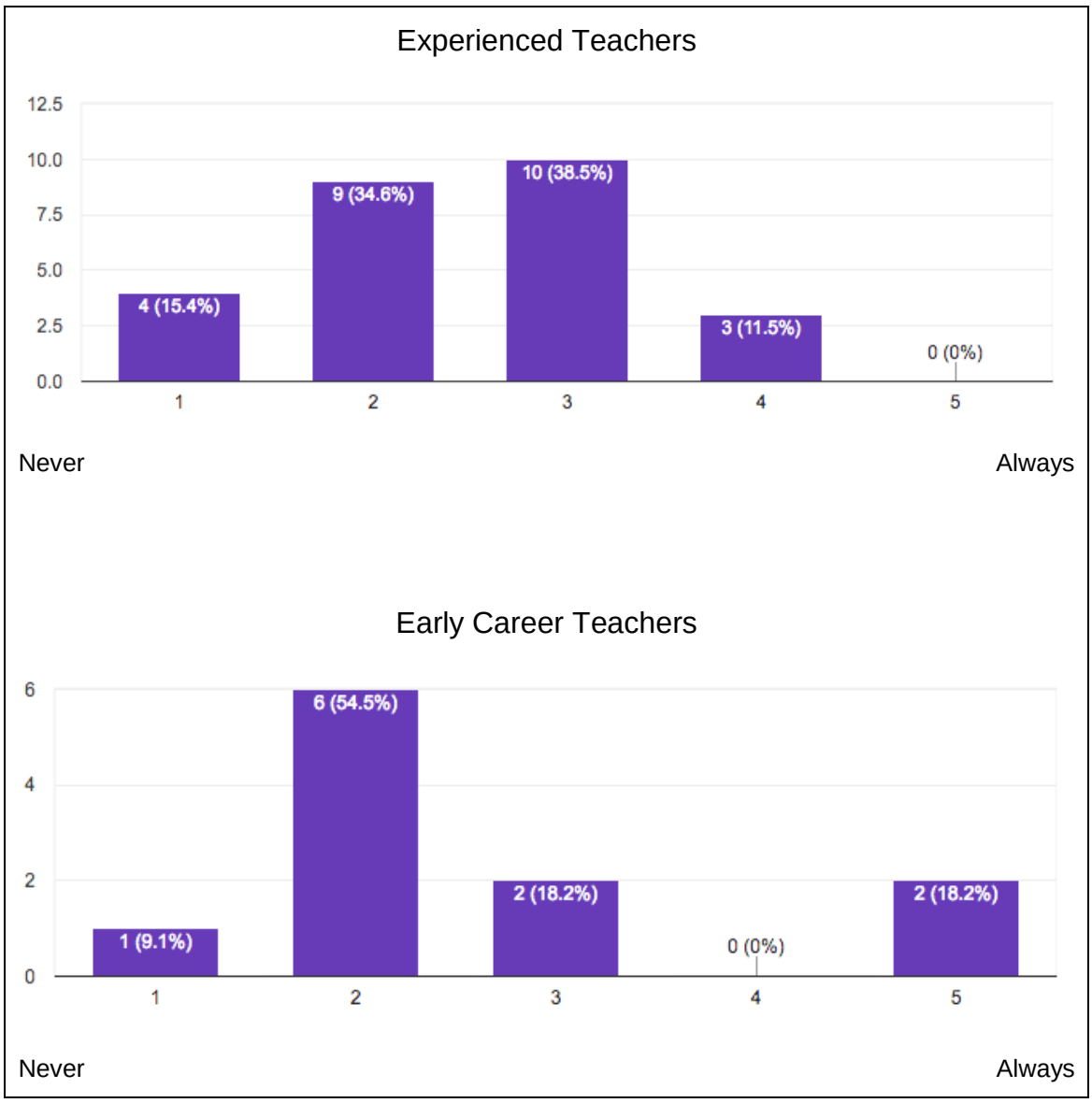
Does your school-based CPD differentiate between classroom practice and other teaching duties?



Do you wish you could choose the subject of school-based CPD?

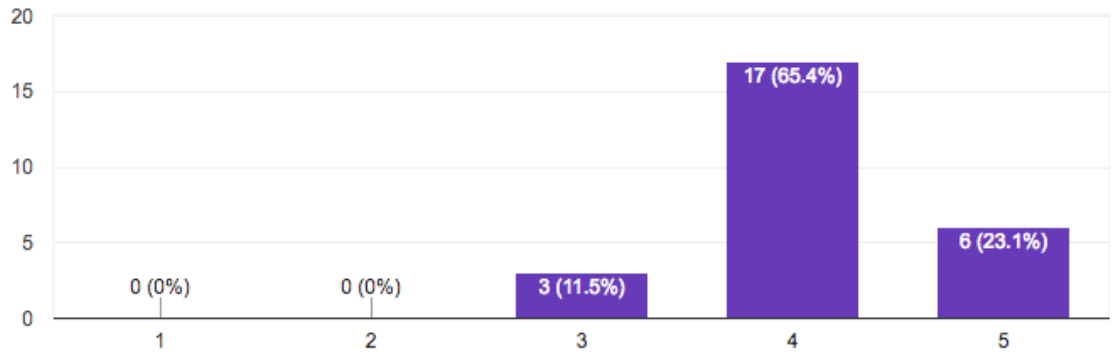


Do you believe that your school-based CPD is relevant to everyone who teaches?



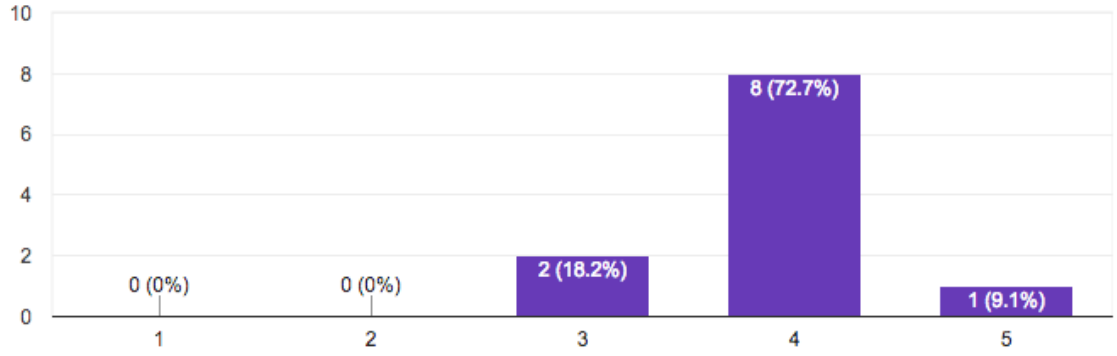
Would school-based CPD be more effective if it were developed for specific teaching needs?

Experienced Teachers



Never Always

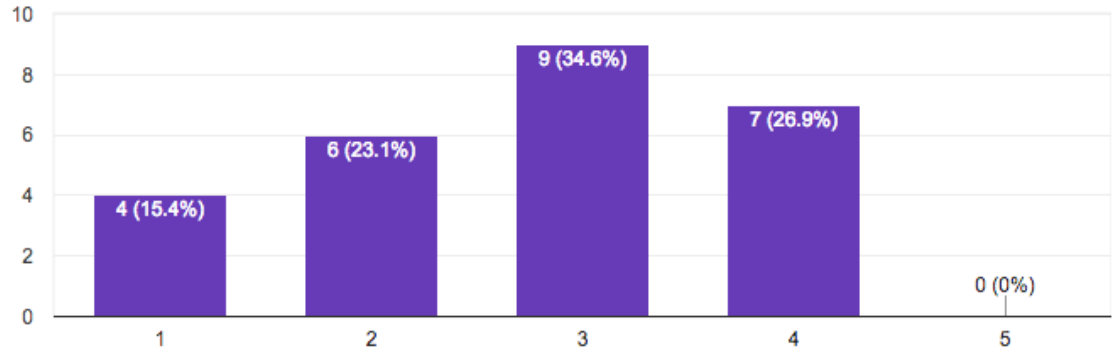
Early Career Teachers



Never Always

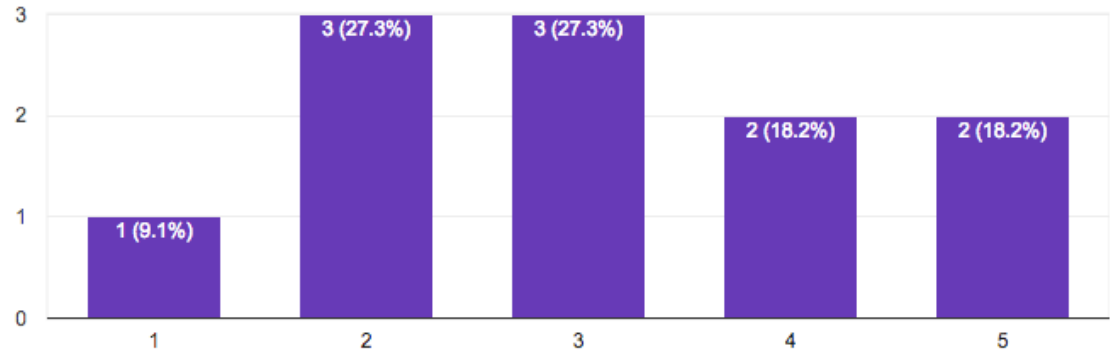
Does school-based CPD improve your impact in the classroom?

Experienced Teachers



Never Always

Early Career Teachers



Never Always

Do you have any further thoughts on how CPD could be used more effectively for improving teaching and learning?

Experienced Teachers

I think Teaching and Learning CPD needs to be more subject specific. It would be useful for staff to have time to find out how to develop methodologies that are specific to their curriculum
Regulatory issues take precedence over practical hand-on teaching practise. Subject-specific activities are non-existent and have to be undertaken in your own time. CPD is far too general, more like team-briefings and are CPD in name only.
Join twitter, follow some "tweachers", read some teaching blogs.

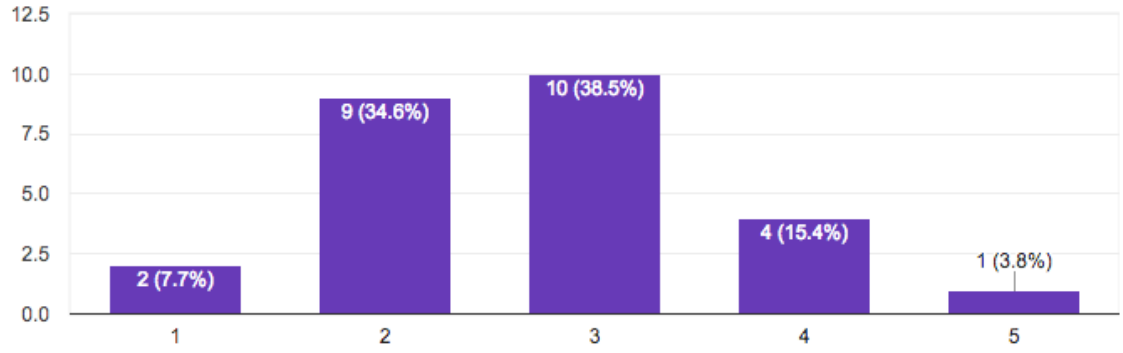
Early Career Teachers

More teacher choice and carousel type CPD so you can attend relevant sessions
Less whole school, more department based.
More subject CPD as not trained in computing so having time for this would have been useful.
Options to choose subject, time tabled CPD sessions so you could try techniques, tools and software in a classroom environment on and with other teachers.
More external courses and advertising them to staff.
We have had a focus on modelling but not had any real examples of modeling, it would appear that we should know what these things should look like. All looks good on paper, lucky we work in computing where we can build real models and visualisers to do the rest. need to practice what they preach.

Baseline Survey Responses – Initial Teacher Education

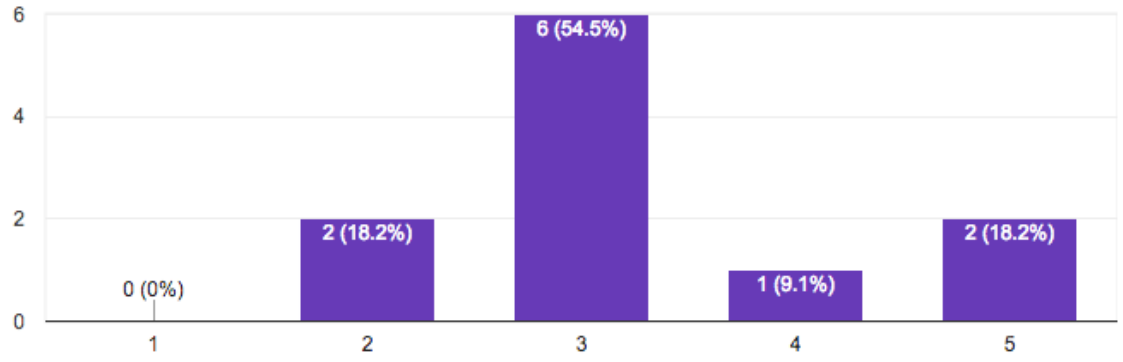
How confident were you in the classroom immediately after receiving your ITT?

Experienced Teachers



Never Always

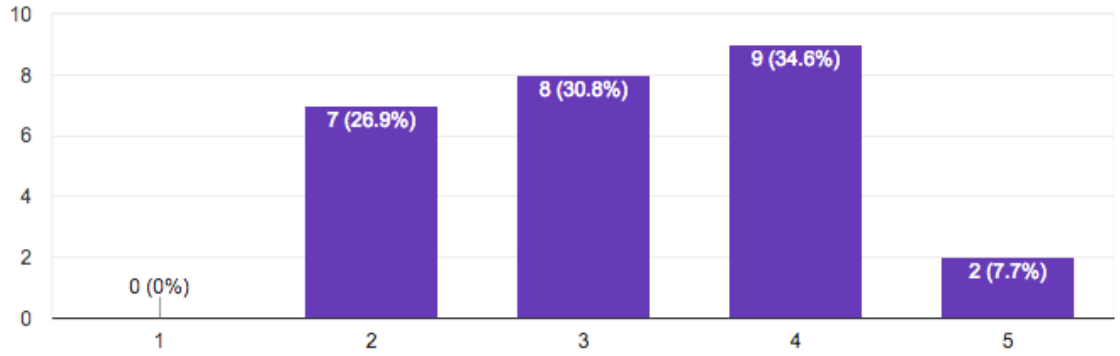
Early Career Teachers



Never Always

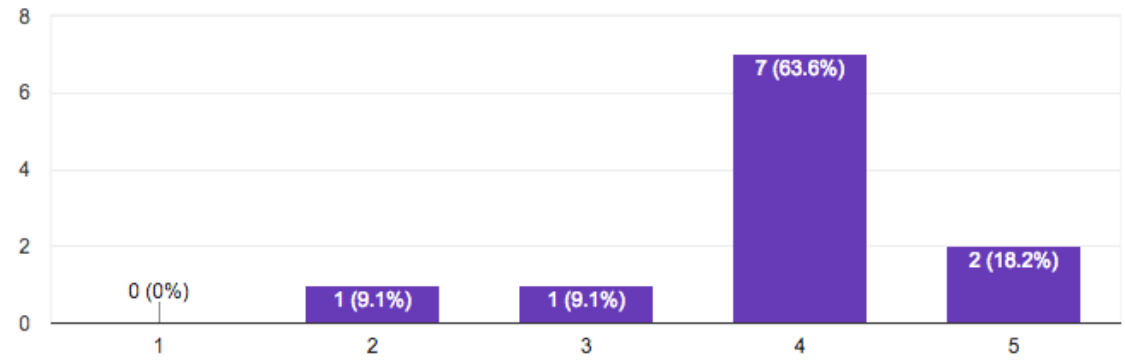
How confident in the classroom were you when you finished your induction year (NQT)?

Experienced Teachers



Never Always

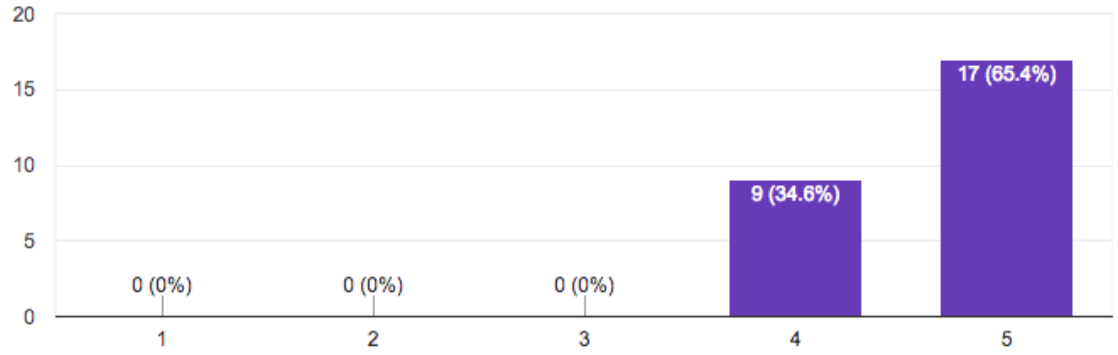
Early Career Teachers



Never Always

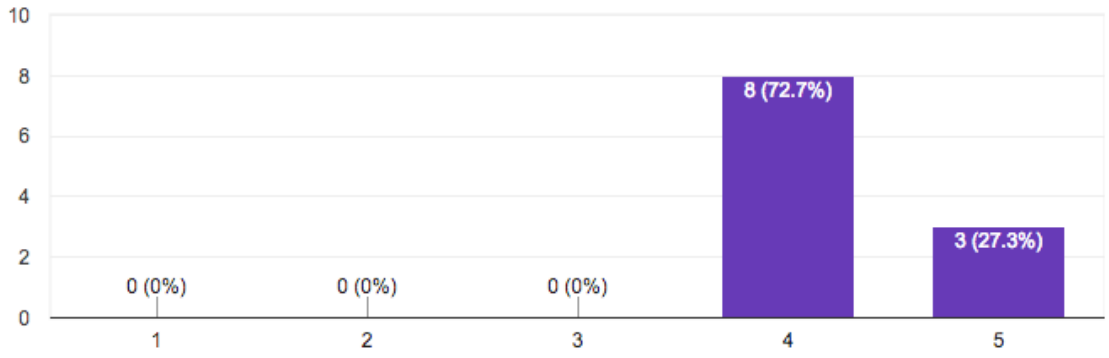
How often are you confident now in the classroom?

Experienced Teachers



Never Always

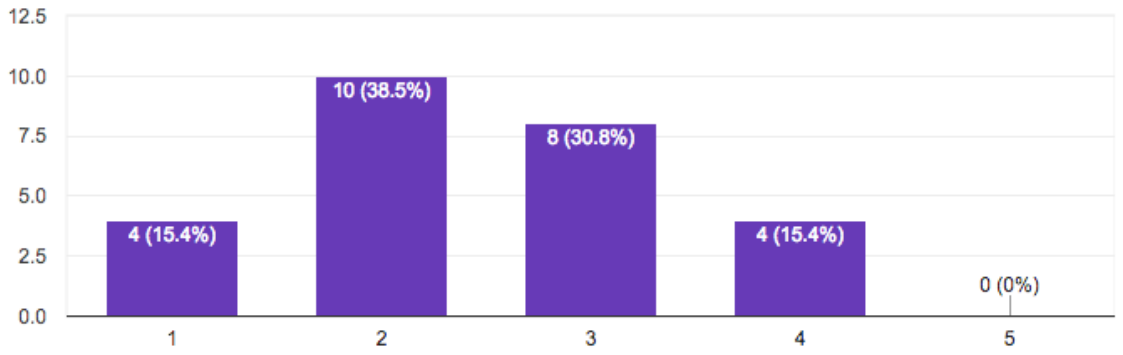
Early Career Teachers



Never Always

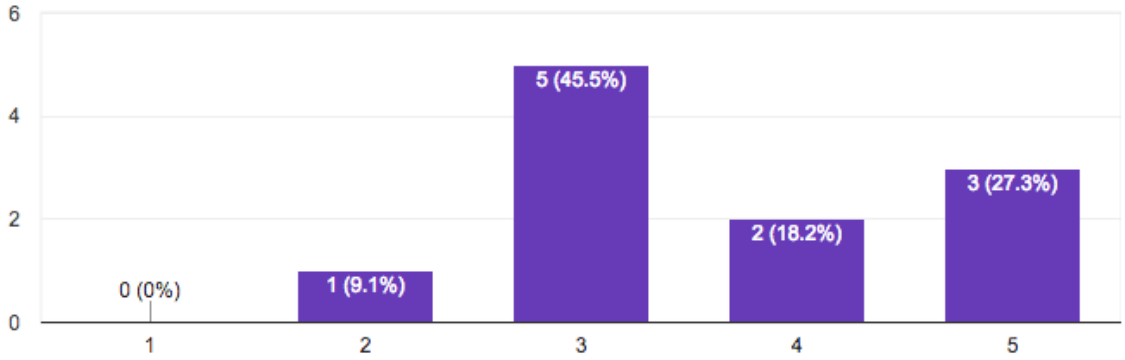
How often do you use the techniques for classroom management you learned during ITT?

Experienced Teachers



Never Always

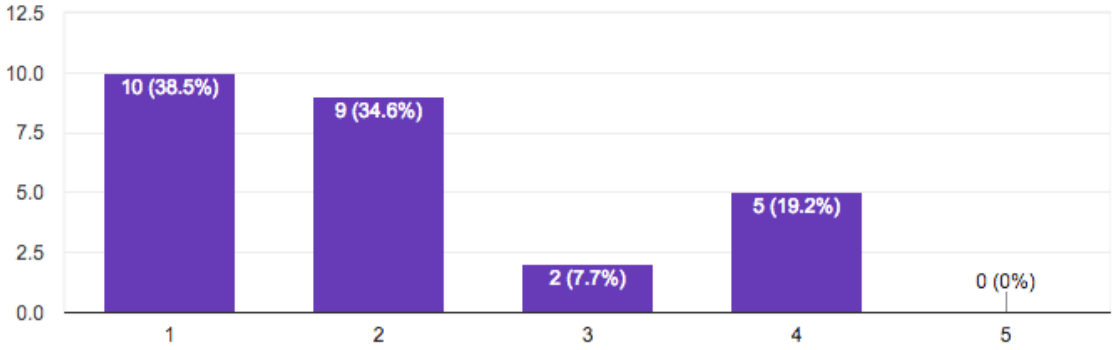
Early Career Teachers



Never Always

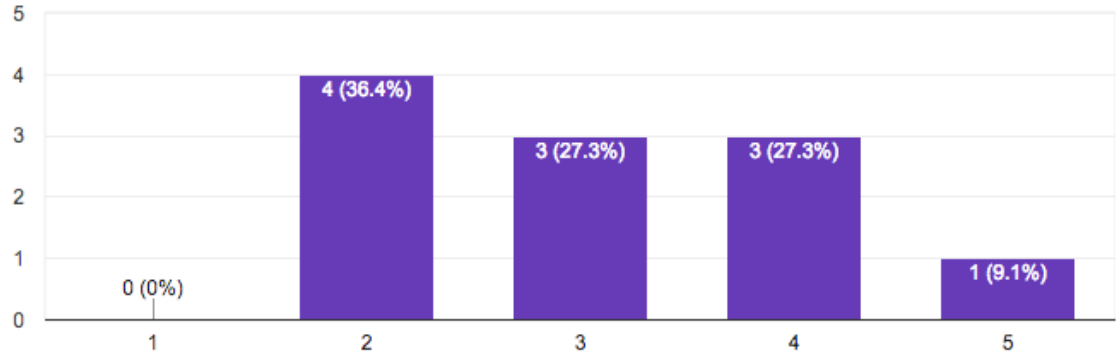
How often do you reflect on teaching theory provided during your ITE in your current teaching?

Experienced Teachers



Never Always

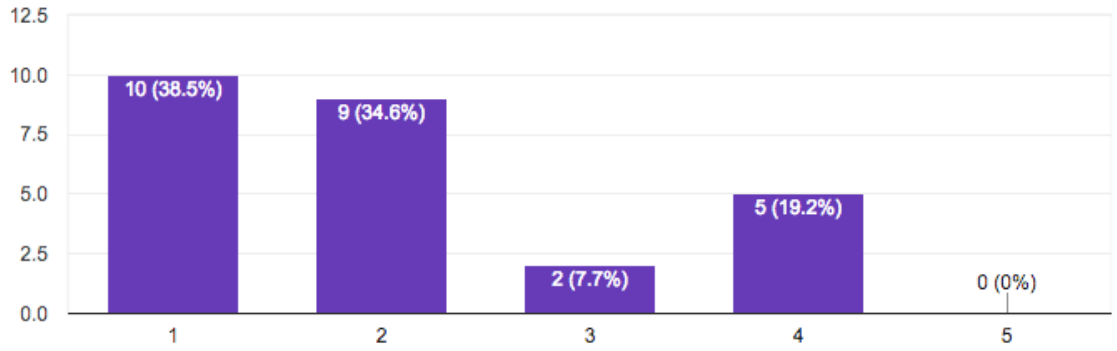
Early Career Teachers



Never Always

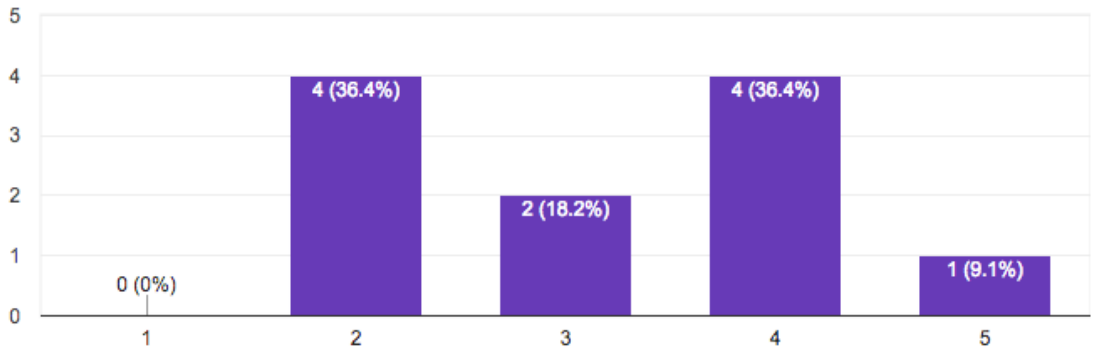
Do you reflect on any aspect of your ITE for your current teaching practice?

Experienced Teachers



Never Always

Early Career Teachers



Never Always

Which aspects of your ITT experience you find to be most useful for your current teaching practice. How do these impact your classroom impact today?

Experienced Teachers

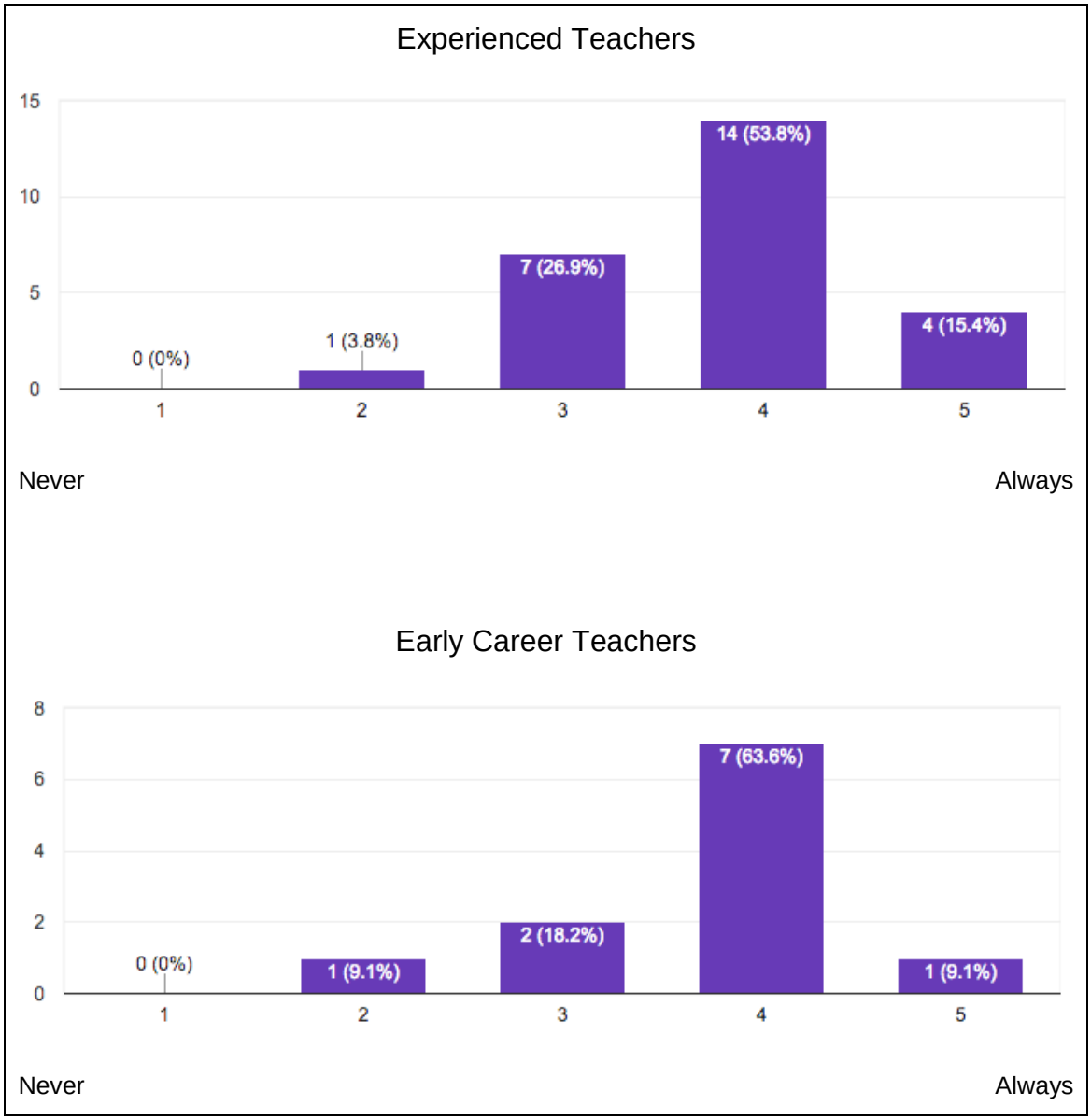
time in front of students; building experience to deal with a wide range of characters and behaviours
Can't think of anything I did in ITT that I use now. Although, it was quite some time ago!
My ITT experience showed me what not to do.
Use of language with students to avoid confrontation, but reinforce boundaries for behaviour management was one of the most useful bits we looked at, I still use some of those techniques today. I think when I trained there was very little focus on learning, which is why CPD today is still interesting and useful
Say everything with confidence - even if you are not!
Working with experienced teachers
Subject knowledge

Early Career Teachers

Group work (which I did as my assignment focus) and a level teaching strategies
Teaching pedagogy
Behaviour management
planning, questing why i am doing some thing, looking at outcomes
Lesson planning was helpful, learning theory is not the same as behaviour management techniques.
Most useful was being able to observe a well tasught lesson and then imediately be able to practice some of what I had just witnessed (ie Next period).

Baseline Survey Responses – Classroom Identity

How frequently do students inspire you in the classroom?



Give some examples of how students surprise or inspire you in the classroom.

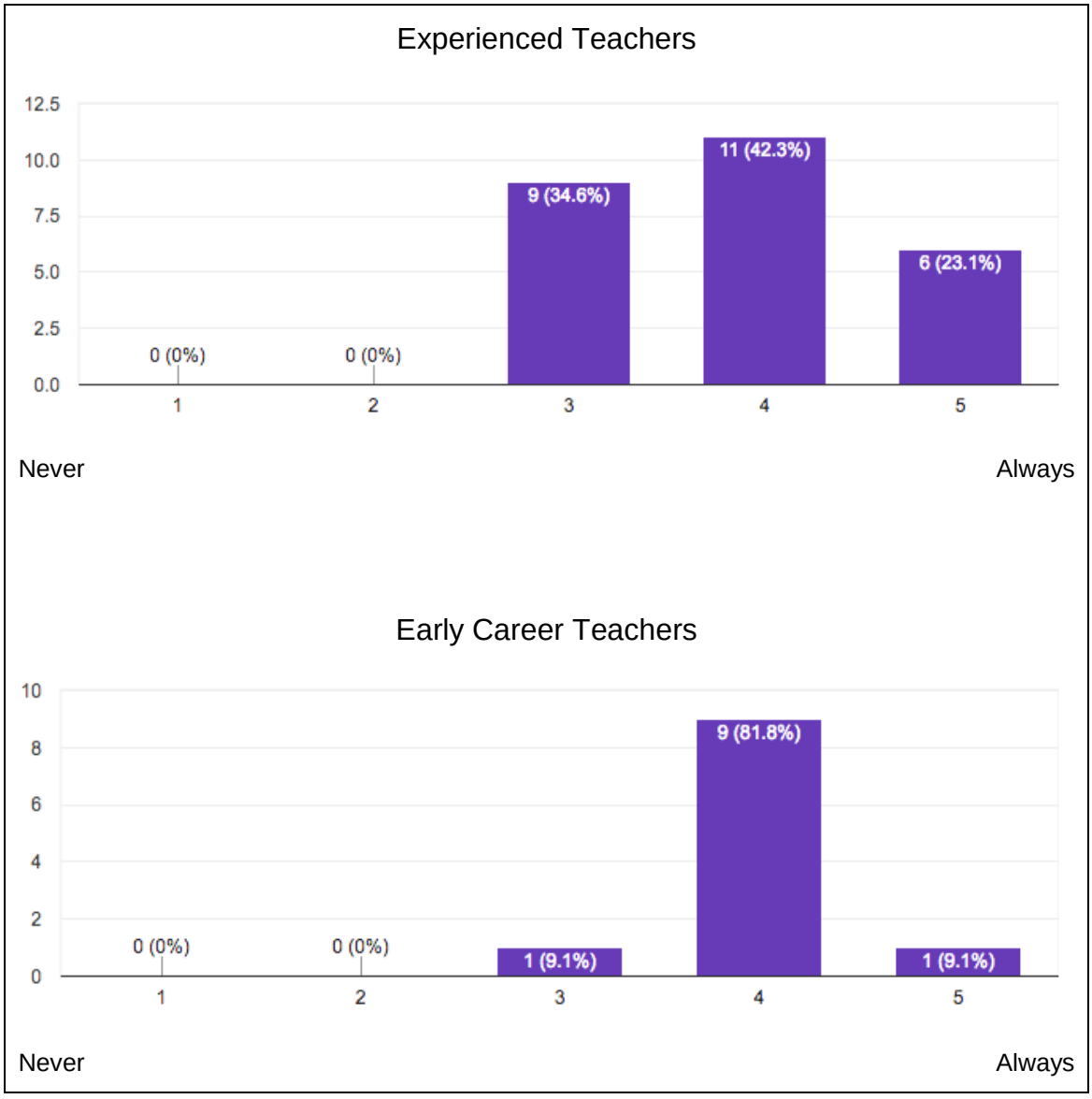
Experienced Teachers

questions they ask, ideas they have
SEN/PP/LA students accessing lesson content and making great progress
Quality of code produced and the different ways in which they think to solve problems.
reveal unknown skill; teach me something about some software (I'm an IT teacher)
Enthusiasm for the subject. Continuing to work on their own projects at home then talk about what they have done.
na
Questions that I have not thought of on a subject. Individual work or projects that go beyond expectations and show effort and an interest in the subject.
Their eagerness to approach task creatively.
N o
I have no idea what this question is asking for. It's much too ill-defined.
Random quizzes, FUN!
Their curiosity/questions they come up with
Participating in cyber girls challenge - their enthusiasm and resilience
Usually through discussions with them on the opinions on the world. I really like getting to know the students and try to change my practice in accordance with their needs and interests
imagination
Spontaneous;y create a coded solution using a technique other than that taught in class
Amazing ideas for projects!
n/a
picking up concepts quickly, developing own learninb strategies
Aspiration to understand more, challenging inquisitve questions
all of the time
ruhghghgghhg
They seek knowledge
Their enthusiasm
Working at home on projects that are creative and imaginative. Volunteering to undertake additional activities such as 'buddying', fundraising for specific events or trips.
Doing extra work at home which goes beyond the curriculum.

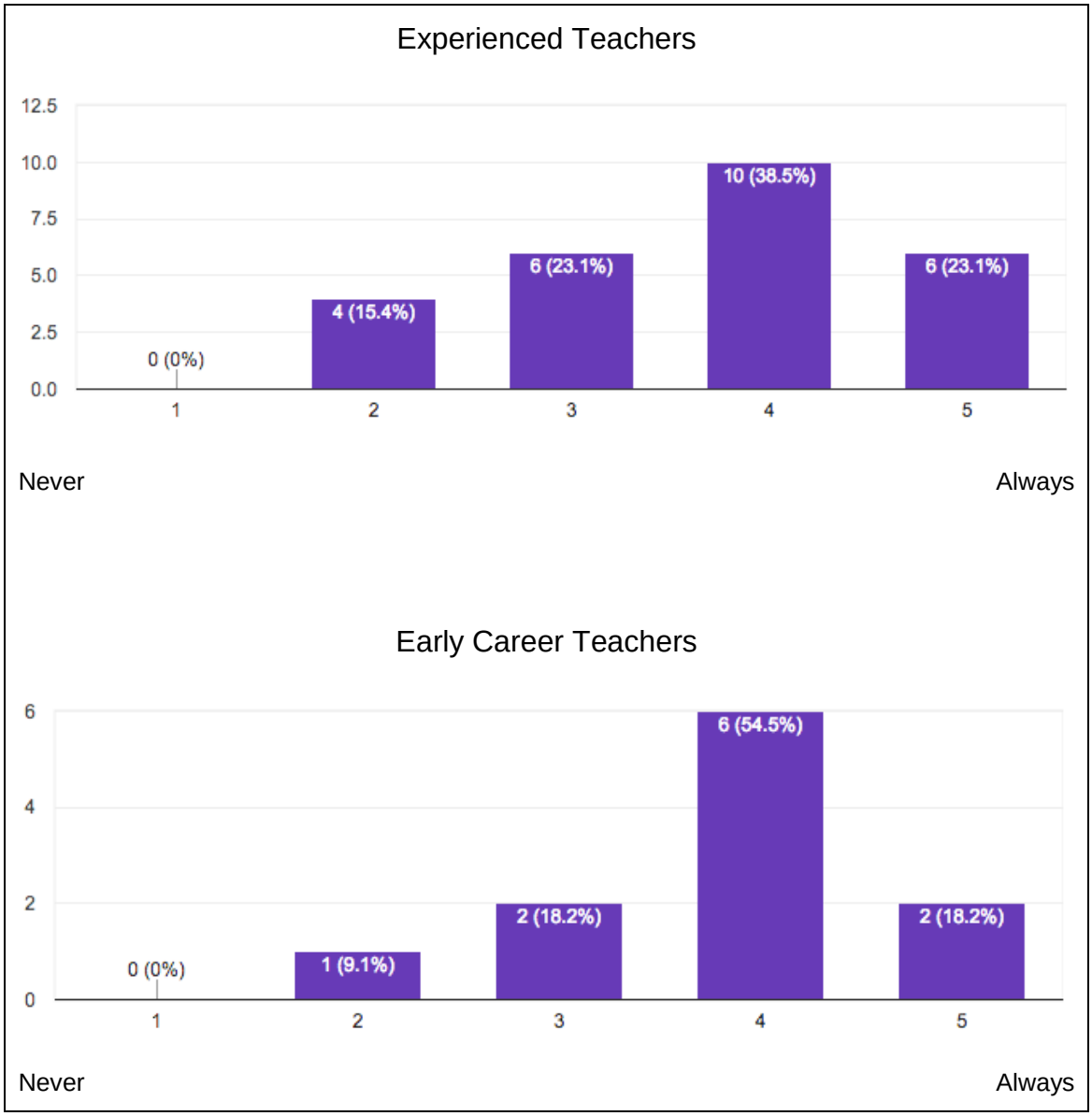
Early Career teachers

Answers to questions, amount of effort on IL
When they suddenly understand a concept and explain it to their peers better than I did.
Thoughtful response to class text.
Students whoo persevere even when they find it difficult.
Dedication to success and willingness to keep trying.
Enthusiasm
knowleged, intrest and the question why?
Making better progress with programming projects than expected
They are eager to please
Enjoying every lesson and giving it their all
Had five Yr11 exam classes this year, the hard work and dedication they show keeps me going.

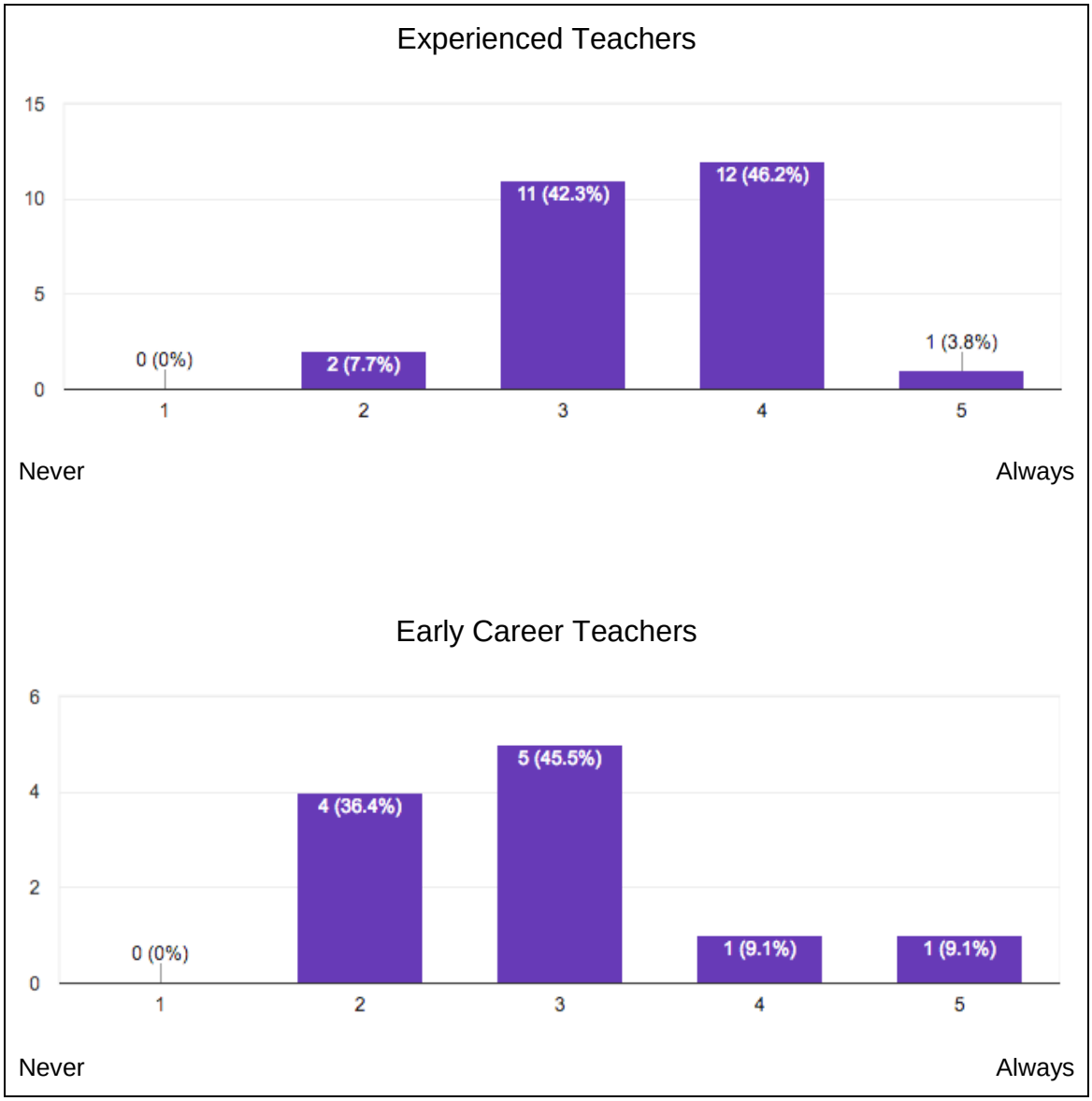
How often do you maintain a proven routine in your classroom practice?



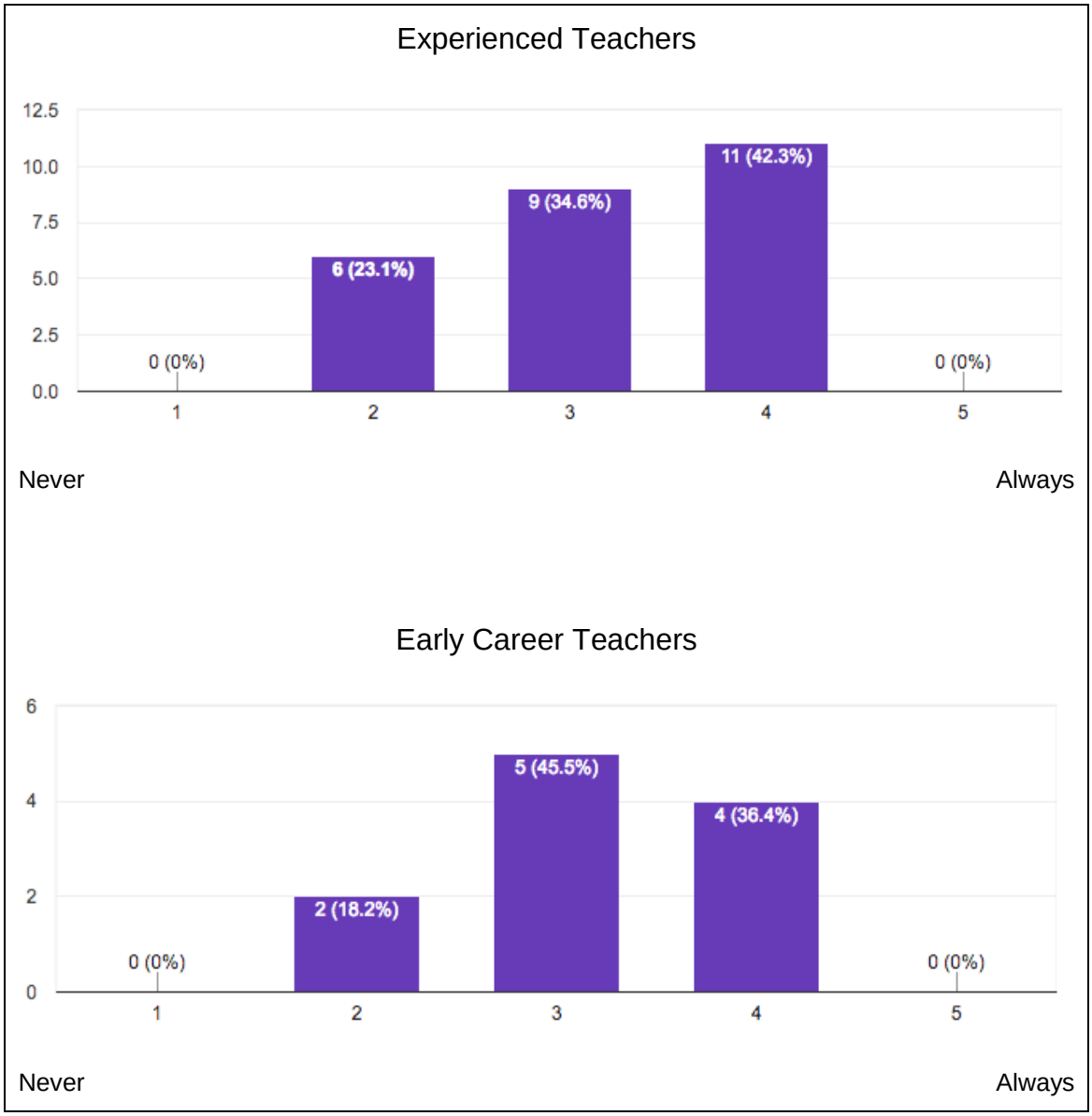
How often do you apply a lesson routine to all your classes?



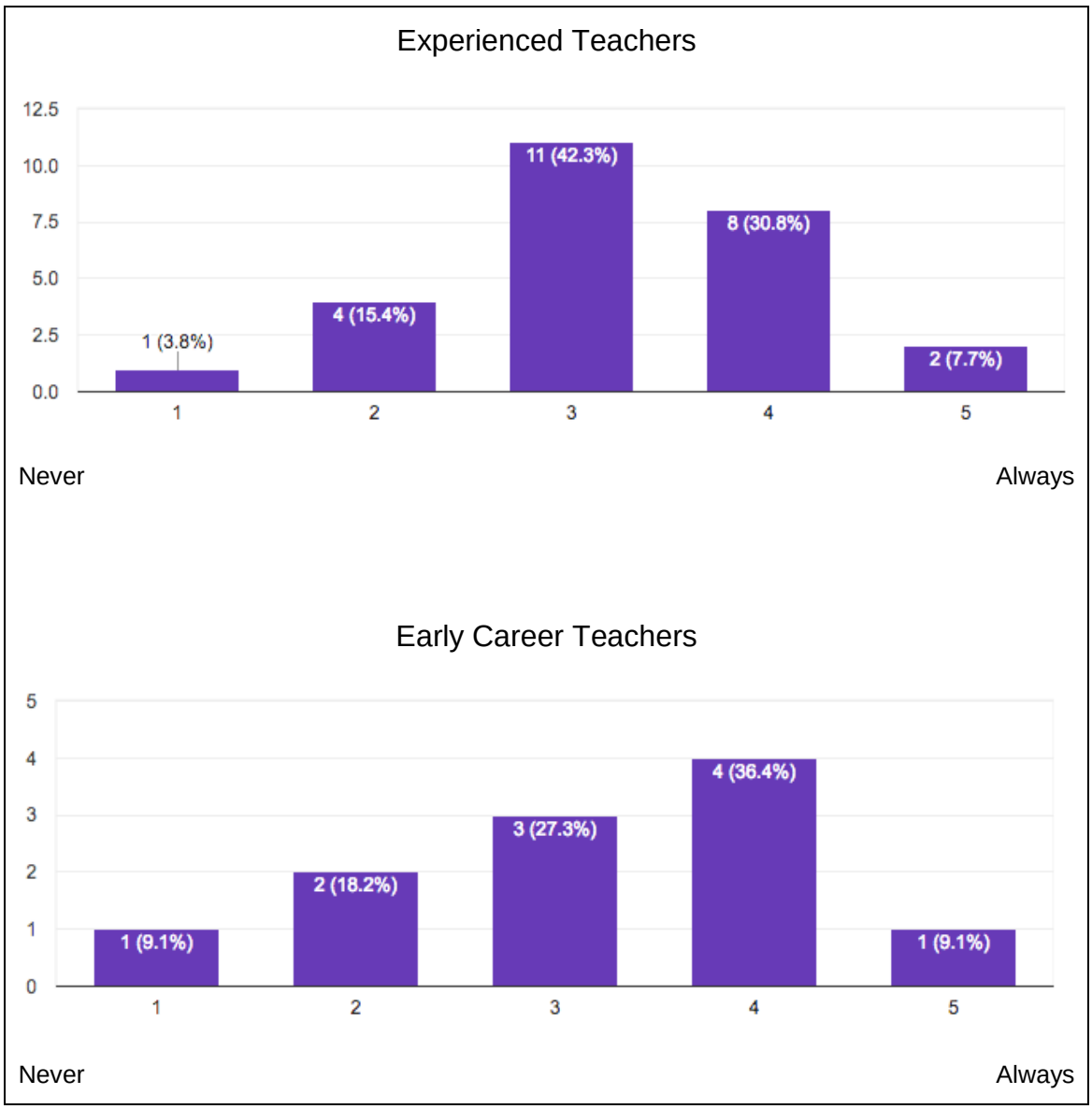
How regularly do you take risks with your classroom teaching style?



How often do you allow students to divert you from your teaching plan?



How often does the dynamics in the classroom force you to change your teaching plan?



Provide some examples where lessons have recently not gone to plan

Experienced Teachers

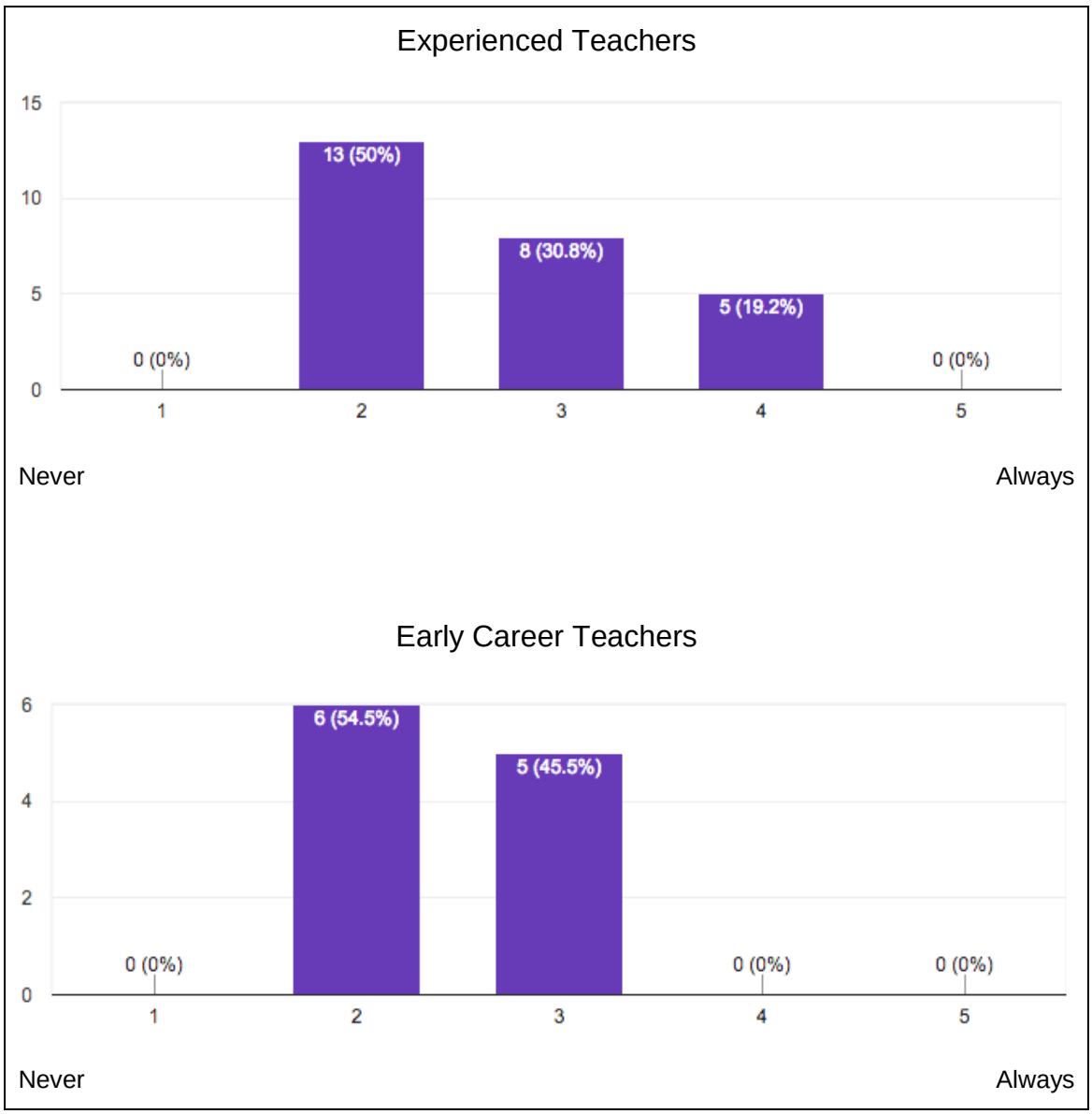
students arrive with "baggage", absence of large groups of students etc
Interruptions in learning - students sick, to SST, events outside the classroom
A lesson that was meant to be a recap followed by a new topic became a whole lesson on the recap topic as it was evident the students needed to spend more time on it.
Lost internet connectivity
Not gone to plan suggests a problem but sometimes learning takes another route. Perhaps children are not as confident with something as you think so you need to take a step back or alternatively move the learning on.
na
Behaviour management of a class, or failure of technology.
Students were unable to reflect on prior knowledge and use this to access new learning.
No
There are none.
Spending more time on Binary due to misconceptions
Network not available so couldn't teach planned lesson on computers
When IT goes wrong
I think it is about adapting the plan to a class. As long as you have what they need to learn as the focus you can divert your original plan of delivery. Sometimes it is the method of delivery I used with one class won't suit another so I need to adpat it. If students are not understanding, going at a faster pace or not engaging in what I have planned then I will stop it and change how I am delivering
tech fail
Making sounds with the Microbit. Investigation went on to include a greater range of functions due to the interest levels of the students.
Some little scroat unplugged all the PCs
n/a
flip classroom, physical demo, walk around school for network
Questions and student interest that lead to different relevant tangents
things happen

hjgjgjjgj
Practical lessons
Teaching subjects I am not qualified to teach and being informed, through assessment, that students know something, when they clearly do not.
When a pupil became very ill suddenly and the class had to be dismissed to allow paramedics to attend, I was able to reconvene the class in the main hall and get back to some form of lesson without access to many of the classroom equipment. I had to construct a new lesson plan 'on the wing' and got the pupils involved a lot more in learning about binary by using them as digits in the system, moving around as the conversion between denary and binary was calculated. The pupils thought it was more fund and the test the following week was achieved by all but one pupil - better than average!
Going through Walking talking mocks with students. They sometimes find it boring/don't see the point.

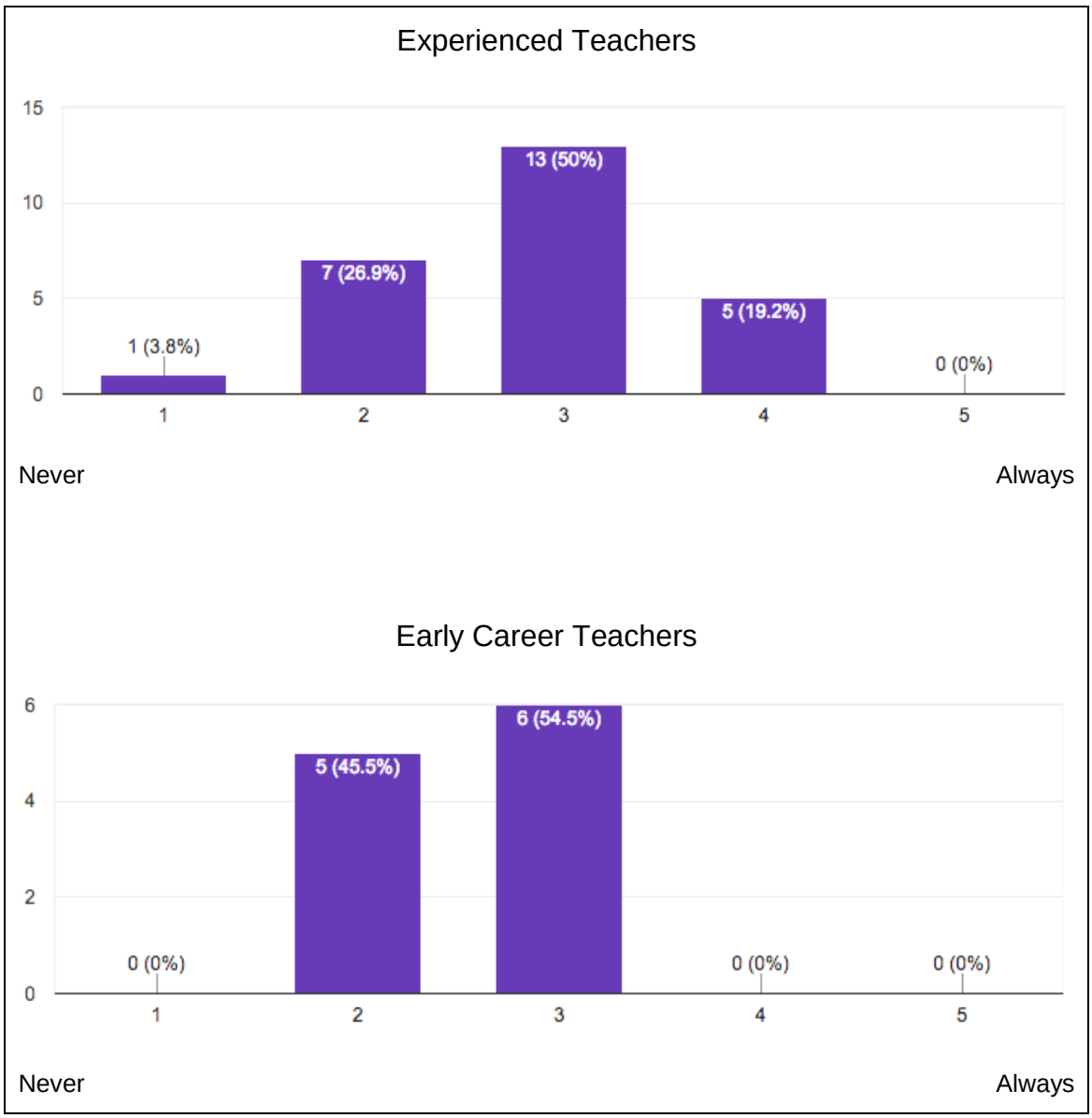
Early Career Teachers

Students are deflated/need waking up with more active tasks
When I realised that students did not know how to balance equations so I gave over the rest of that lesson to ensuring they did.
Students engaged in studied text -allow much more ttime for discussion insead of writing task
When students have taken longer to understand a concept that I thought they would pick up earlier in the lesson.
Students not engaged by topic, meaning new tasks have to be created on the spot.
Not sure
Relying on prior knowledge or concepts that need expaling in a diffrent way
Computers all stopped working due to network problem, so had to think of something different to do
The expectations are set too high the students don't engage
Maths, money handling. Stopped to get out practical coins as they had all forgotten about money. Yr 4.
ASD student having major melt down, Missing prior learning that was essential to tasks, 6 new students due to moves in maths dept.

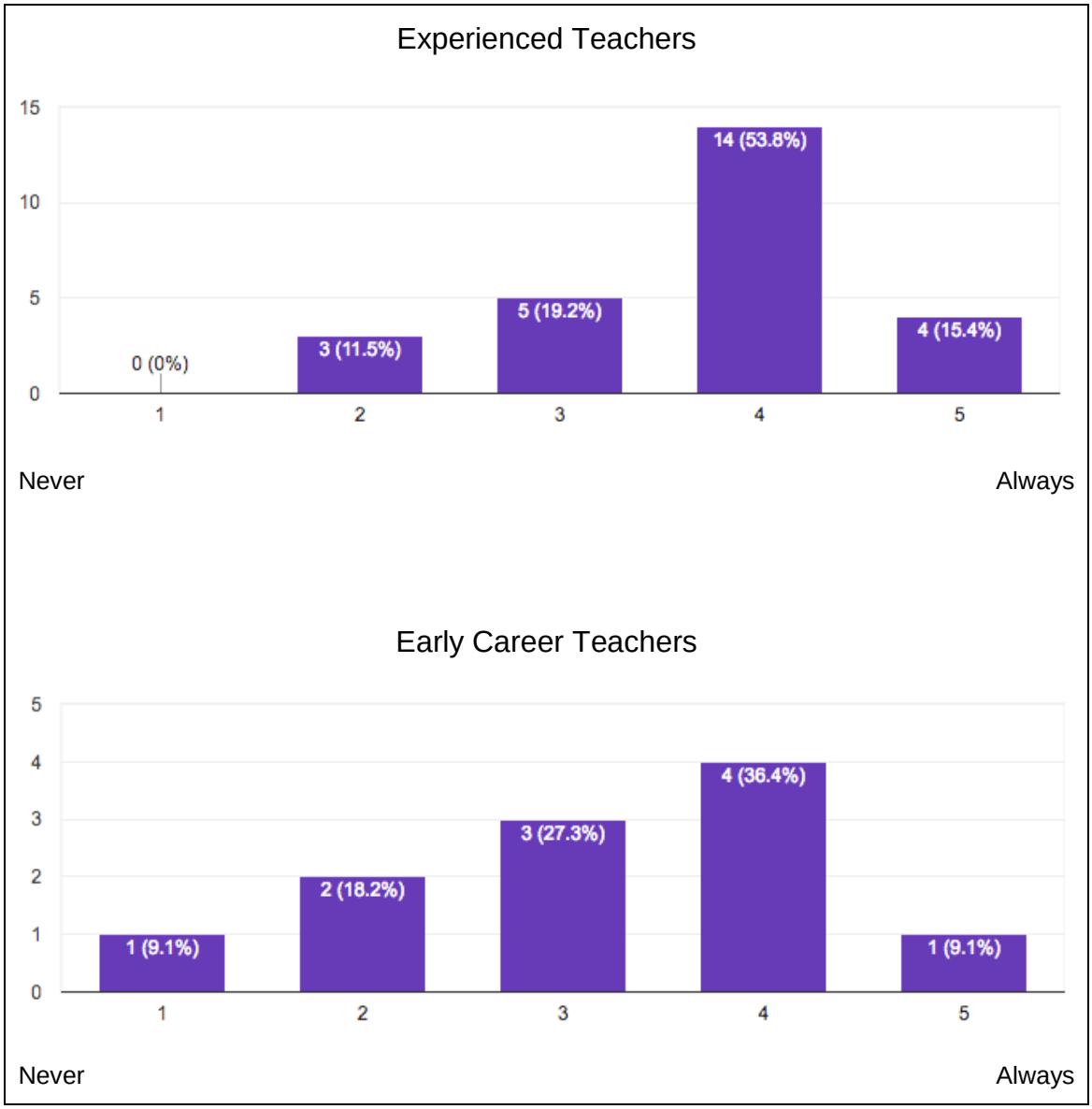
How frequently do you realise that you should have conducted a lesson differently once that lesson is over?



How often do you find that you are busy with aspects of your classroom teaching that was not in your teaching plan?



How often do you deploy classroom skills that you developed yourself?



Give some examples of classroom skills you developed yourself and now rely upon.

Experienced Teachers

teaching ideas, rely a lot on relationships with students to control behaviour
BFL strategies
I can't think of any
humour
Don't develop much myself but adopt things I have learnt from elsewhere. eg. the SNOT stategy, which enables me to spread my teaching time. Children work through trying to solve problems themSelves, ask a Neighbour, ask an Other person before asking the Teacher.
na
Designing own room structure for my needs.
Emotions coaching. Flipped learning.
No
Clarity of exposition. The ability to explain clearly and simply requires many hours of thought about each concept.

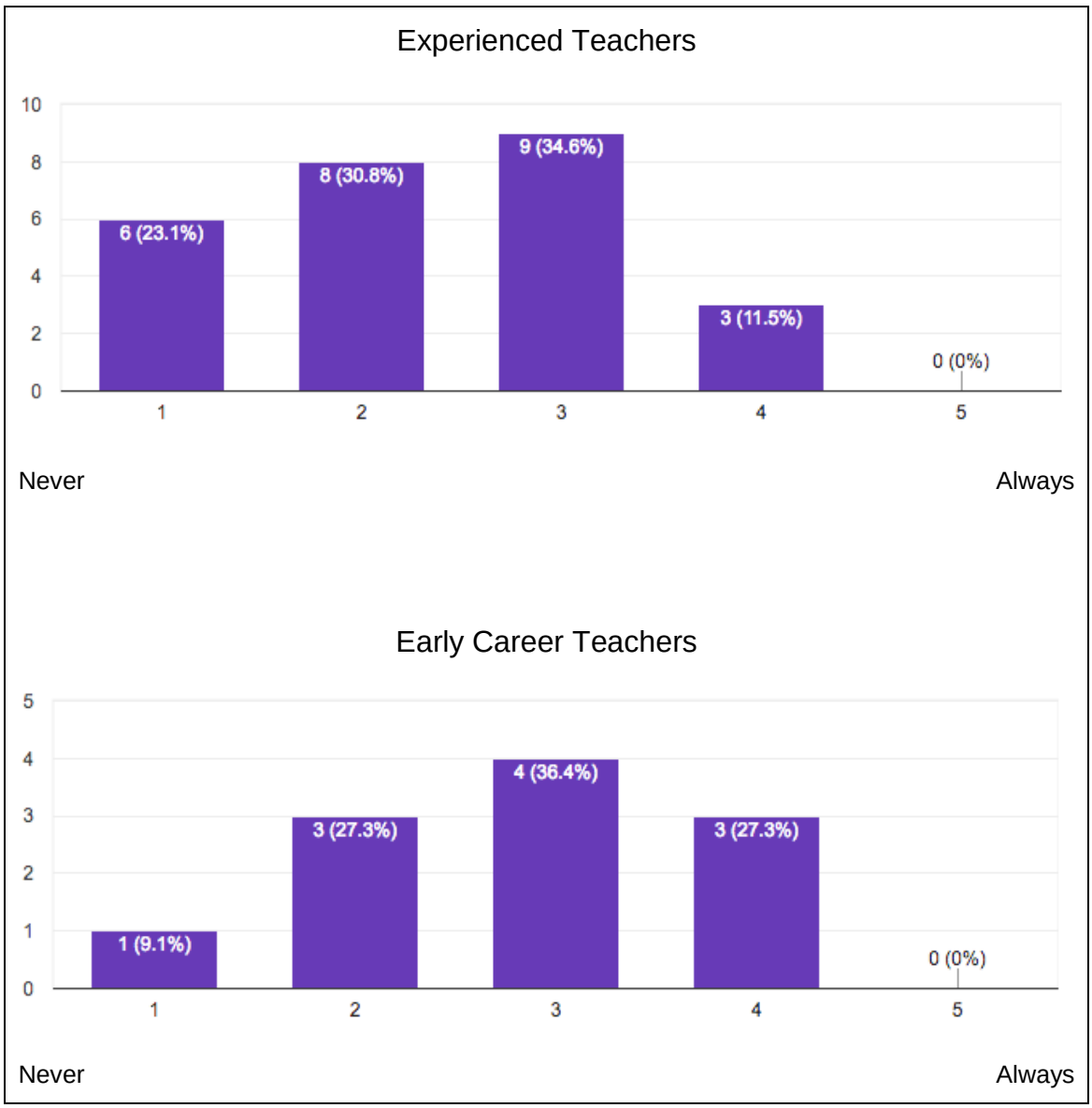
Not sure what you mean
?
Mainly it is about relationships, knowing the students and adapting how I chivvy them on or stretch them to do more. I have introduced more class discussions on the latest news as I feel it is relevant and they need to develop good coimmunication skills -I'm sure they aren't original ideas
preventing escalation
Using Impero to broadcast my screen to the students allows me to give them a direct digital copy of the board workspace and any collaboration that we have had as a class.
Ritual humiliation
n/a
chill time, homelesrning booklets, extention choice
countdown and use of oneNote

software skills
hgfjhfjhfjh
N/A
My behaviour management techniques
Flipped classroom, where the pupils decide from three or more options what they want to learn that day. Reportage - where pupils report back on what they learned that day - either for themselves or as a report from a piece of groupwork. Pupils suggestions for homework from a 'basket' of possibilities - printed on cards
Using a Do Now, the way I scaffold programs, the way I run interventions and web tutorials. I've written about them in detail in my book: "Teaching Computing in Secondary Schools"

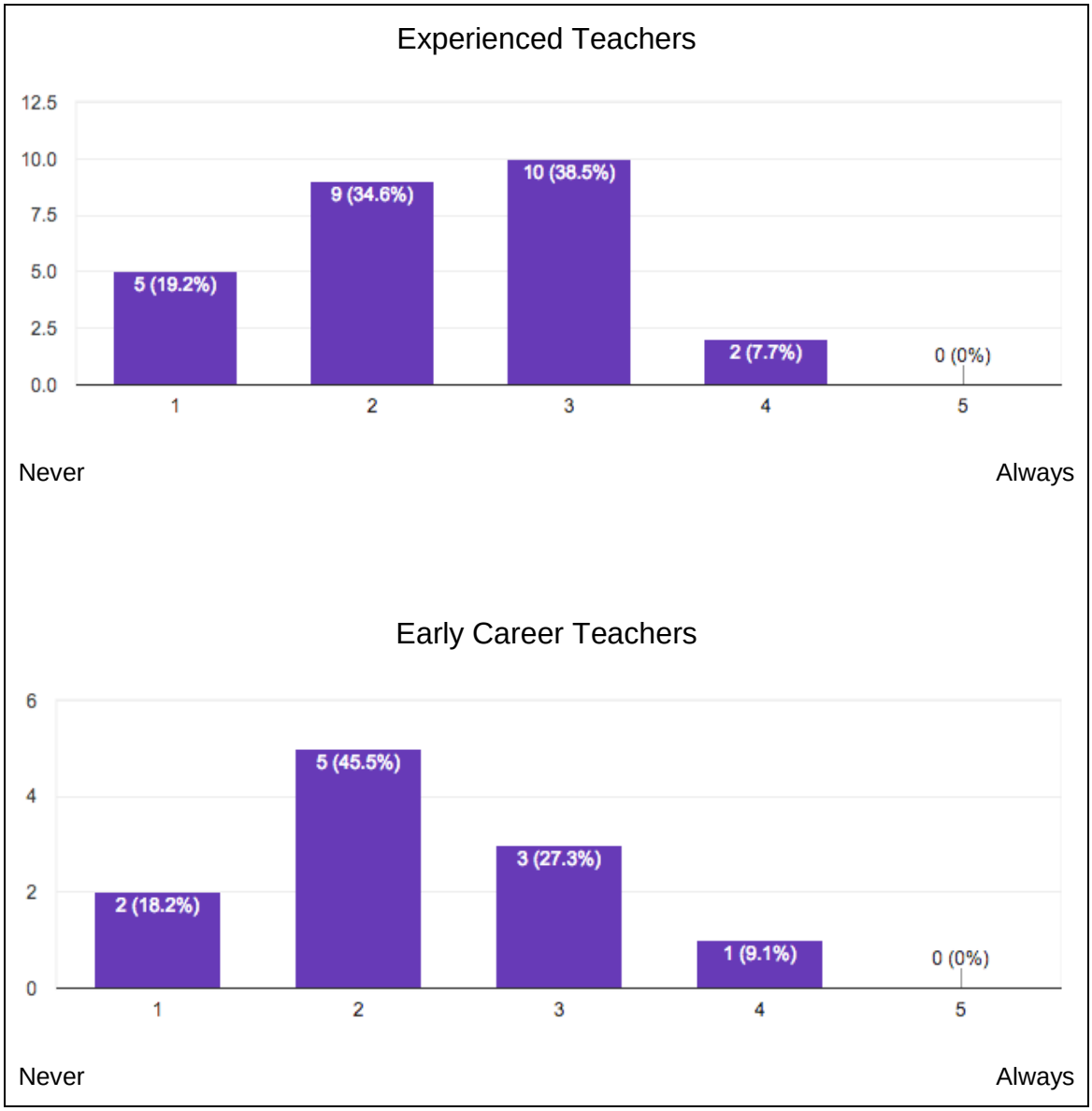
Early Career Teachers

Growth mindset, sticking to timings closley, enthusiasm and energy
Can't think of any really.
Using film to suppor learning of structure
Using data effectively. Planning for all to sucees. Seating plans for behaciour management. Letting students decide tasks for progress. Using online quiz tools for myself and allosing studets to create them.
Methods of questioning and classroom control.
Na
Applying scanerios to real life, adapting lessons to particlaur students based on thier expeeriences
?
knees to me all students look at the board knees facing forward they are in a computer room so this ensures they are not distracted by the screen
Golden time chart, Class Dojo
next but one questioning, cold calling but giving a whole question to someone else as thinking time before student is required to answer.

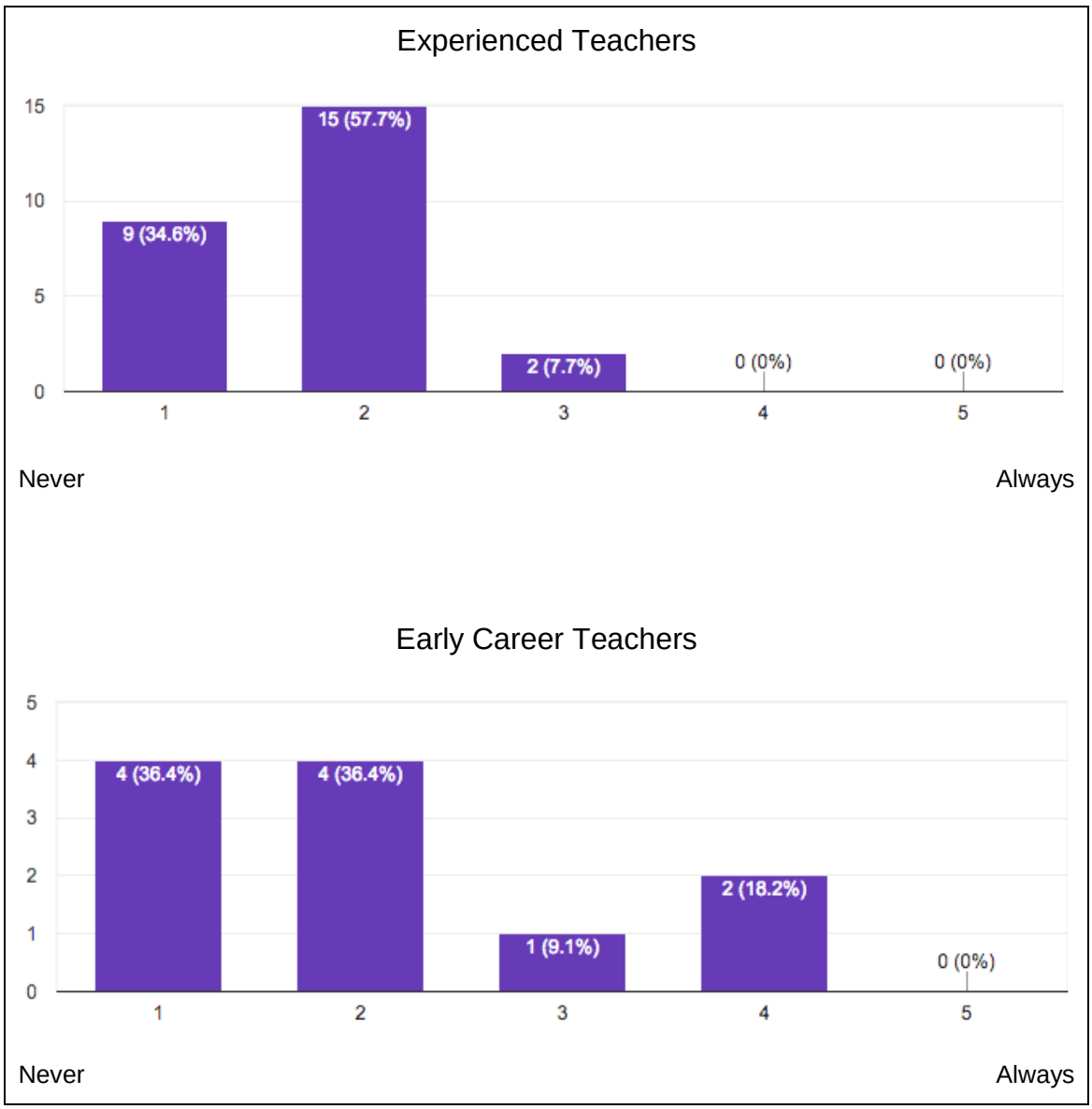
How often in your current teaching do you seek assistance or advice to help develop your classroom skills?



How often are you surprised by events that occur in the classroom?



How often do you find that you have depleted all your skills and knowledge in the classroom?



What do you feel could help you to have more impact on your teaching?

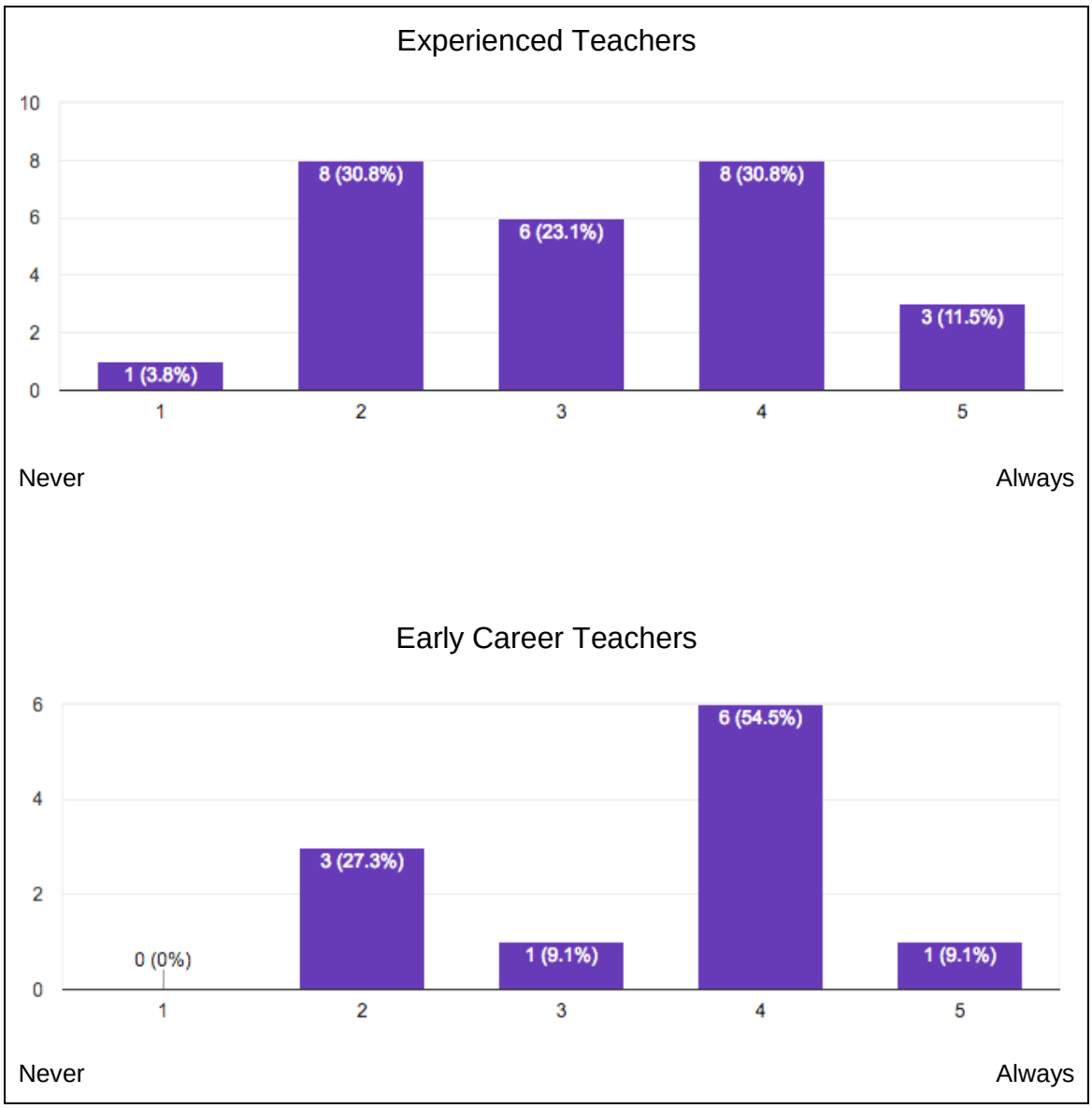
Experienced Teachers

higher aspiration of students/parents, greater responsibility of students, less onerous admin tasks
Further Subject Specific CPD
More time to reflect and work with colleagues on strategies.
money to buy better software
Definitely need to keep up to date on strategies and developments as teaching constantly changes and returns to old ways.
depleted
More time for planning.
Stronger red line with behaviour management.
No
More time for planning. Better designed textbooks.
Having time to deal with indiviuals
More research into what works rather than ideas
Reliable IT
More time to think
more PPA
Better resources!
A big stick
n/a
none
deeper wide computing knowledge
no
gjgjjgjgjgj
Computing CPD
More time instead of unnecessary CPD and more collaboration
A more even mood!
Better school-wide behaviour management and consistency to expectations.

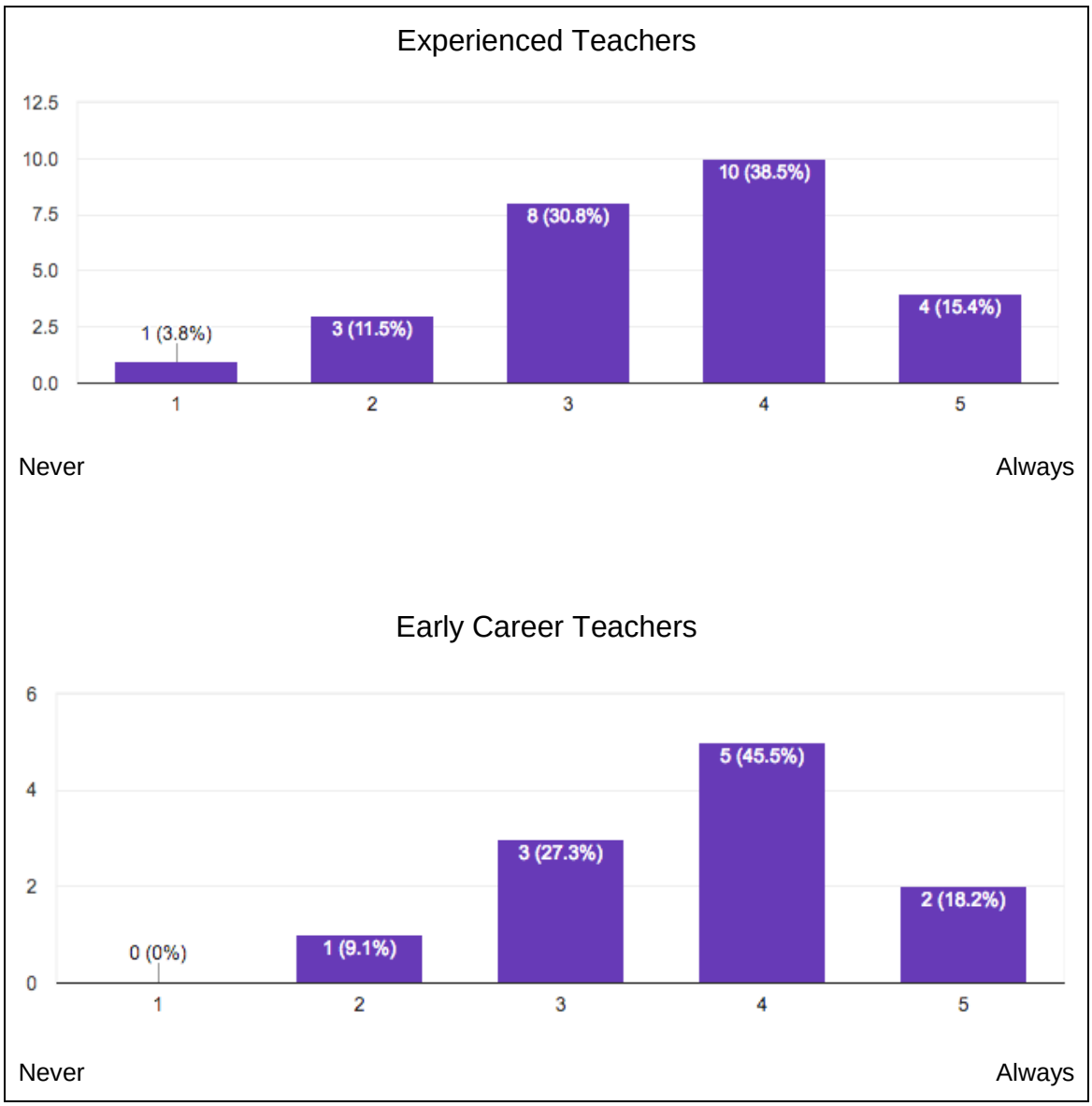
Early Career Teachers

more time to plan for efficient differentiation
Coming up with more engaging activities.
More time for marking/planning
Less paperwork thus providing more time for planning brilliant resources.
Help in context of my department.
Support with challenging group
Better access to tech in classroom and direct involvment with industry - mapped pathsways to future employment
Peer-to-peer informal observations and coaching
watching students with other teachers
More sharing of ideas and practises on groups/forums of what went wells and people sharing what didn't with advice offered to them.
Being able to teach more practical skills, networking, PC building, System config etc.

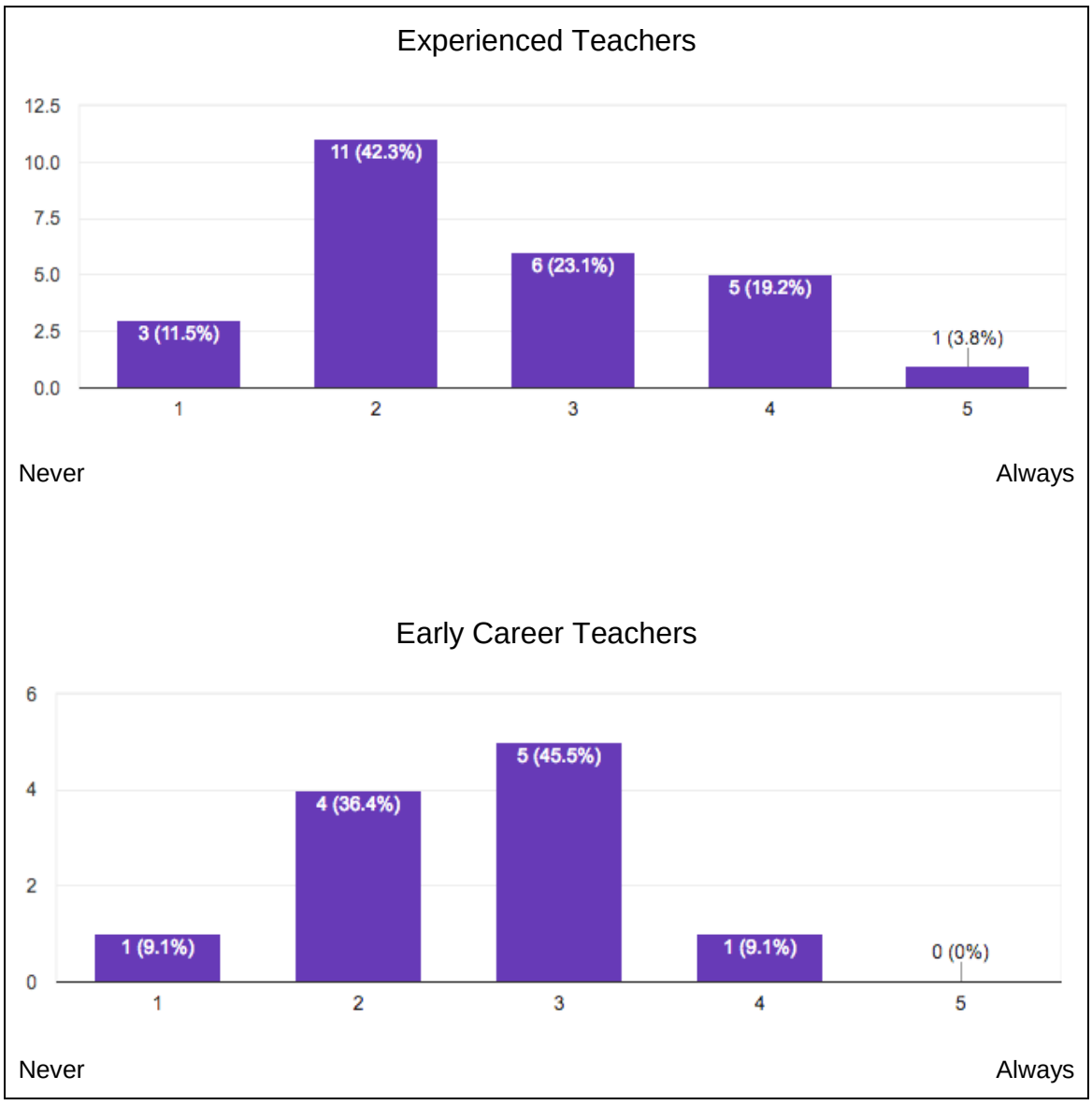
How often do you rely on your own personal resilience to get through a lesson?



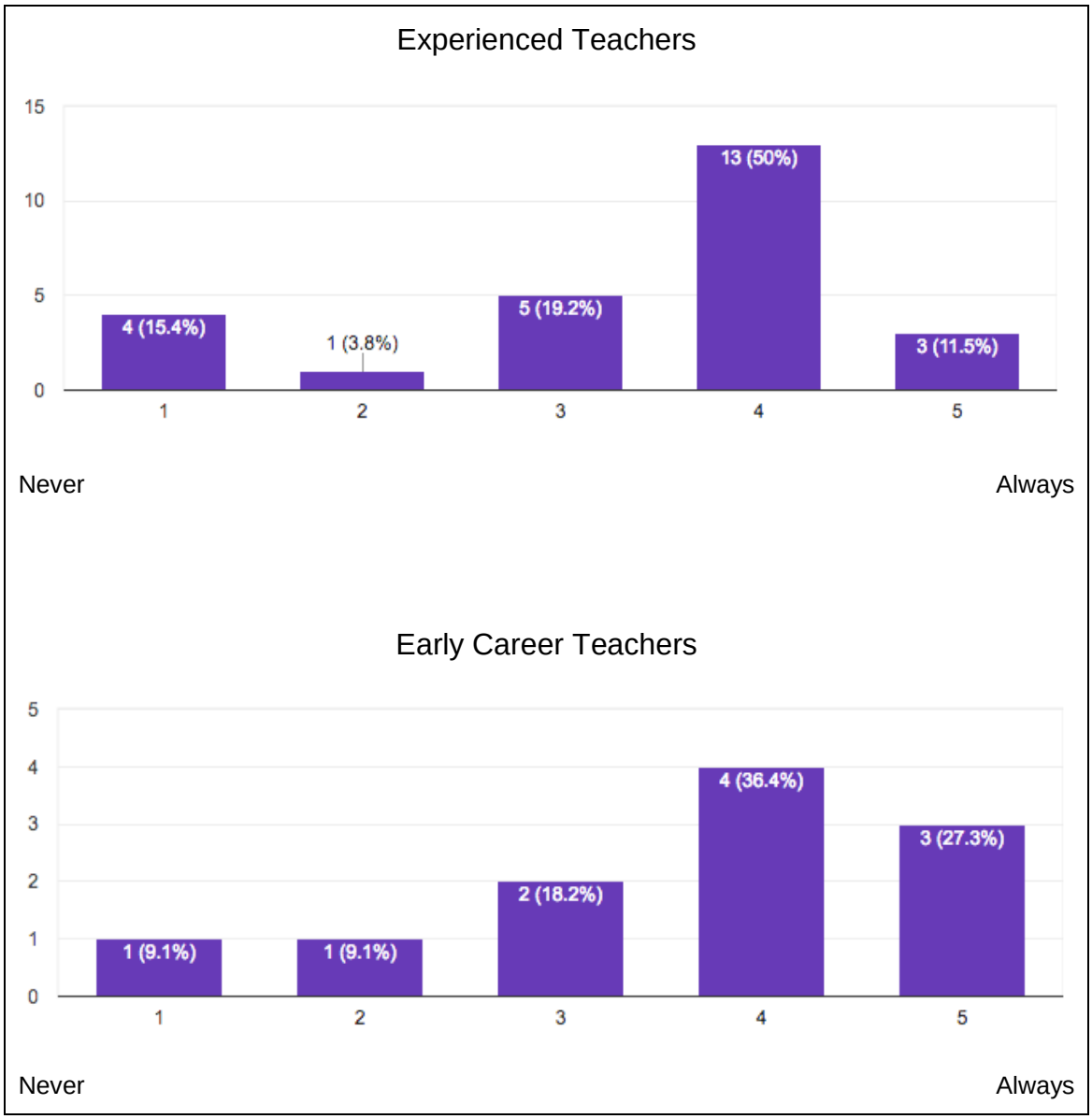
Do you feel that you use a range of personalities or identities in your teaching practice?



Stress is a common reason teachers give for leaving the profession. How often are you mostly stressed by classroom teaching?



Stress is a common reason teachers give for leaving the profession. How often are you mostly stressed by non-teaching responsibilities as a teacher?



Do you have any additional comments you would like to add concerning improving teaching and learning experiences in the classroom?

Experienced Teachers

For the last question I would say it is my other responsibilities not as a Teacher that add to my work load and so Stress. That is because I have other roles in the school and too many other jobs to complete
I love the classroom, it is the tasks for no reason from slt that cause stress
jgjgjgjgjg
Not to teach subjects that are not qualified in and for SLT to ask what CPD is wanted/ needed rather than just deciding, after all, they go on about differentiation but don't practice it themselves with their staff needs.
If teaching was just about what happens in the classroom it would be a dream job, but ex-teachers and non-teachers manage to sabotage that experience with worthless paperwork!
Poor behaviour around the school is an issue. Workload and unpredictability can be an issue.

Early Career Teachers

Time and pressure I think are the main contribution to stress.
I have already left teaching as being responsible for 21 classes (computing) and making sure 80% achieve their targets was too much strain. Too much proving what you did to help the student and not enough on student responsibility. Being left out of a pay rise because a year 2 year 11 classes that you didn't teach in year 10 didn't get their target grades although their coursework was severely lacking and not much time to teach theory. Not enough time to spend with my husband was another reason. Stop trying to get teachers to try out the latest new fad and the force 4-part lesson plan and allow teachers to teach.
The creation of paperwork to evidence what has happened has a direct impact on how long you spend delivering content and enabling students to progress
Give teachers a little more help to make lessons fun, then the students will want to learn.

Baseline Survey Responses – Increasing Experience of Teaching

Many studies into developing expertise note how experienced practitioners have a lower cognitive load than novices. I am interested to know if you have experiences of this in teaching, where classroom practice becomes easier as you draw on your experience and have time to 'think on your feet' more. What would you say about this theory?

Experienced Teachers

you have more experience of having tried things out - so have better knowledge of what might work well.
Agreed!
I agree with this and find it much less stressful to have to change a lesson based on the circumstances and can go in a different direction without a lot of thought.
knowing subject knowledge, assessment criteria etc make it easier to be confident and be in control
When you have taught things previously you constantly draw on earlier experiences. Repeating a lesson with a different group of children will often produce things in a different way with differing outcomes. Experience will always help as you can think back to how things went previously.
na
I would agree. More experience makes it possible to take risks, or change the direction of the lesson.
Perhaps but I would also argue that as a reflective practitioner you have a muti layered approach to analysing successes and areas to improve in your lessons and are perhaps doing this at a deeper cognitive level than you might have in the early days of your teaching.
I agree

This is clearly true. After 30+ years I have a wealth of personal examples and approaches to concepts. I usually know exactly what the misconceptions are and what manner of words of explanation to use in order to minimise them.
Confidence is breed through experience. Confidence is then transferred to students.
Classroom management is second nature - you do it without thinking.
Agree - as an NQT I had to script my lessons so I covered everything and remembered to ask questions. I haven't done this for a long time
I think that is probably correct, the longer you do a job the more experiences and so tools you have in your repertoire. Experience helps us know which tool will work in each circumstance. However, Teaching as a profession has changed a massive amount in the 15 years I've been doing it. I am constantly learning and need to develop my practice to reflect the new curriculum requirements and emphasis on linear assessment. So that does require more cognitive load as I develop new methodology and tools to meet these demands.
obvious
As you develop as a teacher, you have to think less about the content. This does allow more time to 'think on your feet' should a student ask something unexpected. As an early practitioner, you spend more time thinking about lesson structure and simply 'getting through the plan'. Being flexible is the key to a successful lesson and having the confidence to stray from the plan comes with experience.

It makes absolute sense (incidentally I am researching cognitive load in students)
Sorry - short of time to answer open questions :(
I agree, new teachers find different scenarios difficult as they are new. Experienced teachers have seen it so know options to work with the scenarios
This is very true, experience gives not only gives a wider range of tools and greater confidence
thinking on your feet is a vital skill
hfhfhfh
N/A
Agree
I would agree that this 'load' reduces with confidence and familiarity with both teaching techniques and the subject matter. Keeping abreast of developments to introduce into the syllabus to enrichen it is an additional load however.
Yes, it's certainly true. Once you automate certain routines, you can focus on teaching. With experience, you learn to ignore certain things and stay on track. You're better at tactical and operational adjustments because you have a clear long game and expectations.

Early Career Teachers

Yes I do agree, once you have, for example, taught a unit before you feel a lot more confident and things become easier. I also think flexibility is always needed
I would agree, the longer I am teaching the more time I have for myself as the lessons are mostly planned and the resources made. It is more about marking the books, which is a standard length of time, and teaching the actual lesson.
Our specifications for GCSE have changed too dramatically o track this in my teaching experience
I agree with this. Although I came into teaching late (52) I had be a TA for many years. I have used a lot of what I learnt about children and observing other teachers. As time has gone by, I became more confident in my own teaching.
I would say this holds true with my experience, as I have taught for longer many of my teaching habits have become embedded and I don't need to actively think about them. This allows me to think about other ways I can enhance my lessons.
I agree. Now in my fifth year teaching I don't spend as long on planning - I am able to think on my feet much more.
Unsure currently
Seems sensible

I dont know as i am an nqt but notice my hod does not do half as much work as me. I need to mark to be in control and keep track he only marks when necessary. he has a better balance than me so i guess i will get there in the end too.

I found practical experience and knowing what to do from previous experiences a lot more helpful than learning theories in training.

I think the main answer to this question lies in what you are actually taught during your ITT. Knowing which fires to extinguish first makes a massive difference to the amount of work you have to do, as does which classes you are given. So the question does not become about the load itself but in which direction it is being applied.

Do you find with increasing teaching Experience that you have developed a 'lighthouse effect' where you can sense changing dynamics, predict changes in behaviour or attitudes, and can then adapt classroom teaching sooner? Do you agree with this? What are your thoughts on this idea?

Experienced Teachers

better ability to "read" a situation and intercept
Mostly, yes. However there are a multitude of factors which contribute to this outside the control of a teacher and a teachers impact is limited
Yes, I agree. I feel more aware of an upcoming problem and can diffuse situations before they arise easier/quicker.
yes - the 'eyes in the back of your head' type of thing. Probably you are able to identify what will become a bigger problem later if you do not deal with it early on.
You become more adept at following the mood of a class but I think this comes with knowing the children not necessarily with teaching experience. You know what is likely to flare incidents etc. The practice comes with adapting things as that happens. That is the part that requires a little experience.
na
Depends on the class. Some classes and students are predictable, but on occasion you can be caught out, both in a positive and negative way.
Yes, experience allows you to think on your feet and adapt sooner as you are more likely to have a broader repertoire of tried and tested approaches and you have more confidence in responding to the dynamics in the class rather than sticking to your lesson plan.

I agree
Yes. Because I no longer need to devote much conscious thought to subject concepts and ways to present them, most of my attention can be devoted to the classroom dynamic, allowing rapid response when necessary.
Experience means you have dealt with similar situations in the past so therefore you can deal with them better the following time.
Yes, you do pick up on subtle changes.
Agree. I seem to have developed a sense this over time. If you do something enough times you know how to react.
I think so, I feel I am more intuitive to a classes or students needs or reaction. That doesn't mean I always get it right!
yes. it's just experience
I believe that as an experienced practitioner, you know what will work before the lesson starts.
Yes, totally agree. Can also depend on which lesson the students just came from, so I know how to prepare, if they have had say RE or PE for example. One I need to wake them up from and one I need to calm them down from.

Sorry - short of time to answer open questions :(
Yes
Also true but I also brought much of this with me from previous experience outside the classroom
foresight is a wonderful thing
vnvnvnv
N/A
Agree
To some extent. The classroom dynamics are important, but can be managed to some extent too - depending on circumstances e.g. separating pupils in conflict, ensuring agreed classroom rules are followed about respect and giving others the same chance as themselves to contribute and have their views valued.
To an extent. And sometimes I'll change activity to "mix it up" when I sense that energy is low.

Early Career teachers

Sometimes, but you can't rely on predictions.
Yes. I am much more adaptive than I was at the start of my teaching career. I have plenty of fallback plans and am much better at reading a room and changing the lesson accordingly.
Yes - this comes from knowing students better as well as teaching experience - especially notes in classes I have taught for 3 years
Mostly this can happen. Some students can be very difficult to engage and have no self-belief no matter what to do to encourage as a teacher and their difficulties with the subject don't match their predicted grades so you end up having to push the child to impossible limits. This makes it difficult to plan for rapid progression for that specific child. Teachers have to really plan specifically for many children which is exhausting in itself.
Sometimes, but there are so many variables involved in these dynamics across individual students and classes.
Not sure about this one. At times / with certain groups.
Yes but not always succfully
I agree, I have got slightly better at this over time
I am getting there - my withitness is improving

Yes, recognising restlessness and when children are giving up or need that extra push.
Probably but I would ava that the main changes occur when you get to know your students better, then you can begin to predict how the behaviour might change.

Finally, if you wish to, please give some insight into how you have found your classroom teaching experience so far. Have you had to learn on your feet? Has teaching been a difficult and unpredictable experience for you? Are there times that you genuinely feel like giving up for a different career? Have you found you are becoming more effective as you gain experience?

Experienced Teachers

I feel it is much easier with time/experience in some regards, however physically the job is as hard as it has ever been in my opinion and as I get older I find it more challenging in this respect. Whilst I enjoy my job, it is not one I foresee myself remaining in until retirement.
I still love being a classroom teacher and working with young people, seeing them develop and engage with my subject is great. The increased pressure for results and other paperwork and admin have made me think what I might do instead of teaching, but so far I haven't come up with an alternative so know teaching is still the right job for me. I feel I am more effective now than ever, but found coming back after maternity leave to new specs a fresh start as I think I'd lost some of the drive. I've now been teaching for 16 years.
Workload has gone down - partly experience and partly changing assessment models (BTEC going from 6 units of coursework to 2, plus two exams), plus being able to re-use resources and finding those great people who have tim eto make that presentation that you need for the next topic.
I have taken a step back from classroom teaching to become a specialist in one subject. This allows me to teach more children but with confidence in one area. It also frees me from a lot of the bureaucracy that comes with classroom teaching. I genuinely could not manage my life as a single parent with 3 children with a classroom teaching career and thankfully don't have to. I also combine 2 part time teaching jobs that allow me more flexibility and freedom (but at a greatly reduced pay) than I would have being a classroom teacher. For me, life has to have a balance and I could not do that as a class teacher. However, with experience you also learn that there is no need to constantly 'reinvent the wheel' to make teaching effective. Using your planning time wisely and knowing when to go all out and when to economise on time comes with experience.
na
We all learn best through first hand experience so all my practice so far (positive and not so positive) has made me the teacher I am today and has enabled me to adapt and keep perspective. The pace and workload of teaching does not get easier as you become more experienced. It is not a case that you have less work to do once you have taught a topic a few times. As education is continuously changing (curriculum, specifications, exams, priorities) we are consistently doing something new and there are fewer opportunities to consolidate. As an experienced teacher, I am an older teacher and I have found it harder to find the energy reserves I once had to deliver a 6 hour day of lessons. I think this is the biggest challenge. It's as if I peaked in my 8th to 10th year of teaching and now I have the same enjoyment and believe I have refined my approaches with positive effects but perhaps not the same stamina! Maybe the administrative demands and the emphasis on data and predicting and justifying data also plays a part in exhausting my reserves!
You only become more effective if you constantly strive to understand and learn more about what works. In the British system, with high workloads and very poor ideas about what constitutes effective practice this often takes too many years. I doubt that 10 years is enough for most teachers.
I think to be a successful teacher you have to be proactive and resilient. I think there is a great deal more support for new teachers and all teachers now than there used to be. But there is also higher demands and accountability in terms of outcomes
been teaching so long that I plateaued a long time ago

I started as a teacher of Maths and am now Head of CS. Whilst I have always had an interest in CS, I have had to learn a great deal about teaching the subject as well as the actual content and recommended programming languages. I feel that there are times I do not know enough and with the workload of marking and planning in general, there is often not enough time to thoroughly prepare. As I mentioned earlier, however, the experienced practitioner is able to adapt and think on their feet.

I find coming from industry has made me much more resourceful and able to think and adapt more quickly.

Sorry - short of time to answer open questions :(

I feel more likely to give up now as experience is not valued, new teachers are cheaper and get jobs, it is not looked at as a good thing to have taught for a long time unless you have moved regularly. I feel that staff that stay in a school develop skills and deploy policies better than new teachers and teachers new to a school

One of the biggest limiting factors over the years was from outside influences of more senior teachers and observers giving negative and ineffective feedback depleting confidence and increasing stress to repeatedly bend and twist teaching approaches to fit useless expectations

sometimes and sometimes not, it depends on the day

vnnvnmmv

I have numerous responsibilities, some of which I am not paid for, and am expected to do anyway. SLT do not respect this and provide adequate time, so I am constantly working more than I should. SLT also require useless pieces of written evidence "for OfSTED", which is unnecessary.

I felt that I only started learning when I 'conceded' that my teacher training was just the start of my journey and not the destination. Experienced teachers are worth their weight in gold and if more of them were given the space to mentor, the education system would be a much better place to work.

I learnt a lot from twitter and a few inspirational teachers and leaders at a "Requires Improvement School". I've actually learned less in the "Outstanding schools" I've taught at. I highly recommend Oli Knight's book-"Creating Outstanding Classrooms-A Whole School Approach" and Doug Lemov's "Teach Like a Champion 2.0" along with Benedict Carey's "How We Learn" and Paul Bambrick Santoyo's "Get Better Faster" as well as journals and research by John Hattie, Deans for Impact, Rob Coe. There's a lot on twitter to learn from if you follow a wide range of teachers. However beware of just following the populist crowd.

I found teaching in an Outstanding school stressful because of the expectation to get great results regardless of the cohort. The no excuses attitude is a bit of a poisoned chalice/false illusion. Sometimes kids do worse because of so many factors outside a teacher's control. I almost burnt out after 6 years in my first school-an outstanding inner city girls school. I left to teach in the tropics for a year and that gave me perspective and renewal. I'm likely to do the same and teach internationally again.

I am definitely getting better and feel more confident, although I recognise that context is important and there's a lot still to learn in each school I teach in,

Another thing that is challenging is the low wage of teachers, where there is a skills shortage, one sure fire way is to increase funding, yet we see the government making successive cuts and pay freezes!

Early Career teachers

I have had to learn a lot on my own and don't feel that I have received support or training like I thought I would. Luckily, I am very independent but I can see why a lot of teachers leave in their first couple of years!

I don't often think about a different career. Teaching can be hard but I also find it rewarding and for the moment I am happy with my career choice. It is becoming easier all the time and I don't think I would change my mind unless it suddenly became harder.

I think as an NQT I made better lesson materials - as I have become more experienced I definitely plan less, but the quality of teaching has still improved

I've had 2 difficult classes in an greater london school. Behaviour management has been a steep learning curves. My current class is very SEN and emotional needs. Which means a lot of assistance is required and teaching independence. I almost dreaded coming in at points but the year is almost over so I know nothing will be as bad as this in future.

I love the challenge, I cam to teaching from industry via a network mangers post in a busy secodary school, so I knew what to expect. Sometimes it is difficult but no I havent thought about giving it up, just thinking about getting better at it.

As I have written previously I no longer teach. My husband had a surprise heart-attack(he's very fit so not expected) and it made me realise I didn't want to spend every evening and weekends marking, planning or inputting data. There has to be some kind of social life which is not possible in teaching.

I am in my 4th year of teaching and I am currently head of 2 departments. This has involved a huge amount of learning and time spent managing and improving department processes, without necessarily having an impact on t&l. I thoroughly enjoy the teaching aspect of my job and working with the students, often it is the administration and SLT meddling that is the most stressful element. Inability to understand that what works in an MFL or science classroom does not automatically work everywhere can be frustrating and leads to wasted time and effort on policies and procedures that are inevitably reversed. I worked in industry before coming to teaching and I am acutely aware of the positives of this career, however I have considered changing my role within education.

I feel that I am getting more effective as I teach for longer, however I can recognise that there are still many areas of practice I have yet to perfect.

School are currently inefficient and relying on outdated practices, a school needs to be forward thinking to enable the current students to adapt to a working environment and go on to be successful. Schools also need to consider environmental impact and work life balance of staff.

I am loving teaching. I have progressed from PGCE to NQT and this has been very enjoyable. I think as my confidence rises I am less stressed and lessons are easier. I have my resources, I know the material - at the moment life is good.

Appendix V

Participant Survey Responses - Professional Development

Note: the numbers in the table represent a range of possible responses from a Likert scale, where 1 represents 'never' and 5 represents 'always', see examples in Appendix II.

Are you participating as a mentor or mentee? (I am unable to identify these responses to any individual)	Does your school based CPD help you with maintaining administrative and legal requirements?	Dos your school based CPD provide you with the latest educational research and theory?	Does your school based CPD provide you with ideas for improving classroom practice?	Does your school based CPD provide you with the development you need to improve your teaching?	Do you find school based CPD to be relevant to your personal professional development?	Do you seek CPD beyond that which is offered from the school based CPD?
Mentee	4	3	4	4	4	3
Mentee	3	2	3	3	3	2
Mentee	4	3	3	3	3	5
Average	**3.7**	**2.7**	**3.3**	**3.3**	**3.3**	**3.3**
Mentor	5	3	3	2	2	4
Mentor	4	4	4	3	2	2
Mentor	4	5	5	5	4	4
Average	**4.3**	**4.0**	**4.0**	**3.3**	**2.7**	**3.3**

Are you participating as a mentor or mentee? (I am unable to identify these responses to any individual)	Do you believe that you don't need the school based CPD because you have sufficient experience?	Does your school based CPD differentiate between classroom practice and other teaching duties?	Do you wish you could choose the subject of school based CPD?	Do you believe that your school based CPD is relevant to everyone who teaches?	Would school based CPD be more effective if it were developed for specific teaching needs?	Does school based CPD improve your impact in the classroom?
Mentee	1	2	3	3	3	4
Mentee	1	2	4	3	5	3
Mentee	2	4	4	2	4	4
Average	**1.3**	**2.7**	**3.7**	**2.7**	**4.0**	**3.7**
Mentor	3	4	4	2	5	2
Mentor	2	4	5	2	5	3
Mentor	3	5	4	4	4	4
Average	**2.7**	**4.3**	**4.3**	**2.7**	**4.7**	**3.0**

Participant Survey Responses – Initial Teacher Education

Note: the numbers in the table represent a range of possible responses from a Likert scale, where 1 represents 'never' and 5 represents 'always', see examples in Appendix II.

Are you participating as a mentor or mentee? (I am unable to identify these responses to any individual)	How confident were you in the classroom immediately after receiving your ITT?	How confident in the classroom were you when you finished your induction year (NQT).	How often are you confident now in the classroom	How often do you use the techniques for classroom management you learned during ITT?	How often do you reflect on teaching theory provided during your ITT in your current teaching?	Do you reflect on any aspect of your ITT for your current teaching practice.
Mentee	3	3	4	4	2	3
Mentee	2	4	4	4	2	4
Mentee	2	3	4	3	3	3
Average	**2.3**	**3.3**	**4.0**	**3.7**	**2.3**	**3.3**
Mentor	2	2	5	2	1	1
Mentor	4	4	4	3	3	4
Mentor	4	4	5	4	3	3
Average	**3.3**	**3.3**	**4.7**	**3.0**	**2.3**	**2.7**

Participant Survey Responses – Classroom Identity

Note: the numbers in the table represent a range of possible responses from a Likert scale, where 1 represents 'never' and 5 represents 'always', see examples in Appendix II.

Are you participating as a mentor or mentee? (I am unable to identify these responses to any individual)	How frequently do students inspire you in the classroom	How often do you maintain a proven routine to your classroom practice	How often do you apply a lesson routine to all your classes	How regularly do you take risks with your classroom teaching style?	How often do you allow students to divert you from your teaching plan?	How often does the dynamics in the classroom force you to change your teaching plan?
Mentee	3	4	4	3	3	3
Mentee	2	4	4	2	3	3
Mentee	4	4	4	2	3	2
Average	**3.0**	**4.0**	**4.0**	**2.3**	**3.0**	**2.7**
Mentor	4	4	4	4	5	4
Mentor	4	4	4	4	3	3
Mentor	4	5	4	4	4	4
Average	**4.0**	**4.3**	**4.0**	**4.0**	**4.0**	**3.7**

Are you participating as a mentor or mentee? (I am unable to identify these responses to any individual)	How frequently do you realise that you should have conducted a lesson differently once that lesson is over?	How often do you find that you are busy with aspects of your classroom teaching that were not in your teaching plan?	How often do you deploy classroom skills that you developed yourself?	How often in your current teaching do you seek assistance or advice to help develop your classroom skills?	How often are you surprised by events that occur in the classroom?	How often do you find that you have depleted all your skills and knowledge in the classroom?
Mentee	3	3	2	3	3	3
Mentee	3	3	3	4	2	2
Mentee	3	2	2	3	2	2
Average	**3.0**	**2.7**	**2.3**	**3.3**	**2.3**	**2.3**
Mentor	5	4	4	2	3	2
Mentor	2	2	4	3	3	2
Mentor	2	3	4	3	2	2
Average	**3.0**	**3.0**	**4.0**	**2.7**	**2.7**	**2.0**

Are you participating as a mentor or mentee? (I am unable to identify these responses to any individual)	How often do you rely on your own personal resilience to get through a lesson?	Do you feel that you use a range of personalities or identities in your teaching practice?	Stress is a common reason teachers give for leaving the profession. How often are you mostly stressed by classroom teaching?	Stress is a common reason teachers give for leaving the profession. How often are you mostly stressed by non teaching responsibilities as a teacher?
Mentee	1	3	3	3
Mentee	2	2	2	3
Mentee	4	2	2	4
Average	**2.3**	**2.3**	**2.3**	**3.3**
Mentor	3	5	2	4
Mentor	2	4	2	4
Mentor	3	4	2	3
Average	**2.7**	**4.3**	**2.0**	**3.7**

Appendix VI

Mentoring Participant Log

How much time did you observe a lesson for this week?		mins
How long did you meet your colleague for this week?		mins

What areas of development have you considered for review this week and have these areas been selected?

In your own words, reflect on how participating impacted your approach to classroom practice. (Use the 'Thoughts for log' document in your Google Drive folder to guide you)

Is there any additional information, comments or advice you'd like to add about participating in this research?