Impacting Educator Motivation: Exploring the Role of Learning Strategies in Continuous Professional Development (CPD)

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Abstract

This assignment examines the effectiveness of learning strategies in enhancing educator motivation during Continuous Professional Development (CPD) in an Early Years Foundation Stage (EYFS) setting, focusing on Teaching Assistants (TAs), teachers and leaders. Motivated by observed dissatisfaction and low engagement amongst educators, the research evaluates the impact of three learning strategies: critical thinking, peer learning and elaboration, on TA, teacher and leader motivation.

Using pulse surveys, interviews and statistical analysis, the intervention explored the impact of learning strategies on educator motivation. The findings reveal that while all strategies positively influenced motivation, peer learning had the most consistent impact across all groups. Critical thinking proved most effective for experienced educators, whilst elaboration showed potential but requires further exploration through further research.

Notably, this intervention may have limited generalisability due to its small sample in one urban school setting. However, it offers a contribution to the discourse surrounding CPD, by highlighting how targeted learning strategies can impact educator motivation.

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2. Introduction

This assignment is motivated by observations made during my role as a training facilitator for primary school educators, where I noted two critical issues with Continuing Professional Development (CPD), namely; a notable lack of motivation during sessions and educators' voiced dissatisfaction with the education CPD system.

CPD is widely recognised as essential for improving classroom practice and outcomes for pupils (McCormick, 2010; Collin & Van der Heijden & Lewis, 2012; Cordingley, 2015; EEF, 2021) and is a statutory part of teaching contracts (Kennedy, 2016) yet it is not valued by educators themselves (Teacher Tapp, 2018). In an effort to reform CPD, the Department for Education (DfE) introduced several reforms as part of its teacher recruitment and retention strategy, including the Early Career Framework (DfE, 2019) and the updated National Professional Qualification: Leading Teacher Development Framework (DfE, 2020). More recently, the DfE commissioned Ofsted (2024) to complete an independent review of teachers' professional development. The Phase 1 findings report that i) the pandemic had an impact on motivation and participation, (ii) workload pressures are a barrier and iii) most development opportunities are provided in-house by school staff, yet CPD is not prioritised by leaders (Ofsted, 2024). These findings highlight a significant disconnect between the recognised importance of CPD and its perceived value and implementation within education.

Education research has established robust theories on student learning, yet it still lacks developed concepts on educator professional development and effective strategies to motivate teachers (Kennedy, 2016). This discrepancy is particularly evident when comparing the innovative learning strategies used in student classrooms with the often outdated and

uninspiring CPD experiences provided for educators (Kennedy, 2016; Ofsted, 2024). Furthermore, research on CPD for leaders suggests that motivation and time constraints are a barrier to professional development (Ofsted, 2024). Research on the subject of CPD for TAs is even more limited and there is a notable gap in the literature (Burgess & Mayes, 2007). This assignment will therefore include teachers, TAs and leaders in an attempt to provide a comprehensive view.

Research aimed at improving teacher CPD suggests a shift from programmes aimed at persuading teachers to change their beliefs (Maaß et al., 2017; Swan, 2006; Tuan et al., 2017) to the use of learning strategies which motivate teachers to take charge of their own learning and want to change their own classroom practice and beliefs (Wilson & Cooney 2002; Calleja, 2018, Beswick, 2005; Swan, 2006; Yurekli et al., 2020). Despite these advances, there remains a gap in the literature concerning how to effectively enhance educator[1] motivation during CPD sessions. Pintrich's (1992) work with university students to explore the impact of learning strategies on motivation, using the Manual for the use of the Motivated Strategies for Learning Questionnaire (MSLQ), offers a potential bridge to this gap, demonstrating positive outcomes that could be adapted for use in educator CPD contexts. The Education Endowment Foundation (EEF) (2021) reinforces this perspective by recommending that increasing educator motivation leads to more effective CPD.

Based on these considerations, my research seeks to contribute to the discourse surrounding educator CPD by evaluating its effectiveness among different roles across an Early Years Foundation Stage (EYFS) setting, specifically; TAs, teachers and leaders. Furthermore, based on Pintrich's (1992) finding of a positive link between motivation and learning strategies, my

[1] Educator will be used to refer to teachers, teaching assistants and members of the Senior Leadership Team throughout this assignment

research also aims to improve educator motivation through the use of learning strategies in CPD sessions. Although this intervention is a small-scale study and limited to a single urban school setting, this research will expand the literature by including participants from different roles, reflecting a modern day teaching workforce.

Before debating the impact of learning strategies on educator motivation in primary Continuous Professional Development (CPD), we must first define the involved terminology.

2. 1 Learning Strategies

The term learning strategies has a range of definitions from a variety of researchers. Learning strategies are simply defined by Brown (1980) as a process that contributes directly to learning. Chamot (2004) elaborated further on processes by including techniques, approaches and actions that learners take to retain information. Notably, researchers widely agree that learning strategies are any operation that learners use in order to make sense of learning (Wenden & Rubin, 1987; Mayer, 1988; Oxford, 1990; Pintrich, 1992; O'Malley & Chamot, 1990; Williams & Burden, 1997; Harden, 2013). For the purposes of this assignment, learning strategies will therefore be defined as any operation that educators use to retain or make sense of information. Following Pintrich's MSLQ (1992), the learning strategies that will be focused on this assignment are: critical thinking, peer learning and elaboration.

2. 2 Motivation Theory

Motivation can be broadly defined as a process whereby an amount of instigation force arises, which initiates action and is sustained over time (Pintrich & Schink, 1996; Dörnyei, 1998). Thus, motivation theory can provide a valuable lens for exploring educator motivation in CPD sessions (Graham & Weiner, 1996). By understanding these theories, we can explain why

certain learning strategies motivate educators more effectively than others and offer a framework for assessing the effectiveness of the different strategies.

Hull (1943), defined motivation as behaviour that is a function of drive multiplied by habit. Hull's drive theory distinguishes between learning and behaviour; learning is the direction of behaviour, for example mathematics, whereas drive focuses on the duration and intensity (Galloway et al, 2004). Hull connected drive and habit through a multiplicative relationship, B = f(D X H), demonstrating how low drive equates to a lack of appropriate learning behaviours (Hull, 1943). Whilst this mechanistic view of motivation was a highly influential theory in the between the 1940s and 1960s, it no longer holds as great an influence in its academic field (Graham & Weiner, 1996; Galloway et al, 2004). Therefore, Hull's theory of motivation (1943) may not provide the most suitable framework for this assignment, as it suggested that the effectiveness of learning strategies hinges on individual drive levels. This perspective has a restrictive view of the broader impact that learning strategies have on motivation, instead emphasising educator's personal motivation as a determining factor (Seward, 1950).

Similarly, the behaviourist approach suggests that motivation arises from basic drives (Galloway et al, 2004). Thus, motivation is predictable and behaviours can be conditioned. Behaviourism measures motivation by the amount of time learners are engaged with a task (Galloway et al, 2004). Skinner (1953) emphasised the role of rewards and punishments, to influence behaviour and enhance motivation. This has consequently shaped educational practices by promoting positive pupil behaviours (Omomia & Omomia, 2014). However, its applicability to studying educator motivation in CPD is limited. Skinner's (1953) focus on external rewards and punishments dismisses educators' intrinsic motivations, or more complex human behaviour,

and may patronise an adult audience (Moxley, 1998). CPD arguably requires sustained motivation, beyond sanctions and rewards, influenced by professional goals, perceived value of training and personal beliefs.

At the beginning of the 1960's, there was a general shift in psychology from mechanism approaches, such as Hull's, and quantitative theories, such as behaviourism, towards qualitative conceptions of motivation, such as cognition theory (Graham & Weiner, 1996). In opposition to drive theory, cognition theory focuses on complex emotions that drive motivation, including a desire to gain success, please peers and gain knowledge and power (Graham & Weiner, 1996).

Atkinson's (1964) cognitive attribution theory focuses on an individuals' need to achieve and to avoid failure. The motivation to engage in a task is influenced by the expectation of success; if individuals believe they can succeed and value the outcome, their motivation increases (Atkinson, 1964). Thus, if individuals attribute their success to internal, stable and controllable factors, such as ability and effort, they are more likely to experience increased motivation. Following this, attributing failures to internal yet uncontrollable factors, such as lack of ability, can decrease motivation.

In the context of educator CPD, Atkinson's perspective underscores the importance of designing activities that both enhance educator confidence in their abilities but also ensure the set outcomes from the sessions are meaningful and valuable to them. Thus, Atkinson's (1964) view of attribution theory provides a deeper understanding of the motivational dynamics in educational settings. By fostering positive expectations of success and highlighting the value of CPD outcomes, sessions can be effectively planned to motivate educators. Therefore, attribution theory provides a productive approach to motivation in an educational setting and is

applicable to examining educator motivation in this assignment (Atkinson & Feather, 1966; Maehr & Sjogren, 1971).

In addition to Atkinson (1964), Dweck's cognitive theory emphasises individuals' beliefs about their abilities, and how much capacity they feel they have to improve, specifically how fixed and growth mindsets influence motivation (Elliot, Dweck & Yeager, 2017). A cognitive theory approach will be taken in the assignment. Thus, motivation will be defined by integrating Atkinson's (1964) focus on individuals' need to achieve with Dweck's (2017) emphasis on how fixed and growth mindsets influence motivation, to examine the underlying factors affecting engagement in CPD sessions.

2. 3 Continuous Professional Development (CPD)

For the context of this assignment, Continuous Professional Development will refer to weekly training undertaken by primary school educators in the EYFS. The theoretical controversy that surrounds the understanding of the concept of CPD makes it difficult to define (Collin & Van der Heijden & Lewis, 2012). There are growing doubts from researchers around causality claims, the pursuit of an ideal professional development model and lack of conceptual clarity that threaten the credibility of professional development research (Coldwell & Simkins, 2011; Collin & Van der Heijden & Lewis, 2012; Capps et al 2012; Evans, 2022). Nevertheless, a general consensus is that educator CPD can be defined as practices aimed at developing educators beyond the initial teacher training provided (McCormick, 2010; Collin & Van der Heijden & Lewis, 2012; Cordingley, 2015). Arguably, this modest definition does not provide a comprehensive insight into educator CPD. To provide further clarity on the subject, the EEF (2021) stated that effective CPD should play a crucial role in improving classroom practice and pupil outcomes. Thus, within the framework of this assignment, the definition of CPD will be defined as evidence-informed, collaborative practice that is aimed at improving classroom

practice and pupil outcomes in the primary school setting. It is important to note that pupil outcomes refer to both attainment and pupil confidence, wellbeing and social skills.

2. 4 Research questions

To investigate the impact of learning strategies on educator motivation in CPD, I have formulated three research questions, which will structure the following literature review:

1. What is the current state of research on effective Continuous Professional Development (CPD) in the context of education and educator development?

2. What is known about the factors that influence educator motivation in the context of CPD?

3. How has the concept of learning strategies been explored in CPD for educators, and what are the implications for motivation?

3. Literature Review

3. 1 What is the current state of research on effective Continuous Professional Development (CPD) in the context of education and educator development?

At the beginning of the 21st century, extensive research into educator CPD took place, with the aim to identify key success elements (Cordingley et al 2003; Bell, Cordingley, Isham, & Davis, 2010; Cordingley, 2015). While research identified aspects of effective CPD, with largely coherent findings, the implementation became fragmented (Cordingley, 2015). The research

coincided with austerity. Education resources were split between School Direct and Teaching Schools, resulting in an inconsistent approach to CPD across England (Cordingley, 2015).

This literature review will begin with the findings of five influential systematic reviews into the effectiveness of CPD in the context of educator development in the first vicennium of the 21st century. All reviews used the methodology for systematic reviews developed by the Evidence for Policy and Practice Information and Coordinating Centre (EPPI), involving (i) rigorous peer review, (ii) testing of findings with appropriate stakeholders and (iii) a bespoke project database (Cordingly, 2015). The reviews conducted found consistent results; if CPD is research rich, meaning evidence-informed, it is likely to result in enhanced pupil achievement, collaboration and selection of learning strategies (Cordingley et al, 2003, 2005, 2007; Timperley et al, 2007; Bell et al, 2010; McNicholl, 2013). Furthermore, results suggested that teachers participating in research rich CPD activities benefited from improved subject knowledge, varied teaching, innovation and improved confidence (Cordingley et al, 2003, 2005, 2007). Timperley et al (2007) and Bell et al (2010) later reinforced the findings that research rich CPD positively influences educators and thus pupil achievement. In addition, they found that the contribution and engagement from school leaders in CPD can further the positive impacts on educators.

Accordingly, there is a wide range of evidence to suggest that research-informed CPD positively impacts educators (Cordingley et al 2003; Bell et al, 2010; Cordingley, 2015) and that this influences educators' innovation in the classroom and therefore pupil outcomes (Cordingley et al, 2003, 2005, 2007; Bell et al, 2010). In addition, there is some evidence to suggest that leadership involvement has an impact (Duke & Salmonowicz, 2010; Leithwood et al, 2010; Grissom & Leob, 2011) although this is not empirically sound (McCormick, 2010; Robinson & Gray, 2019).

In light of these findings about effective CPD in the context of England, it is important to consider the Department for Education's (2016) Standards for Teachers' Professional Development. Not dissimilar to the findings of Cordingly (2003, 2005, 2007), Timperely et al (2007) and Bell et al (2010), the DfE (2016), states that effective CPD follows five principles: i) improves pupil outcomes, ii) underpinned by robust evidence, (iii) includes collaboration, (IV) sustained over time, (V) prioritised by leadership.

To further elaborate on the first principle, the implementation guidance (DfE, 2016) states that CPD must be explicitly relevant to participants, with activities designed around existing educator experience and their desired outcomes for pupils. In contrast, educator CPD in the primary setting is widely criticised for often being irrelevant to educator needs in the classroom, thereby not having the desired effect on teacher, and thus pupil, change and outcomes (Shriki & Patkin, 2016; Opfer & Pedder, 2011; Abakah, 2019; Abakah, 2023).

Next, the documentation (DfE, 2016) states that CPD should be research-informed, delivered by knowledgeable experts and include collaboration, namely in the form of peer problem solving, listening to new perspectives and focussed discussion around practice and supporting pupils. It is widely accepted that both evidence informed and collaborative CPD affect change in teacher practice, knowledge and pupil outcomes (Cordingley et al, 2003, 2005, 2007; Timperley et al, 2007; Bell et al, 2010; Carpenter & Staudt Willet, 2021; EEF, 2021; Gibbons et al, 2021; Prestridge et al, 2021; Evans, 2022). Whilst we have extensive research on procedures that support educators to gain knowledge from CPD sessions, there is a gap in the literature when exploring the role of the CPD facilitator as the knowledgeable expert. Kennedy's (2016) review of educational research in the field of CPD highlighted the lack of literature on individuals delivering CPD sessions, including how they are selected, prepared and knowledgeable about the field and how their effectiveness is assessed.

Following this, the documentation (DfE, 2016) further outlines the importance of sustaining impact, suggesting ongoing support, follow-up activities and opportunities for experimentation, reflection, evaluation and feedback. This standard is frequently overlooked in current CPD, as educators often face cognitive overload due to workload and diverse pupil needs (Desimone, 2009; Darling-Hammond et al., 2017). Consequently, the time required to complete follow up activities or engage in experimental practices is neglected (Tannehill et al., 2021; Van Driel et al., 2012). Furthermore, when teachers are instructed to attend compulsory CPD in an overly busy timetable, without sufficient time for reflection or choice in the subject matter, then motivation will be negatively impacted (Kennedy, 2016). Kennedy (2016) suggested that the desired outcome of enhanced teacher knowledge through CPD is not always achieved, as the underlying message communicated to teachers is: attendance is required but learning is not.

Lastly, the DfE (2016) explores effective leadership in relation to CPD. The documentation states that leaders should design CPD that complements an ambitious curriculum with a vision for pupil success and that they should be role models, championing effective professional development for themselves and colleagues. However, while the general consensus between researchers is that leaders have a positive impact on pupil outcomes through promotion of CPD (Cordingley et al, 2003, 2005, 2007; Timperley et al, 2007; Robinson et al, 2009; Bell et al, 2010; Duke & Salmonowicz, 2010; Leithwood et al, 2010; Grissom & Leob, 2011) specific critiques of the literature involve the difficulty in empirically testing the difference that leadership makes on outcomes, with estimated effects ranging widely from small to large (Marzano et al, 2005; Robinson et al, 2008; Robinson & Gray, 2019). Thus, for the purposes of this assignment, the role of leadership in promoting CPD, and thus the effect on educator motivation, will not be a focus due to the difficulty in empirically measuring the impact.

Whilst the literature from the beginning of the 21st century provides useful guidance on the key elements of effective CPD, it is important to note that it is widely criticised (Goodall et al, 2005; Lawless & Pellegrino, 2007; Dymoke and Harrison, 2006; McCormick et al, 2008; McCormick, 2010). It is argued that the literature of this time does not serve the field well, in terms of reporting, and thus reflecting 'ordinary schools' (McCormick, 2010: 1) or providing an accurate picture of how educators learn best (Dymoke and Harrison, 2006).

In more recent years, professional development research has expanded its scope, with new issues and knowledge that have gained increasing popularity and interest (Evans, 2022). Current research has considered current trends and new developments in the field. These include self-directed learning (Behroozi & Osam, 2021; Concannon-Gibney, 2021; Ritter & Ergas, 2021; Fransson & Norman, 2021), online communities and networks (Carpenter & Staudt Willet, 2021; Prestridge et al, 2021) and practice-model schools (Gibbons et al, 2021).

Furthermore, the EEF (2021) has provided specific recommendations for schools. The guidance report on effective professional development provided three recommendations to schools: careful CPD design, ensuring CPD builds knowledge, motivation and teaching techniques and consideration of school context (EEF, 2021). Notably, the EEF (2021) and Kennedy (2016) are the first publications in the literature reviewed for this assignment to specifically mention educator motivation as a foundation for effective CPD.

This focus on educator motivation as a foundational element of effective CPD provides essential context for interpreting the recent findings from the Ofsted (2024) review. Commissioned by the DfE, Ofsted (2024) conducted an independent review of teachers' professional development. The Phase 1 findings reported that i) the pandemic had an impact on motivation and participation, (ii) workload pressures are a barrier and iii) most development opportunities are

provided in-house by school staff, yet CPD is not prioritised by leaders (Ofsted, 2024). Together, these perspectives underscore the critical role of educator motivation in effective CPD, particularly as the challenges posed by the COVID-19 pandemic may have further diminished motivation, potentially explaining the trends I observed among teachers during CPD sessions.

However, despite the recent progress in research, the field continues to lack coherent and coordinated critical discourse (Cleary et al., 2022; Evans, 2022; Hinojosa, 2022). The epistemic worthiness of the field depends on the development of a systematic critical examination, seen in the parallel field of educational leadership research (Duke & Salmonowicz, 2010; Leithwood et al, 2010; Grissom & Leob, 2011). Furthermore, unchallenged mainstream assumptions continue to impoverish CPD research, highlighting a need for a rigorous critical approach (Borko, 2004; Avalos, 2011; Cleary et al., 2022; Evans, 2022). One assumption is around casualty. Evans (2022) argued that there is an over simplistic belief that direct cause-and-effect relationships can be determined when establishing the effectiveness of CPD and suggested that there is a tendency to hold a narrow view of the CPD process, failing to account for its complex and multifaceted nature. Furthermore, there is a suggested lack of rigorous conceptualisation within the field, leading to an underdeveloped theoretical framework (Avalos, 2011; Cleary et al, 2022; Evans, 2022). Arguably, these assumptions collectively hinder the advancement of a coherent critical discourse in CPD research, highlighting the need for greater conceptual clarity and precision.

To summarise, the literature indicates that:

a) Extensive theoretical, small-scale research into educator CPD at the beginning of the 21st century identified key success elements, but wider implementation became

fragmented due to austerity measures and resource distribution between School Direct and Teaching Schools, resulting in inconsistent CPD approaches across England.

b) Influential systematic reviews using EPPI methodologies (Cordingley et al, 2003, 2005, 2007; Timperley et al, 2007; Bell et al, 2010), found that research-informed CPD enhances pupil achievement, teacher collaboration, and teaching innovation. Leadership involvement in CPD was also found to further positive impacts on educators.

c) The DfE (2016) outlined five guiding principles for effective CPD, including improving pupil outcomes and being underpinned by robust evidence. However, criticisms highlight that CPD often fails to meet educators' needs, lacks relevance, and overlooks the importance of sustaining impact through follow-up activities.

d) Recent research has expanded to include new developments such as self-directed learning and online networks. However, it is argued that the field still lacks a coherent and coordinated critical discourse, with unchallenged assumptions about causality, conceptualisation and the CPD process.

e) Of all the literature examined, only two sources specifically mentioned the importance of educator motivation in effective CPD (Kennedy, 2016; EEF 2021). The Ofsted (2024) review reinforced the importance of educator motivation in CPD, noting that the pandemic further impacted educator motivation. This highlights a need for further research in this area.

3. 2 What is known about the factors that influence educator motivation in the context of CPD?

To further explore the role of motivation in the context of CPD, we must examine the literature surrounding this topic. As previously discussed, most of the literature surrounding effective CPD does not explore motivation as a factor. The lack of prior consideration around educator motivation in the context of CPD is indicative of teachers' perspectives of the value of the CPD that they attend. When surveyed, a third of teachers in England stated that they take part in CPD at least once a week, but only 38% of teachers agreed that this contributed to their instructional capabilities (Teacher Tapp, 2018). In order for educators to be motivated by CPD, they need to see value in the content delivered (EEF, 2021; Gibbons et al, 2021).

To further support this claim, the EEF (2021) states that educators must be motivated to act upon the new knowledge or strategies shared during CPD as a change in knowledge does not always lead to a change in educator behaviour or practice (Opfer & Pedder, 2011). The EEF action report (2021), written in conjunction with research schools, suggests three mechanisms for motivating educators in CPD: (i) setting and agreeing on goals, (ii) presenting information from a credible source and (iii) providing affirmation and reinforcement after progress (EEF, 2021).

Firstly, in regards to goal setting, the report (EEF, 2021) states the need for CPD facilitators to set specific, ambitious goals to motivate educators and therefore enhance performance. Secondly, the EEF (2021) recommends that the more credible the source used in CPD, the more likely educators will be to use the information to change their practice. This aligns with research considered earlier in this literature review on the importance of research rich CPD (Cordingley et al 2003, 2005, 2007; Bell et al, 2010; Cordingley, 2015). Finally, providing affirmation and reinforcement after a teacher has made an effort to alter practice, or shown progress in performing a new skill, should improve educators' motivation to act upon professional development (EEF, 2021; Sims et al, 2021). This approach aligns with the earlier

discussion on sustained impact and workload demands (Tannehill et al., 2021; Van Driel et al., 2012). The EEF's (2021) suggestion of sustaining CPD impact through follow-up positive reinforcement and coaching, as opposed to asking time-poor teachers to complete further activities (DfE, 2016), may be an improved solution.

It is evident that the Atkinson's (1964) and Dweck's (2017) theories of motivation align with the EFF mechanisms for motivating educators in the context of CPD. The first mechanism, setting ambitious, clear goals corresponds with Atkinson's (1964) emphasis on the expectations of success and the value of outcomes, which drive motivation. The second, regarding the presentation of information from credible sources, focuses on enhancing educators' confidence and self-efficacy. This aligns with Dweck's (2017) growth mindset theory as individuals are encouraged to foster a belief in their ability to improve. The third mechanism, providing positive reinforcement aligns with both Atkinson (1964) and Dweck's (2017) theories by recognising the belief that effort leads to improvement, thereby enhancing intrinsic motivation and sustaining educator engagement in CPD.

The specific role played by intrinsic motivation in educator CPD has been examined in two independent case studies, in different countries, five years apart, that are worthy of discussion.

The first, earlier, case study relates to the Embedding Formative Assessment (EFA) programme, developed by Leahy and Wiliam (2013) to enhance pupil outcomes by delivering CPD sessions against five formative assessment strategies. The specific activities included creating time for monthly teacher-led learning communities, peer observations and ongoing leadership support over a two-year period. The programme emphasised the development of motivation by encouraging educators to intrinsically seek to enhance their teaching practice and hold each other accountable during the monthly peer meetings. The participants completed a

questionnaire, the findings of which suggested that the collaborative element of the learning communities and peer learning through observation led to increased teacher motivation. Furthermore, the schools reported higher pupil outcomes, with a 25% increase in student achievement in the national school leaving examinations (Leahy & Wiliam, 2013).

The later study examined the CPD sessions of a small group of mathematics teachers (Calleja, 2018). This study was qualitative in design and used a thematic analysis to investigate the views of teachers. The findings from this study suggest that intrinsic factors motivate teacher participation in CPD in three ways, namely; (i) teachers' enthusiasm to develop knowledge about teaching practices, (ii) their beliefs about the value of inquiry, and (iii) their drive to change classroom practice (Calleja, 2018). Furthermore, the educators outlined that being part of a community, active learning and including practice-based explanations increased their motivation (Calleja, 2018). These findings are consistent with other research studies into teacher motivation, particularly educator reference to collaboration, or peer learning in increasing their motivation in CPD (Cordingley et al, 2003, 2005, 2007; Timperley et al, 2007; Bell et al, 2010; DfE, 2016; EEF, 2021).

These two independent case studies, although informative and consistent in their findings, have two discernible limitations. Firstly, although the EFA programme was large, in that it encompassed 120 schools (Leahy & William, 2013), these were exclusively secondary schools. This places a contextual limitation on the results, as the same factors may not be applicable to educators in the primary setting. This is indicative of a larger issue, as the study has not yet been replicated in an EYFS or primary setting. Secondly, the latter study was conducted in Malta and although there are some similarities between the two countries' education system and the CPD structure, they also differ in certain aspects (Calleja, 2018). These differences, including the prominent role of the Catholic Church and the bilingual nature of instruction in Malta, compared to the more secular, English-only curriculum in England, may affect the

relevance of the Maltese findings to the English system (Calleja, 2018). Furthermore, the Malta study involved a small sample of seven secondary school mathematics teachers. This means (i) that the results may not be replicable, and (ii) the educators studied are an entirely different sample to the EYFS educators considered in this assignment.

Leahy and Wlliams' (2013) findings were further tested by Speckesser et al (2021) through a randomised controlled trial in 140 secondary schools. This study found that students in EFA schools made the equivalent of two additional months' progress in their GCSE Attainment 8 scores. Notably, progress among pupils with FSM and previous lower attainment made the most progress. This broader study, with a larger and randomised sample, adds weight to Leahy and Williams earlier findings, although the issue of context, primary versus secondary, remains. However, despite the difference in sample type between these reported studies and the educators discussed in this assignment, the high replicability of the studies suggests that the findings have potential for widespread educational improvement, including primary educators considered in this assignment.

It is notable that none of the research reviewed includes TAs as participants. In England, TAs are often the constant adults in classrooms and yet, there is a lack of CPD opportunities for these educators (Bignold & Barbera, 2011). Whilst there is a dearth of literature specifically addressing CPD and its impact on TA's motivation, it is widely accepted that CPD improves self-efficacy and classroom practice (Bignold & Barbera, 2011; Brown & Devecchi, 2013; Makopoulou et al, 2019; Clifford Swan et al, 2021). These results are similar to the results of studies on the impact of teacher CPD (Leahy & Williams, 2013; Calleja, 2018). Thus, for the purposes of this assignment, and the similarity in studies on the benefits for both teacher and TAs, it will be assumed that the learning strategies designed to enhance motivation will

positively impact all primary educators. Therefore, both teachers and TAs will be included in the participants of the following intervention.

To recapitulate, the literature suggests that:

a) Teacher motivation in CPD is crucial for effective implementation and outcomes. Research indicates that educators place value on CPD they perceive as impactful or beneficial for their instructional capabilities. The EEF (2021) identifies clear goal-setting, credible sources and positive reinforcement as key motivation mechanisms in CPD. These mechanisms align with Atkinson's (1964) and Dweck's (2017) theories of motivation as they emphasise the importance of clear goals, confidence building through credible sources and intrinsic motivation through positive reinforcement to build sustained motivation.

b) Findings from two case studies underscore the importance of intrinsic motivation in CPD for educators. Calleja's (2018) study found that factors such as professional development, inquiry-based learning and collaboration lead to motivation in educators in CPD. Leahy and Wiliam's (2013) EFA programme, provides a robust example of how structured CPD can enhance both teacher motivation and student outcomes. The emphasis on collaborative learning communities and ongoing support aligns with best practices in fostering educator efficacy and motivation. Most importantly, the programme's findings demonstrated significant improvements in pupil attainment (Leahy and Wiliam, 2013; Speckesser et al, 2021). The findings from these case studies align with broader research on teacher motivation, particularly; the benefits of collaboration, learning communities and peer learning.

c) Despite the significant role that TAs play in classrooms (Bignold & Barbera, 2011), their inclusion in literature around CPD and motivation has been overlooked. Following this, this assignment will assume that CPD learning strategies that enhance motivation for teachers, will also benefit TAs. Whilst understanding the limitations of this assignment, specifically its small sample size and thus inability to be generalisable, an attempt will be made to contribute to a more comprehensive understanding of CPD's impact on all educators.

3. 3 How has the concept of learning strategies been explored in CPD for educators, and what are the implications for motivation?

As previously outlined, learning strategies will be defined as any operation that learners use to retain or make sense of information for the purposes of this assignment (Wenden & Rubin, 1987; Mayer, 1988; Oxford, 1990; Pintrich, 1992; O'Malley & Chamot, 1990; Williams & Burden, 1997; Harden, 2013). Pintrich's (1992) Manual for the use of the Motivated Strategies for Learning Questionnaire (MSLQ), provides a guide to exploring motivational orientations and the use of different learning strategies. The MSLQ is based on a general cognitive view of motivation and learning strategies and involves two sections (i) 31 items that assess student motivation, (ii) 31 items regarding learning strategies, including: rehearsal, elaboration, organisation, critical thinking, self-regulation, environment, effort regulation, peer learning and help seeking.

A gap exists in the research concerning the use of learning strategies and their impact on educators in the context of primary CPD. Current literature primarily addresses the effects on adult learners in general, rather than teachers in a professional primary school setting. Among the reviewed literature, the most pertinent learning strategies to this research were critical thinking, peer learning and elaboration. This review will therefore outline the relevant research

on these three learning strategies that will be used with primary educators in the intervention to ensure its basis in empirical evidence.

3.3.1 Critical thinking

Literature defines the learning strategy, critical thinking, as an internal cognitive process (Garrison, 1992) where the learner questions, analyses, interprets, judges or evaluates the information presented to them (Gibby, 2013). In the context of adult learning, critical thinking is widely accepted to be an important skill in challenging and changing existing knowledge and beliefs (Garrison, 1992; Vaske, 1998; Sogunro, 2015). Furthermore, it is also widely suggested that when critical thinking is used as a learning strategy, the motivation of learners is enhanced (Elliot & Dweck, 1988; Graham & Golan, 1991; Pintrich & Garcia, 1991). However, despite its value being recognised in both these perspectives it appears that critical thinking is still often an underutilised learning strategy in adult learning (Gibby, 2013).

Duncan and Pintrich (1992) studied the correlation between critical thinking, motivation and use of cognitive learning strategies with adult learners. The study conducted with 758 university students in America, using the MSLQ to test for motivation, found i) positive implications for a transference of knowledge and application of problem solving skills to novel situations when critical thinking was applied as a learning strategy and ii) a positive relationship between critical thinking and an intrinsic goal orientation, or motivation. Furthermore, tasks which encourage intrinsic goal motivation, such as critical thinking, are related to deeper thought processing and thus higher-order cognitive engagement (Entwistle, 1988; Entwistle & Marton, 1984; Pintrich & Garcia, 1991). The study's applicability to the current assignment is potentially limited by its focus on university students, as opposed to primary educators, however the large sample size balances this effect somewhat. Despite this limitation, the correlation between critical thinking

and motivation reported by this study is noteworthy and will be examined in the context of teacher CPD later in the intervention.

3.3.2 Peer learning

The learning strategy, peer learning, can be defined as mutual peer interactions, in a learning environment, which leads to mutual cooperation and understanding (Topping et al, 2017). Sogunro (2015) argues that peer learning plays an important role in motivation and that the need for adult learners to be accepted by the group increases their motivation towards learning. Thus, building a learning community of peers within the interactive classroom can increase motivation for learning: ‘When students feel they are part of the social group of the class and are working with others in the class to achieve similar ends, their motivation to participate is enhanced’ (Svinicki, 2004: p148).

Consequently, facilitators of adult learning should consider strategically including small group activities, designed to enhance peer learning and collaboration, as part of their instructional delivery (Sognuro, 2015). Providing opportunities for adult learners to be involved in the learning process through discussing their prior knowledge and vast experience, sharing advice and seeking clarification, allows for deeper understanding and other routes to learning than sole reliance on the facilitator (Knowles, 1980; Toohey, 1999). When adult learners are in an environment that is only facilitator-focused, it is often patronising and thus, demotivating (Sogunro, 2015). Thus, by applying these principles of peer learning within the context of the intervention concerning educators and CPD, it suggests that fostering mutual peer collaboration and building a robust learning community will enhance motivation by ensuring educators feel supported by their peers and involved in their own learning process.

3.3.3 Elaboration

The learning strategy, elaboration, can be defined as the enhancement of information that clarifies or specifies the relationship between information learned and a learner's prior knowledge or experience (Hamilton, 2012). Furthermore, Sogunro (2015) describes elaboration as an opportunity for adult learners to be self-directed and make their own connections between prior knowledge and ideas presented.

Elaboration as a learning strategy is also associated with greater cognitive engagement, and consequently motivation to learn (Bransford et al, 1986). However, the type of elaboration activity used is important. Superficial activities, such as rewriting notes, lead to lower cognitive engagement (Knowles, 1980). In contrast, elaboration that involves self-directed efforts to connect new knowledge to prior experiences or beliefs is linked to higher cognitive engagement and motivation (Weinstein & Mayer, 1986). It is a crucial role of the facilitator to support adult learners to elaborate as a learning strategy providing opportunities to develop the connection of new knowledge to pre-existing beliefs (Kruszelnicki, 2020) and allow learners to become architects of their own knowledge (Glaser, 1991). In relation to educators' CPD, it could therefore be argued that facilitators need to be skilled in actively fostering self-directed learning strategies, such as elaboration, to enhance both cognitive engagement and motivation.

In summary, the literature indicates that:

a) Learning strategies are defined as operations learners use to retain or make sense of information, and include critical thinking, peer learning, and elaboration. The concept of learning strategies in CPD for educators has been explored through Pintrich's (1992) Motivated Strategies for Learning Questionnaire (MSLQ), which assesses motivational orientations and learning strategies. However, there is a notable gap in the research concerning the impact of these strategies on primary educators, with existing studies

largely focusing on adult learners in other contexts. This gap indicates a need for targeted research to understand the specific implications of these strategies on CPD and motivation in primary education settings.

b) Critical thinking as a learning strategy involves questioning, analysing, and evaluating information, which enhances learners' motivation (Elliot & Dweck, 1988). Studies, such as those by Duncan and Pintrich (1992), show a positive correlation between critical thinking and motivation. Despite the focus on university students in these studies, the findings highlight the potential benefits of integrating critical thinking into CPD for primary educators to enhance motivation and cognitive engagement. This suggests that incorporating critical thinking activities in CPD can lead to more motivated and engaged teachers, ultimately benefiting their professional development and classroom practice.

c) Peer learning involves mutual interactions that foster cooperation and understanding, significantly enhancing motivation through social acceptance (Sogunro, 2015). The research highlights the important role of the facilitator, including the need to incorporate small group activities to promote peer learning and collaboration.

d) Selected activities can enhance cognitive engagement and motivation (Knowles, 1980; Weinstein & Mayer, 1986). Facilitators should support self-directed elaborative learning strategies, enabling educators to link new information to their existing knowledge, thus fostering deeper understanding and sustained motivation in CPD contexts. These

implications suggest CPD programmes that are designed to include peer learning and elaboration can improve educator motivation.

Literature Review Conclusion

The landscape of research on CPD for educators has evolved significantly, highlighting both notable advancements and persistent challenges. At the beginning of the 21st century, extensive research provided crucial insights into the elements of effective CPD. Key literature highlighted the need for research-informed CPD that aims to enhance pupil achievement, teacher collaboration and teacher innovation. Systematic reviews, such as those by Cordingley et al (2003, 2005, 2007), Timperley et al (2007) and Bell et al (2010) reinforced the importance of leadership involvement in effective CPD. However, the practical implementation of these reviews faced barriers such as austerity measures and uneven resource distribution, particularly between School Direct and Teaching Schools, leading to inconsistent CPD practices in primary schools across England. This inconsistency has resulted in CPD that does not meet educator needs due to a lack of relevance and sustained impact.

More recent developments in CPD research have suggested a need for self-directed learning and online learning communities to enhance relevance and motivation. While these suggestions offer promising avenues for educator CPD, the field still lacks a coherent discourse on what constitutes effective practice and requires a critical examination of the underlying assumptions about CPD processes and outcomes. Notably, research on educator motivation within CPD remains underexplored. Only a few studies, including those by Kennedy (2016) and the EEF (2021), have specifically addressed the role of motivation in CPD effectiveness. This highlights a critical gap in the understanding of how to motivate educators in CPD, demonstrating a need for targeted research to bridge this gap.

The literature on factors influencing teacher motivation in CPD, suggests that educators are most motivated by CPD that is perceived to be relevant and beneficial to their teaching practices. Key mechanisms for enhancing motivation include goal setting, research-informed sessions and positive reinforcement, including after the sessions for sustained impact. These align with theoretical perspectives on motivation, namely Atkinson (1964) and Dweck (2017). For instance, goal setting and confidence building are crucial for sustaining intrinsic motivation, which, in turn, drives deeper cognitive engagement.

Examining specific learning strategies, including critical thinking, peer learning and elaboration, suggests potential for positively enhancing educator motivation. Critical thinking has been shown to enhance motivation and cognitive engagement (Elliot & Dweck, 1988). Studies such as Duncan and Pintrich's (1992) have demonstrated a positive relationship between critical thinking and intrinsic motivation, suggesting that integrating critical thinking into CPD can lead to more engaged and motivated teachers. A limitation of the current body of research is its focus on adult learners, mostly university students, and not primary educators, demonstrating a need for further research in primary school contexts with teaching professionals. Peer learning also plays a significant role in motivation, as the need for social acceptance enhances motivation (Sogunro, 2015). Facilitators should therefore include small group activities that promote peer collaboration, allowing educators to share experiences and knowledge. Furthermore, effective CPD should encourage self-directed elaboration, enabling educators to link new concepts to their pre-existing knowledge and beliefs. This approach not only fosters deeper understanding but also sustains motivation (Weinstein & Mayer, 1986).

In summary, while existing research has provided valuable insights into effective CPD practices and the role of motivation, significant gaps in the research remain, particularly regarding the

specific impact of learning strategies on educator motivation in a primary school context. Addressing these gaps through focused research could lead to more effective and engaging CPD, ultimately benefiting both educators and students.

Consequently, following the knowledge gained from my literature review and the background of my professional context, the purpose of my intervention is to ascertain whether specific learning strategies, such as critical thinking, peer learning and elaboration, when used in CPD sessions, impact on educator motivation in the context of a primary school setting.

I have therefore generated two research questions, that provided structure for the design of this school-based intervention:

1. Is there empirical evidence demonstrating the impact of learning strategies on educator motivation in the context of Professional Development and, if so, which strategy proves most effective?

2. Did participants identify factors beyond the introduced learning strategies that enhanced educator motivation in Professional Development?

4. Methodology

My practitioner research was designed to answer the aforementioned research questions. This section of the paper will discuss my research design and nature of my intervention, ensuring that the different phases of research are explained, justified and evaluated, with reference to elements of collaboration which formed a major part of the research design. Methods of data analysis will be explained, with acknowledgments of the design's limitations and a consideration of any ethical issues (British Educational Research Association (BERA), 2024).

4.1 Research Design

My research comprised different phases. These include a baseline questionnaire and two successive research cycles. The latter included CPD sessions, pulse surveys, SLT observations and stratified interviews. I collected both quantitative and qualitative data typical to a mixed method approach (Cresswell & Piano Clark, 2007; Becker & Bryman 2012).

4.2 Baseline Questionnaire

The baseline questionnaire [Appendix A] was administered prior to the intervention to gather educators' perspectives on their motivation and attitudes towards CPD sessions. The questions were designed to measure two variables: motivation and attitudes. These were directly determined by the purpose of the study, specifically; to explore educators' current levels of motivation in order to later assess the impact of learning strategies on their motivation in CPD (Saris & Gallhoffer, 2014). Care was taken to ensure questions were non-leading and non-biased to ensure that the responses received were representative of the participant's thoughts (Wilson & McLlean, 1994; Brace, 2013; Cohen et al, 2018; Hargie, 2022). Underpinning the avoidance of bias was a necessity to ensure unique positionality and adopt a reflexive research approach when developing the baseline questions (Bourke, 2014; Holmes, 2020) and ensured I acted ethically throughout the design process (BERA, 2024).

The questionnaire was designed to collect both quantitative and qualitative data to allow for a comprehensive picture of educator motivation (Cresswell & Piano Clark, 2007) and increased confidence in the accuracy of the findings (Gilbert & Stoneman, 2016). Combining the data in this way provided a way to use statistics, along with narratives of educators, to provide further depth in understanding about educator motivation and attitudes towards CPD (Henderson & Bedini, 1995).

4.3 Research Cycles

The two research cycles were designed to intervene on the findings from the baseline questionnaire. The process included i) identification of the research problem, specifically lack of educator motivation in CPD, and review of relevant literature, (ii) design of the intervention, two CPD sessions, using critical thinking, peer learning and elaboration as learning strategies (Pintrich, 1992) with the intent of increasing educator motivation and iii) data collection to measure impact on educator motivation (Brew, 2006; Spronken-Smith et al, 2013). This included pulse surveys [Appendix B] and SLT observations [Appendix C] after each session, to assess sustained impact on educators and interviews with a proportional stratified sample of participants [Appendix D].

4.3.1 CPD sessions and Pulse Surveys

To evaluate the impact of learning strategies on educator motivation, the intervention consisted of two, 30-minute CPD sessions, held a month apart. The content of the CPD sessions was chosen based on the School Development Plan, and therefore focussed on high quality interactions in the EYFS, based on evidence from the EEF communication and language toolkit (2023).Although the subject content was important, the primary goal of these sessions was to change a desired behaviour, eductor motivation, through the use of specific learning strategies in CPD.

The design of the CPD sessions can be further explained using Michie et al's (2011) framework for understanding behaviour [Figure 1].

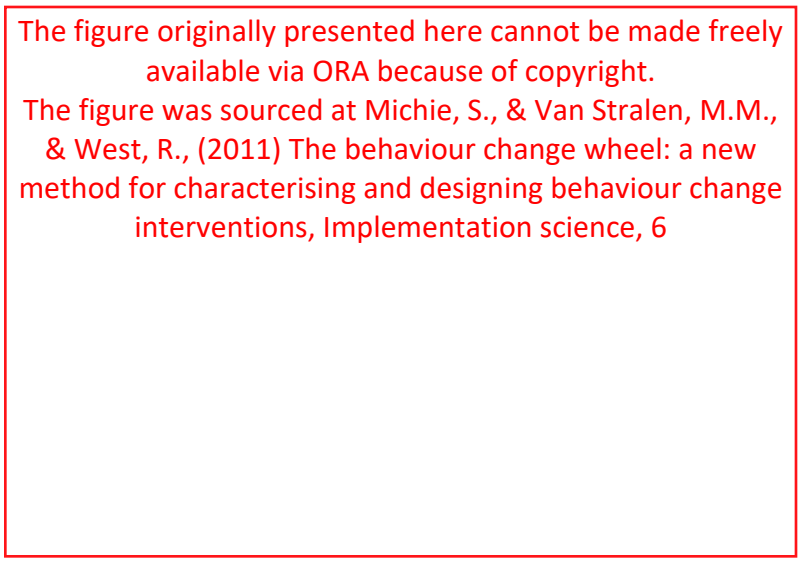


Figure 1 - Michie et al's (2011) Framework for understanding behaviour

Capability

To change educator perspectives of their own capabilities, with the goal of impacting intrinsic motivation (Atkinson, 1964; Michie et al 2011), the sessions were focussed on educators' professional development needs, high quality interactions with pupils, identified in collaborative initial sessions with SLT, based on anonymised performance reviews and the school development plan.

Motivation

To further impact educator motivation in CPD sessions, and foster motivation for professional development going forward, the first session included all three learning strategies outlined in the literature review: critical thinking, peer learning and elaboration (Pintrich, 1992). The goal was to enhance short-term motivation during the CPD sessions through the use of learning strategies, with the ultimate aim of achieving longer-term behaviour change, resulting in consistently elevated motivation throughout all professional development (Michie et al, 2011). On reflection, a limitation of this design is its primary focus on short-term motivation during and immediately

after the CPD sessions. It does not directly measure sustained motivation for all professional development, improved classroom practice or pupil attainment. Further research could investigate the long-term impact on motivation, classroom practice and pupil outcomes over an extended period.

Opportunity

The second session was held a month later to i) ensure opportunity for participants to reflect on the first session and start to change behaviour, ii) to allow time for intervention design adaptations following the first session (Michie et al, 2011). As a result, this last session focused on just two learning strategies, critical thinking and peer learning, which were of most interest after analysing the initial findings.

4.3.2 Pulse Surveys

Pulse surveys [Appendix B] were designed using Pintrich's MSLQ (1992) questions, specifically critical thinking, peer learning and elaboration, to ensure the validity of the intended measurements and to facilitate easy comparisons of the results. After the second CPD session, the pulse survey questions were revised to focus solely on critical thinking and peer learning.

The questions were primarily quantitative, following Pintrich's MSLQ (1992) and using the same seven point scaled score. However, it is important to note that the MSLQ (Pintrich, 1992) was designed for university students, whereas this intervention's participants are professional adult educators, which poses two complex issues: i) the developmental and cognitive differences between young students and professionals may affect the relevance of the questions ii) professionals may interpret the questions differently, impacting on the reliability of the data (Hock & Mellard, 2011).

To address this limitation and ensure the research comprehensively addresses all research questions, qualitative questions were included in Pulse Survey 1 [Appendix B] to identify other factors affecting motivation, specifically addressing research question 3. Similar qualitative questions were used at the beginning of Pulse Survey 2 [Appendix B] to measure the sustained impact from the first CPD session.

4.3.3 SLT observations

As this intervention was conducted at my previous place of work, therefore meaning I was not present daily, collaboration was essential to ensure validity. To include an additional data source and involve a colleague to improve robustness, learning walks by SLT took place two weeks after the first, and second, CPD session. The observation form [Appendix C] was designed to be concise, primarily collecting quantitative data to accommodate leaders' time constraints (Creagh et al, 2023) and facilitate ease of analysis. However, while this collaboration provided a valuable alternative perspective, the two week period following the CPD session was insufficient in measuring sustained impact and yielded limited data. Additionally, this observation created unnecessary workload for SLT and the educators involved. On reflection, I would not include this in a replication of the study.

4.3.4 Stratified Interviews

My research questions were the primary guiding factor in my participant sampling decisions for the stratified interviews (Guest, 2014). The design allowed the use of information gathered from survey data to identify the most and least motivated individuals for more in-depth study (Schatz, 2012). I chose a proportional sample, one TA, teacher and leader (Lynn, 2019) to enhance validity. I considered interview protocols such as ensuring an informal, comfortable environment (Flick, 2009). To consider the time burden on participants, I limited the interview time to 20

minutes, conducted these within the pre-existing weekly meeting slot and conducted one of the interviews in a pair (Denscombe, 2006). Using both pulse surveys and semi-structured interviews had analytical advantages, including corroborating findings drawn from two data samples and using multiple data sources to provide further explanations (Schatz, 2012).

The interviews were semi-structured [Appendix D], with three questions per research question, designed to provide qualitative data and a purpose, while also allowing for flexibility (Richards, 2009; Partridge et al, 2010). My familiarity with the participants through our prior working relationship, was a potential limitation to this part of the process. This is a common critique of researchers who favour fully structured interviews to ensure measurable and controlled responses (Cohen et al, 2018; Partridge et al, 2010). I mitigated this risk through a thoughtful and considered approach to each interview, placing participants at ease but also ensuring they were focused on the subject matter of the interview.

4.3.5 Data Analysis Methods

I analysed the interview data using deductive coding, collaborating with a colleague to develop a coding frame [Table 1], based on research questions, organised by code categories, accompanied by definitions and example data segments (Gaskell, 2000; Braun & Clarke, 2006). My colleague did not have prior training in deductive coding. Therefore, the creation of a clearly defined coding frame was a sufficient way of ensuring validity and standardising coding (O'Connor, 2020).

Research Question	Code name	Definition	Example data segments

RQ1 *Is there empirical evidence demonstrating the impact of learning strategies on educator motivation in the context of Professional Development and, if so, which strategy proves most effective?*	Peer learning with direct reference to enhancing motivation	Any reference to learning with or from other colleagues combined with reference to enhanced motivation.	'*Working with other teachers motivates me.'*
	Opportunities to critique research enhancing motivation	Any reference to agreeing or disagreeing with research presented combined with reference to enhanced motivation.	'*Picking apart research makes me want to do better in the classroom.'*
	Peer learning	Reference to peer interactions/ cooperation.	'*I like bouncing ideas off each other.*'
	Elaboration	Reference to connecting new knowledge to prior experiences.	'*I like reframing thoughts so that I can understand them in terms of my classroom experience.'*
	Critical thinking	Reference to questioning, analysing, and evaluating information.	'*Evaluating research that is relevant to my students lights me on fire!'*
RQ2 *Did participants identify factors beyond the introduced learning strategies that enhanced educator motivation in Professional Development?*	research-informed	Reference to evidence rich content.	'*When I know the session is based on something solid, like the EEF, I pay attention.'*
	Active learning	Reference to physical movement while learning.	*'I like getting up and moving, we need breaks just like the kids!'*
	Positive reinforcement	Reference to positive affirmations, specifically by a person of authority.	'*When I implement a strategy from CPD, and SLT pick up on it, it makes me want to continue.'*

[**Table 1** - Semi-Structured Interview Coding Frame]

The coding frame constitutes the analytic instrument with which raw data is classified into a conceptual framework as it is applied to the data (Gaskell, 2000).

Inter-coder reliability (ICR) was calculated at this stage of the qualitative analysis, using Cohen's Kappa analysis (Rau & Shih, 2021) to assess the robustness of the coding frame and its application [Table 2].

Code tag	Rater 1 Frequency	Rater 2 Frequency	Agreed on decisions	Observed Agreement	Coding decisions	Cohen's Value of Kappa	Level of Agreement
RQ1 - Peer learning enhancing motivation	4	5	8	0.89	9	0.78	Substantial agreement
RQ1 - Opportunities to critique research enhancing motivation	3	2	5	0.83	6	0.67	Substantial agreement
RQ1 - Peer learning	3	4	6	0.86	7	0.71	Substantial agreement
RQ1 - Elaboration	1	2	2	0.67	3	0.25	Fair agreement
RQ1 -Critical Thinking	3	2	2	0.4	5	0.25	Fair agreement
RQ2 -research-informed	7	6	12	0.86	14	0.71	Substantial agreement

RQ2 - Active learning	3	2	5	0.83	6	0.67	Substantial agreement
RQ2 -Observations	4	2	2	0.33	6	0.33	Fair agreement

[**Table 2** - Kappa Analysis Contingency Table]

Achieving fair to substantial levels of agreement for each code indicates reliability of findings (Blackman & Koval, 2000). Furthermore, achieving these levels of agreement demonstrates the communicability of the coding frame across researchers (Joffe & Yardley, 2003; O'Connor, 2020).

It should be noted that critics of ICR, suggest that it contradicts the interpretative nature of qualitative research, prioritising objectivity over the richness of subjective insights and diversity of perspectives (Braun & Clarke, 2006; Hollway & Jefferson, 2012).

Conversely, proponents of ICR highlight its role in ensuring objectivity and provoking dialogue and collaboration among researchers (O'Connor, 2020). During this research cycle, the coding frame was revised after the first round of independent coding to ensure definitions were agreed on before the second round (Campbell et al, 2013). This approach enhanced the consistency and transparency of the coding process, ensuring that the final analytic framework represents a credible account of the data (O'Connor, 2020).

4.4 Participants

The intervention took place in my previous school with ten members of the EYFS team. All participants were female and aged between 25-55. This included 5 TAs and 5 teachers, two of whom are also leaders, specifically the new EYFS Lead and the Assistant Head Teacher (AHT). The group included participants with varying levels of experience, ranging from those who have

been working in education for over three years: experienced, and those working for less than three years: inexperienced (EEF, 2021). The justifications for this sample are:

1. **Relevant experience:** This sample includes participants with varying levels of experience, allowing for a comprehensive understanding of how the intervention impacts both experienced and inexperienced educators. This variation ensures that the findings are applicable across a range of professional experiences.

2. **Leadership Representation:** Including leaders such as the EYFS Lead and AHT, ensures that the intervention's outcomes are observed by individuals in decision making positions. Thus, this could facilitate the scaling of successful strategies or interventions across the school.

3. **Diverse Perspectives**: Through the inclusion of TAs, teachers and leaders, this intervention captures a wide range of perspectives and roles within the EYFS team. This diversity is crucial in evaluating the intervention's impact on different job roles and ensuring that the findings are robust and have potential to be generalisable. Thus, the sample is representative of a typical EYFS team and therefore enhances the external validity of the results.

4. **Practical Feasibility**: Conducting the intervention in my previous school with a familiar team of colleagues facilitates logistical ease, enhancing the intervention's implementation fidelity. For example, reduced administrative barriers, existing relationships, knowledge of the school layout and resource availability. Furthermore, the pre-existing relationships arguably contributed to open communication and collaboration

throughout the intervention and more honest feedback on the impact of the learning strategies on motivation.

5. **Focused Educational Stage:** Concentrating on the EYFS Phase allows for targeted investigation into early childhood education. Although the sample size is small, and therefore not able to be generalised to all early years settings, the results do provide a foundation for replication in other studies and thus, valuable insights into the sector.

These justifications robustly support the rationale behind my sample selection, emphasising my interventions potential to yield impactful results within my school setting.

4.5 Collaboration

The process of collaboration was specifically emphasised throughout this intervention. This included:

1. Engaging with a course colleague conducting similar research to collaboratively plan our methodology, utilising Pintrich's MSLQ (1992). This opportunity to share knowledge was beneficial in promoting innovation towards the achievement of our shared goal, improving educators' CPD (Abramo, 2008). Furthermore, Adams et al (2005) stated that knowledge sharing among researchers is conducive to a significant increase in research effectiveness.

2. Meeting with the Senior Leadership Team (SLT) ahead of the intervention to define the CPD focus and incorporate their perspectives on current teacher motivation and my methodology. This internal collaboration was useful in choosing the participants and led to a more targeted selection process, resulting in ensuring the intervention addressed

school priorities and thus, a willingness to continue the intervention after the initial two cycles and ensuring sustained impact (Dundar & Lewis, 1998).

3. Convening with SLT after the first research cycle to share initial feedback, adapt subsequent pulse survey questions and CPD sessions. This resulted in a decision to exclude elaboration as a learning strategy in the second research cycle, due to its consistently negative impact on educator motivation. This was later followed up with a meeting after the second research cycle to discuss further findings and receive the feedback on leadership observations of the EYFS teams and discuss a further plan of action for the school.

4. Involving an SLT member as a critical friend during the sessions to ensure quality and rigour of the intervention through asking probing questions to challenge assumptions and offering an objective viewpoint to identify biases (MacPhail et al, 2021). For example, my initial idea to include just teachers in the study was challenged on the basis of potential selection bias. After consideration, I agreed that this group would not have been representative of typical EYFS settings, which includes both teachers and TAs, thus the external validity of the results would have been compromised.

5. Partnering with a professional colleague to code interview responses to ensure intercoder reliability and increase validity (Tinsley & Weiss, 2000; O'Connor & Joffe, 2020).

6. Presenting the overall research findings to both the school staff at my previous school setting and my current team in my new role. This provided a shared understanding of the

intervention's impact and insights into evidence- based strategies for enhancing educator motivation in CPD.

4.6 Ethical Considerations

When designing this intervention, due regard was given to BERA's (2024) educational research guidelines. Before starting this investigation, I received CUREC approval and completed the university's Ethics and Integrity training. Furthermore, following the university's Best Practice Guidance BPG 04 (2021) approval from the headteacher and all participants were sought before starting the intervention, pseudonyms used and the document linking the pseudonyms and participants stored on the University OneDrive. In addition, the following ethical considerations were also taken to ensure the dignity, rights, safety, and wellbeing of participants (UK Research Integrity Office UKRIO, 2023):

1. Following the UKRIO's 3.6.2 (2023) I ensured that I followed the university systems to ensure confidentiality and security of personal data related to participant responses and views. Accordingly, all data was stored on the OneDrive with restricted access. Thus, all data collections followed the university's BPG 09 (2021) on data collection, protection and management.

2. Risks were identified, including the additional burden on educators' workload and wellbeing through time taken to attend CPD sessions, complete pulse surveys and participant in interviews. These risks were mitigated by timetabling sessions during pre-existing weekly meeting slots, ensuring interviews take less than 20 minutes, and conducting these in public spaces within the school setting (UKRIO, 2023, 3.1.6 f) All interviews followed the university's BPG 10 (2021) on conducting interviews.

3. Participants may have felt an obligation to participate due to the power dynamics and existing relationships (Swan, 2006). To lessen this risk, colleagues were approached by a member of SLT instead of myself. It was emphasised that declining to participate would have no effect on professional opportunities and a full explanation of the study was provided. It was stressed that participants could withdraw consent to participate at any point in the study (BERA, 2024).

4.7 Limitations

In addition to those previously mentioned, there are further limitations to this study that affects its generalisability and comprehensiveness:

1. The study focuses solely on the Early Years Foundation Stage (EYFS) and does not cover other phases in the primary school setting. Equally, the location of the school within a major city may set this group of EYFS educational staff apart from schools, for example, a rural setting with different class sizes and staff ratios. As a result, the findings may not be applicable to other phases within the school or other schools, limiting the broader applicability of the results. However, to balance this limitation, it is also arguable that all primary educators share a common vocational mindset, and face similar challenges, sufficient to give weight and value to the findings from this study across different primary education settings.

2. The use of a stratified sample includes a specific group of participants and therefore, does not capture perspectives of all participants in the study. The lack of representation could lead to a partial understanding of the impact of learning strategies on educator motivation in CPD. To reduce this risk, I carefully selected participants proportional to the participants in the overall study, including one TA, teacher and leader.

3. The relatively short duration of the intervention, a month, may not be sufficient to observe long term changes in educator motivation and sustained behaviour change. A longer intervention period would capture sustained impact and more comprehensive results.

To summarise, while the study provides valuable insights into the impact of CPD on educator motivation within the EYFS context of this particular school setting, its limitations include the narrow focus on EYFS, the use of a small stratified sample and the short length of the intervention, which may not allow for the observation of sustained impact.

5. Findings and Discussion

5.1 Findings

This section will first discuss the findings from the initial baseline questionnaire. The assignment will then address each of the two research questions and the related findings. The findings will be followed by a discussion in light of existing research and theoretical perspectives earlier explored in the literature review.

Baseline questionnaire

The baseline questionnaire [Appendix A] was used at the beginning of the intervention, to ascertain participants' current levels of motivation for their role, professional development and their experiences of learning strategies. Out of the ten participants questioned, all ten were motivated in their current role, yet 9 expressed dissatisfaction with their current CPD. This suggests that while educators are driven to teach, the existing CPD structure is demotivating and is not meeting their professional development needs. This confirmed my initial observations that prompted this research topic.

When questioned about factors that would contribute to improved motivation, participants mentioned ‘evidence-based CPD or qualifications’ (n=5), use of ‘engaging strategies’ during CPD (n=8) and CPD that is ‘relevant’ to their classroom practice (n=4). Participants also listed demotivating factors, including ‘time’ (n=7) in regard to length of time CPD takes and the weekly contracted session and ‘irrelevant’ (n=3) sessions that do not correlate with their professional practice.

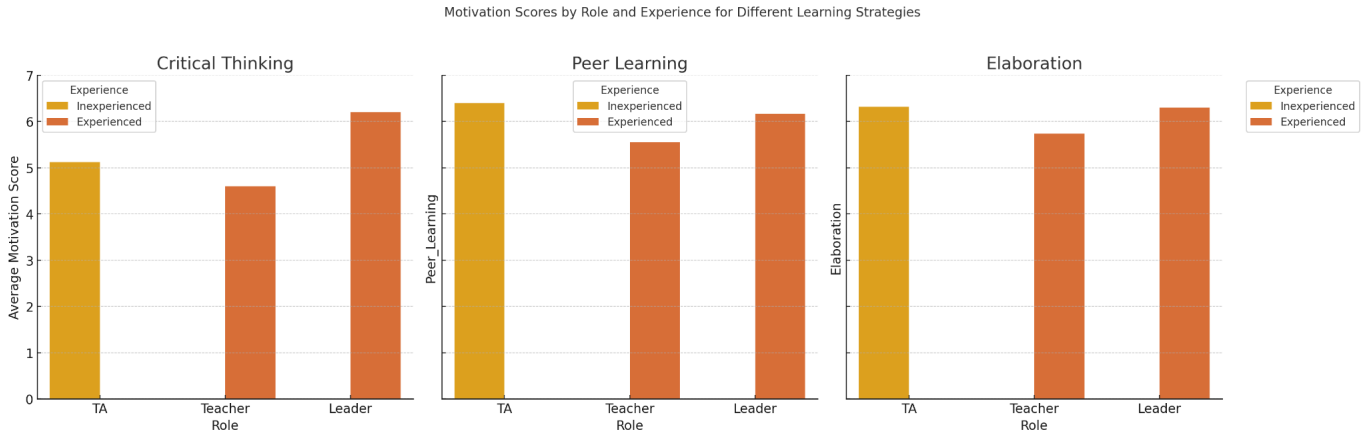
When analysing roles and experiences, TAs and leaders were most motivated by their roles. Notably, the most experienced teachers were the least motivated by CPD, in contrast to TAs who were the most motivated by CPD and expressed a desire for further timetabled CPD. This is in contrast to teachers, who have weekly CPD as part of their weekly contracted hours, but comment negatively on time taken to attend CPD.

1. **Is there empirical evidence demonstrating the impact of learning strategies on educator motivation in the context of Professional Development and, if so, which strategy proves most effective?**

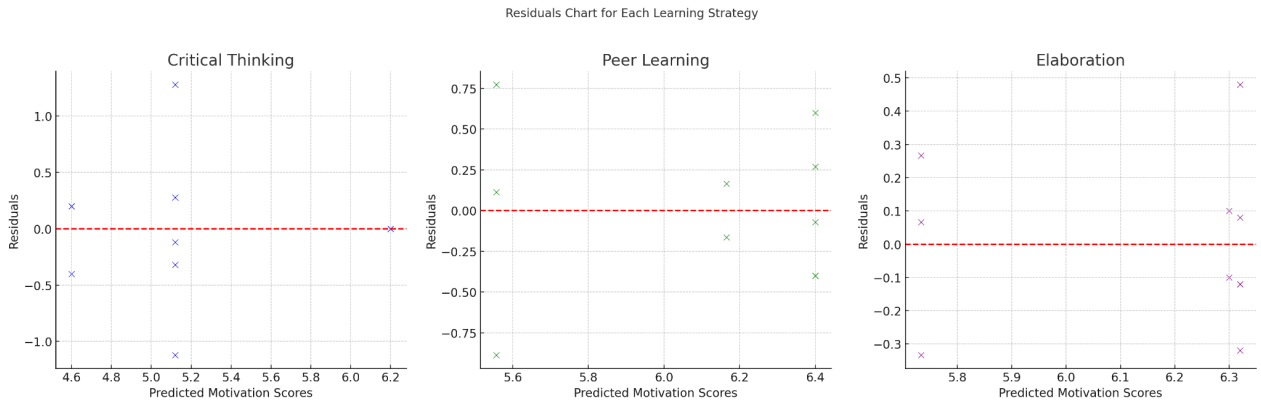
The next part of the assignment will present and analyse the findings from both pulse surveys and stratified interviews to demonstrate the impact of learning strategies on educator motivation in this intervention. SLT observation data will also be considered. Rigorous quantitative analysis methods, including Analysis of Variance (ANOVA) and residuals charts, were used to assess how these learning strategies influenced educator motivation within both CPD sessions, taking into account moderating variables such as educator roles and their experience levels. The findings will then be discussed, to explore how different learning strategies can impact educator motivation.

Pulse surveys

Pulse surveys were used to capture data after each CPD session, to measure the impact of specific learning strategies on educator motivation. The following bar charts displaying mean motivation scores and the residuals chart, visualise the dependent variable, motivation scores, in relation to the independent variables, roles and experience, for each learning strategy:



[**Figure 2** - Motivation scores by role and experience for different learning strategies]



[**Figure 3** - Residuals chart for each learning strategy]

The empirical evidence suggests that i) learning strategies positively influence educator motivation and ii) the degree of motivation varies according to educators' roles and experiences.

To further explore the data in depth, the impact of each learning strategy can be examined individually:

Critical thinking

The ANOVA analysis of these mean scores, suggests a significant interaction effect between role and experience. This implies that the effectiveness of critical thinking on motivating educators varies depending on their role and experience level. This may indicate that more experienced educators, or leaders, respond differently to critical thinking tasks, compared to less experienced or non-leadership educators. This suggests that critical thinking is most effective when used with educators who are already proficient in implementing this learning strategy and have had sufficient opportunities to use and practise this skill.

The residuals chart for critical thinking further reinforces these findings. The relatively random distribution of residuals around the zero line indicates that the model fit was adequate, supporting the observed significant interaction effect in the bar charts. This indicates a relationship between role, experience, and motivation in the context of critical thinking, adding confidence to conclusions drawn.

Peer learning

The ANOVA analysis of the mean scores showed no significant interaction effects between role or experience on motivation scores. This suggests that peer learning strategies may have a similar impact on motivation across all roles and experience levels. This indicates the robustness of peer learning as a learning strategy for all educator groups and its suitability in CPD sessions.

Furthermore, the residuals chart for peer learning supports this analysis, showing a similarly random distribution of residuals with no clear pattern. This adds further credibility to the findings of the uniform impact of peer learning on educator motivation without requiring specific adjustments for different educator groups.

Elaboration

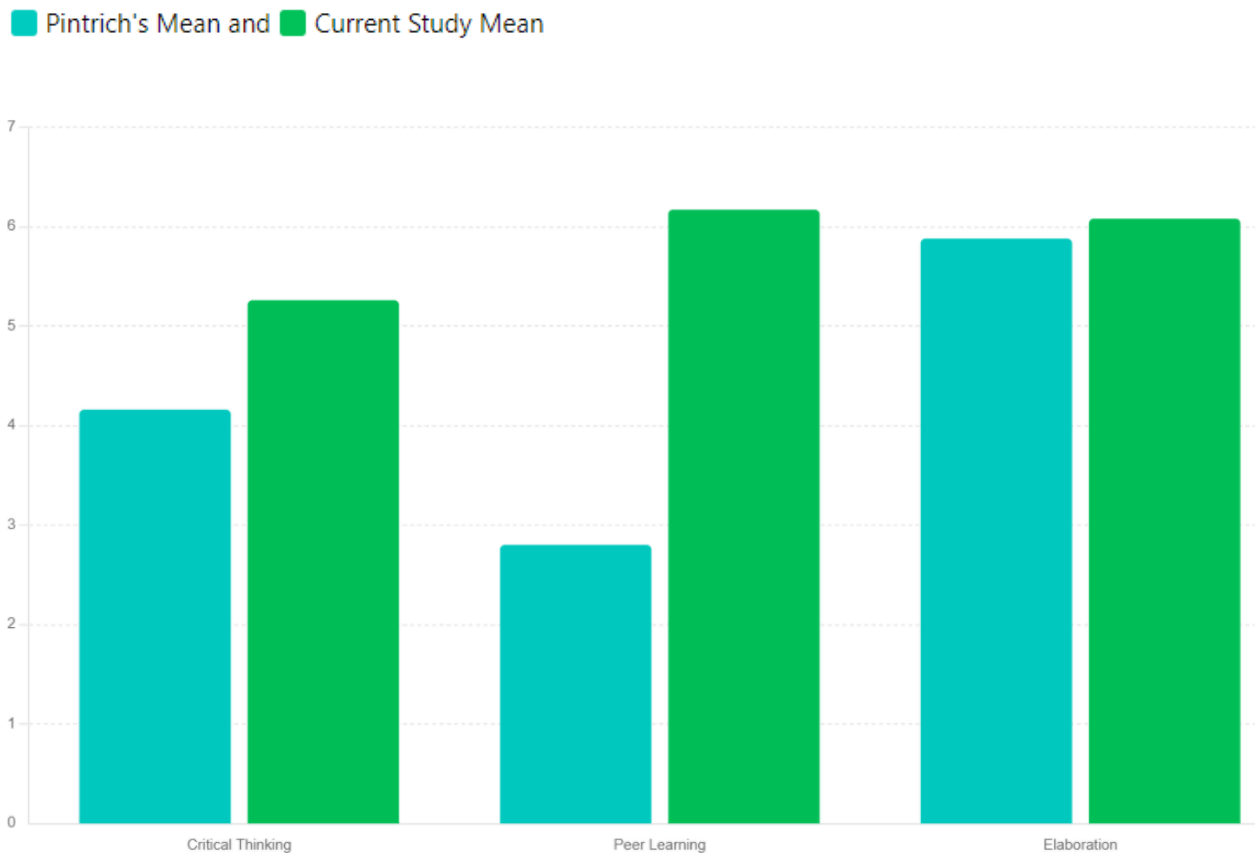
The ANOVA analysis showed that the interaction effect between experience and role approached significance, suggesting a potential trend. However, the data was not sufficient. This may suggest that further data with a larger sample size would be beneficial. Elaboration was therefore only used as a learning strategy in the first research cycle, and could be used in a larger replicating study.

The residuals chart for elaboration indicated that the model provided a reasonable fit to the data as it did not show any problematic patterns. However, the lack of significant residual patterns implies that any differences in motivation based on experience or role are subtle. This aligns with the near significance of the interaction effect and supports the need for further research or additional data.

In summary, while some learning strategies may universally impact educator motivation, others might be more effective when tailored according to the educators' roles and experience levels. In regard to the findings, the even distribution of residuals across all three learning strategies indicates that the bar charts accurately captured the relationships between the independent variable, role and experience, and the dependent variable, motivation. This adds credibility to the findings and reinforces the conclusions drawn from the statistical tests: i) role and experience play a significant role in shaping motivation for critical thinking, ii) peer learning has

a consistent impact across groups of educators and iii) further evidence is needed to provide more conclusive insights into the impact of elaboration on motivation. However, the limitation of the small sample size must be acknowledged as this may have impacted on the ability to detect more in-depth analysis and generalisations.

To further contextualise the findings, a comparison was made between the mean motivation scores in this intervention with those reported by Pintrich's MSLQ (1992) on which the pulse survey was designed:



[**Figure 4** - Comparison of mean scores]

Whilst the MSLQ (1992) provides a useful benchmark for comparing the motivation levels observed in this study, a limitation is the comparability between the MSLQ's participants, university students, with professional educators of varying roles and experiences.

Firstly, the mean motivation score for critical thinking in this intervention is notably higher than the reported mean in Pintrich's (1992) study. This suggests that the educators in this research responded more positively to critical thinking, and were therefore more motivated by this learning strategy. This difference may be explained, in part, due to the involvement of experienced educators and leaders in this intervention, who may have had prior proficiency with this learning strategy, which therefore could have increased the effectiveness and thus motivation level.

Next, there is a vast difference in the scores for peer learning. This study reports a significantly higher motivating effect on educators as opposed to the university students in Pintrich's MSLQ (1992). This difference may be attributed to the greater maturity of professional educators and their shared commitment to improving pupil outcomes.

Lastly, the mean motivation score for this study is slightly higher than Pintrich's (1992) mean, suggesting that elaboration was effective in impacting motivation. However, as this was only used in the first research cycle of this intervention, results would need to be further explored to draw a decisive conclusion.

These comparisons reveal that the learning strategies implemented in this study generally produced higher motivation scores than those reported by Pintrich (1992). This could be attributed to several factors, including the participants' experiences and the targeted design of

the CPD sessions, which were specifically tailored to meet the professional development needs of the educators.

In conclusion, the higher mean motivation scores in this study compared to Pintrich's (1992) benchmarks suggest that the specific context and structure of the CPD sessions had a positive impact on educator motivation. These findings underscore the importance of tailoring professional development strategies to the unique needs and backgrounds of educators, as doing so can significantly enhance their motivation and engagement.

Interviews

In addition to the quantitative findings from the pulse surveys and statistical analyses, stratified interviews were conducted with educators to gain deeper insights into their experiences. The interviews provided qualitative data that supports the empirical evidence by offering a nuanced understanding of how learning strategies impacted motivation.

Critical thinking

Critical thinking was assigned two distinct code tags during the interview analysis: one for instances where it was directly identified as a motivating factor, '*opportunities to critique research enhancing motivation*' [table 3] and another for when it was mentioned as a learning strategy, '*critical thinking*' [table 3]. It is notable that only 1 participant, an experienced leader, out of 3 interviewees referenced critical thinking. Both code tags were referenced 5 times, with participant 9 initially linking critical thinking with motivation, stating: '*picking apart research makes me want to do better in the classroom.'*

This supports the earlier ANOVA analysis findings, which revealed a significant interaction effect between role and experience for critical thinking, suggesting that its effectiveness as motivator depends on the educators' experience and role. Participant 9 further elaborated on the reasons why they found critical thinking motivating, discussing how the role of evaluating, synthesising and applying new knowledge had a positive impact on their motivation:

> *When I was studying for my NPQ [National Professional Qualification], we were encouraged to look at our own classroom experiences or problems through a research lens, applying what we know to what is published, to find practical solutions to our real-world problems.*

Given participant 9's experience, leadership role and use of prior learning in professional development, critical thinking had a significant impact on their individual motivation during CPD. Notably, critical thinking was not mentioned by the other participants, with less experience and in different roles.

Peer learning

Similarly to critical thinking, peer learning was assigned two distinct code tags during the interview analysis: one for instances where it was directly identified as a motivating factor, '*Peer learning enhancing motivation"* [table 3] and another for when it was mentioned as a learning strategy, '*peer learning*' [table 3]. The highest frequency of responses when asked about motivation and learning strategies was against the code, '*Peer learning enhancing motivation*' [table 3], highlighting the significant role this strategy had in increasing educator motivation.

This supports the earlier findings that indicated the consistent and positive impact on motivation, regardless of experience or role. Furthermore, 2 out of 3 educators specifically referenced peer

learning as a factor in positively influencing their motivation. Participant 2, a TA, stated that 'working with other teachers motivates them', while Participant, 7, a teacher, commented:

> *Working alongside colleagues is so motivating. Having time within CPD to solve problems together and discuss practice makes me want to get back in the classroom and give it a go!*

The responses highlight the inherent collaborative nature of peer learning. The interview findings align with the quantitative data from the pulse surveys and statistical analysis, illustrating that peer learning consistently enhances motivation across different roles.

Elaboration

The code tag, 'elaboration' had the lowest frequency in responses [table 3]. It was mentioned by Participant 2, as a helpful way to 'reframe thoughts in order to understand'. When mentioned, it was not explicitly linked to motivation, but as a method to support another learning strategy, or as part of a wider process:

> *I find it helpful to work with other colleagues as they will often explain a new concept in their own words and use examples. We can then decide whether we find the concept helpful and think about our students and how we could apply it in the classroom, which I find motivates me and holds me accountable for using it [new knowledge or concepts].*

Participant 2, has found elaboration from a colleague helpful, but it is the peer learning and critical thinking strategies that have motivated this participant to change their classroom practice, and notably, hold themselves accountable.

Code tag	Frequency (Frequency count of each time this category was mentioned in the interview data)	Number of teachers who mentioned each category
RQ1 - Peer learning enhancing motivation	9	2
RQ1 - Opportunities to critique research enhancing motivation	5	1
RQ1 - Peer learning	7	2
RQ1 - Elaboration	3	1
RQ1 -Critical Thinking	5	1

[**Table 3** - Coding Table for Research Question 1]

SLT observations

SLT observations [Appendix C] took place two weeks after the first CPD session. It was reported that there had been an increase in motivation seen across all roles and EYFS classrooms. After the first research cycle new knowledge had been incorporated into classroom practice 'regularly'. After the second session, this was noted as 'part of team practice' suggesting sustained motivation and impact.

In addition, SLT noted further signs of motivation, including informal staff room discussions around current research and classroom practices, including conversations covered in the CPD

topic. However, it was acknowledged that the interval between CPD sessions and subsequent observations was too short to measure sustained long-term impact. Furthermore, time constraints led to incomplete observation forms, resulting in gaps in the data and limiting the ability to draw fully comprehensive conclusions.

Conclusion

In response to the research question, '*Is there empirical evidence demonstrating the impact of learning strategies on educator motivation in the context of Professional Development and, if so, which strategy proves most effective?'* The findings indicate that:

1. There is empirical evidence which supports the impact of learning strategies on educator motivation in the context of professional development. All learning strategies were found to positively influence motivation, with impact varying by role and experience.

2. Thus, there is not solely one effective learning strategy. Instead, peer learning had a universally positive impact, while critical thinking's effectiveness depended on the educators' experience. Elaboration showed potential but requires further research. Overall, the findings suggest trends, but they do not provide a complete answer to the research question, highlighting the need for further research to fully understand the effectiveness of each learning strategy.

2. **Did participants identify factors beyond the introduced learning strategies that enhanced educator motivation in Professional Development?**

While this assignment primarily focuses on the impact of learning strategies on motivation, it is important to acknowledge other motivating factors in CPD. To explore this research question, three questions in the interview [Appendix D] were specifically designed to gather insights on

alternate motivating factors. Three specific factors were identified: research-informed CPD, active learning and positive reinforcement.

The code tag, ‘research-informed’ had the highest frequency score, 13, with all 3 teachers mentioning this in their interviews [table 4]. References include mentions of research-informed CPD being ‘reliable’ (n=2), ‘valuable’ (n=3) and ‘relevant’ (n=1). Participant 7 further commented:

> *When I know the session is based on something solid, like the EEF [Education Endowment Foundation], I pay attention. I know that it has been tested in other classrooms and so I think it will work in mine. I don’t have the time to read all the papers so I like attending CPD that summarises it [research] for me.’*

This anecdotal evidence suggests that educators see the value in practical evidence from trusted research bodies, such as the EEF, that has been field tested and therefore has relevance to their daily practice. There is also reference to the time saving factor of research-informed CPD, delivering evidence-based strategies to time poor teachers. The ‘time saving’ element was also mentioned by both participants 2 and 9.

The second motivational factor mentioned by 2 out of the 3 teachers was physical, or active, learning [table 4]. Participant 7 referenced the need to ‘get up and move’, while participant 2 stated a preference for ‘active learning like moving around the room’. Participant 2 elaborated on this:

> *I need to move around to get my brain working. I then feel motivated to learn and take on new information to use with pupils. Sitting down and watching a presentation makes me want to sleep!*

It appears that active learning would contribute to improved engagement within sessions, and thus a motivation to take on new information and apply this to their practice.

The second highest frequency code tag was ‘observations’ [table 4]. 2 out of 3 educators discuss the importance of ‘support’ in the implementation process after the CPD session has taken place. Participant 2 stated:

> *When I implement a strategy from CPD, and SLT pick up on it [classroom practice], it makes me want to continue it [implementing new knowledge].*

Both participants (2&7) specifically mentioned ‘positive’ and ‘constructive’ feedback, suggesting that participants see the value that professionally constructive conversations can have in enhancing motivation and sustaining the impact of implementation.

Notably, the code tag ‘observations’ was not always mentioned as a motivating factor. In fact, ’observations’ were also mentioned as ‘demotivating’ (n=2) and ‘stress inducing’ (n=1) suggesting that, for some participants, the pressure of observations hinders motivation. These findings highlight the complexity of feedback mechanisms within professional development and the importance of providing support that enables educators to implement new knowledge effectively, without adding additional pressure. This underscores the need to carefully balance motivational strategies to ensure they support, rather than undermine, educators' professional growth.

Code tag	Frequency (Frequency count of each time this category was mentioned in the	Number of teachers who mentioned each category

	interview data)	
research-informed	13	3
Active learning	5	2
Observations	6	2

[**Table 4** - Coding Table for Research Question 2]

Conclusion

In response to the research question, '*Did participants identify factors beyond the introduced learning strategies that enhanced educator motivation in Professional Development?*' The findings indicate that:

1. Participants identified three motivating factors beyond the introduced learning strategies. These included research-informed CPD, active learning and observations.

2. The most prominent of these factors was research-informed CPD, with all participants emphasising the value of evidence-based content that is both reliable and relevant. Educators appreciated the time saving nature of this approach, allowing them to learn and use research-informed practices from trusted bodies like the EEF.

3. Active learning was also highlighted as an important motivator by two participants, who expressed a preference for physical engagement during CPD sessions. Support through observations was another identified factor, with comments on constructive feedback being a powerful motivator. However, observations were also referenced as a demotivating factor, with some participants describing it as stress inducing.

5.2 Discussion

Findings from the investigation will now be discussed in light of the aforementioned reviewed literature.

Research question 1

The first research question 1, 'I*s there empirical evidence demonstrating the impact of learning strategies on educator motivation in the context of Professional Development and, if so, which strategy proves most effective?*' will now be discussed. The first part of the question, which evaluates the impact of all learning strategies on motivation, will be addressed first, followed by a discussion on the second aspect concerning the most effective learning strategy.

Is there empirical evidence demonstrating the impact of learning strategies on educator motivation?

The findings suggested that all learning strategies contributed to enhanced educator motivation in some form. This aligns with recommendations from the EEF's guidance report on effective professional development (2021), which advocates for carefully designed CPD that includes the use of teaching strategies and techniques to motivate educators. However, the existing literature reveals a gap in understanding the specific impact of learning strategies on educator motivation in school settings, particularly for TAs, as most research focuses broadly on adult learners. Although the findings of this study are limited due to its small sample size and single urban school setting, this intervention offers a starting point for further research, due to the empirical evidence found on the positive impact of learning strategies on motivation.

To further understand the motivational dynamics at play when using learning strategies, it is useful to analyse these findings in relation to motivation theories; specially Atkinson's attribution theory (1964) and Dweck's cognitive theory (2017). According to Atkinson (1964), motivation is

driven by balancing an individual's need to achieve and their expectation of success. In the context of this study, the use of learning strategies such as peer learning and critical thinking, contributed to educators' confidence in implementing new evidence-based strategies in their classrooms, aligning with Atkinson's principles of motivation through achievement and expectancy.

Furthermore, Dweck's (2017) cognitive theory of motivation further supports this analysis by highlighting the role of growth mindsets in shaping educator motivation. In the context of CPD, educators with a growth mindset are more likely to embrace new learning strategies and persist in the face of challenges, whereas those with a fixed mindset may struggle to see the value of continuing professional development. This study's findings align with Dweck's (2017) theory, as educators who were motivated by CPD showed a willingness to embrace new knowledge and improve their practice. By integrating Dweck's (2017) focus on mindsets with Atkinson's (1964) need for achievement, we gain a more comprehensive understanding of how CPD can be designed to foster a culture of continuous improvement and sustained motivation. The findings suggest that when CPD is designed with motivational theories in mind, and includes learning strategies that foster a growth-oriented mindset, educators remain engaged in the CPD session.

Which strategy is most effective?

Simply, the findings indicate that there is not solely one effective strategy. Instead, peer learning had a universally positive impact on all educators, including teachers, TAs and leaders. Critical thinking was effective in enhancing motivation, however this depended on the educator's experience and role. Elaboration did enhance motivation, however, further research on a larger sample size would need to be conducted to further explore its effectiveness.

The discussion will compare each learning strategy, and the related findings on its effectiveness to enhance motivation, with the literature.

Critical thinking

Critical thinking proved most effective in motivating experienced educators, particularly those in leadership positions. During the stratified interviews, 1 participant, an experienced leader, out of 3 interviewees referenced critical thinking and motivation. In support of this, ANOVA analysis findings revealed a significant interaction effect between role and experience for critical thinking. This insight may help explain why critical thinking remains an underutilised strategy (Gibby, 2013) as its effectiveness depends on the experience of the educators. This aligns with the research, which suggests that tasks encouraging intrinsic goal motivation, such as critical thinking, are closely linked to deeper thought processing and higher-order cognitive engagement, skills that tend to be more developed in experienced practitioners and leaders (Entwistle, 1988; Entwistle & Marton, 1984; Pintrich & Garcia, 1991).

Peer learning

Peer learning enhanced motivation across all TAs, teachers and leaders. The analysis of the interviews found that the highest frequency of responses when asked about motivation and learning strategies was the code tag, '*Peer learning enhancing motivation*'. 2 out of 3 educators specifically referenced peer learning as a factor in positively influencing their motivation. The ANOVA analysis found that peer learning had a consistent and positive impact on motivation, regardless of experience or role.

These findings are consistent with existing research, including Sogunro's (2015) suggestion that adult learners are motivated by a sense of acceptance and belonging amongst their colleagues, and Svinicki's (2004) argument that collaboration fosters motivation by establishing shared

goals. Furthermore, the creation of a supportive learning environment, where educators can collaborate and learn from each other, appears to be an essential factor in sustaining motivation during professional development (Knowles, 1980; Toohey, 1999; Cordingley et al, 2003, 2005, 2007; Timperley et al, 2007; Bell et al, 2010; DfE, 2016; EEF, 2021). These findings, in light with the examined literature, suggest a strong link between peer learning and motivation.

Elaboration

The ANOVA analysis of the data showed the interaction effect between experience and role approached significance, suggesting a potential trend in the use of elaboration as a learning strategy and educator motivation. However, the data was not sufficient. During stratified interviews, the code tag, ‘elaboration’ had the lowest frequency in responses. These findings align with research.To illustrate, Knowles (1980) noted that elaboration techniques can often be superficial, which may result in lower levels of cognitive engagement and, consequently, reduced motivation. However, research suggests that when elaboration is combined with other learning strategies, such as critical thinking, higher cognitive engagement follows (Weinstein & Mayer, 1986). This relies on the skill of the facilitator in actively fostering elaboration alongside other learning strategies, to enhance motivation. Therefore, as previously mentioned, further exploration of this learning strategy, perhaps in combination with other techniques, would be beneficial.

In conclusion:

a) All learning strategies examined in the study positively impacted educator motivation, with peer learning emerging as the most consistently effective across all educator roles. However, no single learning strategy can be identified as the most effective. The effectiveness of each learning strategy varied based on the educators' roles and

experience levels, highlighting the complexity of motivation in CPD. This finding aligns with Evans' (2022) argument that motivation in CPD is not a singular construct but rather a dynamic interplay of various factors, including personal experience, professional context, and the specific learning strategies employed.

b) Atkinson's (1964) and Dweck's (2017) theories provide insight into how CPD can be designed to foster sustained motivation by creating environments that promote confidence, collaboration and a culture of continuous improvement.

c) The effectiveness of critical thinking as a learning strategy was found to be contingent on the educator's experience and role. This aligns with research suggesting that tasks encouraging intrinsic motivation and higher-order cognitive engagement are more suited to individuals more practised in critical thinking, such as some experienced leaders. By contrast, peer learning proved universally effective in enhancing motivation across all educators, irrespective of role or experience.

d) Elaboration did not have the same impact on motivation as peer learning or critical thinking. The data indicated a potential trend but was insufficient to draw definitive conclusions. The lower frequency of responses regarding elaboration during interviews suggest that elaboration is not motivating when used as a learning strategy on its own. However, research indicates that when combined with other strategies like critical thinking, elaboration can enhance cognitive engagement and thus, motivation. Further research could investigate how elaboration, particularly when integrated with other strategies, might be more effectively utilised to enhance educator motivation.

Research question 2

In regard to research question 2, '*Did participants identify factors beyond the introduced learning strategies that enhanced educator motivation in Professional Development*?' The findings identified three motivating factors beyond learning strategies: research-informed CPD, active learning and observations.

Research-informed CPD

The most prominent of the three identified factors was research-informed CPD. All educators interviewed emphasised the value of evidence-based content as it is reliable and relevant. This is consistent with the research, with multiple mentions of how evidence-based CPD motivates educators (Cordingley et al, 2003, 2005, 2007; Timperley et al, 2007; Bell et al, 2010; DfE, 2016; EEF, 2021) as they see the value in the content delivered (EEF, 2021; Gibbons et al, 2021). The presentation of credible information in CPD sessions, focuses on educators' confidence and self-efficacy, aligning with Dweck's (2017) growth mindset, as credible, field based research contributes to educators' belief in their ability to improve.

Furthermore, educators highlighted the time saving benefits of this approach, noting that research rich CPD enables them to quickly adopt evidence-based practices from trusted sources. In support, the Department for Education's (2016) Standards for Teachers' Professional Development states that in order for CPD to be effective, it must be underpinned by robust evidence, in order to provide educators with information that will lead to improved pupil outcomes.

Notably, this intervention did not explore the role of the knowledgeable expert in CPD facilitation, although this is recognised in the literature as an important factor. The facilitator is responsible for staying informed on current research, reading widely and effectively disseminating relevant

findings in a clear and time efficient manner to educators. If this study were to be replicated, the role of the facilitator is a further element that could be explored.

Active learning

Active learning, or physical engagement during CPD sessions, was also highlighted as an important motivator by 2 out of the 3 participants. Findings from the interviews found that educators viewed active learning as a way to maintain their focus and increase their motivation. This aligns with the results from Calleja's (2018) study, which found that active learning, including practice based vocational learning, increased motivation in participants. Literature supports the idea that active learning helps educators remain engaged and better absorb new information (Belousova et al, 2015). In the context of CPD, active learning fosters dynamic interactions, enabling educators to integrate new knowledge more effectively into their practice (Calleja, 2018). By incorporating active learning, CPD sessions can cater to varied learning preferences, ultimately enhancing educators' motivation during sessions, and therefore, their retention of new knowledge.

Observations

Observations were identified as a significant, but complex motivating factor. When interviewed, participants highlighted the power of constructive feedback, noting the positive impact on their motivation to refine and improve their practice after CPD sessions. However, observations were also noted as a source of stress. This duality is acknowledged in the literature, where the nuanced nature of CPD is further explored.

Furthermore, the EEF's guidance on Effective Professional Development (2021), emphasised the importance of positive reinforcement to sustain the impact of CPD. The EEF (2021) suggest

that this takes the form of ongoing positive feedback and coaching. Coaching, in particular, has been identified as an effective alternative to traditional observations, offering a more supportive and less stressful approach (EEF, 2021; Sims et al 2021). Sims et al. (2021) found that coaching not only has a positive effect on educator motivation but also shows progress in the acquisition and application of new skills learned during professional development.

By replacing formal observations with coaching, educators can receive targeted, constructive feedback to sustain the impact of CPD sessions and the implementation of new knowledge and practices. This would mitigate the chance of additional pressure and workload as the follow-up session would not be formal assessments or observations.

To summarise:

a) Research-informed CPD and active learning emerged as key motivators beyond learning strategies. Consistent with the literature, educators valued evidence-based content for its reliability and relevance, reinforcing confidence and promoting a growth mindset (Dweck, 2017). Active learning was also identified as an important motivator, fostering engagement and retention of new knowledge and practices, as supported by Calleja (2018) and Belousova et al (2015). These findings align with the broader research emphasising the benefits of dynamic, evidence rich CPD (Cordingley et al, 2003, 2005, 2007; Timperley et al, 2007; Bell et al, 2010; DfE, 2016; EEF, 2021).

b) Observations, while powerful in providing constructive feedback and sustained motivation, were also cited as stress inducing and demotivating. This aligns with literature that highlights the nuanced nature of observations in CPD. To reduce stress

and sustain motivation, the literature supports the shift towards coaching as an alternative, offering positive reinforcement and ongoing support without the formal pressure of observations (Sims et al, 2021; EEF, 2021). This approach could enhance the long-term impact of CPD while minimising the negative effects of traditional observation methods.

Implications for practice

The findings from this research offer valuable insights into the implications for my future practice as a training facilitator. This assignment has highlighted both the opportunities for improving CPD and the challenges that need to be addressed in order to ensure enhanced motivation during, and after, professional development. The implications for future practice include: tailored learning strategies, coaching for sustained impact and reflections on my own continued professional development. This assignment will now discuss each of these elements:

Tailoring learning strategies

A primary implication from this study is the importance of tailoring learning strategies, used in CPD, to specific audiences of educators. The findings demonstrated that different learning strategies have varying levels of effectiveness, depending on the roles and experience of educators. For example, critical thinking was only effective in enhancing motivation among experienced educators, especially those in leadership positions. This suggests that CPD facilitators must not only be well researched but also have an understanding of the prior experiences and capabilities of their audience. To make learning inclusive for all educators, learning strategies would need to be broken down into manageable steps, ensuring that all participants feel confident in using and applying them.

The CPD I deliver is intended for all educators within a school, rather than being specifically tailored for leaders. Consequently, if I choose critical thinking as a learning strategy for future CPD sessions, I will now ensure that I allow additional time to teach, build and reinforce critical thinking skills. For example, modelling the evaluation of research, professional debates or problem solving skills. This approach will ensure that every participant, regardless of their position, can effectively engage with and benefit from the chosen learning strategy.

In addition to tailoring the learning strategies for different educators, I will aim to broaden the scope of the motivational strategies I use. While learning strategies have demonstrated positive effects on motivation, it is clear that additional factors, including evidence informed research, active learning and follow-up support, play a significant role in ensuring educator motivation.

Furthermore, I will ensure that I read widely and use credible sources to structure CPD sessions. Participants in this study expressed the importance of evidence-informed CPD as it allows them to confidently implement new strategies in their classroom that they know will work. In addition, educators appreciated the time-saving nature of research-informed CPD as it provided them with access to valuable insights that they may not have otherwise had time to explore. In order to stay abreast of current research and developments in the field, I will: i) dedicate weekly time to read widely, ii) attend relevant training and iii) continue my studies in the field of education after the completion of the MSc programme.

In addition to taking steps to ensure evidence-informed CPD, I will incorporate active learning into CPD sessions. Active learning promotes physical engagement and interaction with course material, supporting educators to remain focused and enhances motivation. This is supported by Calleja's (2018) findings, which suggest that active, practice-based vocational learning

enhances participant motivation. Thus, I will prioritise active learning to encourage participants to apply what they are learning in dynamic and meaningful ways.

Exploring Coaching as a Sustained Approach to CPD

A key implication of this study is the importance of exploring coaching as a long-term strategy for sustaining the impact of CPD. While constructive feedback was identified as a powerful motivator, the formal nature of observations was also cited as a source of stress and demotivation for some educators. This highlights the need for an alternative method of follow-up support that fosters continuous improvement without the pressure of formal assessments.

Coaching presents an opportunity to provide collaborative and personalised support for educators. Research by Sims et al. (2021) found that coaching not only positively affects educator motivation but also promotes progress in the acquisition and application of new skills. This suggests that coaching could be a valuable alternative to traditional observations, helping to sustain the impact of CPD in the long term.

In future, I plan to integrate coaching as a follow-up to CPD sessions. Rather than relying solely on formal observations, coaching will allow me to provide regular, constructive feedback in a way that supports educators' professional growth without inducing anxiety. This approach aligns with the recommendations of the EEF (2021), which emphasises the importance of positive reinforcement and sustained support in order to maintain the effectiveness of CPD. By replacing formal observations with coaching, I can create a more supportive and motivating professional development environment for educators.

Conducting Further Research on Learning Strategies

This study highlights the need for further research on the effectiveness of learning strategies in CPD, particularly the role of elaboration in enhancing motivation. While elaboration showed potential, the data was insufficient. This suggests that additional research with a larger sample size is necessary. This should also include a wider demographic of schools, including those in more rural locations.

Moreover, the study reveals a gap in the literature regarding CPD for TAs, despite their important role in supporting pupil learning. Future research should explore how tailored CPD can better support and motivate TAs, as well as extend beyond the EYFS and primary settings to include secondary and further education contexts. Expanding the scope of research beyond the EYFS and primary settings could also provide valuable insights into how CPD strategies affect a broader range of educators.

In my future practice, I will be open to conducting further research and seeking out opportunities to refine my approach to CPD. By expanding the focus of my research to include a wider range of educators and exploring new motivational strategies, I can contribute to the ongoing development of effective and inclusive CPD practices. Investigating how elaboration, when combined with other strategies, can enhance motivation will be a particular area of focus in future research.

An essential implication of this study is the importance of continuing my own professional development as a CPD facilitator. The role of a facilitator is not limited to delivering content; it also involves staying current with the latest educational research, refining facilitation skills, and understanding the impact of CPD on both educators and pupils. Therefore, it is crucial that I remain committed to ongoing professional development to create CPD sessions that motivate educators, have a positive impact on classroom practice and raise pupil attainment and wellbeing.

In summary, the implications for future practice are significant. By tailoring learning strategies to the needs of my audience, expanding the range of motivational techniques, integrating coaching, pursuing further research, and committing to my ongoing professional development, I can enhance the effectiveness of CPD sessions to improve motivation and therefore classroom practice and pupil outcomes.

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To recapitulate:

a) This study highlights key implications for my future practice as a CPD facilitator. Tailoring learning strategies to the specific needs of educators is essential to ensure effective engagement across different roles and experience levels. Additionally, expanding the use of motivational techniques, such as incorporating evidence-informed research and active learning, will enhance the effectiveness of CPD.

b) The exploration of coaching as a sustained approach offers a supportive alternative to traditional observations, fostering continuous improvement. Further research on strategies like elaboration and addressing the gaps in CPD for TAs are also necessary steps to broaden the impact of professional development.

c) Finally, my role as a CPD facilitator requires ongoing professional growth, staying current with educational research, and understanding the broader impact of CPD on both educators and students. By refining my approach in these areas, I can create more effective and inclusive CPD sessions that ultimately lead to more motivated educators and better outcomes for students.

6. Conclusion

To conclude, the overall focus of this assignment was to ascertain whether learning strategies impact educator motivation in the context of CPD. My original research questions led me to broaden my understanding of how learning strategies, and other factors, impact educator motivation. Informed by the critical review of literature, my intervention sought to determine i) if learning strategies positively impact motivation and which strategy was most effective and ii) if other factors contributed to educator motivation in the context of CPD. This conclusion will first summarise the findings and implications for practice, before evaluating the collaborative elements and will finish with the concluding remarks.

6.1 Summary of findings

This assignment aimed to explore the impact of learning strategies on educator motivation within the context of professional development (CPD) and to identify additional factors that could enhance motivation. The baseline questionnaire, conducted prior to starting the intervention, found that while educators were generally motivated in their roles, there was widespread dissatisfaction with the current CPD structure, indicating a need for more relevant and motivating professional development.

The first research question examined whether there was empirical evidence supporting the impact of learning strategies on educator motivation and sought to determine which strategy was most effective. The results from pulse surveys and interviews demonstrated that all three learning strategies, critical thinking, peer learning, and elaboration, positively influenced educator motivation. However, the impact varied according to the educators' roles and experience levels. Critical thinking was most effective amongst experienced educators and leaders, while peer learning had a positive impact on motivation across all educator roles.

Elaboration showed potential to impact motivation, but lacked sufficient data to draw a definitive conclusion, highlighting the need for further research.

In response to the second research question, participants identified three additional motivating factors beyond the introduced learning strategies: research-informed CPD, active learning, and observations. Research-informed CPD was the most prominent factor, with educators valuing evidence rich content from trusted sources, such as the EEF. Active learning was also highlighted as a key motivator, emphasising the importance of physical engagement during CPD sessions. Observations, while recognised as a powerful tool for providing constructive feedback, were also cited as stress or anxiety inducing for some participants, indicating a need for a positive approach to feedback mechanisms. Coaching could be an alternative approach, offering a collaborative and supportive strategy, that can sustain the impact of CPD over time.

Overall, the findings suggest that while learning strategies are crucial for enhancing educator motivation, additional factors such as research based content, active learning, and supportive feedback, such as coaching, play significant roles in sustaining motivation and improving the effectiveness of CPD. The study highlights the importance of tailoring CPD to the specific needs of educators and underscores areas for further research to optimise CPD practices.

6.2 Implications for practice

The findings from this research provide valuable insights for my role as a CPD facilitator, highlighting both opportunities for future professional development and the challenges that need to be addressed in order to enhance educator motivation. A key implication is the need to tailor learning strategies to the specific roles and experience levels of educators. For instance, using critical thinking when delivering training for experienced educators, particularly leaders. In the

future, I will ensure that CPD sessions include sufficient time to build and reinforce skills, such as critical thinking, making the learning strategies accessible and beneficial for all educators involved.

Additionally, I will seek to broaden the scope of motivational strategies. The study showed that factors such as evidence informed CPD, active learning, and follow-up support, including coaching, are crucial in enhancing educator engagement. Therefore, I will prioritise integrating research rich content, physical engagement and coaching as a follow-up strategy. I will replace formal observations, which were found to induce stress in this intervention.

Moreover, this study highlights the importance of continuous professional growth for facilitators. I will aim to stay abreast of educational research, refine my facilitation skills and understand the broader impact of CPD on both educators and pupils. By committing to these practices, I can design more motivating, effective and inclusive CPD sessions. My future research will focus on expanding these strategies to a broader range of educators to optimise the impact of CPD across a wide range of educational settings.

6.3 Evaluation of collaboration

Throughout this assignment, collaboration played a key role in shaping the methodology, ensuring the quality of the intervention and enhancing the overall impact of CPD on educators' motivation.

Firstly, the collaboration with a course colleague allowed for effective planning of the methodology, leveraging shared knowledge to refine our approaches and ensure that our work

was grounded in established research frameworks, such as Pintrich's MSLQ (1992). This partnership fostered innovation and strengthened the overall research design.

Furthemore, working closely with the SLT helped to align the CPD focus with school priorities, leading to a more targeted and effective intervention. The ongoing dialogue with the SLT, including feedback after the first research cycle, enabled the adaptation of the CPD sessions and pulse surveys to better meet the needs of the participants. This collaboration ensured that the intervention was not only relevant but also had a lasting impact in the school setting beyond the initial implementation.

Involving an SLT member as a critical friend added rigour to the process by challenging assumptions and helping to avoid potential biases, such as in participant selection. This role was instrumental in maintaining the objectivity and external validity of the study, ensuring that the findings were robust and could be applicable to a broader context. Moreover, partnering with a professional colleague for coding interview responses further ensured the reliability of the data analysis. This collaboration was crucial for ensuring the integrity of the research findings, as it provided a check against potential biases and inconsistencies and enhanced the credibility of the results.

Finally, the dissemination of the research findings to both my previous and current school teams facilitated a shared understanding of the intervention's outcomes and contributed to the broader discussion on effective CPD strategies. This collaborative effort not only validated the research but also extended its impact to a wider audience.

Overall, the collaborative processes used in this intervention were instrumental in enhancing the quality and relevance of the research, ensuring that the outcomes were robust.

6.4 Concluding remarks

This assignment set out to explore the impact of learning strategies on educator motivation within CPD and to identify additional motivational factors that contribute to effective professional development. The findings have provided valuable insights into how tailored learning strategies can significantly enhance motivation. Peer learning, in particular, emerged as a universally effective strategy, while critical thinking proved most impactful among experienced educators, especially those in leadership roles. Elaboration showed promise but requires further investigation.

The research also highlighted the importance of incorporating additional motivational factors, such as research-informed CPD, active learning, and supportive feedback mechanisms. The role of coaching, as an alternative to traditional observations, was identified as a crucial factor in providing ongoing support without the stress associated with formal assessments. These elements not only enhance motivation but also contribute to the sustained application of new knowledge in classroom practice.

Throughout the study, collaboration played a central role in refining the methodology, ensuring the reliability of the data, and enhancing the overall impact of the intervention. The involvement

of the SLT, course colleagues, and a critical friend was instrumental in aligning the research with school priorities, avoiding biases, and maintaining the rigour of the study.

However, the study's limitations, including the small sample size and the focus on a single urban school setting, must be acknowledged. These factors limit the generalisability of the findings, and further research with larger, more diverse samples is needed to draw more definitive conclusions.

In conclusion, this study contributes to the ongoing discourse on effective CPD by demonstrating the importance of tailored learning strategies and additional motivational factors in enhancing educator motivation. By continuing to refine and expand upon these findings, future research can further inform the development of CPD practices that are both effective and inclusive, ultimately leading to motivated educators and improved educational outcomes for pupils.

[Word count: 18,398]

7. References

Abakah, E., (2019). *Continuing professional development (CPD) of teachers in Ghana: An exploration of basic school teachers' practices and experiences*, Sydney: University of Technology

Abakah, E., (2023) Teacher Learning from Continuing Professional Development (CPD) Participation: A sociocultural perspective, *International Journal of Educational Research Open*, *4*

Abramo, G., & D'Angelo, C.A., & Di Costa, F., (2009) Research collaboration and productivity: is there correlation? *Higher education*, 57

Adams, S. J. D., & Black, G. C., & Clemmons, J. R., & Paula, E., & Stephan, P. E., (2005). Scientific teams and institutional collaborations: Evidence from U.S. Universities, 1981–1999, *Research Policy*, 34 (3)

Atkinson, J.W., (1964) *An Introduction to Motivation*, Princeton: N. J. D. Van Nostrand

Atkinson, J.W., & Feather, N.T., (1966) *A Theory of Achievement Motivation*, New York: Wiley

Avalos, B., (2011) Teacher professional development in Teaching and Teacher Education over ten years, *Teaching and Teacher Education*, 27 (1), DOI: https://doi.org/10.1016/j.tate.2010.08.007

Becker, S., Bryman, A. and Ferguson, H. eds. (2012). *Understanding research for social policy and social work: themes, methods and approaches*. Policy Press

Bell, M., & Cordingley, P., & Isham, C., & Davis, R., (2010) *Report of Professional Practitioner Use of Research Review: Practitioner Engagement In and/or With Research*, Coventry: CUREE, GTCE,LSIS and NTRP

Belousova, A., Kozhukhar, G. and Ryumshina, L., (2015) Innovative teaching methods in adult education, n *ICERI2015 Proceedings*, IATED

Bignold, W., & Barbera, J., (2012) Teaching assistants and teacher education in England: meeting their continuing professional development need, *Professional Development in Education*, *38*(3)

Blackman, N.J.M. and Koval, J.J., (200) Interval estimation for Cohen's kappa as a measure of agreement, *Statistics in medicine*, 19(5)

Borko, H., (2004) Professional development and teacher learning: Mapping the terrain, *Educational Researcher*, 33(8)

Bourke, B., (2014). Positionality: Reflecting on the research process, *Qualitative Report*, 19(33), DOI: https://doi.org/10.46743/2160-3715/2014.1026

Brace, I., (2013) *Questionnaire design*, Kogan Page.

Bransford, J., & Sherwood, R., & Vye, N., & Rieser, J., (1986) Teaching thinking and problem solving: Research foundations. *American psychologist*, *41*(10)

Braun, V., & Clarke, V., (2006) Using thematic analysis in psychology, *Qualitative research in psychology*, *3*(2)

Brew, A., (2006) *Research and teaching: Beyond the divide*, New York: Palgrave-MacMillan.

British Educational (BERA) (2024). '*Ethical Guidelines for Educational Research Fifth Edition*', Available at: https://www.bera.ac.uk/publication/ethical-guidelines-for-educational-research-fifth-edition-2024(Accessed: 2nd August 2024)

Brown, H.D., (1980) *Principles and Practice of Language Learning and Teaching*, Englewood Cliffs, NJ: Prentice Hall

Brown, J., & Devecchi, C., (2013) The impact of training on teaching assistants' professional development: Opportunities and future strategy, *Professional development in education*, *39*(3

Burgess, H., & Mayes, A.S., (2007) Supporting the professional development of teaching assistants: classroom teachers' perspectives on their mentoring role, *The Curriculum Journal*, *18*(3)

Campbell J. L., & Quincy C., & Osserman J., & Pedersen O. K., (2013). Coding in-depth semistructured interviews: Problems of unitization and intercoder reliability and agreement, *Sociological Methods & Research*, 42, DOI: https://doi.org/10.1177/0049124113500475 Google Scholar

Calleja, J., (2018) Teacher Participation in Continuing Professional Development: Motivating Factors and Programme Effectiveness*, Malta Review of Educational Research*, 12(1), p5-29

Capps, D.K., & Crawford, B.A., & Constas, M.A., (2012) A review of empirical literature on inquiry professional development: Alignment with best practices and a critique of the findings, *Journal of science teacher education*, *23*, p291-318

Chamot, A.U., (2004) Issues in Language Learning Strategy, Research and Teaching, *Journal of Foreign Language Teaching,* (1)

Cleary, t., & Kitsantas, A., & Peters-Burton, E., & Lui, A., & McLeod, K., & Slemp, J., & Zhang, X., (2022) Professional development in self-regulated learning: Shifts and variations in teacher outcomes and approaches to implementation, *Teaching and Teacher Education*, 11, DOI: https://doi.org/10.1016/j.tate.2021.103619

Clifford Swan, J., & Heslop, K., & Ranson, F., (2021) Investigating the impact of a specialist CPD training programme for Teaching Assistants, related to supporting children with English as an Additional Language, *Work Based Learning e-Journal International*, *10*(1)

Cohen, L.,& Manion, L. & Morrison, K., (2018) Research Methods in Education, 8th edition, London: Routledge

Coldwell, M. and Simkins, T., (2011) Level models of continuing professional development evaluation: A grounded review and critique, *Professional development in education*, *37*(1), p143-157

Collin, K., & Van der Heijden, B., & Lewis, P., (2012) Continuing Professional Development, *International Journal of Training and Development*, *16*(3), p155-163

Cordingley, P., (2015) The Contribution of Research to Teachers' Professional Learning and Development, *Oxford Review of Education*, (412), 234-252, DOI: 10.1080/03054985.2015.1020105

Cordingley, P., & Bell, M., & Rundell, B., & Evans, D., (2003). The Impact of Collaborative CPD on Classroom Teaching and Learning, *In Research Evidence in the Education Library*, London: EPPI-Centre, Institute of Education

Cordingley, P., & Bell, M., & Evans, D, & Firth, A., (2005) The Impact of Collaborative CPD On Classroom Teaching and Learning. Review: What Does Teacher Impact Data Tell Us About Collaborative CPD? *In Research Evidence in Education Library*, London: EPPI-Centre, Institute of Education

Cordingley, P., & Bell, M., & Isham, C., & Evans, D., & Firth, A., (2007) What Do Specialists Do In CPD Programmes For Which There Is Evidence of Positive Outcomes for Pupils and Teachers? Report, *In Research Evidence in the Education Library*, London: EPPI-Centre, Institute of Education

Creagh, S., & Thompson, G., & Mockler, N., & Stacey, M., & Hogan, A., (2023) Workload, work intensification and time poverty for teachers and school leaders: A systematic research synthesis, *Educational Review*

Cresswell, J.W., & Piano Clark, V L., (2007) Designing and Conducting Mixed Methods Research, Sage Publications: California

Darling-Hammond, L., & Hyler, M.E. & Gardner, M., (2017) *Effective teacher professional development*, Learning policy institute

Denscombe, M. (2006) *The good research guide*, 4th edition, Maidenhead: Open University Press

Desimone, L. M., (2009) Improving impact studies of teachers' professional development: Toward better conceptualizations and measures, *Educational Researcher*, 38(3), 181–199, DOI: https://doi.org/10.3102/0013189X08331140

Department for Education (DfE)., (2016) *Standards for Teacher Professional Development*, Available at: https://assets.publishing.service.gov.uk/media/5a750b16ed915d5c54465143/160712_-_PD_Expert_Group_Guidance.pdf

Department for Education (DfE)., (2019) *Early Career Framework ECF*, Available at: https://www.gov.uk/government/publications/early-career-framework, (Accessed: 8/08/24)

Department for Education (DfE)., (2020) *National Professional Qualification (NPQ): Leading Teacher Development Framework*, Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/925511/NPQ_Leading_Teacher_Development.pdf, (Accessed: 8/08/24)

Dörnyei, Z., (1998) Motivation in second and foreign language learning. *Language teaching*, *31*(3), p117-135

Dundar, H., & Lewis, D. R., (1998) Determinants of research productivity in higher education, *Research in Higher Education*, 39 (6)

Duke, D., & Salmonowicz, M., (2010) Key Decisions of a First-Year 'Turnaround' Principal, *Educational Management Administration and Leadership*, 38(1):33–58. DOI:10.1177/1741143209345450

Duncan, T & Pintrich, P., (1992) *Critical Thinking and Its Relationship to Motivation, Learning Strategies, and Classroom Experience*

Dymoke, S., & Harrison, K., (2006) Professional Development and the Beginning Teacher: Issues of Teacher Autonomy and Institutional Conformity in the Performance Review Process, *Journal of Education for Teaching*, 32 (1)

Education Endowment Foundation (EEF) (2020) Do years in the profession make you a better teacher?, Available at: https://educationendowmentfoundation.org.uk/news/eef-blog-do-years-in-the-profession-make-you-a-better-teacher

Education Endowment Foundation (EEF) (2021) *Effective Professional Development,* Available at: https://educationendowmentfoundation.org.uk/education-evidence/guidance-reports/effective-professional-development

Education Endowment Foundation (EEF) (2023) *Communication and Language Approaches,* Available at: https://educationendowmentfoundation.org.uk/education-evidence/early-years-toolkit/communication-and-language-approaches

Elliott, E.S., & Dweck, C.S., (1988) Goals: An approach to motivation and achievement, J*ournal of Personality and Social Psychology*, 5 (12)

Elliot, A.J., & Dweck, C.S & Yeager, D.S., (2017) *Handbook of Competence and Motivation: Theory and Application*, Guilford Publications

Entwistle, N., (1988) Motivational factors in students' approaches to learning, In *Learning strategies and learning styles*, Boston, MA: Springer US

Entwistle, N., & Marton, F., (1984). Changing conceptions of learning and research. In F. Marton, D. Hounsell, & N. Entwistle (Eds.). *The experience* (p 211-236), Edinburgh, Scotland: Scottish Academic Press

Evans, L., (2022) Doubt, Skepticism, and Controversy in Professional Development Scholarship: Advancing a Critical Research Agenda, In *The Palgrave Handbook of Teacher Education Research*, Cham: Springer International Publishing

Flick, U., (2009) *An Introduction to Qualitative Research* (4th edition). London: SAGE Publications

Galloway, D., & Rogers, C., & Armstrong, D., & Leo, E. & Jackson, C., (2004) Ways of Understanding Motivation, *The RoutledgeFalmer Reader in Psychology of Education, London: RoutledgeFalmer*

Garcia, T., & Pintrich, P.R., (1996) Assessing Students' Motivation and Learning Strategies in the Classroom Context: The Motivated Strategies for Learning Questionnaire, *In Alternatives in assessment of achievements, learning processes and prior knowledge*, Dordrecht: Springer Netherlands.

Garrison, D.R., (1992) Critical Thinking and Self-Directed Learning in Adult Education: An Analysis of Responsibility and Control Issues, *Adult Education Quarterly*, 42(3)

Gaskell G.C., (2000) Individual and group interviewing, In Bauer M. W., Gaskell G. (Eds.), *Qualitative Researching with Text, Image and Sound: A Practical Handbook*, London: SAGE

Gibby, C., (2013)Critical Thinking Skills in Adult Learners, *ARECLS,* 10

Gilbert, N., & Stoneman, P. (2016) *Researching Social Life*, 4th Edition. London, SAGE Publications Ltd

Glaser, R., (1991) The maturing of the relationship between the science of learning and cognition and educational practice, *Learning and Instruction*, 1(2), doi: https://doi.org/10.1016/0959-4752(91)90023-2

Goodall, J., & Day, C., & Lindsey, G., & Muijs, D., & Harris, A., (2005) *Evaluating the Impact of Continuing Professional Development*, London :Department for Education and Skills

Graham, S., & Golan, S., (1991) Motivational influences on cognition: Task involvement, ego involvement, and depth of information processing, *Journal of Educational Psychology*, 83

Graham, S., & Weiner, B., (1996) Theories and Principles of Motivation, *Handbook of educational psychology*, *4*(1), pp.63-84

Grissom, JA., Loeb, S., (2011) Triangulating Principal Effectiveness, *American Educational Research Journal,* 48(5), p1091–1123, DOI:10.3102/0002831211402663

Guest, G., (2014) Sampling and selecting participants in field research, *Handbook of methods in cultural anthropology*, *2*(1)

Hamilton, R., (2012) Elaboration Effects on Learning, In: Seel, N.M. (eds) *Encyclopedia of the Sciences of Learning*, Springer, Boston, MA

Hardan, A.A., (2013) Language Learning Strategies: A General Overview. *Procedia-Social and Behavioral Sciences*, *106*, p 1712-1726

Hargie, O., (2021) *Skilled interpersonal communication: Research, theory and practice*, London: Routledge

Henderson, K.A & Bedini, L.A., (1995) Notes on linking qualitative and quantitative data, *Therapeutic Recreation Journal*, *29*

Hinojosa, m., (2022) Practice what you teach: Onsite coaching and dialogic feedback to promote the appropriation of instructional strategies, *Teaching and Teacher Education*, 11,

DOI: https://doi.org/10.1016/j.tate.2021.103582

Hock, M. F., & Mellard, D. F., (2011) 'Efficacy of Learning Strategies Instruction in Adult Education', *Journal of Research on Educational Effectiveness*, 4(2), DOI: 10.1080/19345747.2011.555291

Holmes, A. G. D., (2020) Researcher positionality – A consideration of its influence and place in qualitative research – A new researcher guide, *Shanlax International Journal of Education*, 8(4), DOI:https://doi.org/10.34293/education.v8i4.3232

Hollway, W. and Jefferson, T., (2012) *Doing qualitative research differently: A psychosocial approach,* London: SAGE

Hull, C.L., (1943) The Problem of Intervening Variables in Molar Behavior Theory, *Psychological review*, *50*(3)

Joffe, H. and Yardley, L., (2003) Content and thematic analysis, London: SAGE

Knowles, M. S., (1980) *The modern practice of adult education: From pedagogy to andragogy* (2nd ed., New York: The Association Press

Kruszelnicki, W., (2020) Self-Directedness and the Question of Autonomy: From Counterfeit Education to Critical and Transformative Adult Learning, *Stud Philos Educ* **39**, DOI: https://doi.org/10.1007/s11217-019-09697-6

Lawless, A., & Pellegrino, W., (2007) Professional Development in Integrating Technology into Teaching and Learning: Knowns, Unknowns, and Ways to Pursue Better Questions and Answers, *Review of Educational Research*, 77 (4)

Leahy, S., & Wiliam, D., (2013) *Embedding Formative Assessment*, Specialist Schools and Academies Trust

Leithwood, K., & Patten, S., & Jantzi, D., (2010) Testing a Conception of How School Leadership Influences Student Learning, *Educational Administration Quarterly,* 46(5), p671–706

Lynn, P., (2019) The advantage and disadvantage of implicitly stratified sampling, *Methods, data, analyses: a journal for quantitative methods and survey methodology (mda)*, *13*(2)

MacPhail, A., & Tannehill, D., & Ataman, R., (2021) 'The role of the critical friend in supporting and enhancing professional learning and development', in *Professional Development in Education*, 50(4), DOI: 10.1080/19415257.2021.1879235.

Maehr, M. L., & Sjogren, D. D., (1971) Atkinson's Theory of Achievement Motivation: First Step Toward a Theory of Academic Motivation? *Review of Educational Research*, *41*(2), 143-161, DOI: https://doi.org/10.3102/00346543041002143

Makopoulou, K., & Neville, R.D., & Ntoumanis, N., & Thomas, G., (2021) An investigation into the effects of short-course professional development on teachers' and teaching assistants' self-efficacy, *Professional development in education*, *47*(5)

Marzano, RJ., & Waters, T., & McNulty, B., (2005) *School Leadership That Works: From Research to Results*, Auroroa, CO: ASCD and McREL

Mayer, R.E., (1988) Learning strategies: An overview. *Learning and study strategies*, p11-22

McCormick, R., (2010) The state of the nation in CPD: A literature review, *The Curriculum Journal*, *21*(4), p 395-412

McCormick, R., & Banks, F., & Morgan, B., & Opfer, D., & Pedder, D., & Storey, A., & Wolfenden, F., (2008) *Schools and Continuing Professional Development (CPD) in England – State of the Nation research project (T34718): Literature review report. A report commissioned by the Training and Development Agency for Schools*, Cambridge/Milton Keynes: Cambridge University Press/Open University Press

McNicholl, J., (2013) Relational agency and teacher development: A CHAT analysis of a collaborative professional inquiry project with biology teachers, *European journal of teacher education*, *36*(2)

Michie, S., & Van Stralen, M.M., & West, R., (2011) The behaviour change wheel: a new method for characterising and designing behaviour change interventions, *Implementation science*, *6*

Moxley, R.A., (1998) Why Skinner is difficult, *The Behavior Analyst*, *21*, p73-91

O'Connor, C., & Joffe, H., (2020) Intercoder Reliability in Qualitative Research: Debates and Practical Guidelines, *International Journal of Qualitative Methods*, *19*, DOI: https://doi.org/10.1177/1609406919899220

Ofsted., (2024) I*ndependent review of teachers' professional development in schools: phase 1 findings*, Available at: https://www.gov.uk/government/publications/teachers-professional-development-in-schools/independent-review-of-teachers-professional-development-in-schools-phase-1-findings#fn:3 (Accessed: 8/08/24)

O'Malley, J.M., & Chamot, A.U., (1990) *Strategies Used by Second Language Learners*, Cambridge: CUP

Omomia, O.A., & Omomia, T.A., (2014) Relevance of Skinner's Theory of Reinforcement on Effective School Evaluation and Management, *European Journal of Psychological Studies*, (4), p174-180

Opfer, V. D., & Pedder, D., (2011) *Conceptualizing Teacher Professional Learning. Review of Educational Research*, 81(3), 376-407, DOI: https://doi.org/10.3102/0034654311413609

Oxford, R., (1990) *Language Strategies: What Every Teacher Should Know*, University of Alabama, Boston: Heinle & Heinle Publications

Partridge, H., Edwards, S.L. and Thorpe, C. (2010) evidence-based practice: Information professionals' experience of information literacy in the workplace. *Practising Information Literacy*. Available at: https://www.sciencedirect.com/science/article/pii/B9781876938796500133, (Accessed: 6th August, 2024)

Pintrich, P.R., (1992) *A manual for the use of the Motivated Strategies for Learning Questionnaire* (MSLQ)

Pintrich. P.R. & Garcia, T., (1991). Student goal orientation and self-regulation in the college classroom, In M.L. Maehr & P.R. Pintrich (Eds.), *Advances in Motivation and Achievement* (Vol. 7. p371-402), Greenwich, C1' JAI Press.

Pintrich, P.R., & Schink, D.H., (1996) *Motivation in Education: theory, research, and applications*, Englewood Cliffs, NJ: Prentice Hall

Rau, G. and Shih, Y.S. (2021) Evaluation of Cohen's kappa and other measures of inter-rater agreement for genre analysis and other nominal data. *Journal of english for academic purposes*, *53*, p.101026.

Richards, K. (2009). Interviews. In: Heigham, J., Croker, R.A. (eds) Qualitative Research in Applied Linguistics, Palgrave Macmillan, London, DOI: https://doi.org/10.1057/9780230239517_9

Robinson, V., & and Gray, E., (2019) 'What Difference Does School Leadership Make to Student Outcomes?', *Journal of the Royal Society of New Zealand*, 49(2), p 171–187, DOIi: 10.1080/03036758.2019.1582075.

Robinson, V., & Hohepa, M., & Lloyd, C., (2009) School Leadership and Student Outcomes: Identifying What Works and Why, *Best evidence synthesis iteration (BES),* Wellington: Ministry of Education

Robinson, V., & Lloyd, C., & Rowe, J., (2008) The Impact of Leadership on Student Outcomes: An Analysis of the Differential Effects of Leadership Type, E*ducational Administration Quarterly*, 44(5), p635–674, DOI:10.1177/0013161X08321509

Saris, W.E & Gallhofer, I.N., (2014) *Design, evaluation, and analysis of questionnaires for survey research*, John Wiley & Sons

Schatz, E., (2012) Rationale and procedures for nesting semi-structured interviews in surveys or censuses, *Population studies*, *66*(2)

Seward, J. P., (1950) Secondary reinforcement as tertiary motivation: a revision of Hull's revision. *Psychological Review, 57*(6), 362–374, DOI: https://doi.org/10.1037/h0058496

Shriki, A. and Patkin, D., (2016) 'Elementary school mathematics teachers' perception of their professional needs', T*eacher Development,* 20(3), pp. 329–347, DOI: 10.1080/13664530.2016.1155476

Sims et al., (2021) *What are the Characteristics of Teacher Professional Development that Increase Pupil Achievement?* A systematic review and meta-analysis, EEF
Speckesser et al., (2018) *Embedding Formative Assessment*, EEF

Skinner, B.F. (1953) *Science and Human Nature*, NewYork: Macmillan

Sogunro, O.A., (2015) Motivating Factors for Adult Learning in Higher Education, *International Journal of Higher Education*, 4(1)

Spronken-Smith, R.A., & Brodeur, J.J., & Kajaks, T., & Luck, M., & Myatt, P., & Verburgh, A., & Walkington, H., & Wuetherick, B., (2013) Completing the research cycle: A framework for promoting dissemination of undergraduate research and inquiry, *Teaching and Learning Inquiry*, *1*(2)

Svinicki, M. D., (2004) *Learning and motivation in the postsecondary classroom*, Bolton, MA: Anker

Swan, M. (2006) *Collaborative Learning In Mathematics: A challenge to our beliefs and practices*, London, NRDC

Tannehill, D., & Demirhan, G., Čaplová, P., & Avsar, Z., (2021) Continuing professional development for physical education teachers in Europe, *European Physical Education Review*, 27(1), 150-167, DOI: https://doi.org/10.1177/1356336X20931531

Teacher Tapp (2018) What Teachers Tapped This Week #56 - 22nd October 2018, Available at: https://teachertapp.co.uk/articles/what-teachers-tapped-this-week-56-22nd-october-2018/

Timperley, H., & Wilson, A., & Barrar, H., & Fung, I., (2007) T*eacher Professional Learning and Development: Best Evidence Synthesis Iteration (BES)*, Wellington: Ministry of Education

Tinsley, H.E & Weiss, D.J., (2000) Interrater reliability and agreement, In *Handbook of applied multivariate statistics and mathematical modeling*, Academic Press

Toohey, S., (1999) *Designing courses for higher education*, Philadelphia, PA: Open University Press

Topping, K., & Buchs, C., & Duran, D., & Van Keer, H., (2017). *Effective Peer Learning: From Principles to Practical Implementation,* Routledge

UK Research Integrity Office (UKRIO, 2023) Code of Practice for Research, Available at: https://ukrio.org/wp-content/uploads/UKRIO-Code-of-Practice-for-Research.pdf, (Accessed 6/08/2024)

University of Oxford (2021) '*Best Practice Guidance: BPG 06 Internet-mediated research*', Available at: https://researchsupport.admin.ox.ac.uk/files/bpg06internet-basedresearchpdf, (Accessed: 7/08/24)

Van Driel, J., & Van, J. A., & Meirink, K., & Zwart., (2012) 'Current trends and missing links in studies on teacher professional development in science education: a review of design features and quality of research', *Studies in Science Education*, 48(2), pp. 129–160, DOI: 10.1080/03057267.2012.738020

Vaske, M.J., (1998) *Defining, Teaching, and Evaluating Critical Thinking Skills in Adult Education*. [S.l.]: ERIC Clearinghouse

Weinstein, C.E., (1987) Fostering learning autonomy through the use of learning strategies, *Journal of reading*, *30*(7)

Wenden, A.L & Rubin, J., (1987) *Learner Strategies in Language Learning*, Englewood Cliffs, NJ: Prentice Hall

Williams, M., & Burden R., (1997) *Psychology for Language Teachers*, Cambridge: CUP

Wilson, N., & McLlean, S., (1994) Questionnaire design, University of Ulster

8. Appendices

Appendix A

Baseline Questionnaire

The following questions ask you about your motivation for and attitudes towards the CPD sessions you regularly, or have previously, attended as an educator.

There are no right or wrong answers, just answer as accurately as possible. Use the scale below to answer the questions.

If you think the statement is very true of you, circle 7; if a statement is not at all true of you, circle 1. If this statement is more or less true of you, find the number between 1 and 7 that best describes you.

1. On a scale of 1 to 7, where 1 represents "Not at all motivated" and 7 represents "Extremely motivated," how motivated do you currently feel in your teaching role?
   1 2 3 4 5 6 7

2. How satisfied are you with your current Professional Development experiences? (1 - Very Dissatisfied, 7 - Very Satisfied)
   1 2 3 4 5 6 7

3. Have you participated in any interactive Professional Development programmes in the past year?
   (Yes/No)

4. If you answered "Yes" to question 3, please describe the interactive elements or strategies that were part of those programmes.
   _____
   _____
   _____

5. In your opinion, how effective were the interactive components of those Professional Development programmes in enhancing your teaching motivation? (1 - Not Effective, 7 - Very Effective)
   1 2 3 4 5 6 7

6. Are there specific factors or aspects of Professional Development that you believe could further enhance your motivation? Please describe.
   _____
   _____
   _____

7. Do you believe that factors beyond interactivity influence your motivation in Professional Development?
   (Yes/No)

8. How would you rate your overall job satisfaction as a teacher? (1 - Very Dissatisfied, 7 - Very Satisfied)
   1 2 3 4 5 6 7

9. What other factors or aspects of your teaching experience do you believe contribute to your motivation or demotivation?
   _____
   _____
   _____

10. Please provide any additional comments or insights regarding your motivation and Professional Development experiences as a teacher.
    _____

Appendix B

Pulse Survey 1

The following questions ask you about your motivation for and attitudes about this CPD session.

There are no right or wrong answers, just answer as accurately as possible. Use the scale below to answer the questions.

If you think the statement is very true of you, circle 7; if a statement is not at all true of you, circle 1. If this statement is more or less true of you, find the number between 1 and 7 that best describes you.

1. On a scale of 1 to 7, with 1 being "Not motivated at all" and 7 being "Extremely motivated," how motivated do you feel after this Professional Development session?
   1 2 3 4 5 6 7

2. Respond to this statement: I often find myself questioning things I hear or read in this course to decide if I find them convincing
   1 2 3 4 5 6 7

3. Respond to this statement: When a theory, interpretation, or conclusion is presented in a CPD session, I try to decide if there is good supporting evidence
   1 2 3 4 5 6 7

4. Respond to this statement: I treat the course material as a starting point and try to develop my own ideas about it
   1 2 3 4 5 6 7

5. Respond to this statement: I try and play around with ideas of my own related to what I am learning in a CPD session
   1 2 3 4 5 6 7

6. Respond to this statement: Wherever I read or hear an assertion or conclusion in this session, I think about possible alternatives
   1 2 3 4 5 6 7

7. Respond to this statement: When learning course material, I find it helpful to explain the material to a colleague
   1 2 3 4 5 6 7

8. Respond to this statement: I try to work with other colleagues during CPD to complete tasks
   1 2 3 4 5 6 7

9. Respond to this statement: When learning new course material, I like to set aside time to discuss the course material with a group of teachers involved in the CPD
   1 2 3 4 5 6 7

10. Respond to this statement: When learning new CPD information, I pull together information from different sources, such as readings and discussions
    1 2 3 4 5 6 7

11. Respond to this statement: I try to relate ideas to those on other courses, wherever possible
    1 2 3 4 5 6 7

12. Respond to this statement: When learning new information in CPD sessions, I try to relate material to what I already know
    1 2 3 4 5 6 7

13. Respond to this statement: When I learn new information, I write brief summaries of the main ideas from the readings and the concepts
    1 2 3 4 5 6 7

14. Respond to this statement: I try to understand material from this CPD by making connections between previous knowledge and concepts
    1 2 3 4 5 6 7

15. Respond to this statement: I try to apply course readings in other class activities such as wider CPD sessions and colleague discussions
    1 2 3 4 5 6 7

16. Which interactive strategy used in today's session did you find most engaging or effective? Please select one:

a. Critical Thinking
b. Peer Learning/ collaboration
C. Elaboration (paraphrasing/ summarising/ creating analogies/ note-taking)
D. Other (please specify)

3. Did the interactive elements in today's session positively impact your learning experience? (Yes/No)

4. What specific aspect of today's session contributed most to your motivation?

_____

Pulse Survey 2:

The following questions ask you about your motivation for and attitudes about this CPD session.

You may be asked to circle an answer that is most relevant. You may be asked to provide a score against a statement. For example, if you think the statement is very true of you, circle 7; if a statement is not at all true of you, circle 1. If this statement is more or less true of you, find the number between 1 and 7 that best describes you.

1. Did you implement any strategies (recapping/evaluative talk/open-ended questions/explaining and showing/posing suggestions/making links/ recalling events) discussed last session? Circle the most appropriate:

   No Yes once Regularly Yes, they are now part of my routine

1a. Have you done anything differently as a result of the last session? Circle the most appropriate:

Read literature around the subject Discussed strategies with colleagues Other _____

2. On a scale of 1 to 7, with 1 being "Not motivated at all" and 7 being "Extremely motivated," how motivated do you feel after today's Professional Development session?
   1 2 3 4 5 6 7

2. Respond to this statement: I often find myself questioning things I hear or read in this course to decide if I find them convincing
   1 2 3 4 5 6 7

3. Respond to this statement: When a theory, interpretation, or conclusion is presented in a CPD session, I try to decide if there is good supporting evidence
   1 2 3 4 5 6 7

4. Respond to this statement: I treat the course material as a starting point and try to develop my own ideas about it

1 2 3 4 5 6 7

5. Respond to this statement: I try and play around with ideas of my own related to what I am learning in a CPD session
   1 2 3 4 5 6 7

6. Respond to this statement: Wherever I read or hear an assertion or conclusion in this session, I think about possible alternatives
   1 2 3 4 5 6 7

7. Respond to this statement: When learning course material, I find it helpful to explain the material to a colleague
   1 2 3 4 5 6 7

8. Respond to this statement: I try to work with other colleagues during CPD to complete tasks
   1 2 3 4 5 6 7

9. Respond to this statement: When learning new course material, I like to set aside time to discuss the course material with a group of teachers involved in the CPD
   1 2 3 4 5 6 7

10. Which interactive/learning strategy used in today's session did you find most engaging or effective? Please select one:

a. Critical Thinking
b. Peer Learning/ collaboration

11. Did the interactive elements/learning strategies in today's session positively impact your learning experience? (Yes/No)

Appendix C

SLT Observation

1. How motivated were the staff team at the beginning of the year (September 2023) on a scale of 1 to 7, with 1 being "Not motivated at all" and 7 being "Extremely motivated,"
   1 2 3 4 5 6 7

2. Have you seen an increase in motivation after this professional development intervention?
   Yes/no

3. On recent learning walks, have you seen any of the introduced strategies being used in practice? Please circle any observed:

- Recapping
- Evaluative talk
- Open-ended question
- Explaining and showing
- Posing suggestions
- Making links
- Recalling events

4. Would you say that these strategies are (circle the most appropriate):

Not used at all Used once Used Regularly Now part of the team routine

5. Have you seen any other indicators of motivation in the team after the professional development sessions:

- Discussions amongst the team
- Reading educational literature
- Other

   _____
   _____

Appendix D

Stratified Sample Interview

Research question 1: Is there empirical evidence demonstrating the impact of learning strategies on teacher motivation in the context of Professional Development?

1. Can you describe your experiences with learning strategies in Professional Development sessions? How do you feel they have influenced your motivation as a teacher?

2. How do you perceive the relationship between learning strategies in Professional Development and your overall motivation in the teaching profession?

3. In your opinion, what types of evidence or data would best demonstrate the impact of learning strategies on teacher motivation in Professional Development?

Research Question 2: Which learning strategies in CPD, as outlined in the literature, prove most effective in enhancing teacher motivation?

1. Based on your experiences, which interactive CPD strategies have you found to be the most effective in enhancing your motivation as a teacher?

2. Can you share any instances where you felt that learning strategies enhanced or hindered your motivation during Professional Development? What factors contributed to these feelings?

3. Are there specific Professional Development sessions or programmes that stand out to you as particularly effective in terms of enhancing teacher motivation? What learning strategies were employed in those sessions?

Research question 3: Did participants identify factors beyond the introduced learning strategies that enhanced teacher motivation in Professional Development?

1. Aside from learning strategies, can you identify other factors or aspects of Professional Development that have a noticeable impact on your motivation as a teacher?

2. What are some non-interactive aspects of Professional Development that you believe contribute positively or negatively to your motivation? Please provide examples.

3. How do you perceive the connection between learning strategies and other factors such as leadership support, content relevance, or peer collaboration in shaping your motivation during Professional Development?
