The Role of a Teaching and Learning Working Party (TWP) in Teacher Continued Professional Development (CPD)

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THE ROLE OF A TEACHING AND LEARNING WORKING PARTY (TWP) IN TEACHER CONTINUED PROFESSIONAL DEVELOPMENT (CPD)

ABSTRACT

Effective CPD can support teachers with engaging with educational research to improve their teaching practice. This practitioner research explores how teachers are engaging with research, their perspectives of it, and barriers they face. Despite being willing, many teachers feel they lack the time to engage with research independently and note issues with research relevance and accessibility. Providing teachers with opportunities to engage with research in collaborative and sustained ways, as can be facilitated by a 'Teaching and Learning Working Party' (TWP), may support teachers in making research-informed changes to their practice that improve student outcomes.

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INTRODUCTION

The complex and multifaceted disconnect between teaching practice and educational research theory has been documented in the literature surrounding teacher education and professional development (Dewey, 1904; Farley-Ripple et al., 2018; Joram et al., 2020; Korthagen, 2010; Vanderlinde & van Braak, 2010; Wilson et al., 2018). The use of research by teachers is often contrasting, ranging from teachers who are extensively using research to inform their decision-making, to those who are mostly guided by personal experience (Cochran-Smith, 2005; Joram, 2007; Joram et al., 2020). Research has a central role in professional development for teachers and it is vital that individual teachers and school leaders seek to adopt an evidence-based approach to improving teaching practice and teacher continued professional development (CPD) (Collin & Smith, 2021; Joram, 2007; Wilson et al., 2018). There is therefore a drive for teachers to be engaging with educational research to inform their practice (Biesta, 2010; Brown & Zhang, 2016; Cain, 2017; Godfrey, 2017). To successfully achieve this, we first need to better understand teachers' perspectives of research to ascertain how and why teachers are opting to engage with and/or in research, and if there are any barriers to them doing so. Only then can we focus on improving teacher engagement with educational research as part of CPD.

Having frequently debated this disconnect with colleagues past and present, this practitioner research seeks to first explore teachers' perspectives and engagement with educational research in my school, prior to exploring the impact of a 'Teaching and Learning Working Party' (TWP), designed to support teacher engagement with research. To consider the role of the TWP, I shall explore teachers' reasons for joining the TWP and if/how the experience impacts their teaching practice and professional development. In addition, I will also explore the reasons underpinning teachers' decisions not to join the TWP during this academic year, with a view to increasing participation in future years.

This research was conducted at a selective independent girls' day school in Oxfordshire, where I am currently in post as one of two School Consultant Teachers (SCT) for Teaching

and Learning (T&L). Working in collaboration with the Deputy Head Academic, we are in the process of implementing, reflecting, and refining our T&L development plan that is centred on raising the profile and effectiveness of T&L and CPD throughout the school. The TWP is one of the initiatives introduced during the 2021-22 academic year. Its function is to act as a mechanism for CPD that is centred around collaborative engagement with research, with a view to improving teaching practice in our school.

Owing to the changing landscape of education and future workplace demands, it is vital that schools prepare young people for academic success, and equip them with the necessary skills for lifelong learning (Darling-Hammond et al., 2017; Furlong, 2013; Wilson et al., 2018). Teacher quality has been shown to have a fundamental, if not the most influential, role in improving student outcomes. Teachers must therefore continually seek to improve their teaching practice through effective CPD (Darling-Hammond et al., 2017; Lee, 2018). Despite this, the quality of T&L experienced by students has been shown to vary widely (Lee, 2018). It is therefore essential that we gain a deeper understanding of what effective CPD looks like, to ensure that professional development opportunities are fit for purpose and effectively support the needs of all teachers (Sims et al., 2021).

To further explore the wider context and research landscape of the issues raised above, I will explore literature surrounding the following:

(1) The nature and purpose of educational research;
(2) Teacher engagement with and/or in educational research;
(3) Teacher perspectives of educational research;
(4) The role of educational research in teacher CPD;
(5) Collaborative approaches to teacher CPD.

LITERATURE REVIEW

1. The nature and purpose of educational research

The use of research to inform professional practice is not unique to education (Cain, 2019). One of the earliest formalised approaches was that of evidence-based medicine, and its systematic use of current research to inform patient treatment (Stavrou et al., 2014). Nowadays, research is used to inform practice across many other disciplines and government departments including wellbeing, crime prevention, and economic growth (Cain, 2019). However, the education sector is believed to be much less informed by research than medicine and the healthcare sector (Cain, 2019).

Educational research takes many forms, including action research and evaluation research, and consequently encompasses a vast array of methodologies (Burton & Bartlett, 2005; Cohen et al., 2018). In addition, the person(s) conducting research can vary from classroom practitioners to government bodies (Wilson et al., 2018). BERA-RSA (2014) recognises teachers and schools who actively conduct their own research as “research-engaged” (p. 40). This suggests that to be research-engaged, schools and practitioners must be, to some extent, producers, and utilisers of research literature. For this study, I would prefer to adopt a wider view of research engagement that includes both producers and/or utilisers of educational research and thus, I propose the following definitions that have been informed by BERA-RSA (2014), Burton and Bartlett (2005), and The American Educational Research Association (2022):

Educational research is an intentional and systematic enquiry that seeks to better understand a particular phenomenon within education with a view to improving educational outcomes.

Engagement with educational research can involve being a producer and/or utiliser of research.

There are different producers of educational research including practitioners, higher education institutions (HEI), and other organisations. Practitioner research can be described as teacher as researcher, a concept promoted by curriculum theorist Lawrence Stenhouse in 1975 (BERA-RSA, 2014; Cordingley, 2015; Kirkwood & Christie, 2006; Stenhouse, 1975). Stenhouse argues that teachers should play an essential role in research due to having the ability and motivation to conduct natural observations, and being in a position to apply and test theory (Stenhouse, 1981). Practitioner research often functions at the micro level, and seeks to develop understanding of a particular area of interest (Bell et al., 2010; BERA-RSA, 2014; Cordingley, 2015). This may involve conducting a literature review, sharing and evaluating best practice via peer observations, analysis of school data, small-scale or school-wide inquiry, or action research (Bell et al., 2010; BERA-RSA, 2014; Cordingley, 2015; Darling-Hammond & Baratz-Snowden, 2007). Evidence from high performing schools suggests that teachers need to engage with both subject specific and pedagogical research, and that to develop highly effective practice, CPD should also involve the production of research (BERA-RSA, 2014).

HEI research often involves larger studies that are designed and led by academic researchers, in which teachers are often participants (Bell et al., 2010). HEIs are frequently recognised for producing research that is “world leading” or “internationally excellent” and covers a range of themes including curriculum development and pedagogy, student voice and engagement, and digital learning (Wilson et al., 2018 p. 30). HEI research frequently functions at the macro level and can often involve local or national research across multiple schools (Bell et al., 2010; BERA-RSA, 2014). There are, however, concerns about the national distribution of HEIs conducting educational research, the majority of which seem to be based in and around London and the South-East (Wilson et al., 2018). This results in a lack of bi-directional communication between practitioners and researchers in other regions of the UK. Such relationships are argued to be fundamentally important in bridging the divide between research and practice (Winch et al., 2015).

Educational research is also conducted by many different organisations including government bodies (e.g. Ofsted: https://www.gov.uk/government/organisations/ofsted), professional bodies

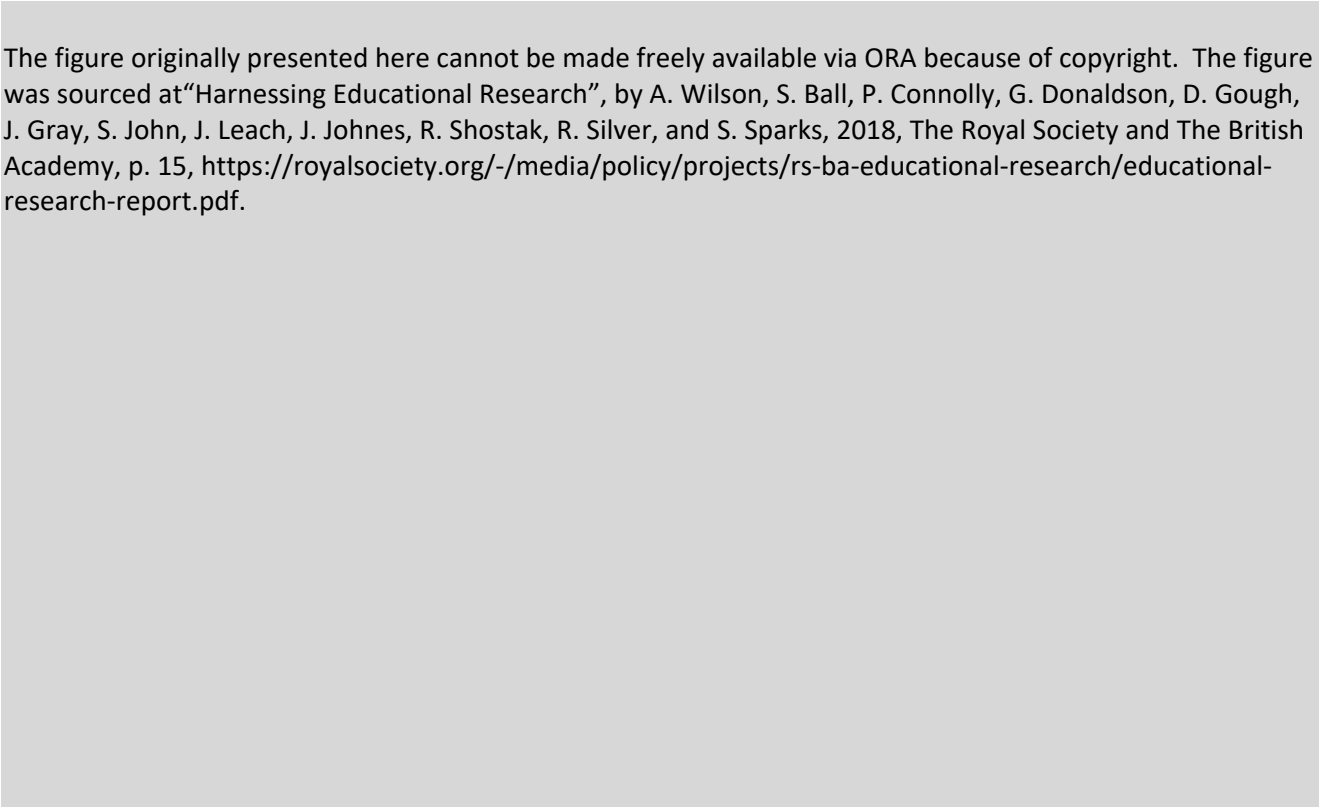
(e.g. The Chartered College of Teaching (CCT): https://chartered.college/), and independent charities (e.g. The Education Endowment Foundation (EEF): https://educationendowmentfoundation.org.uk/) (Wilson et al., 2018). At the heart of each of their mission statements is the desire to improve the educational outcomes for students (CCT, n.d.-a; EEF, 2022a; Ofsted, 2022). Central to their strategies for achieving this is the need to be research-informed and evidence-led.

The use of educational research findings can be summarised as follows: to inform changes to policy or practice in an evidence-informed manner (Ofsted, 2022; Wilson et al., 2018). When used to inform policy, research is rarely adopted in isolation due to the differences between school contexts (Wilson et al., 2018). That is not to say, however, that research evidence has not yielded many positive changes to educational policy in recent years, including changes to the KS1 and 2 English National Curriculum in England and changes to Ofsted inspection criteria surrounding diversity and identity (Goodman et al., 2016).

Educational research is a source of specialist expertise that provides insights and often answers important questions surrounding teaching, learning, and education (Cordingley, 2015; Wilson et al., 2018). Wilson et al. (2018) summarise its purpose as follows: “The ultimate goal of educational research is to enable an improved life experience and educational outcomes for young people” (p. 15). Figure 1 provides a summary of the role of research within the wider education landscape. The actors are researchers (including practitioner researchers), practitioners, and policymakers (Wilson et al., 2018).

Figure 1

A summary of the role of educational research within the wider education landscape



Note. From "Harnessing Educational Research", by A. Wilson, S. Ball, P. Connolly, G. Donaldson, D. Gough, J. Gray, S. John, J. Leach, J. Johnes, R. Shostak, R. Silver, and S. Sparks, 2018, The Royal Society and The British Academy, p. 15, https://royalsociety.org/-/media/policy/projects/rs-ba-educational-research/educational-research-report.pdf. CC-BY 4.0.

Educational research has a role in both informing policymaking, and in identifying issues that educational policies may need to address (Wilson et al., 2018). Policymaking is also influenced by political and social agendas and interests which can affect the level of attention directed towards different issues, and reduce the impact of educational research on policy (and subsequently practice) (Furlong, 2013; Wilson et al., 2018). Despite this, policymakers perceive themselves to have the same fundamental goals as other key stakeholders in educational improvement: to improve the educational outcomes of young people (Wilson et al., 2018).

The UK Department for Education (DfE) recognises the importance of research in improving student outcomes by stating that evidence is central to policy making (DfE, 2018). The DfE notes five main ways in which it seeks to engage with, and in, educational research, including

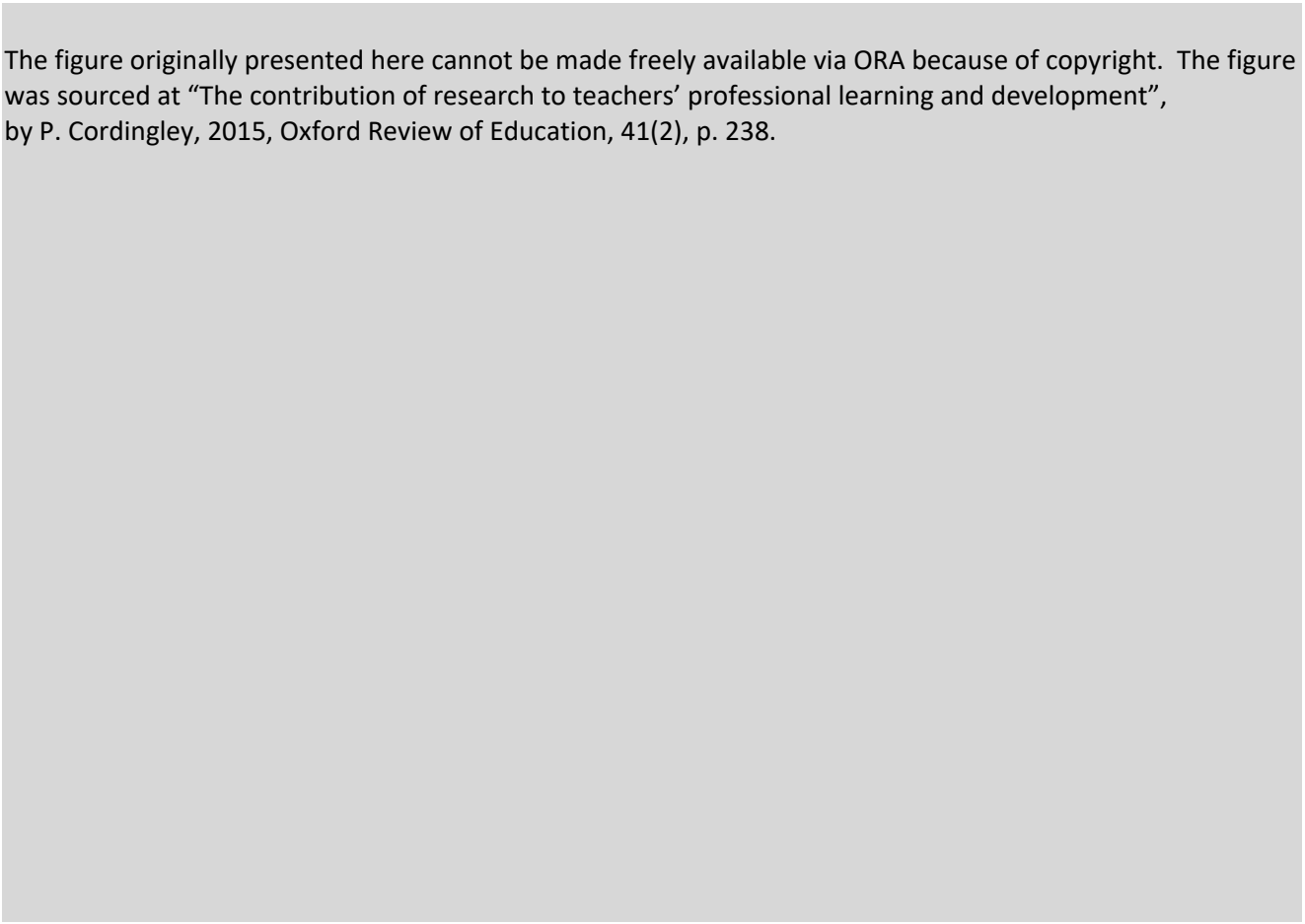
providing funding for independent organisations such as the EEF, in the hope of improving the use of research by teachers and school leaders (Cain, 2019; DfE, 2018). This follows findings suggesting that school leaders felt the DfE needed to place a greater emphasis on aligning education policies and messaging with research evidence (Coldwell et al., 2017). In addition, the DfE is actively commissioning research to gather data to explore 20 research questions focused on their areas of research interest (DfE, 2018). These cover all phases of education and contexts and include questions ranging from early years transitions to cognitive science approaches to teaching. Despite such efforts, there is more to be done to increase coherence within the education system to better facilitate the flow of information between research, policy, and practice (Cordingley, 2015; DfE, 2018; Wilson et al., 2018). To aid this, research outputs must aim to explicitly note their practical applications for both policy and classroom practices (Wilson et al., 2018).

2. Teacher engagement with educational research

Teacher engagement with educational research can occur in different ways and can be driven by intrinsic and/or extrinsic motivation. Teachers may engage with research with a view to addressing practical challenges faced in their practice, or for career development (e.g. promotion or additional qualifications) (Cain, 2016). Teachers may opt to engage with the research findings of others or, alternatively, undertake practitioner research (BERA-RSA, 2014; Cordingley, 2015; Kirkwood & Christie, 2006; Menter et al., 2011; Stenhouse, 1975; Winch et al., 2015). The nature of teacher and researcher engagement with research can be summarised as illustrated in Figure 2. When considering teacher engagement in research, three mechanisms were identified: (1) Researcher-led, (2) Teacher-led, and (3) Masters-based (Bell et al., 2010). The latter two involve teachers designing and conducting their own research, yet each shows benefits for teachers and students.

Figure 2

A summary of the nature of teacher and researcher engagement with and in educational research



Note. From "The contribution of research to teachers' professional learning and development", by P. Cordingley, 2015, *Oxford Review of Education,* 41(2), p. 238. CC BY-NC.

The goal of practitioner research is often to introduce a positive reform following a systematic enquiry into a particular area of practice (Menter et al., 2011; Winch et al., 2015). This can enhance teacher expertise, confidence, and autonomy surrounding professional decision making (Menter et al., 2011; Winch et al., 2015). Engagement with research is also thought to enhance teacher critical and systematic reflection, contributing to improved practice and teacher development (Cordingley, 2008; Winch et al., 2015).

A small number of studies have examined research outputs to identify features of research writing that are most conducive to teacher engagement with research. Cordingley (2008)

outlines the need for seven features, which, if not addressed, could pose barriers to engagement:

> (1) Provide sufficient, detailed analysis and description of the teaching intervention or knowledge in action vividly to enable teachers to connect with it and to test it for themselves;
> (2) Provide detail about the starting points of pupils and the phases or subjects involved in research outputs in order to enable teachers to interpret and adapt for their own context;
> (3) Include a short summary of the method;
> (4) Layer evidence and writing so that practitioners can make informed choices about reading strategies;
> (5) Provide clear pathways for finding out more about the research;
> (6) Provide evidence about the connections between an intervention or approach and pupil learning; and;
> (7) Ensure clear, simple, short and jargon free writing. (p.38)

Addressing these features would undoubtedly require additional time and resources for researchers, particularly if writing for peer review, thus highlighting the importance of additional, separate publications that are based on the features outlined above (Cordingley, 2008; Vanderlinde & van Braak, 2010).

Cordingley (2008) argues that teachers must also connect "intellectually, practically and emotionally" (p. 37) with the knowledge presented in research if they are to use it effectively to inform their classroom practice. The research must be relevant to their needs and context. This idea is supported by the teacher perspectives obtained in the 2017 National Foundation for Educational Research (NFER) survey that highlighted how teachers found research to have the most influence on their classroom practice if they could see how it related to their own context (Nelson et al., 2017). Wilson et al. (2018) notes that practitioners and researchers (and policy makers) often have different priorities, which contributes to a "mismatch between supply and demand" (p. 34). Thus, there is a need to identify these areas of mismatch and address them. The EEF has, more recently, been making progress towards achieving this through research partnerships with schools, and their process for commissioning new research (EEF, 2022c). The latter is centred on addressing gaps in the EEF evidence base that are based on questions that teachers, researchers, and other stakeholders would like answered.

Research must also be accessible to teachers, logistically, financially, and intellectually (Wilson et al., 2018). Logistically, it is important that teachers have developed the skills to

locate research findings of interest (Cordingley, 2008; Wilson et al., 2018). They must then be able to access such findings in a free or financially feasible way. This is currently particularly challenging for teachers who are not enrolled onto university-led courses (e.g. PGCE or MA/MSc) (Godfrey, 2017). Even if such research was to be readily available, it must also be accessed by practitioners at the time it is relevant to their individual teaching practice (Cordingley, 2008). There have been some efforts to reduce physical and financial access barriers through professional bodies, such as the CCT providing some free access to research literature, yet there is still a small monthly fee for a full membership which may render it inaccessible for some teachers (CCT, n.d.-b; Godfrey, 2017; Wilson et al., 2018). It is hoped that teacher access to primary research literature will become easier in the future (Wilson et al., 2018). For example, the government is aiming to ensure all publicly funded research is freely accessible online (Cain, 2019).

Research can, at first, appear abstract and theoretical, and this presents another barrier to teacher use (Cordingley, 2008; Wilson et al., 2018). A 2017 research report commissioned by the DfE found that most of the teachers interviewed relied on senior leaders and organisations, like the EEF, to translate and summarise research, as they did not feel confident engaging with primary literature directly (Coldwell et al., 2017). A particularly successful example of this is the EEF toolkit that aims to provide “an accessible summary of education evidence”, and has been shown to play a key role in teacher engagement with research (EEF, 2022b; Wilson et al., 2018). However, sources of accessible research summaries can vary and may include HEIs, professional bodies, local authorities, and senior leaders (Coldwell et al., 2017; Cordingley, 2008). Other more recently established research mediators (e.g. researchED: https://researched.org.uk/) play a critical role in distilling and summarising research findings, often into different formats such as conference presentations and blogs, to present findings alongside application suggestions. This makes key information more accessible for teachers and in the context of their classroom practice, whilst promoting conversation surrounding research (Wilson et al., 2018). However, even if provided with access to research, teachers must subsequently be able to critically evaluate the quality and relevance of research findings and their application to their own practice and context (Vanderlinde & van Braak, 2010; Wilson

et al., 2018). Cordingley (2008) argues that to be able to do so, teachers need to be explicitly aware of their existing knowledge and practice to compare this with the new information and ideas they are being presented with.

The responsibility for engaging with educational research, and providing evidence-informed CPD, has increasingly fallen upon school leaders (Brown & Zhang, 2016; Coldwell et al., 2017; Cordingley, 2008). Consequently, school leaders have a highly influential role in creating a positive and effective culture surrounding the use of research, and must ensure that teachers are provided with the necessary support, resources, and time to use research to develop their practice (Brown & Zhang, 2016; Coldwell et al., 2017; Godfrey, 2017; Wilson et al., 2018). Findings from a study conducted by Brown and Zhang (2016), suggested that to improve the use of research evidence by teachers, school leaders should:

(1) Promote the vision for evidence-use (i.e. actively encourage its use);
(2) Illustrate how research can be effectively employed to enhance aspects of teaching and learning; and
(3) Establish effective learning environments, in which learning conversations around the use of evidence, can flourish. (p. 1)

The value teachers place on research evidence has also been shown to be influenced by school leaders, with the most strongly research-engaged schools having highly organised and effective leadership teams (Coldwell et al., 2017). Despite this and the standards set out by the DfE and school inspectorates such as Ofsted and the ISI, teachers express that their working conditions are not conducive to spending time engaging with and using research (Wilson et al., 2018). This lack of time can prevent teachers exploring research both independently and collaboratively, and thus leave them unable to successfully consider and trial new approaches to T&L (Brown & Zhang, 2016; Cain, 2016; Vanderlinde & van Braak, 2010). In addition, time constraints can be a driving force behind teachers' desires for research evidence to be presented in the form of quick-wins; strategies that can be interpreted and trialled in the classroom immediately, yet often only operate at a superficial level (Brown & Zhang, 2016; Cordingley, 2008). Researchers are often reluctant or simply unable, however, to present their findings in a concise, prescriptive manner. This may result in the findings that the author is trying to communicate being lost altogether (Cordingley, 2008).

3. Teachers' perspectives of educational research

There is long standing evidence of polarising perspectives surrounding the use of educational research to inform teaching practice (Winch et al., 2015). For some time, there has been evidence to suggest that some teachers have negative perceptions of educational research (Cain, 2016; Cain, 2017; Korthagen, 2010; Vanderlinde & van Braak, 2010; Watts, 2009). Studies exploring teachers' perceptions of research have identified several reasons underpinning negative perceptions. Cain (2017) argues that research is not necessarily accepted by teachers and suggests that teachers may instead rely on their own experience, or the experience of valued colleagues. Teachers may also experience feelings of contradiction between their experience-based expertise and research findings and theory, thus impacting teachers' professional identity (Watts, 2009). In addition, teachers felt that research can be ambiguous or lack relevance to their classroom practice (Vanderlinde & van Braak, 2010). More recently, Joram et al. (2020) identified aspects of teacher perceptions that may influence their use of educational research including:

(1) The relevance and transferability of research findings to their own context;

(2) The degree of risk involved in trialling new ideas presented in the research;

(3) Teacher agency and the trialling of new ideas presented in the research;

(4) The time and support required to engage with research.

If the perceptions outlined above tend towards being negative, it may result in low uptake and use of educational research by teachers (Joram et al., 2020). Understanding teachers' perspectives of research is important for researchers, school leaders, and other stakeholders in education. To effectively support the utilisation of research findings in classroom practice, the reasons underpinning negative perspectives must be better understood (Cain, 2017; Vanderlinde & van Braak, 2010). Cain (2017) highlights, however, that differing perspectives may also provide opportunities for fruitful discussion and debate surrounding research that may result in changes to practice. Providing negative perspectives can be explained and justified, they can be part of the process of critically considering research. If all research was accepted without question, this critical step in the process of research utilisation would be lost altogether (Nicholson-Goodman & Garman, 2007).

Despite concerns, there is contrasting evidence to suggest that teacher interest in educational research is growing globally (Cain, 2019; Penuel et al., 2017). The 2017 research report commissioned by the DfE, to evaluate progress with evidence informed teaching in England, found that most teachers involved in the study saw the value in research evidence (Coldwell et al., 2017). They concluded that teachers were most likely to value and trust research provided it was supported by other sources, aimed at addressing problems faced in their classroom practice, and positively championed by school leaders and trusted colleagues. Similar findings were echoed in the NFER surveys (Nelson et al., 2017; Walker et al., 2019a). The 2017 survey of 1,670 teachers in England found that both teachers and schools were in support of using evidence to inform their practice (Walker et al., 2019a). In both surveys, teachers' views about the use of research were generally shown to be positive and that they are willing to engage, but suggested there is more that can be done by school leaders to support teachers in this process (Nelson et al., 2017; Walker et al., 2019b). When exploring teachers' sources of information, however, academic research was shown to have the smallest influence on teacher classroom practice (Nelson et al., 2017). Instead, teachers were shown to rely more heavily on other sources of information including pupil performance data, colleague expertise, and training/CPD. This could be due to a lack of guidance surrounding how research is relevant to classroom practice (Wilson et al., 2018). Winch et al. (2015) argue, however, that teachers should not expect research to provide them with absolute assurance of what will work in practice. Instead, they must critically evaluate research findings in light of their own professional judgement, context, and circumstances, in order to make research-informed decisions (Cordingley, 2017a; Winch et al., 2015). In essence, research evidence should be viewed as one source of information that teachers should use when making decisions that impact their practice. It should not outweigh professional judgement (Biesta, 2010; Godfrey, 2017).

The NFER surveys also highlighted differences in the responses of teachers from different positions of leadership (Nelson et al., 2017; Walker et al., 2019b). Senior leaders were significantly more likely than middle leaders and teachers to report that their schools had a positive research culture, and that they utilised research evidence to inform their practice.

Similar differences in the perspectives of senior leaders and teachers were also noted in a previous study by Vanderlinde and van Braak (2010). When asked about the gap between research and practice, teachers perceived the disparity to be much greater than viewed by senior leaders. In addition, their approaches to engaging with and utilising research was noted to be different. Teachers noted a tendency to use online sources of information (e.g. websites, forums), instead of primary literature. However, senior leaders reported utilising research findings to inform their practice, particularly when making decisions or changes at a whole school level. Despite this, senior leaders expressed how the use of complex language in research was a barrier that exacerbated the divide between research and practice.

4. The role of educational research in teacher CPD

There is a growing body of evidence underpinning what effective CPD looks like (Collin & Smith, 2021; Darling-Hammond et al., 2017). Key elements include being research-informed, collaborative, and of a sustained duration (Collin & Smith, 2021; Cordingley, 2003; Darling-Hammond et al., 2017). Despite being complex and context specific, when effective, CPD is the driving force behind improving teacher quality and student outcomes (Collin & Smith, 2021; Cordingley, 2003; Cordingley, 2015; Darling-Hammond et al., 2017). To aid the design and implementation of the TWP, the remainder of this section will explore the role of research in informing professional development models, programmes, and approaches.

Darling-Hammond et al. (2017) outline seven principles of effective teacher professional development taken from their analysis of 35 studies linking CPD to positive outcomes for students. They suggest that effective CPD:

(1) Is content focused;
(2) Incorporates active learning utilising adult learning theory;
(3) Supports collaboration, typically in job-embedded contexts;
(4) Uses models and modelling of effective practice;
(5) Provides coaching and expert support;
(6) Offers opportunities for feedback and reflection;
(7) Is of sustained duration. (p.1)

Many CPD initiatives have been found, however, to be ineffective at achieving these outcomes due to being poorly designed and/or implemented (Collin & Smith, 2021; Darling-Hammond et al., 2017). Common barriers have been shown to include a lack of resources, a lack of

consistency and/or shared vision, insufficient time for learning and implementation, failure to monitor the effectiveness of new initiatives, and ineffective school cultures (Darling-Hammond et al., 2017). It is essential that CPD is designed to address the needs of both teachers and students within the school, and includes robust plans to mitigate potential barriers (Darling-Hammond et al., 2017). This could be supported by changes to educational policy that enable schools to provide teachers with more time for professional development, whilst providing additional guidance to school leaders surrounding evidence-informed CPD (Darling-Hammond et al., 2017).

More recently, there has been an increased focus on improving the guidance surrounding what effective CPD looks like. The EEF guidance report by Collin & Smith (2021) defines professional development as “structured and facilitated activity for teachers intended to increase their teaching ability” (p.7). This report provides three key recommendations built around the importance of the following four mechanisms: (1) Build knowledge, (2) Motivate staff, (3) Develop teaching techniques, and (4) Embed practice. When CPD is designed with a focus on these mechanisms and implemented with care, it should result in improved teaching practice and outcomes for students. In addition, Darling-Hammond and Baratz-Snowden (2007) also emphasise that CPD should be designed and delivered based on how teachers learn, and not just focus on what teachers need to learn. They also highlight the importance of providing opportunities for teachers to apply new learning to their own practice, whilst continually reflecting and refining their approach to teaching. Cordingley (2008) also suggests that CPD programmes must support teachers with explicitly understanding their current practice and encouraging them to compare it to new knowledge gained from research.

Bell et al. (2010) suggests that professional learning support (e.g. coaching or other guidance) must be sustained for teachers to successfully incorporate new strategies into their teaching practice. Teachers must be provided with opportunities to observe examples of good practice from colleagues (Furlong, 2013), be observed themselves, and receive feedback (Cordingley, 2003). Cordingley (2003) emphasises the importance of gaining insights from observers that may not be immediately obvious to the teacher themselves. Teachers should then use such

insights to actively set personal learning goals based on their own needs, thus allowing teachers agency over their own professional development.

Educational research surrounding effective CPD should also be used by policymakers to help support school leaders in designing, implementing, and monitoring their professional development approaches (Darling-Hammond et al., 2017). The DfE “Teachers’ Standards” (2011) states that professional development and critical reflection are essential to improving the teaching practice of all teachers regardless of their career stage. Within the DfE “Standard for teachers’ professional development” (2016) five evidence-informed characteristics of effective professional development are outlined:

> (1) Professional development should have a focus on improving and evaluating pupil outcomes;
> (2) Professional development should be underpinned by robust evidence and expertise;
> (3) Professional development should include collaboration and expert challenge;
> (4) Professional development programmes should be sustained over time;
> (5) Professional development must be prioritised by school leadership. (p. 1)

To be effective, approaches to CPD should be carefully designed and implemented (Collin & Smith, 2021). School leaders play a critical role in this and must support teachers throughout each phase of their professional lives (Cordingley, 2015; Day & Gu, 2007; Furlong, 2013). To do this successfully, CPD programmes should offer a range of opportunities that are specific to the individual needs of teachers with differing levels of expertise, experience, and values (Day & Gu, 2007). Whilst experience is one important source of knowledge, teacher quality does not necessarily improve with increased experience. Therefore, CPD is important for teachers in all phases of their career and must be personalised to be effective.

School leaders and those responsible for CPD must overcome many challenges when seeking to provide teachers with opportunities for effective CPD (Collin & Smith, 2021; Darling-Hammond et al., 2017; Graves & Moore, 2018). Changes to professional development approaches are often viewed as high risk owing to the pressures exerted by public examination and inspection performance metrics (Graves & Moore, 2018). Therefore, school leaders should, and increasingly do, turn to research evidence to best inform their approaches to teacher CPD (Collin & Smith, 2021; Graves & Moore, 2018). Translating research findings into changes at the school level, however, is often a challenge for senior leaders (Graves &

Moore, 2018). In a study by Graves and Moore (2018), school leaders demonstrated a motivation to engage with research to further school improvement and improve student outcomes. Research was also noted as a means for justifying existing approaches and decisions, and to gain buy-in from colleagues. Access to research, particularly primary literature, was a noted barrier for senior leaders and teachers who were not partaking in post-graduate level qualifications. Instead, senior leaders and teachers were suggested to turn to books, particularly those focusing on the application of research, and online-sources of information, particularly via social media e.g. Twitter. The use of media such as Twitter is not without issues. It is suggested that senior leaders and teachers may judge the quality and validity of claims by the popularity of individuals on such platforms, rather than seek to critically consider the findings being presented (Graves & Moore, 2018). Therefore, senior leaders and teachers need to be equipped with the necessary skills to interpret and evaluate research findings, including research associated with improving CPD (Winch et al., 2015).

The greatest barrier of all, when tasked with designing and implementing effective CPD opportunities, is time (Collin & Smith, 2021; Cordingley, 2015; Darling-Hammond et al., 2017; Graves & Moore, 2018). This is not only concerned with the time available to school leaders and those responsible for developing professional learning, but also the time and workload constraints faced by teachers generally, and how this often prevents them from engaging with CPD (Collin & Smith, 2021; Cordingley, 2015; Darling-Hammond et al., 2017; Graves & Moore. 2018). School leaders must recognise this and seek to minimise the time pressure CPD places on teachers, whilst also ensuring that any time given to professional development is utilised in an effective and meaningful way (Collin & Smith, 2021). If CPD can be effective, sustained, and personalised to meet the needs of individual teachers, it should not only result in improved outcomes for students, but also numerous benefits for teachers including improved subject and pedagogical knowledge, improved confidence, and improved enthusiasm for engaging with CPD (Timperley et al., 2007). This will require elements of risk taking, however, and a commitment to a long-term vision for professional development that is backed by research, from both teachers and senior leaders (Graves & Moore, 2018).

5. Collaborative approaches to teacher CPD

The TWP explored in this research study, is inherently collaborative. It was therefore important to explore the literature surrounding collaborative approaches to CPD to inform the planning, activities, and functioning of the TWP. Specifically, many of the key principles of 'Communities of Practice' (CoP) (Wenger, 1998; 2011) explored in the literature below were central to the structure and functioning of the TWP. How this subsequently informed the TWP is detailed within section 2 of the methodology.

Collaboration has been shown to have a fundamental role in professional development across many sectors in the form of CoP (Wenger, 1998). CoP can be defined as "groups of people who share a concern or passion for something they do and learn how to do it better as they interact regularly" (Wenger, 2011, p.1). Central to CoP are the shared interests, issues, and goals of its members (Wenger, 1998). The outcome of CoP is the sharing of professional knowledge and learning that occurs between its members.

CoP often involve colleagues from different teams or departments working together, thus frequently facilitating the flow of information within an organisation (Wenger, 1998). The duration and amount of participation within CoP by members can be flexible and varied and the activities of the group tend to rely more on collective leadership or self-organisation than intensive management. It is also important that CoP members are provided with the time, space, and resources necessary to collaborate.

The activities that CoP engage with may include problem solving, seeking information, seeking experience/expertise, peer visits/observations, and discussions (Wenger, 2011). CoP exist throughout education and can support professional development from onset of initial teacher training and throughout teachers' careers (Kirschner & Lai, 2007; Patton & Parker, 2017; Wenger, 2011). They can affect educational practices both within and beyond the scope of the school in which they exist (Patton & Parker, 2017; Wenger, 2011), and play a role in exploring ways to support students in developing the necessary skills for lifelong learning (Wenger, 2011).

Collaborative approaches to research utilisation have many noted benefits for student outcomes, teacher CPD, and school improvement (Cain, 2019; Cordingley, 2015; Cordingley, 2017b). Activities may include collaborative exploration of research evidence to inform planning, collaborative enquiry or action research, coaching, peer observations, and professional dialogues (Cordingley, 2015). Approaches to professional learning that are centred around peer support have been shown to be effective regardless of whether participation is initiated on a voluntary or compulsory basis, and providing professional dialogue is focused on evidence-informed approaches, not just current practice (Cordingley, 2015).

Collaborating with colleagues can facilitate richer consideration of research theory, and its relevance to the specific school context in which teachers work, thus bridging the gap between research and practice (Bell et al., 2010; Cordingley, 2015; Cordingley, 2017b). Collaboration can enable teachers to review the application of teaching strategies and/or theoretical principles, and carefully consider the benefits and limitations (Cordingley, 2015). It also allows teachers to consider a greater range of teacher perspectives and help to build confidence via shared risk taking when exploring collective issues (Cordingley, 2015; Cordingley, 2017b). In addition, if conducting practitioner research, evidence can be gathered from a larger number of students, which would likely make any conclusions more robust (Cordingley, 2017b).

The provision of opportunities for collaboration is noted as a key principle of effective CPD that can result in positive changes at many levels including to the whole-school culture (Darling-Hammond et al., 2017). There are concerns, however, that too few schools know how to develop and effectively facilitate successful professional learning communities or CoP (Stoll & Louis, 2007). This may be due to the difficulties associated with identifying exactly what makes a CoP effective, and the challenges associated with replicating such approaches. In addition, such challenges are thought to be exacerbated within secondary school settings due to requirements to balance the development of subject specific knowledge and shared pedagogical knowledge.

6. Concluding remarks

From the literature, is it clear that engagement can be with and/or in research and may be led by teachers and/or researchers (BERA-RSA, 2014; Cordingley, 2015; Kirkwood & Christie, 2006; Menter et al., 2011; Stenhouse, 1975; Winch et al., 2015). When considering engagement in research, there are many different producers of educational research from practitioners, to HEIs, to other independent or government led organisations. The former tends to operate at a micro level, the latter at a macro level (BERA-RSA, 2014). Research outputs are often used to inform practice and/or policy with a view to improving pupil learning outcomes (Ofsted, 2022; Wilson et al., 2018). To inform the former, teachers must want to engage with research. It is clear there is a drive for this throughout the education sector, including in my own school. This is not happening, however, at the level we would like it to be and there are a number of contributing factors.

Firstly, teachers' perspectives and use of research have been shown to vary for several reasons not limited to relevance, risk, agency, and time (Joram et al., 2020; Winch et al., 2015). More recently, positive teacher perspectives of research have been reported, providing research is deemed relevant, robust, accessible, and celebrated by school leaders and within school cultures (Cain, 2019; Coldwell et al., 2017; Walker et al., 2019a). This shows promise for improving teacher engagement with research, providing a number of conditions are met. In addition, teacher engagement with research is believed to promote critical reflection and contribute to improvements in teaching practice (Cordingley, 2008; Winch et al., 2015). To achieve this, however, research outputs must seek to address the needs of teachers, whilst being logistically, financially, and intellectually accessible (Cordingley, 2008; Wilson et al., 2018). In the first element of this research project I will collect baseline data to explore teachers' perspectives of, and engagement with, educational research in my school. I will then utilise these findings, alongside the literature surrounding effective CPD, to inform the design of an intervention that looks to promote teacher engagement with educational research: the TWP.

The literature demonstrates that evidence-informed approaches to CPD offer a means by which to support teachers in successfully improving their practice (Wilson et al., 2018). There is an increasing body of literature surrounding key features of effective CPD for improved teaching practice and outcomes for students (Collin & Smith, 2021; Darling-Hammond et al., 2017; DfE, 2016). Common features include collaboration, expert guidance, a focus on evidence, and opportunities for developing practice and reflection. All of these must occur for a sustained duration (Collin & Smith, 2021; Darling-Hammond et al., 2017; DfE, 2016). Such features will play a fundamental role in informing the planning and implementation of the TWP. In addition, the TWP will be collaborative and draw on many of the principles of CoP (Wenger, 1998). Collaborative approaches have been shown to support teachers in reflecting on the relevance and application of research in their context, and have been demonstrated to result in improvements for student and school outcomes (Cain, 2019; Cordingley, 2015; Cordingley, 2017b). Following the enactment of the intervention, I will collect additional data to better understand the impact of the TWP on teacher CPD; specifically looking at the impact of it on teacher engagement with research.

METHODOLOGY

1. Research questions

RQ1 - How are teachers engaging with educational research and what are their perspectives of it?

RQ2 - What are teachers' reasons for joining the Teaching and Learning Working Party (TWP)?

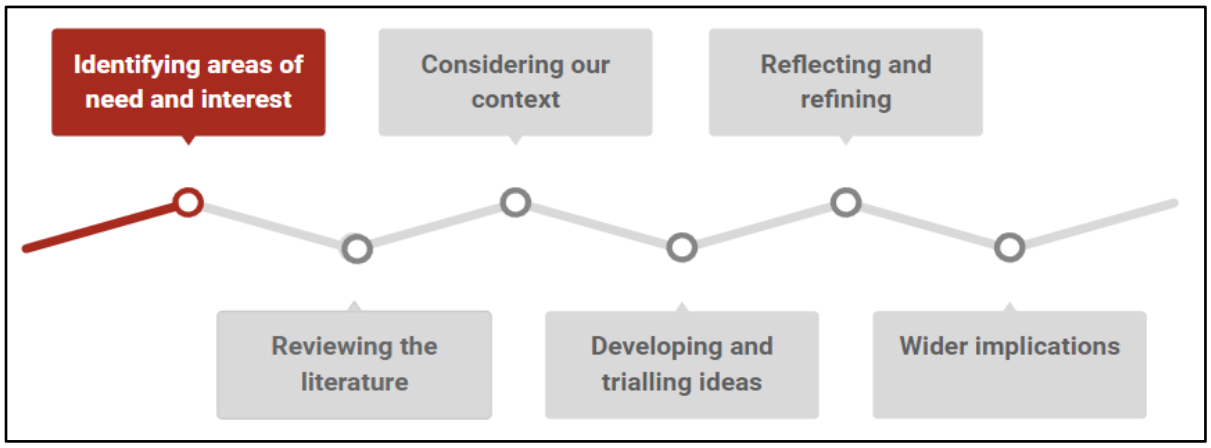
RQ3 - How does being part of the Teaching and Learning Working Party (TWP) impact teacher continued professional development (CPD)?

2. Intervention

The TWP was established at the beginning of the 2021-22 academic year. I led the group, acting as both the researcher and as one of the T&L leads. The TWP met six times throughout the year, with a meeting taking place each half term for one hour after school. Figure 3 shows an overview of the format of the TWP. A detailed summary of the key activities and outputs of each meeting is included in appendix A.

Figure 3

An overview of the TWP format for the 2021-22 academic year



The design of the TWP was underpinned by evidence surrounding effective CPD. It was collaborative, evidence focused, of sustained duration, and offered frequent opportunities for reflection and feedback (Darling-Hammond et al., 2017; DfE, 2016). In addition, the TWP also

acted as a CoP, due to its members having shared interests and goals that were decided during the first meeting (Wenger, 1998). Progress towards these goals was discussed and monitored throughout the year by the T&L leads, using the findings from this research project. This helped to ensure that the necessary resources were available, to facilitate progress towards the shared and personal goals of the TWP members (Darling-Hammond et al., 2017).

The activities conducted were centred around promoting teacher engagement with research by providing relevant literature, selected based on the group interests, and a dedicated time for discussion surrounding the literature theory and applications. By promoting engagement with research in a discursive way, it was hoped that teachers would critically reflect on their current practice with a view to improving their future practice (Furlong, 2013; Winch et al., 2015). The first piece of literature utilised by the group was the EEF summary titled “Cognitive Science Approaches in the Classroom: A Review of the Evidence” (Perry et al., 2021). This was selected on the basis that it presented a summary of key primary literature in a way that was accessible, freely available, and included information surrounding the theory and application of the principles presented in a jargon-free way. Thus, it was consistent with many of the principles outlined by Cordingley (2008) as being conducive to effective engagement with research (see literature review section 2). In addition, the TWP members all expressed an interest in exploring cognitive science approaches during the discussions that took place in the first TWP meeting.

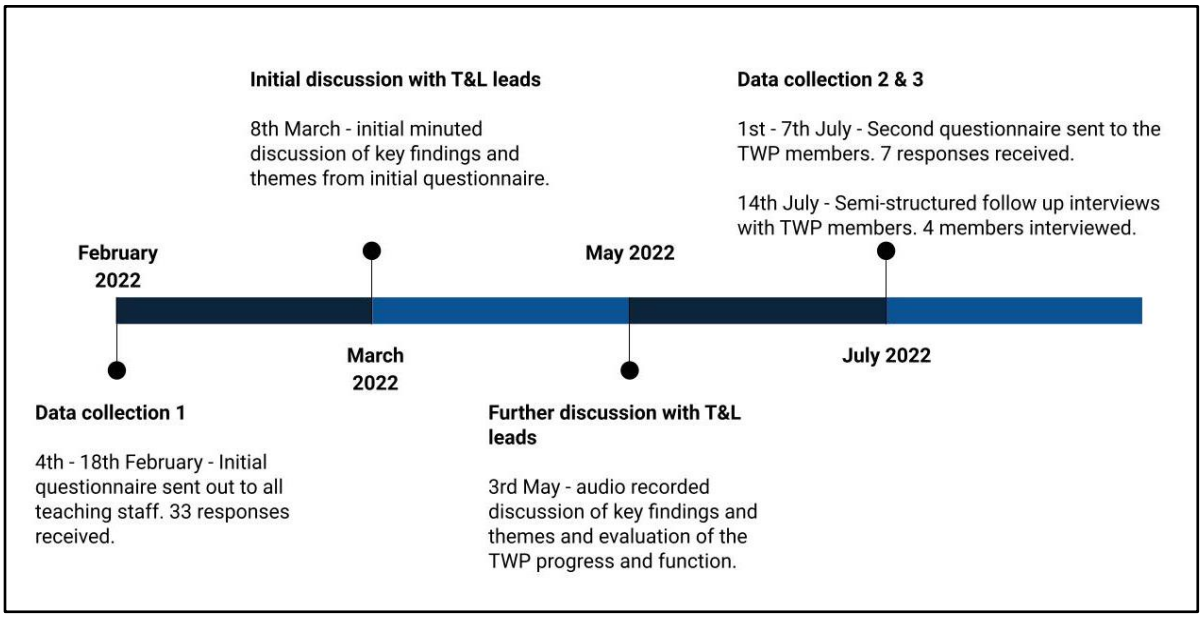
The EEF paper was circulated to the TWP members for reading prior to the second meeting. Subsequent group activities were focused on locating and distilling additional research of interest with a view to developing such skills, often acknowledged as a barrier to engagement (Wilson et al., 2018). One element of this involved signposting sources of educational research, both primary and distilled, e.g. Google Scholar, the EEF, and the CCT. During this time, the group collectively decided to dedicate the remainder of the academic year to exploring dual coding and managing cognitive load. Central to the activities conducted by the group was continual discussion surrounding the relevance of the research to our needs and context (Darling-Hammond et al., 2017). This was an important aspect of promoting

engagement with the research and allowing teachers to connect emotionally and practically with the findings (Cordingley, 2008). As part of this process, group members gave two short presentations to all teaching staff that summarised our key findings, surrounding the theory and application, and their relevance to our context.

3. Data collection timeline and rationale

Figure 4

A summary of the research project timeline and data collection points



Data collection 1 was designed to collect baseline data exploring how teachers in my school are engaging with educational research and their perspectives of it. To gather perspectives from as many participants as possible, the initial questionnaire was distributed at a time that was convenient for teaching staff. It also allowed for data to be collected from the TWP members after partaking in three group meetings, and facilitated reflection on their reasons for joining the group, and what they hoped to gain. The key findings from the data analysis of this questionnaire were then used by the T&L leads to reflect on the progress of the TWP, and inform the planning for future meetings. The key findings were also shared with the TWP members to ensure that participants agreed with the developing themes (Tracy & Hinrichs, 2017).

Data collection 2 and 3 took place at the end of the academic year to gather perspectives from the TWP members about their experience of being part of the group. The second questionnaire was issued first and the findings from the data analysis were used to guide the questions posed during the semi-structured interviews. The interviews provided an opportunity to gather rich perspectives surrounding the themes that emerged from the questionnaire. In addition, by including two data collection points at this stage, qualitative credibility via triangulation was enhanced (Cohen et al., 2018; Tracy & Hinrichs, 2017). Following the completion of this research project, the findings from all three data collection points will also be used to reflect on the progress of the TWP, and inform the planning and implementation during subsequent academic years.

The data collected via Microsoft forms, audio recordings, and transcriptions has been stored securely on the University of Oxford Nexus OneDrive.

4. Instrumentation

Both questionnaires were distributed via email containing a link to the Microsoft Form. The initial questionnaire was sent to all teaching staff and was live for a two-week period. A polite reminder email was sent two days prior to the questionnaire closing and the voluntary nature of participation was reiterated. The second questionnaire was distributed in the same way but to the TWP members only. This questionnaire remained live for a one-week period.

The use of questionnaires allowed for anonymity, confidentiality, and ease of completion due to being in a format that participants were familiar with (Cohen et al., 2018; Firth, 2020; Menter et al., 2011). It also allowed for a larger number of perspectives to be gathered than would have been feasible if conducting interviews (Burton & Bartlett, 2005; Menter et al., 2011). This was particularly important for the initial questionnaire. However, questionnaires are not without limitations, primarily because the questions are fixed and do not allow for probing and richer exploration of participant responses that would be possible if using interviews (Burton & Bartlett, 2005; Firth, 2020; Menter et al., 2011). Questionnaire findings are also subject to participants' motivation, accuracy, and honesty of response (Menter et al., 2011). Thus, a mixed methods approach including a questionnaire and interviews was adopted during the

later data collection phase (that involved the TWP members only) to allow for further probing of answers (Menter et al., 2011).

Following analysis of the initial questionnaire, two in-person meetings were conducted with the T&L leads to discuss the findings and their implications for the planning of subsequent TWP meetings. Discussion points from these meetings were documented in two ways: firstly, via brief meeting minutes and secondly, via audio recording and transcription.

Following the second questionnaire, completed by the TWP members, 1:1 semi-structured interviews were conducted in person, audio recorded and transcribed. Semi-structured interviews were used to further explore the responses obtained during the second questionnaire (Menter et al., 2011). The interviews focused on exploring themes identified during the analysis of the second questionnaire. A summary of these themes and the interview questions is included in appendix B3. The interviews allowed participants to provide richer insights into their experience of being part of the TWP and future recommendations for the group (Cohen et al., 2018; Firth, 2020; Menter et al., 2011). Owing to the small number of interviewees (n=4), this process was not overly time consuming, as is often the case with interviews (Cohen et al., 2018; Firth, 2020; Menter et al., 2011). The interviews were conducted in a quiet, private location to limit distractions and interruptions (Cohen et al., 2018). Despite the lack of anonymity during the interview process, efforts were made to maintain a relaxed atmosphere to encourage honest and open responses (Cohen et al., 2018). This was aided using audio recording to document participant responses, thus allowing the interviewer's full attention to be given to asking the questions and listening to participant responses (Firth, 2020). Written consent was obtained from participants prior to audio recordings taking place. Transcriptions and notes were anonymised.

5. Questionnaire format

Both questionnaires were designed to collect information from many participants in an easy and time efficient way (Menter et al., 2011). Tables summarising the contents of each questionnaire can be found in appendix B. The initial questionnaire started with two multiple choice questions focused on the following participant characteristics: years in service and

current role (e.g. teacher, middle leader, senior leader). A Likert scale question was then used to gather quantitative data to gauge overall opinions of the importance of educational research for individual teaching practice (Cohen et al., 2018). The five response options provided were balanced and typical of this style of question, ranging from strongly disagree through to strongly agree (Cohen et al., 2018). The remaining questions were open-ended and deliberately broad to gather qualitative data and allow participants to offer richer perspectives, and elaborate on their views of research and their engagement with it (Menter et al., 2011). Questions were phrased in a way that should be clear, yet avoid influencing participant responses (Cohen et al., 2018; Firth, 2020; Menter et al., 2011). The second part of this questionnaire was designed to ascertain teachers' reasons for deciding to join the TWP or not, and these questions were also open-ended.

A second questionnaire was issued to the TWP members at the end of the academic year to gather information about their experiences of being part of the group. This questionnaire began with eight Likert scale questions, designed to gauge their opinion about the impact they feel the TWP has had on: their engagement with educational research, their practice, and their experience of collaborating with colleagues. These questions were followed by three open ended questions to allow participants to provide further information about the benefits, drawbacks, and future improvements of the TWP. Participants then had the opportunity to volunteer to participate in follow up semi-structured interviews to further explore their perspectives and experiences. Using a mixed methods approach allowed for the collection of larger amounts of qualitative data and further probing of responses to facilitate a richer exploration of the research questions (Burton & Bartlett, 2005; Firth, 2020).

Questionnaires were piloted by the T&L leads prior to being sent to other teachers to gain feedback about the clarity and phrasing of questions and the time taken to complete the questionnaires. This allowed for participants to be informed about the anticipated time investment prior to completing the questionnaires.

6. T&L meeting format

Two meetings were held between the T&L leads (Deputy Head Academic and 2 SCTs, including me, acting also in the role of the researcher) to specifically discuss the findings from the initial questionnaire and inform subsequent TWP meetings.

The first meeting took place shortly after the initial questionnaire had closed to discuss the initial developing themes regarding what members hoped to gain from being part of the group. The output of this meeting was used to inform the planning for the following TWP meeting that took place in spring term two and the activities and outputs of which are detailed in appendix A. During this meeting, a short summary of the initial findings as discussed and agreed by the T&L leads was shared with all group members to improve qualitative credibility and ensure that the TWP members were provided with an opportunity to provide critique and feedback prior to the group aims being agreed (Tracy & Hinrichs, 2017).

The second meeting between the T&L leads took place subsequently to discuss and evaluate the progress of the TWP in more detail and identify key areas of strength and future development. Some of these discussion points were used to inform the immediate planning for the summer term TWP meetings as detailed in appendix A. Other identified areas for development will be enacted in the longer term. This meeting was audio recorded with the consent of all participants and subsequently transcribed. Detailed minutes in the form of a summary table were produced and distributed to the T&L leads for agreement (see appendix C).

7. Interview format

Semi-structured interviews were conducted with a view to gaining further insight into the experiences of the TWP members and allow opportunities for participants to provide more detail surrounding the key themes that emerged from the responses to the second questionnaire (Cohen et al., 2018; Firth, 2020; Menter et al., 2011). As is typical for this type of interview, the interview questions, sub questions, and probes were pre-scripted, but the sub questions and probes were only used where necessary to encourage individuals to elaborate

or clarify their response (Cohen et al., 2018; Firth, 2020; Menter et al., 2011). In addition, prompts were utilised if required to provide additional clarification regarding the questions (Cohen et al., 2018). A copy of the interview questions can be found in appendix B3. Careful consideration was given to the questions and comments posed during interview to avoid influencing participant responses (Menter et al., 2011). Participants were informed about the level of anonymity and confidentiality ascribed to their data, written consent was obtained, and interviewees were offered access to their interview transcripts (Menter et al., 2011).

8. Data analysis

Closed questions

Closed questions were used in both questionnaires to allow participant information and perspectives to be gathered and presented quantitatively as descriptive statistics. Additional participant information regarding teachers' length of service and position of responsibility was gathered to enable the comparison of perspectives of the use of research between these groups.

Open questions: questionnaires

Open questions were used in both questionnaires to allow for the collection of rich qualitative data. The analysis process included many of the phases outlined by Braun and Clarke (2021) as part of thematic analysis. Prior to data coding, I read through the questionnaire data, interview transcripts and listened to the interview recordings twice more whilst taking brief notes of key ideas. Data coding was then completed using NVivo (v.1.0) coding software to systematically assign codes and develop key themes presented from the raw data (Braun & Clarke, 2021; Cohen et al., 2018; Cresswell, 2016; Elliot, 2018; Firth, 2020). Initially, this was conducted inductively to identify and assign code labels to concepts presented within the raw data (Braun & Clarke, 2021; Cohen et al., 2018; Cresswell & Cresswell, 2018). As the research questions are focused on understanding and presenting participant perspectives and experiences, an inductive and semantic approach to coding was most appropriate for this project and the type of data collected (Braun & Clarke, 2021). After assigning code labels, I developed initial themes based on core concepts that were relevant to the research questions (Braun & Clarke, 2021). After a period of reflection, the themes were reviewed, refined, and re-

named where necessary prior to the data being re-coded via a deductive approach (Braun & Clarke, 2021; Cresswell, 2016; Cresswell & Cresswell, 2018). The themes, their frequencies, and example quotations are presented in the findings and discussion sections of this report (Cresswell, 2016). The frequencies, however, are included only to indicate the number of participants who shared similar perspectives or experiences pertaining to a particular theme. Frequencies are not necessarily indicative of a theme's significance in relation to the research questions (Elliot, 2018). In addition, the completion of coding verification checks by a second research analyst was not feasible during this study due to time constraints. However, where possible, member reflections and checks were conducted to improve the credibility of findings that stemmed from the themes identified (Tracy & Hinrichs, 2017).

Open questions: semi-structured interviews

Pre-prepared open questions were used in the interviews to delve deeper into the perspectives and experiences of the TWP members surrounding the major themes that were developed from the second questionnaire (Cohen et al., 2018; Firth, 2020; Menter et al., 2011). These major themes were collaboration, engagement with research, implementation into classroom practice, CPD experiences, and future development of the TWP. Following transcription, interview responses were analysed and coded using a deductive approach utilising the full range of themes identified in the second questionnaire (Braun & Clarke, 2021; Cresswell, 2016; Cresswell & Cresswell, 2018). The findings were then presented in the text, primarily as quotations, to exemplify the rich perspectives gained from the interviews. The frequency of themes obtained from the interviews was not presented in the data tables alongside the data from the second questionnaire. This was to avoid an overrepresentation of theme frequencies due to the interview participants having also previously completed the questionnaire.

9. Participants

All participants were teachers at an independent girls' day school in Oxford. The initial questionnaire was distributed via an email list for all teaching staff totalling 88 members. Thirty-three responses were received, resulting in an overall response rate of 38%. Participants held a range of teaching and leadership roles as shown in Table 1. The number of years that

participants have been teaching is shown in Table 2. Of the 11 members of the TWP, 10 responded to the initial questionnaire (91% response rate from this group). The objective of the initial questionnaire was to gather perspectives from all teaching staff regarding their engagement with research, and to ascertain reasons for and barriers to joining the TWP during this academic year.

Table 1

A summary of the teaching positions held by participants

Role	**n**	**%**
Teacher	18	55
Middle leader	10	30
Senior leader	5	15
Total	**33**	**100**

Table 2

A summary of the number of years participants have been teaching

Years in service	**n**	**%**
<2 years	0	0
2-5 years	1	3
6-10 years	8	24
>11 years	24	73
Total	**33**	**100**

Nine of the eleven members who elected to join the TWP were still regularly attending by the end of the academic year. The remaining two members were unable to attend the later meetings due to personal reasons. Of the nine members who were still participating in the group by the end of the academic year, seven responded to the second questionnaire and six agreed to participate in follow-up 1:1 interviews. Four TWP members were interviewed, none

of whom were involved in leading the TWP or responsible for leading T&L within the school. A summary of the number of participants involved in each data collection stage is shown in Table 3.

Table 3

A summary of the number of participants involved in each data collection stage

Data collection stage	Number of participants
Initial questionnaire (all staff)	33
Second questionnaire (TWP members only)	7
Semi-structured interviews (TWP members only)	4

10. Role of the researcher

Throughout this project, I was acting as the researcher and in accordance with my school-based middle-leadership role as a SCT for T&L. The intervention was enacted in accordance with the T&L development plan and in collaboration with the Deputy Head Academic and another SCT as an element of our normal working practice. The collection of research data was for the purpose of conducting this practitioner research project, but will also be used to inform the future running and development of the TWP in subsequent academic years. It was made clear throughout this research project that participation in any phase of data collection was entirely voluntary, including where teachers had elected to be a member of the TWP. Transparency and honesty were maintained throughout the project and every effort was made to minimise issues surrounding power dynamics between the researcher, T&L leads, and participants (BERA, 2018; Cohen et al., 2018; Cresswell, 2016; Menter et al., 2011).

11. Collaboration

There are two main elements of collaboration within this research project:

1. Collaboration amongst T&L leads to plan and reflect on the progress and activities of the TWP and utilise the findings from the initial questionnaire.
2. Collaboration amongst the TWP members as part of the activities undertaken by the group as detailed in appendix A.

In addition, the initial findings were also shared with students and teachers of the MSc in Learning and Teaching at the University of Oxford during the 2022 poster conference and seminar weekend. This enabled discussion surrounding the initial findings and the future development and direction of this research project.

12. Ethical considerations

Standards for procedural ethics were adhered to throughout this study as set out by the British Educational Research Association (BERA) and the Central University Research Ethics Committee (CUREC) of the University of Oxford (BERA, 2018; Cresswell, 2016; University of Oxford, n.d.). Written consent was first obtained from the Headteacher (the gatekeeper) prior to commencing the research (BERA, 2018; Cresswell, 2016). All the participants were adults and participation in the initial questionnaire was both voluntary and anonymous (BERA, 2018; Cresswell, 2016; Firth, 2020). The data that was shared and discussed with the T&L leads was presented as themes (and their frequencies) as derived via the coding process. This ensured that participant anonymity was preserved and removed any risk of identification that may be possible from the raw data. The responses obtained via the second questionnaire were identifiable (to the researcher only) if participants volunteered to engage in follow-up interviews. Participants were provided with a written outline of the nature and purpose of the research, and the level of anonymity, prior to participating in each questionnaire to enable them to provide informed consent (BERA, 2018; Cresswell, 2016; Firth, 2020). Participation in the semi-structured interviews was also voluntary and written consent was obtained (using the University of Oxford written consent form, version 4.0) prior to audio recording taking place. Standards for situational and relational ethics were carefully adhered to throughout this data

collection phase (Tracy & Hinrichs, 2017). Participants were anonymised during the transcription process and care was taken to ensure that participants remained unidentifiable within the research write-up (e.g. if utilising comments or quotations where permissible) (BERA, 2018; Cresswell, 2016). The data collected was stored securely on the University of Oxford Nexus OneDrive and in accordance with the Data Protection Act (1998) and GDPR (BERA, 2018). Data analysis was conducted as outlined above to maintain transparency, credibility, and ethical standards (Cohen et al., 2018; Cresswell, 2016; Tracy & Hinrichs, 2017).

FINDINGS AND DISCUSSION

1. RQ1 - How are teachers engaging with educational research and what are their perspectives of it?

(a) Engagement with educational research

Engagement with and in research has many noted benefits for teachers and students, and is a key feature of high performing, research engaged schools (BERA-RSA, 2014; Cordingley, 2008; Menter et al., 2011; Winch et al., 2015). To better understand the ways in which teachers are engaging with educational research in my school, participants were asked an open question surrounding how, and how frequently, they engage with research (see appendix B1- Q5). They were then asked to explain their answer. The themes presented in Table 4 provide an insight into the frequencies and modes of engagement. These findings were used to inform approaches to exploring research within the TWP.

Table 4

A summary of the themes that were developed from participant responses surrounding their frequency and mode of engagement with educational research

Frequency of engagement (n)	Mode of engagement (n)
Daily (3)	Twitter (2) Reading (1)
Weekly (6)	Compulsory weekly T&L briefing (3) Inset (1) Twitter (2) Teacher Tapp (1) Reading (1)
Fortnightly (1)	Online courses (1) Inset (1) Reading (1)
Monthly (7)	Reading (5) TWP (1)
Outside of term time (4)	Reading (3)
Infrequently (9)	Discussions with colleagues who are actively engaged with educational research (1) Inset (1) Reading (4)

Note. The number of participants that mentioned each theme is provided in brackets.

Reading was the most common mode of engagement with research mentioned by participants. Specific examples of types of reading materials mentioned included books, blogs, journals, magazines (e.g. *Impact* journal from the CCT), Tes articles, and the school's monthly T&L newsletter. Many of the examples mentioned offer research findings that have been distilled for teachers to make them more accessible, and often with an enhanced focus on classroom practice (Wilson et al., 2018). A perceived benefit of this is exemplified by this response obtained from the first questionnaire: "I engage with the T&L leaflet that comes out in school as I like the ideas and golden nuggets on offer" (Teacher 12). The monthly T&L newsletter is also an example of a resource that has been curated by the T&L leads to encourage and support teacher engagement with research that is relevant and readily accessible.

Twitter was mentioned by four participants. Participants noted how they follow educational bloggers and researchers, and how it led them to develop new ideas as suggested by the following quote: "Twitter is a good source for ideas and [...] articles, and I engage with this on a weekly basis" (Teacher 20). The use of Twitter as a mechanism for engagement with research and as a means for engaging with other educators continues to grow (Graves & Moore, 2018). Twitter provides a platform for easy and regular access to ideas and discussions surrounding education that can be curated, via following, to meet the needs and interests of individual teachers. However, there are noted concerns surrounding the use of Twitter as a source of information, particularly if the quality and validity of claims is not critically considered (Graves & Moore, 2018).

In addition to the frequency data presented above, six participants specifically mentioned that they are not engaging with educational research as frequently as they would like to. This was exemplified by the following quote: "Not as often as I would like to, often it is a holiday-based exercise" (Teacher 33). This suggests that there are substantial barriers to engagement, particularly during school term time. Teachers' perspectives surrounding barriers to engagement are explored in more depth in section (d).

Despite the noted benefits of engagement in research, there was no mention of this by participants in this study. Other Masters-based research has been conducted in recent years, but beyond this current study, I am unaware of any other practitioner research that is taking place in my school at the present time. Evidence of engagement with research encompassed many different modes and frequencies, and is suggestive of a willingness to engage. The modes mentioned primarily focused on engagement with research that had been distilled for teachers, and is often available online via Twitter, blogs, and articles. This is consistent with research that suggests teachers may tend to avoid engaging directly with primary research literature and instead look to other sources of information to inform their teaching practices (Nelson et al., 2017; Vanderlinde & van Braak, 2010). In addition, teachers may look first to engage with research via quick and accessible means, due to barriers they face.

(b) Teachers' perspectives of educational research

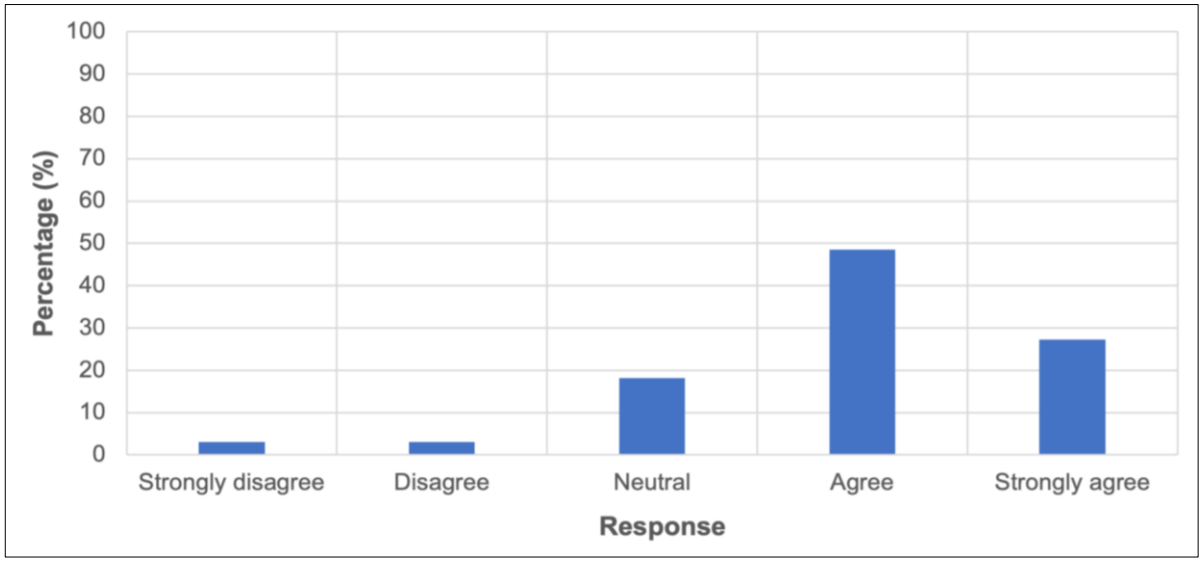
School and teacher engagement with and/or in research is clearly important, but before any barriers to this can be mitigated, it is vital to first understand teachers' perspectives of educational research. To better understand the perspectives of teachers in my school, participants in the first questionnaire were asked to respond to the statement "Educational research is important for my teaching practice" using a Likert scale (ranging from strongly disagree to strongly agree). Participants were also asked to indicate their current role within the school (teacher, middle leader, or senior leader) and the number of years they have been teaching (<2 years, 2-5 years, 6-10 years, or >11 years). This allowed for their responses regarding the importance of research to their practice to be grouped by role, and years in service, and for comparisons to be made.

(i) All participants

Of the 33 questionnaire participants, 76% (n=25) selected “Agree” or “Strongly agree”. Six responded “Neutral” (18%), one responded “Disagree” (3%), and one responded “Strongly disagree” (3%).

Figure 5

Participant responses to the statement “Educational research is important for my teaching practice”

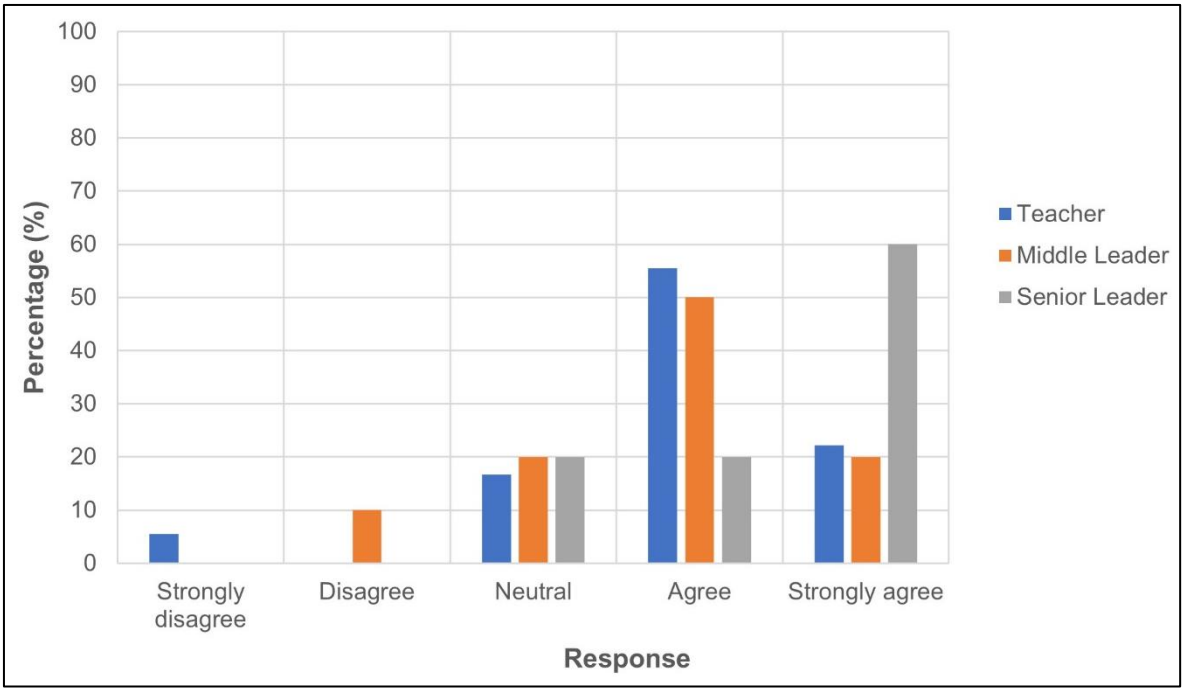


(ii) Comparison by role

Eighteen (55%) of the participants were teachers, ten (30%) were middle leaders, and five (15%) were senior leaders. Comparison of participant responses by role revealed that responses from senior leaders ranged from “Neutral” to “Strongly agree”, with the majority of senior leadership participants (60%, n=3) selecting “Strongly agree”. The majority of teachers and middle leaders responded “Agree” (56%, n=10; and 50%, n=5 respectively). However, due to the differing sample sizes of participants in each group, comparisons using descriptive statistics must be interpreted with caution.

Figure 6

A comparison of participant responses by role to the statement "Educational research is important for my teaching practice"



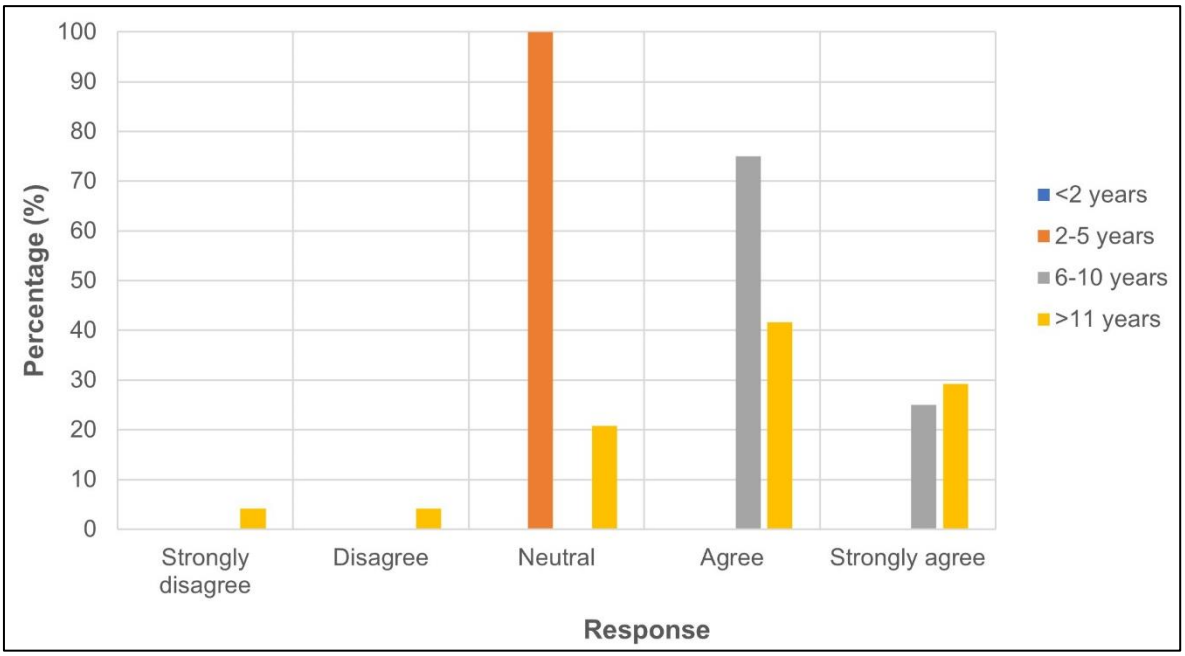
Note. The number of responses is presented as percentages to allow for comparisons between the groups. However, caution should be exercised when interpreting the graph due to the differing sample sizes of each group.

(iii) Comparison by years in service

The majority of participants (n=24, 73%) have been teaching for more than 11 years. Eight (24%) have been teaching for 6-10 years, one (3%) for 2-5 years, and no participants for less than two years. Most participants with more than six years of service responded "Agree" or "Strongly agree" (76%, n=25). The only participant with 2-5 years of service responded "Neutral" and both participants who responded "Disagree" and "Strongly disagree" have >11 years of service.

Figure 7

A comparison of participant responses by years in service to the statement "Educational research is important for my teaching practice"



Note. The number of responses is presented as percentages to allow for comparisons between the groups. However, caution should be exercised when interpreting the graph due to the differing sample sizes of each group.

Teachers' perspectives of research are thought to be increasingly positive in recent years (Cain, 2019; Coldwell et al., 2017; Nelson et al., 2017; Penuel et al., 2017; Walker et al., 2019a; Walker et al., 2019b). The perspectives of teachers in my school are notably positive, with most participants (76%) stating that they "Agree", or "Strongly agree", that educational research is important for their teaching practice. This suggests that most teachers value research and have a willingness to engage with it to inform their classroom practice.

Of the teachers who participated in this questionnaire, two shared perspectives that were negative. In order to develop effective research-engaged cultures in schools, it is important to understand the reasons underpinning negative perspectives of educational research. The available literature offers some insights into this and suggests there may be challenges when research findings are contradictory to the personal experiences and beliefs of teachers (Cain, 2017; Watts, 2009). Consequently, teachers may prefer to rely more on their own experiences or the expertise of colleagues when making decisions about their practice (Cain, 2019; Nelson

et al., 2017; Walker et al., 2019). Interestingly, both teachers who did not agree that research was important to their teaching practice have been teaching for more than 11 years. It is therefore possible to suggest that they may place a greater value on using their own experiences to inform their practice. This was demonstrated by one of their responses to a subsequent question: “I prefer a more holistic approach which is informed entirely by the feedback of the classes in front of me which takes into account, among other things, their enjoyment, involvement, understanding and learning.” (Teacher 10).

The literature surrounding teacher perspectives notes differences between senior leaders, middle leaders, and teachers (Nelson et al., 2017; Walker et al., 2019b). Senior leaders have been shown to have more positive perspectives of the research culture in their schools than those of middle leaders and teachers. In addition, senior leaders are more likely to report that they use research evidence to inform their practice. There is some indication of differences between these groups within my own context. Senior leaders, as a group, agreed most strongly with the statement about the importance of research to their practice. Reasons underpinning this are noted within the literature and suggest that senior leaders may have more experience of using research for purposes such as informing CPD, making changes at the whole school level, and justifying existing approaches (Collin & Smith, 2021; Graves & Moore, 2018; Vanderlinde & van Braak, 2010). In addition, previous research suggests that senior leaders may perceive the gap between research and practice as being less than perceived by teachers (Vanderlinde & van Braak, 2010). Having an awareness of the potential differences in perspectives between these groups is particularly important for those responsible for designing and implementing approaches to CPD, a responsibility that often falls upon school leaders (Brown & Zhang, 2016; Coldwell et al., 2017; Cordingley, 2008). Only then can those in charge of CPD seek to promote research engagement in an effective and supportive way.

When asked to explain their answers to the Likert scale question and how they engage with research, many teachers offered an additional insight into their reasons for engaging, and the barriers they face. The themes that were developed from their responses were subsequently

used to inform the TWP. In particular, to ensure that the activities of the TWP were effective in encouraging and supporting its members to engage with research.

(c) Reasons for engaging with educational research

Table 5

A summary of the themes that were developed from participant responses surrounding their reasons for engaging with educational research

Theme	Frequency
To improve teaching practice	25
To address pupil learning needs	7
To keep up to date with new research	7
To support planning	6
To gain new ideas	4
To consider practical application	3
To develop awareness of other contexts	2
To develop confidence	2

Note. The frequency denotes the number of participant responses for each theme.

The most common theme, as noted by 25 participants, was that engagement with educational research was with a view to improving teaching practice as exemplified by the following quote: “It improves my practice - it helps diversify the methods I use in the classroom and informs my planning. It's great for getting new ideas.” (Teacher 28). This demonstrates that teachers in my school have an awareness of the benefits of engaging with research to develop their practice. The benefits of this, specifically for teachers, are well documented in the literature and include enhancing expertise, autonomy, confidence, decision making, and critical reflection (Cordingley, 2008; Menter et al., 2011; Wilson et al., 2018; Winch et al., 2015). Two participants specifically commented on how research improves their confidence when making decisions and trying new approaches. This is demonstrated by the following response: “Given the amount of variation that naturally occurs in a classroom environment, knowing that something has some educational research backing it up gives me confidence in pursuing it.” (Teacher 5).

Other common reasons for engagement, as explicitly mentioned by seven teachers, included to help in addressing pupil learning needs and gain new ideas. For example, “It helps to tailor teaching and learning to the needs of each cohort; helps to refresh practice and to learn new things about learners and their learning.” (Teacher 32). This indicates an awareness of the role of research in supporting student learning and improving student outcomes. Wilson et al. (2018) argues that this is the primary goal of educational research and one that is shared by all stakeholders in education. When outlining their reasons for engaging with research to improve student outcomes, one teacher also highlighted the importance of context experience and knowledge.

> Knowing what ideas and strategies have worked elsewhere and what the pedagogical studies tell us about learning can help me frame what I am doing in the context I work in to support my planning so that I can ensure my students have the best possible learning outcomes for them. However, education is very context dependent, so it is also important to weave what the research suggests with my professional knowledge of each class and student. (Teacher 33).

This demonstrates an awareness of the importance of integrating context experience and professional knowledge with evidence from research when making decisions about practice. Cordingley (2017a) and Winch et al. (2015) argue the importance of this and stress that research findings must be critically evaluated in light of these other forms of knowledge if they are to result in meaningful changes to practice. To be able to do so, researchers must also present their findings with sufficient detail about the context in which the research was conducted for comparisons to be made (Cordingley, 2008).

It is clear that teachers' reasons for engaging with research are driven by the desire to develop their teaching practice and improve student outcomes. If utilised effectively, this can have many benefits for teachers and students alike (Cordingley, 2008; Menter et al., 2011; Wilson et al., 2018; Winch et al., 2015). To do this, teachers must seek to integrate knowledge obtained from research with knowledge of their school and students (Cordingley, 2017a; Winch et al., 2015). This requires teachers to have the necessary skills to critically consider research in light of their prior knowledge and experience, to decide which elements of research are appropriate for their practice. Despite the noted benefits of research engagement, it is not about unequivocally accepting all research (Nicholson-Goodman & Garman, 2007). Teachers must,

therefore, develop the confidence to engage with research autonomously and critically, prior to making changes to their practice.

(d) Barriers to engagement with educational research

Table 6

A summary of the themes that were developed from participant responses surrounding barriers to engagement with educational research

Theme	Frequency
Lack of time	16
Negative workload implications	6
Lack of practical application examples	4
Lack of access	3
Relevance to subject/context	2
Financial	2
School culture	2
Negative opinion of educational research	2
Challenging research terminology	1

Note. The frequency denotes the number of participant responses for each theme.

The most common theme noted by 16 participants was the lack of time. Six participants mentioned this in relation to having a heavy workload as exemplified by the following quotes: “The workload is rarely manageable to allow me to engage with educational research as much as I would like.” (Teacher 3) and “Finding time pressures of actually doing the job (50 - 60 hours a week) squeezes out time to read about better ways of doing the job.” (Teacher 31). This highlights how despite a desire to engage with research and improve teaching practice, time and workload can be a substantial barrier. This notion was echoed in several other responses, including the following:

> It is very important to my work - I like hearing about new ideas for teaching methods and try to incorporate them into my lessons where possible. However, the workload is regularly more than allows for much time to really think about how new concepts can be applied properly. (Teacher 2).

Barriers associated with time and workload have been long documented in the literature surrounding teacher engagement with educational research and are clearly present in my own school (Joram et al., 2020; Stenhouse, 1981; Wilson et al., 2018). To facilitate teacher engagement with research, the necessary support and time must be provided, and this responsibility often falls on the shoulders of school leaders (Coldwell et al., 2017; Joram et al., 2020; Wilson et al., 2018)

Other barriers mentioned included issues with accessing research. This encompasses a range of challenges including financial costs, language barriers, and the ability to locate and access research of interest. The following response exemplifies these issues:

> The time commitment (as well as in several cases, cost) is prohibitive during term time and it can be hard to find the wood from the trees. Sometimes what I want to know is very difficult to find and other times I don't necessarily know what I am looking for. (Teacher 33).

Issues surrounding access were noted by several teachers. Teacher 3 suggested “Schools need more access to educational research and this needs to be consistent and continuous.” (Teacher 3). In addition, another noted barrier to accessing research was due to the nature of the language utilised by researchers: “Sometimes the jargon-laden nature of educational research is off-putting.” (Teacher 4).

For teachers to engage with educational research, it must be accessible to them logistically, financially, and intellectually (Cordingley, 2008; Wilson et al., 2018). This includes being equipped with the skills to locate research that is both relevant and interesting (Cordingley, 2008; Wilson et al., 2018). In addition, teachers need to be able to access research without incurring unnecessary financial costs. Primary research can be particularly challenging to access and is often only available to teachers who are enrolled onto higher education courses (Godfrey, 2017). It is hoped in the future that teachers will be able to access research more easily and for minimal or no cost which would likely promote engagement and increase the flow of information between research, policy, and practice (Cain, 2019; Cordingley, 2015; Wilson et al., 2018). Jargon-laden research reports are also a barrier to engagement for both teachers and senior leaders (Cordingley, 2008; Graves & Moore, 2018; Joram et al., 2020; Vanderlinde & van Braak, 2010). Consequently, teachers have been shown to prefer to rely on

school leaders or organisations such as the EEF, to produce summaries of primary research literature due to lacking the confidence, and skills, to engage with research directly (Coldwell et al., 2017).

A few participants expressed their uncertainty surrounding the use of educational research, noting the importance they place on their own experience or that of colleagues. For example, “I rely on experience and teaching ideas from valued colleagues much more than educational research.” (Teacher 4).

> I do believe that context experience and subject specific educational research and content knowledge is also very important which is why I have not ticked strongly agree. There are definitely elements of my teaching that I have never engaged with educational research on. (Teacher 7).

The use of professional knowledge gained through experience or shared amongst colleagues is important provided it is not used in isolation. Studies have shown, however, that despite positive perspectives of researcher, teachers often tend to rely more heavily on other sources of guidance such as personal experience and the expertise of colleagues (Walker et al., 2019). Teachers should be encouraged and supported not to ignore this knowledge, but to successfully integrate it alongside the knowledge gained from research to make meaningful changes to their classroom practice (Cordingley, 2017a; Stenhouse, 1975; Wilson et al., 2018; Winch et al., 2015).

One participant also highlighted how more educational research is needed to provide a greater body of evidence for underpinning theories: “Educational research is often eye-opening in terms of how much more of it is needed.” (Teacher 3). This need for more knowledge is acknowledged throughout the field of education and efforts are being made to address areas that are lacking in research evidence (e.g. DFE, 2018). In addition, the EEF prioritises the commissioning of new research based on needs identified by teachers, researchers, and other stakeholders (EEF, 2022c). If more research can be conducted to address these gaps, it will also likely enhance teacher perspectives surrounding the value of educational research (Coldwell et al., 2017).

(e) Concluding remarks

In my school, teachers are primarily engaging with research via books, Twitter, blogs, articles (e.g. the Tes), and the school's T&L newsletter. There was little evidence of engagement with primary research literature or literature summaries. The frequency of engagement was shown to vary from daily to only outside of term time. Even those with infrequent engagement, however, expressed a desire to engage with research more often. Teachers' perspectives of research were shown to be mostly positive with 76% (n=25) of participants in this study stating that they agree or strongly agree that educational research is important for their teaching practice. Only two teachers, with more than 11 years of experience, expressed negative views of educational research. There is some indication that perspectives may differ between groups of teachers, notably that senior leaders may have more positive perspectives than teachers and middle leaders. Having an awareness of such differences is important for school leaders and those responsible for CPD to ensure that research engagement can be encouraged in an effective and supportive way. The most common reasons for engaging with research were to develop teaching practice and improve student outcomes. To do this successfully, a number of barriers associated with time and access must be addressed.

The TWP offers a means to encourage teacher engagement with research whilst seeking to minimise some of the barriers teachers face. The findings presented above were utilised to inform the design and implementation of the TWP and develop the following aims of this intervention:

1. Promote routine engagement with primary literature and research summaries (e.g. those curated by the EEF);
2. Support effective engagement with research by having an awareness of teacher perspectives and the ways in which these may differ from the perspectives of senior leaders and T&L leads;
3. Develop teacher confidence, ability to assess the quality of research findings, and critically engage with research;

4. Develop teacher awareness of the importance of integrating research knowledge alongside professional knowledge and context experience prior to making changes to practice;
5. Mitigate barriers to engagement with research, particularly those associated with time and access.

2. RQ2 - What are teachers' reasons for joining the Teaching and Learning Working Party (TWP)?

The TWP was established as CPD designed to support teachers in engaging with research and facilitate collaborative learning among teachers from different subject areas. The importance of supporting teachers with research engagement in schools is evident throughout the literature (Collin & Smith, 2021; Joram, 2007; Wilson et al., 2018). To reflect on the progress being made by the TWP, it was important to understand teachers' reasons for voluntarily joining the group, and what they hoped to gain from the experience. In addition, it was also important to establish why teachers did not join the TWP this year to identify any barriers they may face, and consider how participation can be improved in future years.

(a) Reasons for joining the TWP

Ten (30%) of the participants that took part in the initial questionnaire had elected to join the newly established TWP for this academic year. The TWP members were asked to explain their reasons for joining the group and the following themes were developed from their responses.

Table 7

A summary of the themes that were developed from participant responses surrounding their reasons for joining the TWP

Theme	Frequency
To learn	5
To share best practice	4
To engage with educational research	4
To keep up to date with new research	3
To consider research in our context	3
To reflect on own practice	3
To improve teaching practice	2
To gain and/or try new ideas	2
To obtain feedback from colleagues	1
To develop school T&L culture	1

Note. The frequency denotes the number of participant responses for each theme.

Five (50%) of the TWP members noted that they had joined the group to provide them with opportunities for professional learning. Common themes that could be viewed as a mechanism for this included: sharing best practice, engaging with research, considering research in our school context, and reflecting on one's own practice. The quotes below exemplify participant's reasons for joining the TWP, whilst highlighting the shared notion of a desire to learn from other colleagues within the group:

> I am interested in what other teachers within the school are interested in and am very willing to learn from others and try new things within my own classroom and department. This is my first job in an all-girls context and therefore I am still learning about what works best and is most effective in this environment. (Teacher 7).

> Giving dedicated time to focus on different areas of research means that I force myself to engage with the research more often and can use it as a forum to share what we all have found, which helps all of us to think more critically about our practice. (Teacher 33).

The themes and quotes presented exemplify how these teachers are willing to participate in professional learning opportunities that involve both engagement with educational research and learning from colleagues (Cain, 2019; Coldwell et al., 2017; Nelson et al., 2017; Penuel et

al., 2017; Walker et al., 2019a; Walker et al., 2019b). It can also be inferred that teachers view the TWP as a mechanism for supporting them with this and as a means by which they can improve their practice.

The quote from Teacher 7 highlights the importance of considering research in our context, an idea that was highlighted by Stenhouse (1975) and is echoed throughout the literature (Cordingley, 2017a; Winch et al., 2015). Collaborating with colleagues within the TWP may also provide a source of support when considering the relevance of research, something that is often noted as a barrier when translating research into practice (Cordingley, 2008; Vanderlinde & van Braak, 2010).

Teacher 33 also highlights how participation in the TWP offers a formalised opportunity to dedicate time to engaging with research and reflect on its relevance to practice. Critical reflection is a key feature of engagement with research, and therefore school leaders must seek to support teachers in developing these skills as part of CPD (Cordingley, 2017a; Furlong, 2013; Winch et al., 2015).

The themes presented also demonstrate the shared goals of the TWP members. Shared goals, issues, interests, and learning from the sharing of knowledge are all central features of CoP (Wenger, 1998). This supports the notion that the TWP is functioning as one.

(b) Reasons for not joining the TWP

Twenty-three (70%) of the participants that took part in the initial questionnaire had not elected to join the TWP for this academic year. Teachers were asked to explain their reasons for not joining the group this year and the following themes were developed from their responses.

Table 8

A summary of the themes that were developed from participant responses surrounding their reasons for not joining the TWP

Theme	Frequency
Lack of time	14
Other commitments	9
Negative workload implications	4
Employment status	5
Perceived lack of expertise	2

Note. The frequency denotes the number of participant responses for each theme.

A lack of time was mentioned as the most common reason for not electing to join the TWP during this academic year, with 61% of non-TWP members (n=14) stating this. This suggests time is the biggest barrier in my context for both engaging with research and participating in voluntary CPD opportunities as offered by the TWP. Time is noted as a major barrier to the utilisation of research and one that can prevent teachers from making meaningful improvements to their practice (Brown & Zhang, 2016; Cain, 2016; Joram et al., 2020; Vanderlinde & van Braak, 2010; Wilson et al., 2018). One teacher offered further insight into how time pressures prevented them from joining the TWP: “I already belong to another working party, and I am the only full-time member of staff in the department at present and so have a heavy burden of work.” (Teacher 4). To address time and workload barriers, it would be important to better understand the pressures different teachers face and how this affects how they elect to utilise their non-teaching time.

Other pre-existing commitments were also mentioned by nine participants, three of whom mentioned that the current TWP meeting day clashed with other meetings or co-curricular responsibilities. Employment status was also mentioned by five participants, and this included part-time colleagues not being in school on the current TWP meeting day. Despite this, two participants specifically noted that they would like to join the TWP in future academic years. This is illustrated by the following response: “I am not in work on a Thursday – but if I was, I

would have liked to be part of the group." (Teacher 26). This barrier could be easily mitigated in future academic years by varying the day of the week on which the TWP meetings take place. This would allow part time colleagues and those with other commitments to participate in some meetings.

Another theme mentioned by two participants was a perceived lack of expertise: "Lack of time – and knowing there are other members of staff who would engage more with this/be more productive/useful." (Teacher 16). This provides further evidence that more support should be given to teachers to develop their confidence with engaging with research, and participating in collaborative professional learning opportunities (Cordingley, 2015; Cordingley, 2017b; Menter et al., 2011; Timperley et al., 2007; Winch et al., 2015). This comment also raises questions about the effectiveness of the communication surrounding the nature and function of the TWP, and how this may have been perceived by colleagues. In the future, it may be necessary to share the benefits of being part of the TWP with the wider staff body. This could be achieved by sharing both the outputs of the TWP and the experiences of its members. In addition, ensuring the TWP continues to be research-informed, and sharing the benefits of this, may also result in increased participation in future years.

(c) **Concluding remarks**

Common reasons for joining the TWP included to learn, share best practice, engage with research, consider research in our context, and reflect on one's own practice. By better understanding the reasons underpinning teachers' decisions to join the TWP, it enabled the T&L leads to reflect on the progress of the group and review areas of strength and future development. These insights informed the planning for subsequent TWP meetings with a view to ensuring members were provided with opportunities to engage with different types of research, discuss the relevance to our context, and share best practice both within the group and with the wider staff body via T&L briefings and the school's T&L newsletter. The most common reasons for not joining the TWP this year were time, workload, and other existing commitments. Shedding a light on these barriers helps to inform the future development of the TWP to encourage more participation in future years. Participation in effective CPD is

important for teachers in all phases of their career, regardless of experience (Day & Gu, 2007). Providing the TWP is deemed effective, it is therefore important to encourage more teachers to engage with the TWP and continue to develop their practice.

3. RQ3 – How does being part of the Teaching and Learning Working Party (TWP) impact teacher CPD?

The TWP is CPD centred around collaborative engagement with research and opportunities for critical reflection. The design of the TWP was based on many of the key principles of effective CPD including being research-informed, collaborative, and of sustained duration (Collin & Smith, 2021; Cordingley, 2003; Darling-Hammond et al., 2017). It also addressed the five characteristics of effective professional development as outlined by the DfE (2016). To assess the effectiveness of the TWP and its impact on teacher CPD, a second questionnaire and interviews were conducted with the TWP members at the end of the academic year. A summary of their perspectives, experiences, and feedback are presented below.

(a) A summary of the perspectives of TWP members on their experience of being part of the group

Seven members of the TWP took part in the second questionnaire. Table 9 provides a summary of their responses to the statements about the experience of being part of the group. The order of statements and results is presented from those participants agreed most strongly with, to neutral.

Table 9

A summary of the TWP members' responses to statements surrounding their experience of being part of the TWP

Statement	Number of responses and TWP member attribution (M)				
	Strongly disagree	*Disagree*	*Neutral*	*Agree*	*Strongly agree*
Being part of the TWP has enabled me to engage with educational research.	0	0	0	3 (M1,2,3)	4 (M4,5,6,7)
I have enjoyed working collaboratively with colleagues in the TWP.	0	0	0	4 (M1,2,3,5)	3 (M4,6,7)
Being part of the TWP has enabled me to learn from educational research.	0	0	0	5 (M1,2,3,5, 7)	2 (M4,6)
Being part of the TWP has enabled me to learn from colleagues.	0	0	1 (M5)	3 (M3,4,6)	3 (M1,2,7)
Being part of the TWP has enabled me to consider educational research in my school context.	0	0	1 (M2)	5 (M2,3,4,5, 6)	1 (M7)
Being part of the TWP has enabled me to consider the classroom application of educational research.	0	0	1 (M2)	5 (M1,3,5,6, 7)	1 (M4)
Being part of the TWP has had a positive impact on my classroom practice.	0	0	3 (M2,3,5)	4 (M1,4,6,7)	0
I have tried new ideas in my classroom as a result of being in the TWP.	0	0	3 (M2,3,7)	4 (M1,4,5,6)	0

Note. The order of statements and results is presented from those participants agreed most strongly with, to neutral. Member attribution (M) is provided in brackets.

Most participants responded to each statement with “Agree” or “Strongly agree” and no participants responded “Strongly disagree” or “Disagree” to any of the statements. All participants agreed or strongly agreed that the TWP had enabled them to engage with research, gain enjoyment from collaborating with colleagues, and learn from research. One “Neutral” response was received when asked to consider the role of the TWP in facilitating the following: learning from colleagues, considering research in our school context, and considering the application of research. Three “Neutral” responses were received regarding the impact of the TWP on classroom practice, and on trying new ideas in the classroom.

(b) Benefits of being part of the TWP

When asked, via the questionnaire, to describe any benefits of being a member of the TWP, the following themes emerged:

Table 10

A summary of the themes that were developed from participant responses surrounding the benefits of being part of the TWP

Theme	Frequency
Learning from colleagues	6
Engaging with educational research	3
Having dedicated time	3
Gaining new ideas	3
Reflecting on own practice	3
Implementing into classroom practice	2
Supporting trainees	1
Sharing with wider staff body	1

Note. These themes were developed from the responses obtained via the second questionnaire only. The frequency denotes the number of participant responses for each theme.

Learning from colleagues was noted as a benefit by six of the seven questionnaire participants and is exemplified by the following quote: “Discussing teaching and learning again with colleagues has been completely refreshing to listen and talk with colleagues from all different subjects, gain ideas about how to improve and start making a change.” (Member 6). Due to the format of the meetings being collaborative, it provided routine opportunities for members to discuss research findings and share experiences from their own classroom practice. The benefits of this were also expressed by all four interviewees who all spoke positively about the collaborative aspects of the experience, in particular being able to discuss ideas with colleagues from other departments. This was demonstrated by the following interview response:

> It's incredibly useful [...] talking with colleagues in the same context as you, about very similar students. Yes, they’re different subjects, but [...] they’re still the same students and they'll still have the same needs regardless. There will be some slight differences between subjects, and between how we can teach, but actually having those conversations is really, really useful. (Interviewee 1).

This suggests that the TWP also had a role in facilitating the flow of information between teachers from different subject areas within the school; a common feature of CoP (Wenger, 1998). The sharing of experience and expertise among teachers when discussing research has also been shown to support teachers with critical reflection and integrating different sources of knowledge (Cordingley, 2008; Winch et al., 2015). Collaborating with colleagues can also enable teachers to better understand the benefits and limitations of research findings and their relevance to their own context (Cordingley, 2015).

Other noted benefits of the TWP, each mentioned by three members, were being able to engage with research, gain new ideas, reflect on one’s own practice, and having a dedicated time to do so. The essence of the latter is exemplified by this quote:

> It has been a motivation to engage routinely with research and discuss this. Due to there being scheduled meetings there is a clearly defined time in the term to be able to have this as the main focus and dedicate time to it. (Member 3).

These benefits were further acknowledged by the four interviewees. In addition, the benefit of being provided with research literature that had been pre-selected due to its relevance was also noted as being particularly useful.

One interviewee also noted a barrier to engagement with research as exemplified by the following response:

> Really positive but in some ways is slightly frustrating because the educational research […] doesn't give answers, it just gives what people have done. […] in a way, you almost want some sort of silver bullet. (Interviewee 1).

This desire for educational research to provide answers is something that Winch et al. (2015) argues that teachers should not expect. They suggest that teachers should not expect research to provide them with an absolute assurance of what will work in practice and must instead seek to critically evaluate research themselves to make research-informed decisions for their own practice. To do so, however, teachers must be equipped with the necessary skills and be explicitly aware of their existing knowledge and practice (Cordingley, 2008; Wilson et al., 2018). This is something that school leaders and those responsible for CPD should be aware of to provide additional support to teachers surrounding critical engagement with research and to guide their expectations.

Interviewees were also asked to explain what motivates them to engage with educational research. They each expressed a desire to continue to improve and develop their teaching practice. This was exemplified by the following response:

> To be better at what I do. Because I have got, what like [X] years left until I retire [...] so I've got [X] times to go through this again and again and again and again. The kids only have once. So, you need to nail it for them each time. (Interviewee 1).

In addition to the benefits discussed, three interviewees discussed examples of how they had implemented ideas from the TWP into their classroom practice. An example of this is illustrated by the following response:

> I've tried [...] dual coding a bit more and I've been more aware that when I'm writing, if I'm talking, [...] the students are trying to do two things at once through essentially […] the same kind of channel and that makes it much harder for them to take it on board. So, I've been much more deliberately [...] enabling them to write and then talk about it separately, and just giving them that space to process and I think that has helped. (Interviewee 1).

The impact of the TWP on classroom practice was only noted by two of the seven questionnaire participants. This suggests that more support is needed to successfully and confidently enable teachers to implement knowledge gained from the TWP.

It was also mentioned by one interviewee that they have not been able to implement ideas as much as they would have liked. One barrier to this is noted in the following response:

> When you're [...] in the middle of discussions [...] in the working party, you start to think "oh, that would work well for this, and that would work well for this". But if the topics that occur to you aren't the ones that you're doing immediately, then it tends to just fall off the bottom of the ladder unfortunately (Interviewee 2).

This suggests that, in addition to having the time to engage, research must also be accessed at a time that is relevant to individual teachers and their practice (Cordingley, 2008).

Interviewees were also asked how being part of the TWP compared to other forms of CPD that they had undertaken previously. They each gave a very positive response and mentioned the benefits of collaborating with colleagues, gaining practical ideas, and discussing the relevance to our context, as particular highlights.

> This [the TWP] has been completely different. So, this is very practical, [...] it's chosen to work for our school and [...] the chance to speak to real colleagues and be able to put things into practice. I think it's [...] really helpful, really useful. (Interviewee 3).

(c) Drawbacks of being part of the TWP

Table 11

A summary of the themes that were developed from participant responses surrounding the drawbacks of being part of the TWP

Theme	Frequency
Lack of time outside the TWP	5
Unable to attend every meeting	1
Differing views among group members	1

Note. These themes were developed from the responses obtained via the second questionnaire only. The frequency denotes the number of participant responses for each theme.

Five of the seven questionnaire participants mentioned having a lack of time outside of the TWP to engage with research and implement research findings. This was exemplified by the following quote: "I haven't always taken the time to consider [the] implications of research when planning my lessons beyond the immediate impact of each meeting." (Member 2).

In addition, this barrier was also mentioned by all four interviewees in relation to having a lack of time to engage with additional reading outside of the TWP, and activities related to the TWP such as conducting peer observations with other members. A desire for more time to focus on reflecting and developing practice was also noted in the following comment: “I would like to have some time [...] on my timetable where I just focus a period to [...] looking at something to do with teaching and learning and how I can tweak what I'm doing so far.” (Interviewee 4).

In the questionnaire, one member mentioned that they were unable to attend every meeting and another member mentioned the challenges associated with differing views among group members. The latter was also mentioned during interview:

> The only potential drawback could be if somebody spent too long talking about an area which was completely not applicable. But, with very few exceptions, that doesn’t really happen because there’s always things that are, at the heart, shared. (Interviewee 3).

(d) Future development of the TWP

Table 12

A summary of the themes that were developed from participant responses surrounding the future development of the TWP

Theme	Frequency
Conducting lesson visits/peer observations	3
Increased sharing of practical application ideas	2
Engagement in educational research	1
Accountability measures	1

Note. These themes were developed from the responses obtained via the second questionnaire only. The frequency denotes the number of participant responses for each theme.

Three members mentioned a desire for more opportunities to conduct lesson visits and/or peer observations as exemplified by the following quote: “start to translate some of the research into lessons, [...] with individuals choosing a particular aspect they would like to implement, then through peer observation/discussion, work on how to put this into practice.” (Member 7).

A desire to conduct peer observations was also expressed by three of the four interviewees

with a view to further developing classroom practice, and the utilisation of new ideas and strategies that emerged from the TWP. For example, “I would like more peer observations of what I'm doing once I've got things [...] in place to then try and [...] improve it.” (Interviewee 4).

One interviewee also expressed a lack of confidence surrounding the implementation of new ideas, with reference to the research surrounding dual coding, explored as part of the TWP:

> You think you are doing it but you’re not entirely sure. [...] If you're giving written instructions and demonstrating it at the same time [...] [or] drawing the diagrams on the board [...] It's hard to know if that really is genuine dual coding or not. (Interviewee 2).

It is clear from the findings presented in this study and the literature surrounding effective CPD (e.g. Bell et al., 2010; Collin & Smith, 2021; Cordingley, 2003; Darling-Hammond et al., 2017; Furlong, 2013), that the future development of the TWP should focus on modelling best practice and facilitating opportunities for peer observation and feedback. This would also support members with implementing and refining new ideas and may also help to build confidence due to shared risk taking (Cordingley, 2015; 2017b).

Additional areas for development, include more sharing of practical ideas and increased accountability measures. It was suggested that accountability measures could support teachers in prioritising the implementation of ideas, and encourage peer observations between group members. One questionnaire participant also mentioned that the opportunity to conduct small-scale action research would be valuable, thus facilitating engagement ‘in’ research.

(e) Concluding remarks

Effective CPD is an important driving force behind improving teacher quality and student outcomes (Collin & Smith, 2021; Cordingley, 2003; Cordingley, 2015; Darling-Hammond et al., 2017). However, improvements in teacher quality and student outcomes, as a direct result of CPD initiatives, are challenging to measure. Consequently, teacher perspectives and experiences can offer an insight into the effectiveness of CPD interventions, such as the TWP. TWP member perspectives surrounding the experience of being part of the group were decidedly positive, particularly regarding engagement with research and collaboration. This suggests that the TWP successfully incorporated features of effective CPD into its structure. In particular, by facilitating collaboration and learning from research and colleagues, which was

noted by one interviewee as being “completely refreshing” (Interviewee 4). Members also noted how the TWP motivated them to engage with research, thus suggesting that the TWP successfully fulfilled two of the four mechanisms outlined by the EEF, suggesting that effective CPD must build knowledge and motivate staff (Collin & Smith, 2021). The primary benefits of being part of the TWP included the opportunity to learn from colleagues, engage with research, gain new ideas and reflect on one’s own practice. In addition, having a dedicated time in which to do so was also noted as a key benefit. This exemplifies the progress that was made, during this academic year, towards addressing the five aims of the TWP as a CPD intervention.

Noted drawbacks included having a lack of time outside of the TWP to independently engage with research, and plan for the implementation of findings into classroom practice. This is a barrier that needs to be overcome for any form of CPD to be meaningful and effective (Darling-Hammond et al., 2017). The issues associated with a lack of time are evidenced throughout this study via the perspectives of teachers and TWP members, thus presenting a considerable barrier to research engagement and the implementation of research findings. Despite a demonstrable desire to achieve this, teachers evidently feel unable to do so to the extent that they would like. This suggests that further efforts need to be made by senior leaders, and those responsible for CPD, to ensure workload pressures are reduced, and approaches to CPD are efficient, effective, and meaningful (Collin & Smith, 2021).

It is clear from the findings presented in this study, and the literature surrounding effective CPD (e.g. Bell et al., 2010; Collin & Smith, 2021; Cordingley, 2003; Darling-Hammond et al., 2017; Furlong, 2013), that the future development of the TWP should focus on modelling best practice and facilitating peer observations. This would also enable the format of the TWP to better align with each of the seven principles as presented by Darling-Hammond et al. (2017). In addition, it will also further address two of the four mechanisms presented by the EEF that suggest effective CPD must seek to develop teaching techniques and embed practice (Collin & Smith, 2021). This will be a crucial step towards bridging the gap between engagement with research, and making meaningful, evidence-informed changes to classroom practice that improve student outcomes.

CONCLUSION

The ultimate purpose of educational research is to develop teaching practice and improve student outcomes. To achieve this, teachers must have the drive and necessary skills to successfully engage with research (Winch et al., 2015). One way of encouraging this is through the provision of effective CPD tailored to the needs of individual teachers and the context in which they teach (Collin & Smith, 2021; Darling-Hammond et al., 2017).

This research project sought to explore the role of a TWP in teacher CPD, within an independent all girls' school in Oxfordshire, with a view to encouraging and supporting teachers in engaging with research. As an initial step in this process, it was important to develop a better understanding of the ways in which teachers in my school were engaging with research and their perspectives of it. Teachers' primary ways of engaging with research included books, Twitter, blogs, articles (e.g. the Tes), and the school's T&L newsletter. There was little evidence of direct engagement with primary research literature. The frequency of engagement was shown to vary from daily (e.g. via Twitter) to only outside of term time (e.g. other reading). Teachers' perspectives surrounding the importance of educational research to their practice were mostly positive, and this provided a secure foundation for developing a stronger research-informed culture within the school. It was important, however, for senior leaders and those responsible for CPD to be aware that the perspectives of some teachers may be less positive than their own. The most common reasons for engaging with research were to develop teaching practice and improve student outcomes. To do this successfully, a number of barriers associated with time and access must continue to be addressed if research engagement can be encouraged in an effective and supportive way.

The design of the TWP was research-informed and based on key principles of effective CPD as outlined by Collin and Smith (2021), Darling-Hammond et al. (2017) and the DfE (2016). In addition, teachers' perspectives and approaches to engaging with research were utilised when developing the TWP aims. The TWP sought to:

1. Promote routine engagement with primary literature and research summaries (e.g. those curated by the EEF);
2. Support effective engagement with research by having an awareness of teacher perspectives and the ways in which these may differ from the perspectives of senior leaders and T&L leads;
3. Develop teacher confidence, ability to assess the quality of research findings, and critically engage with research;
4. Develop teacher awareness of the importance of integrating research knowledge alongside professional knowledge and context experience prior to making changes to practice;
5. Mitigate barriers to engagement with research, particularly those associated with time and access.

To reflect on the progress of the TWP, it was necessary to better understand teachers' reasons for joining the group and consider if their needs were being met. Common reasons for joining the TWP included to learn, share best practice, engage with research, consider research in our context, and reflect on one's own practice. These insights informed the planning for subsequent TWP meetings with a view to ensuring members were provided with opportunities to engage with different types of research, discuss relevance, and share best practice via T&L briefings and the school's T&L newsletter.

It is challenging to measure improvements in both teacher quality and student outcomes as a direct result of CPD. Teacher perspectives and experiences can, however, offer an insight into the effectiveness of CPD interventions, such as the TWP. The TWP members were notably positive about the experience of being part of the group, in particular how it motivated them to engage with and learn from research, and enabled them to collaborate with colleagues from different subject areas. In addition, having dedicated time in which to engage with research and reflect on one's own practice was a noted benefit. These findings also exemplify the progress made towards addressing the five aims of the TWP.

Participating in effective CPD is important for teachers in all phases of their career, regardless of experience (Day & Gu, 2007). Gaining an insight into drawbacks associated with the TWP and the reasons why teachers did not join the group this year can be useful in informing the future development of the TWP to increase participation. Noted drawbacks included having a lack of time to both engage with research outside of the TWP and implement research findings into practice. In addition, lack of time, workload pressures, and other commitments were the most cited reasons for not joining the TWP this year. This suggests that further efforts need to be made by senior leaders and those responsible for CPD to ensure time and workload pressures are reduced and approaches to CPD are efficient and effective (Collin & Smith, 2021). Until such barriers are mitigated, it is unlikely that teachers will be able to engage with research and CPD in a way that brings about meaningful changes to their teaching practice (Wilson et al., 2018). It would likely also enable more teachers to join the TWP in future years. As an initial step towards encouraging this, the day of each meeting will be varied during the next academic year to support part-time colleagues, and those with other commitments to attend meetings.

In future years, the TWP should seek to provide members with opportunities for modelling best practice and conducting peer observations. This will enable teachers to receive feedback when trialling new ideas and facilitate further discussions surrounding the implementation of research findings (Bell et al., 2010; Cordingley, 2015). To support this, it will be necessary to develop effective frameworks that provide a clear focus for peer observations (Cordingley, 2015). This will be a crucial step in ensuring that teacher engagement with research results in meaningful changes to classroom practice, improving outcomes for our students.

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APPENDIX

Appendix A

The activities and outputs of the TWP

A summary of the activities and outputs of the TWP during the 2021-22 academic year (including data collection points and review meetings between the T&L leads)

Meeting	Summary of activities	Summary of outputs
Autumn term 1	**(1) Welcome and overview of the year** (discussed using Figure 3) **(2) Discussion surrounding the current position with T&L in the school** Questions discussed: *(a) What are the biggest challenges or barriers to learning faced by our students?* *(b) What are the biggest challenges or barriers to learning faced by ourselves and our colleges?* **(3) Sharing of personal research interests** Questions discussed: *(a) What areas of teaching and learning are you most interested in?* *(b) Are there any areas of teaching and learning that you have explored recently?* **(4) Consolidating of group aims and objectives for this academic year**	The group consensus was to focus on cognitive science approaches to learning and explore research evidence surrounding this. The EEF summary titled 'Cognitive Science Approaches in the Classroom: A Review of the Evidence' (Perry et al., 2021) was circulated to all members for reading prior to the next meeting.
Autumn term 2	**(1) Initial discussion of the seven cognitive science strategies presented in the report (spaced learning, interleaving, retrieval practice, managing cognitive load, working with schemas, dual coding, and embodied learning).** **(2) In depth discussion of managing cognitive load and dual coding.** Ideas discussed: *(a) Possible benefits of each strategy in our context;* *(b) Possible limitation and considerations of each*	The group consensus was to focus specifically on two strategies: managing cognitive load and dual coding. It was decided as a group there are two avenues to explore: (a) The science behind each strategy (b) The application of each strategy. During the next meeting group members will split into these two groups for further discussion and exploration of the literature dependent on personal interest.

	strategy in our context; *(c) What does/could this look like in practice in our context?*	
Spring term 1	**(1) Split into two sub-groups for further discussion and to seek research surrounding the following:** *(a) The science behind managing cognitive load and dual coding;* *(b) The classroom application of dual coding and managing cognitive load principles.* **(2) Begin to summarise key discussion points and research findings.**	Both groups summarised their initial findings and key discussion notes on shared summary documents. It was decided the best approach was to present these as part of the weekly compulsory whole staff T&L briefings in future weeks (one session focusing on the science and one focusing on the application).

Data collection 1

- Initial questionnaire sent to all teaching staff.

Initial discussion with T&L leads

- Initial discussion of the key findings from the initial questionnaire data analysis.
- Used to inform the next TWP meeting (where the initial findings were shared and discussed with group members).

Spring term 2	**(1) Discussions of initial questionnaire research findings with the TWP members to further consider and refine the group's progress and aims.** **(2) Discussion of possible approaches to formalising lesson visits to observe dual coding in action.** **(3) Continue to focus on dual coding (science and application).** **(4) Preparation of short summary presentations for whole-staff T&L briefings.**	The TWP members agreed with the summary of aims for the group (as derived from the initial questionnaire research findings). Short presentations of findings and TWP progress delivered to all staff during compulsory T&L briefings on **'The Theory Behind Dual Coding'** (25.3.22) and **'Practical Applications of Dual Coding Theory in Our Context'** (1.4.22).

Further discussion with T&L leads

- Audio recorded discussion of key findings from the initial questionnaire focusing on evaluating the progress of the TWP.
- Used to inform subsequent TWP meetings.

Summer term 1	**(1) Collaborative exploration of other mechanisms for engaging with educational research via the Chartered College of Teaching (CCT) *Impact* journals.** **(2) Preparation of short written summaries of articles of interest for circulation via the monthly T&L newsletter ("The TWP Takeover Edition").**	Summary articles produced for the June edition of the staff T&L newsletter on the following topics: 'Sixth Form Study Habits', 'Supporting Students with English as an Additional Language', 'Podcast CPD', 'Retrieval Practice', and 'Developing Character'.
Summer term 2	**(1) Completion of second questionnaire and subsequent discussions reflecting on the TWP progress throughout this academic year.** **(2) Suggested optional reading provided on "Rosenshine's Principles of Instruction" which will be a focus of the whole-staff CPD throughout 2022-23 academic year.**	Completion of the second questionnaire.

Data collection 2

- Second questionnaire sent to the TWP members only.

Data collection 3

- Semi-structured interviews with the TWP members.

Appendix B

Data collection instruments

Table B1

The questions contained in the initial questionnaire sent to all teachers

Question Number	Question	Response
1	How many years have you been teaching?	Closed, MCQ (<2 years, 2-5 years, 6-10 years, >11 years)
2	Which best describes your current role?	Closed, MCQ (Teacher, Middle Leader, Senior Leader)
3	Educational research is important for my teaching practice.	Closed, Likert scale (Strongly disagree, Disagree, Neutral, Agree, Strongly agree)
4	Please explain your answer to the previous question (optional).	Open, optional
5	Please describe how, and how frequently, you engage with educational research.	Open
6	Please explain your answer to the previous question (optional).	Open, optional
7	Are you a member of the teaching and learning working party for this academic year?	Closed, dichotomous (Yes - Q8 and Q9, No - Q10 and Q11)
8	Please explain why you decided to join the teaching and learning working party.	Open
9	Please outline what you would like to gain from being a member of the teaching and learning working party.	Open
10	Please explain why you did not join the teaching and learning working party.	Open
11	Is there anything that would make you consider joining the teaching and learning working party in the future?	Open

Table B2

The questions contained in the initial questionnaire sent to the TWP members only

Second questionnaire

Question Number	Question	Response
1	Please consider the following statements about the teaching and learning working party (TWP) (a) Being part of the TWP has enabled me to engage with educational research. (b) Being part of the TWP has enabled me to learn from educational research. (c) Being part of the TWP has enabled me to learn from colleagues. (d) Being part of the TWP has had a positive impact on my classroom practice. (e) Being part of the TWP has enabled me to consider educational research in my school context. (f) Being part of the TWP has enabled me to consider the classroom application of educational research. (g) I have tried new ideas in my classroom as a result of being in the TWP (h) I have enjoyed working collaboratively with colleagues in the TWP.	Closed, Likert scale (Strongly disagree, Disagree, Neutral, Agree, Strongly agree)
2	Please describe any benefits of being part of the TWP.	Open, optional
3	Please describe any drawbacks of being part of the TWP.	Open, optional
4	Please describe any feedback or advice you can give regarding the future running and development of the TWP.	Open, optional
5	Would you be willing to discuss your answers to the above questions in more detail during a 1:1 interview?	Closed, dichotomous (Yes - Q6, No - End)
6	Please provide your name.	

B3

The questions used in the semi-structured interviews with the TWP members

Interview Questions

Collaboration

1. How have you found the experience of collaborating with colleagues in the TWP?
   Probe: Can you outline any benefits/drawbacks?

Engagement with educational research

2. How have you found the experience of engaging with educational research in the TWP?
   Probe: Can you outline any benefits/drawbacks?

3. What do you feel motivates you to engage with educational research?

Implementation into classroom practice

4. Have you had the opportunity to implement any ideas from the TWP into your lessons?
   If so, how?
   If not, what do you feel has been the biggest barrier to doing so?

CPD

5. How does being part of the TWP compare to other forms of CPD that you have undertaken previously?

Future development

6. What would you most like to gain from any future participation in the TWP?

Appendix C

T&L Leads Meeting Minutes

A summary of key themes and discussion points from the meeting of the T&L leads

T&L Meeting Minutes

Sharing best practice

- Being addressed informally through the TWP and during T&L briefings
- Scope to develop this more formally and for all staff (not just TWP or those who are particularly interested in T&L)

Staff learning

- Being achieved through discussions at TWP meetings - particularly in reflecting on our own practice and learning from the knowledge and expertise of other group members
- Focus is narrow this year (dual coding and cognitive load theory) may not address the needs/interests of all members
- Scope to develop this further to include more learning themes/foci next year using several small groups
- Scope to develop more engagement with educational research (though the time pressure of this is a notable barrier)

Engaging with educational research

- TWP members engaged well with the EEF document and discussions around this were very detailed
- People engage with educational research in different ways and to different extents (e.g. books, Twitter). Splitting into two sub-groups during part of this year worked well to give people the option to focus on distilling primary research or focusing on classroom application
- Scope for developing more personal engagement with related literature between TWP meetings to bring additional ideas to the group (though the time pressure of this is a notable barrier)
- Scope for developing staff skills and confidence surrounding engagement, distillation, evaluation, and use of research literature - particularly with social science research literature
- Scope for developing our roles as T&L leads for curating, distributing/highlighting additional relevant literature

Improving teaching practice

- TWP members are sharing a lot of ideas they have already implemented but it is unclear how many are implementing new ideas or changes to their practice as a result
- Evidence is currently anecdotal
- Scope to develop more robust ways of evidencing this and refining the process to ensure it completes the circle of sharing, implementing, reflecting, refining in a more formalised way
- Scope to develop peer observations but would likely require additional accountability to ensure it is prioritised

Considering research in our context

- Achievable within the format of the TWP - detailed discussions around the classroom application in our context
- Scope to develop further via action research projects
- Scope to develop more context relevant collaboration across the trust

Additional/closing points

- Scope to develop the group next year and encourage more staff to join the TWP
- Scope to develop and formalise paired observations as a way of improving teaching practice, reflecting, and building confidence - this is notably the biggest challenge and developmental aim going forward into next year

Strengths	Future Development
Sharing best practice is being addressed informally through the TWP and through the Friday morning T&L briefings.	Scope to develop the sharing of best practice more formally and for all members of staff (not just the TWP members or those who are particularly interested in T&L). **Used to inform 'Spring Term 2' TWP meeting*.
Staff learning is occurring through discussions at TWP meetings - particularly in reflecting on our own practice and learning from the knowledge and expertise of other group members.	This year's focus is narrow (dual coding and cognitive load theory) and may not be addressing the needs/interests of all members. Scope to develop this further to include more learning themes/foci next year using several small groups. **Used to inform 'Summer Term 1' and 'Summer Term 2' TWP meetings.* Scope to develop more engagement with and learning from educational research (though will need to consider the time implications). Scope to encourage more staff to join the TWP next year.
Some **engagement with educational research** has occurred for TWP members via the EEF document and discussions around this were very detailed. People engage with educational research in different ways and to different extents (e.g. books, Twitter, articles). Splitting into two sub-groups during part of this year worked well to give people the option to focus on distilling primary research or focusing on classroom application.	Scope for developing more personal engagement with related literature between TWP meetings to bring additional ideas to the group (though the time pressure of this is a notable barrier). Scope for developing staff skills and confidence surrounding engagement, distillation, evaluation, and use of research literature - particularly with social science research literature. **Used to inform 'Summer Term 1' TWP meeting.* Scope for developing our roles as T&L leads for curating, distributing/highlighting additional relevant literature. **Used to inform 'Summer Term 1' and 'Summer Term 2' TWP meetings.*

Improvements to teaching practice are difficult to measure or evidence. TWP members are sharing a lot of ideas they have already implemented but it is unclear how many are implementing new ideas or changes to their practice as a result. Evidence is currently anecdotal.	Scope to develop more robust ways of evidencing this and refining the process to ensure it completes the circle of sharing, implementing, reflecting, refining in a more formalised way. Scope to develop and formalise paired observations as a way of improving teaching practice, reflecting, and building confidence. This would likely require additional accountability to ensure it is a priority for staff. This is likely to be the biggest challenge and developmental aim going forward into next year.
Consideration of the relevance to our context is being addressed by the current format of the TWP - particularly through the detailed discussions around classroom applications.	Scope to develop further via action research projects. Scope to develop more context relevant collaboration across the trust.