Busy but research-based: Can an online platform deliver digestible summaries of educational research in order to facilitate a research-based approach to teaching.

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A Research & Development Project Submitted for the MSc in Learning & Teaching 2019

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Can an online forum with monthly 'snippets' of condensed research be used to encourage busy teachers to maintain a research-based approach to their practice?

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Acknowledgements

My sincere thanks: to each of the participants of this study, many of whom I know volunteered out of friendship; and to my supervisor, for tireless support and guidance, particularly in times when I thought that this research had been derailed.

More sentimentally, thank you to my students, for being wonderful and understanding when marking came back *slightly* late as this deadline was looming; to Felicity, Lucy, Lexie, and Princess, for being tireless cheerleaders; and to each of my OUDE supervisors, mentors, and friends of the last three years, for always pushing me to be the best teacher I can be.

Can an online forum with monthly 'snippets' of condensed research be used to encourage busy teachers to maintain a research-based approach to their practice?

Introduction:

This study has primarily been inspired by my own observation and experience of the impact that the teaching workload has on one's ability to maintain an up to date, research-based approach to teaching practice. Within my own school context, I noted that many of my colleagues often commented wistfully on the articles and essays printed on my desk for research during part 2 of the MLT; they expressed how they had enjoyed being well informed about contemporary educational research and conducting classroom research when they were training, but did not have time for it anymore. Indeed, my pursuit of an MSc in the field of education seemed to be widely regarded as a luxury. When I asked my colleagues why they felt this way, and why they no longer endeavoured to keep abreast of educational research, the most common answer was that they felt that they had no time due to their workload. It became apparent that reading and conducting research was the first habit to go when time became a precious resource. Teachers whom I asked about this felt that their priorities of planning, marking, pastoral care, and administration such as data tracking left no room for anything else.

Upon investigation, I found that this observation in my own school context correlated to a national pattern within the field of education; an unsustainable workload is widely regarded as a cause of teacher mental health issues and recently unprecedented rates of teachers leaving the profession (Parliament, House of Lords, 2019). It is not surprising, therefore, that even in casual conversation workload was cited as the main reason that teachers felt that they could not find time to remain up to date with research.

This is also an area of critical importance within my school context as, in an effort to take a research-based approach to CPD, my current school has changed their CPD initiatives every year for the last four in an attempt to find something suitable; the programme is once again being changed for the coming academic year. Each year, the CPD program is reviewed by the teaching body via an online survey and in recent years these surveys have all indicated that the programmes are too time consuming, and that teachers did not feel that their practice had benefitted as a result[1]. Despite the discourse of the school's senior leadership, which often refers to the need for a research-based approach to teaching, the school's CPD initiatives seem to have had their foundation in the school's strategic plan (uniting the systems of learning from the junior schools to the senior school, for example) as opposed to in any current educational research.

From this context I was driven to investigate how it might be possible to develop and maintain a culture of research-based CPD with a focus on teaching within the school. This is what led me to this topic as I would like to tackle the obstacles that teachers cited as holding them back from engaging with research and create a means of delivering time-efficient, efficient CPD.

I believe that given the aforementioned rates of overwork, teacher mental ill health issues, and teachers leaving the profession, this study also has a place in the national context; it endeavours to condense educational research into manageable CPD which could be used to reduce teachers' workload in any school, not just my own.

[1] This information was relayed to me by the school's assistant principal and head of CPD but I was not permitted to access the survey data.

First, I have reviewed the literature surrounding the topics of CPD and teacher development and then, in light of the discoveries made, I have detailed how I designed a research project in which I explored how an online forum with monthly ‘snippets’ of condensed research could act as a CPD resource to encourage busy teachers to maintain a research-based approach to their practice. This dissertation reports on the findings of this research and reflects on both its successes and failures to consider the implications for the future implementation of research-based CPD.

Literature Review

In order to answer the title question 'Can an online forum with monthly 'snippets' of condensed research be used to encourage busy teachers to maintain a research-based approach to their practice?' this review seeks to explore the existing literature in the field of education to determine:

- What are the benefits of research-based practice?
- What are the obstacles to research-based practice?
- How can research-based practice be facilitated?

This is prefaced by a brief explanation of how this dissertation approaches the broad terms of 'CPD' and 'research-based' and how it explores the relationship between CPD and a research-based approach to teaching practices as often, in both the literature and in school contexts, the two are conflated.

i. CPD and research-based practices

The term CPD is broad and can refer to all manner of sins in schools and so for the purposes of this research I have chosen to focus on CPD specifically as it pertains to teachers' learning and teaching, and the consequent promotion of learning and teaching to students in the classroom. This distinction is made because it is my personal belief that learning and teaching should be the core of any teacher's professional development and because, perhaps naively, I think that schools in general likewise prioritise this aspect of CPD. Kelly (2006) defines teacher learning as 'the process by which teachers move towards expertise'(p.514). This is a definition that is open to interpretation. For one, it forces the question 'what is expertise in teaching?' and for another, it makes us wonder what the 'process' towards said expertise may be. In the context of my research I consider the terms 'expertise', 'success' and 'effective', as they are used in relation to teaching and CPD, to describe methods that lead to positive

outcomes for pupils as a priority, but also, as Muijis and Lindsay (2006) state, as positive outcomes for teacher growth, well-being and success.

Furthermore, I use the term 'research-based' here (as opposed to the similar term 'research-informed) to broadly cover both teachers' *use* of research findings from *others* **and** findings from their *own* classroom or school research. This is owing to the trend in the literature (explored in more detail in the following sections) that teachers who have experience of *conducting* research are better able to make *use* of research that they read (Burn, Mutton, & Hagger, 2010; Mitchell and Hobson, 2011; Netcoh, S., Olofson, M., Downes, J., & Bishop, 2017; Niemi, 2008; Papasotiriou and Hannan, 2006; Toom, Kynaslahti, Krokfors, Jyrhama, Byman, Stenberg, & Kansanen, 2010). In a British Educational Research Association (BERA) guide to '*Issues and principles in educational research for teachers',* Campbell et al. (2003, p. 1) recognise the importance of an 'evidence-based profession' but point out that the term 'evidence-based profession' is ambiguous as to whether teachers ought to utilise existing research or whether they ought to conduct research themselves. Campbell et al. (2003) argue that both should be true as:

> *'Teachers need to know about the basics of good research…they need to be able to analyse critically…and to judge findings and conclusions from a well-informed point of view.'* (Campbell et al. 2003, p. 4)

My discussion of research-based practice therefore focuses on the relationship between teachers *conducting* research and *utilising* research and considers CPD that seeks to both *be* research-based and *promote* research-based practices.

ii. What are the benefits of research-based practice?

Emergent throughout the literature seems to be a trend that research-based practice is beneficial in three related ways, which I shall explore here:

- cultivating teachers' professional identities and practices (particularly in the early career stage)
- improving students' attitudes to learning
- improving students' achievement

The first reported benefit, of cultivating teachers' professional identities and practices, is that which I found most explored in the literature. Largely, this is due to the fact that many studies found that the positive impact on teachers' identities and practices had a trickle-down impact to the students (Toom et al., 2010), and this is a matter that I reach toward the end of this section.

Muijs and Lindsay (2006) highlight that through research-based CPD teachers can craft their professional identities which in turn will lead them to feeling more satisfied. This is evidenced in an earlier study which likewise reports a positive impact on teacher identity and confidence; Christenson et al's study found that teachers who participated in action research programs felt that they had 'context for examining teaching practice and planning systematic ways to study and change their teaching' (Christenson, Slutsky, Bendau, Covert, Risko & Johnston, 2002, p.270). Teachers declared that they felt prepared to take careful observation of their classrooms, to ask themselves questions, and that they would continue to enact research in order to better understand their children as learners and consequently their purpose as teachers. Christenson et al. found that as a result of their course (in which participants engaged in action research), the 32 teachers in their study found research to be more accessible as they had they learned about other approaches to doing research that

seemed more manageable and feasible for them to conduct and apply (Christenson et al. 2002).

Interviews that followed one study into teachers as action-researchers (to inform their practice) revealed that the experience had gone so far as to prompt ‘a shift in teachers' core beliefs’ (Netcoh et al., 2017, p.26) and the results indicated that participation had had a positive impact on both identity *and* practice, with one participant reporting that she ‘felt empowered’ and ‘grew her capacity to use multiple teaching approaches to support her students' needs and learning’ (Netcoh et al., 2017, p.28).

Some of the most compelling literature suggests that in order to generate long-term benefits, the research-based approach to teaching must begin with teacher education. Indeed, Finland, with one of the most successful education systems in the world, has its foundation in teacher education that is research-based (Toom et al., 2010). The Finnish research-based approach to teacher education aims to create ‘autonomous and reflective teachers who are capable of using research in their teaching and can be defined as pedagogic thinking teachers’ (Toom et al., 2010, p.333). Student teachers in Finland are required to conduct research for a Master’s thesis, in the process of which they must read research literature and become familiar with different research methods and practices, to prepare the student teachers for the Finish model which insists that all teaching be based on research. The aim of this early intervention is to ensure that teachers ‘acquire an inquiring attitude to teaching’ (Toom et al., 2010, p.333) that leads to a critical approach to practice so that teachers will continue to analyse and justify their own practices (Toom et al., 2010).

Niemi (2008) similarly promotes evidence-based practice in European education training as she argues that ‘research competence and research capacity-building start at the pre-service level of teacher education’ so that teachers grow to always consider research an integral part

of their practice (Niemi, 2008, p. 200). UK literature similarly identifies that it is in teacher education and in the early stages of careers that teachers can be encouraged to become research-based in their practices (Burn et al., 2010). The McKinsey (2007) report stated that efforts to improve educational outcomes must be centred around both teacher recruitment and teacher professional learning in both the training phase and ongoing into teaching careers. Government policy has acknowledged this as the DfE highlights that teachers must be expected to: 'seek to base decisions on evidence of what works in schools in this country and internationally'; and 'to anticipate change and promote innovation' (DfE, 1998, para. 13). Indeed, the Master's in Teaching and Learning initiative by the Labour government was targeted at those who are in the first few years of teaching (DCSF, 2008, p. 13). This perhaps indicates that initiatives to develop research-based practices need to start with young teachers in order to systematically, over time, create a population of teachers who value this approach to education. This reflects my own experience of teacher education in which there was a strong emphasis on the importance of both *utilising* research and *conducting* classroom research in order to inform practices.

In a Scottish study that provided financial incentives to participate in a course toward becoming a 'chartered teacher' evidence was found of the positive impact on professional practice which had continued beyond the duration of the module, though to what extent beyond is not stated. This included 'accounts of successful attempts to link theory and practice resulting in significant shift in practice, and of respondents adopting a research perspective their own teaching' (Kirkwood & Christie, 2006, p. 440). Kirkwood and Christie (2006) state that there is 'no doubt that the concepts of research and enquiry entered the discourse of teacher professionalism' (p.430) and point out that within their investigation around the Scottish 'chartered teacher' modal there is clear expectation that teachers should engage in enquiry and action research, reflect critically on evidence and modify their

practices, test theoretical perspectives, and interpret changes to education policy . The first two of these expectations strike me as particularly relevant as, according to literature previously discussed here (Kirkwood & Christie, 2006; Netcoh et al., 2017), the former is essential in encouraging the latter. Kirkwood and Christie (2006) also suggest that there need to be wide scale and long-term systematic changes in the way in which teachers are educated (both in the initial stages and beyond this) in order to create change through new generations of teachers leaving training.

In a study of teachers' perspectives of research-based practices, which drew a small selection of teachers from American elementary and high schools who had been recommended to the researcher by colleagues due to their valuable opinions on the researcher-practitioner gap, Miretsky (2007) found that all of those interviewed, in her admittedly small scale study of 15 teachers, were dedicated not just to their students but to ongoing learning for themselves (Miretsky, 2007). Indeed, several of those interviewed in this study cited *learning* as a key part of, and benefit of, teaching (Miretsky, 2007). Each of the studies in this section seem to suggest that teachers have an awareness and understanding of the value of research-based practices but that there needs to be some form of intervention that cultivates this.

The reported benefits to students, of improving attitudes to learning and improving their achievement, are mostly described as by-products of the positive impacts that research-based CPD and practice have on teachers. Toom et al. (2010) believe that through research-based approaches the inquiry orientation is also transmitted from the teacher to the students and promotes a socio-constructivist view of learning. Indeed, they point to that fact that the Finnish academic and research-orientated approach has existed for 39 years and note that the success of Finnish students in international score comparisons is probably not a coincidence (Toom et al., 2010). Similarly, it is suggested that effective CPD which promotes research-

based practices prompts teachers to *model* a research-based approach to their students which can have both direct and indirect benefits for students as it develops their own skills in research and independent learning (Cooper, 2007; Muijis and Lindsay, 2006). Cooper (2007) goes as far as to say that in her study research-based practice was 'essential' in achieving their primary goal of 'closing the gaps in student achievement' (Cooper, 2007, p. 318). Therefore, it is evident that research-based practice can lead to benefits for both teachers and pupils.

iii. What are the obstacles to research-based practices?

The literature identifies several key obstacles to teachers' developing and maintaining research-based practices that I explore below:

a) inexperience with research;
b) access to research;
c) time and workload;
d) lack of collaboration and a supportive environment.

a) Inexperience with research:

In a Greek study, Papasotiriou and Hannan (2006) found that teachers who did not have any experience of conducting research did not make use of research findings, unlike teachers who had been involved in research. This was true despite the fact that the Greek teachers who participated in the study expressed an interest in reading research reports. This further suggests that ensuring that teachers participate in their own research (ideally early on in their careers such as at the training stage) is an essential factor in promoting research-based practices, as an interest in research in and of itself is not enough to encourage teachers to use research findings to inform their teaching (Papasotiriou and Hannan, 2006). Similarly, Kirk

(2004, p. 14) comments: 'There has been a tendency for teachers to be the objects and consumers of research rather than its generators' to which Kirkwood & Christie (2006) add that teachers must be 'more active in originating research, to apply research findings to their own context, as well as to subject their work to critical analysis using research tools of various kinds' (Kirkwood & Christie, 2006, p.430). Furthermore, Netcoh et al.(2017) found that the three middle school teachers in their American study into action-research became more receptive to research once they had completed their own studies. Mitchell and Hobson (2011) are perhaps the most categoric in their recognition of the connection between research experience and making use of research when they state that in their study 'Nine participants were *research novices*, while six were *research experienced*. The latter group were found to be more perceptive and critical of the ethics of the research and focused on the research purposes and adequacy of the methods' (p. 83). These sources reinforce the theory that being *active* in research is the key to being an effective research-based teacher. Indeed, this correlates with my earlier exploration of how action-research is encouraged in teacher training in order to create research-aware teachers who will be able and willing to use research findings. It is in light of these theories that I ensured that my own research sought to encourage both *use* and *creation* of research findings.

b) Access to research:

An additional barrier to teachers' engagement and participation in research that is highlighted by the literature is that teachers feel alienated from research. Christenson et al. (2002) found that teachers who participated in their study of action-research programmes 'assumed that research done by others…was out of their reach; it involved traditional positivist research methodologies that made many of them feel intimidated both as readers and potential researchers' (p.270). Similarly, Rynes (2002) points out that practitioners are wary of

academic publications because the language is often jargon and difficult to comprehend. This mirrors my observations at school in which educational research was largely branded 'jargon' by my colleagues who felt that academic journals were detached from their own classroom practices.

Indeed, this gap between academics and practitioners has long existed; in the 1940s academics began proposing suggested ways of closing this divide between themselves and practitioners (as discussed in Posner, 2009; Raadschelders & Lee, 2011). There is still much literature spanning the last ten years that suggests that there are dissemination issues in education research. Battaglio and Scicchitano (2013) argue that, even in cases when academics have actually addressed topics valued by practitioners, (which they do not always do) there is no guarantee that the research will *reach* the practitioners due to inefficient dissemination. Similarly, in their Belgian study Vanderlinde and van Braak (2010) identify the dissemination of research as a key issue in encouraging research-based practices, stating that researchers' do not effectively mediate their work for the practitioners and that, as such, it cannot be utilised as it is 'unclear and unconvincing' (p.310).

Having said this, awareness of the importance of research to teachers may be said to have improved; initiatives such as ResearchEd (founded in 2013) that aim to 'further help the teaching profession connect research and practice in the classroom…[and] supports educators at all levels by encouraging and provoking debate surrounding research, evidence and best practice' have garnered support and (at time or writing) have 34.4 thousand twitter followers as well as conferences spanning European cities as well select locations in North and South America and Africa. The fact that this 'grass roots' platform has grown to such an extent in just six years would seem to indicate that across the profession, research *is* valued and being

used by individuals and that it is perhaps only within schools that this must be recognised and championed through collaborative measures. Furthermore, select institutions are producing their own teacher-friendly versions of research to combat dissemination issues; Cambridge University cater to Maths teachers with their Espresso Shots: ‘a small but intense draught of filtered research on mathematics education, expressly designed with teachers in mind’ (Cambridge Mathematics, 2019) and Harvard University similarly produces ‘Usable Knowledge’: ‘relevant research for today’s educators’ (Harvard Graduate School of Education, 2019).

A different issue of the inaccessibility of research is, however, highlighted by Miretzky (2007) when an interviewed participant in the study refers to a ‘safety issue’ with research-based practices as ‘teachers need to feel safe enough to be vulnerable in front of kids, colleagues, and researchers, because you’re not setting yourself up as the expert if you’re willing to learn things from other people’ (Miretzky, 2007, p. 274). This resonates with my own experience of colleagues commenting on my ‘bravery’ for trying something new in the classroom and as such, is something that I attempt to account for in my own research.

The same study also identified ‘research fatigue’ where poor CPD cited research so much that resentment for one grew to the other: ‘In workshops, I hear people say, 'the research says, the research says'...and I always want to say, well 'the research can say anything you want it to say’ (Miretzky, 2007, p. 274). This suggests that the format of CPD has an impact on teacher receptivity to the research presented and that CPD must be therefore be pitched appropriately to the school setting so as not to trigger this ‘research fatigue’ (Miretzky, 2007).

c) Time and workload:

Unsurprisingly, the literature identifies that lack of time was a significant obstacle to teachers' engagement both *with* and *in* research, even in cases where they were inclined to undertake it. Despite the fact that teachers in Christenson et al.'s (2002) study acknowledged extensive benefits of practicing and applying action research, very few of those who expressed commitment to maintaining a research-based approach actually did so. The most common question posed by participants of the study was 'how can I justify all of this research with so many other things going on in the classroom?' (p.266). And indeed Christenson et al. (2002) admit that it is 'hard to justify why teachers should be asked to do research on top of their other responsibilities rather than being given time within their school day for these time-consuming efforts.' (p.266).

Similarly, in their study of continuing CPD in Scotland, Kirkwood and Christie (2006) also note that there are many constraints facing teachers *regardless* of whether they even have the disposition to alter their practices toward a more evidence-based approach. They identify teachers' 'lack of time' as one of the most common constraints cited by their respondents and conclude that this constraint must be managed by long-term systematic changes, as only through such changes will there be a wide uptake in this approach to CPD. (Kirkwood & Christie, 2006, p.442).

This appears to be a problem for teachers in various contexts as the same sentiment is mirrored by researchers from New Zealand who write that it is not a case of teachers' *willingness* to be research-based but it is that 'the lifestyle of full-time teachers in New Zealand is highly engaged and equally stressful…and suggesting to teachers that they might

consider a programme of professional development is making a request for time that is already very close to fully committed.' (Chalmers and Keown, 2006, p. 111). Though this study dates from 2006, and though from across the world, the frustrated sentiment is one which I have heard from many different colleagues already in my short teaching career.

These sources correlate with the previously highlighted fact that workload (and the consequent lack of time) is prolific in causing teachers to leave the profession in the UK (Parliament, House of Lords, 2019). This suggests, as Kirkwood and Christie (2006) state, that structural changes are required for teachers to be able to utilise, and participate in, research for their practice. One such change perhaps being the way in which research-informed CPD is delivered.

d) Lack of collaboration and supportive environment:

The notion that collaboration is beneficial in a range of ways is consistent in literature from the past 20 years; collaboration is highlighted as one of the most important factors for teacher development, and consequently for teachers being research-based practitioners (Bannister, 2018; Cai et al., 2018; Cordingley et al, 2003, 2005a, b; Day, 1999; Day et al, 2006). In the context of CPD, Cai et al. (2018) go so far as to assert that 'collective participation is vital to the success of a program of professional development' (p.31), whist in a discussion of action research, King (2002) declares that it is most usefully employed as a whole-school *collaborative* activity.

Burn et al. (2010) found that 'the most frequently mentioned factor perceived as hindering that development was 'lack of support from colleagues'' in their research into second year teachers (p.640). The same study draws attention to the literature that indicates that collaboration is a key factor in effective CPD and cites Muijs and Lindsay (2006) who assert

that the creation of a collaborative learning environment for teachers is 'the single most important feature' for school improvement. It seems apparent then, that *lack* of a supportive and collaborative environment can be a significant obstacle to teachers' development into research-based practitioners. Indeed Christenson et al. (2002) reported a prominent reason that teachers in their study did *not* go on to conduct research (despite wishing to) was that they did not have a collaborative environment; in fact, participants reported that 'principals and colleagues were not only unsupportive, but downright hostile to teacher research' (p.270) Which leads Christenson et al. to conclude that 'without the support of peers, it seems that action research is difficult to accomplish' and that 'one would say it is impossible or invalid.'(pp. 270-271). One study found anecdotal evidence for 'significant resentment' towards younger teachers who undertook the MLT (Burn et al., 2010, p.656) which mirrors my own experience and suggests that the hostility that restricts the intentions of teachers who want to engage with research may be impacting young teachers most. This is particularly interesting given the earlier discussion of how interventions to promote research-based practices are targeted at young teachers and it may suggest that some intervention is required for more experienced teachers, to promote the use of research to them, and to consequently in curb this resentment and hostility toward young teachers so that teachers of at all stages of their careers are able to develop and engage with research.

In one study it was found that not only was collaboration of crucial importance for teachers but that the supportive school environment was significantly important in teachers' continued 'engagement in the profession' (Sammons et al, p. 686). Suggesting that it is not only in this regard that collaboration is important, but that it important for maintaining teaching staff more broadly.

Whilst these sources deal with the matter of collaboration and support *within schools,* Cai et al. (2018) assert in their research into collaboration in maths education that collaboration between teachers *and* researchers creates more 'direct and meaningful' research (p.514) and as such poses the question of how researchers and schools work with one another to create change. One of the benefits of collaboration between teachers and researchers that Cai et al. (2018) assert is that researchers are well placed to connect teachers with similar interests and issues and thus create professional learning communities (PLCs) of research and practice that are, in themselves, another platform for collaboration and collaborative CPD. The Finnish Ministry of Education says that PLCs play a significant role in the promotion of teacher motivation and welfare, stating in 2003 that they are 'the key to preventing teachers' burn-out' (MoE, 2001, p. 3). Whilst more recently, Bannister (2018) has asserted that 'there is a positive relationship between teachers' participation in strong teacher communities and equitable outcomes' (p.125).

A comparative study of professional learning communities (PLCs) in England and Finland reports that 'Being able to share concerns and problems was vital to teacher morale and effectiveness' (Webb et al, 2009, p.412). Kelly (2006) emphasises the fact that collaborative approaches are the most effective in developing teachers' attitudes to learning and professional development and insists that approaches to collaboration within schools must be reconsidered in order to ensure maximum efficacy.

Perhaps the most common-sense consideration of PLCs comes from Bannister (2018) when she points out that "given that teacher workgroups, grade-level teams, professional learning communities (PLCs), critical friends groups, and other collaborative approaches dominate the teacher development landscape, it is clear that teacher-community- based strategies resonate with the practical needs and interests of school districts." (p.126). Teachers seem to need one

another, whether consciously or not. As such it seems justifiable to assume that any significant change for teachers, of the kind that my own study seeks to create, should account for tis need for collaboration and should capitalise on the benefits of collaboration reported in the literature.

iv. How can research-based practice be facilitated?

As explored above, the literature identifies several key obstacles to teachers' developing and maintaining research-based practices. Here I explore how the literature suggested these obstacles could be managed:

a. Inexperience with research

Of course, most emphatically, it is suggested that to overcome the obstacle of 'inexperience with research' is best dealt with pre-emptively through teacher education (Burn et al., 2010; Kirkwood and Christie, 2006; McKinsey, 2007; Niemi, 2008; and Toom et al., 2010). However, given the confines of this study, I will not dwell on this but instead shall consider how to overcome this obstacle when it exists in those who are practicing teachers already.

In light of the fact that the literature asserts that teachers who do not have any experience of conducting practitioner research do not make use of research findings, unlike teachers who do have experience of research (Papasotiriou and Hannan, 2006), it seems that an essential method of developing and sustaining a staff who are research-based, is to ensure that they are given opportunities to undertake practitioner-research themselves (Kirkwood & Christie, 2006; Netcoh et al., 2017) and that in doing so they will develop awareness of, and potentially even excitement and passion for, the theories and practices that they will encounter when trying to apply findings from other researcher's work (Kirk, 2004; Netcoh, 2017).

b. Access to research

Battaglio and Scicchitano (2013) proffer that to facilitate a closing of the researcher-practitioner gap, there would have to be a 'systematic overhaul' to address the ingrained practices in academia. One suggestion is that academics need to target publications that are *aimed* at practitioners such as magazines and practitioner journals (Rynes, 2002; Vanderline and van Braak (2010). Some go on to insist that research findings should be made available via popular forums on the internet, for example through blogs, social media, chat rooms, and apps to achieve an easy level of access for teachers (Milam, 2003; Posner, 2009).

Furthermore, when publishing their research in these places, academics need to be aware of the language barrier that could obstruct their work and ensure that they do not use jargon in their reports (Battaglio and Scicchitano, 2013; Christenson et al.,2002; Rynes et al., 2002). Stewart (2006) that only through the simplification of jargonwill there be any erosion of the dichotomy between researchers and practitioners. Similarly, it has been insisted that academics should focus on clearly conveying the *practical implications* of the results from their research for practitioners as this is often teachers' chief concern (Battaglio and Scicchitano, 2013). As detailed in the corresponding section in 'obstacles to research-based practice', this is already in action with the Cambridge and Harvard initiatives but, evidently, publications that focus on an audience of teachers, ought to be more widespread and cater to teachers of varied age ranges and subjects.

It is also argued that face to face interactions between academics and practitioners, in the form of professional meetings, would provide opportunities for better knowledge transfer (Battaglio and Scicchitano, 2013). Posner (2009) indicates that practitioners who are also academics or 'pracademics' could ease access to research by acting as facilitators to mediate research findings and their applications to fellow practitioners. Posner goes on to argue that

pracademics would be uniquely placed to take on this role as they have experience of both theory and practice. Having said this, it seems that if teachers also undertook their own practitioner research then there would be no need to have specialist pracademics as mediators as practitioners would all be equipped with the knowledge of theory and the experience of research.

In order to overcome the obstacle of 'research fatigue' and promote access to research, Miretzky (2007) points out that there needs to be a clear connection between the research and the school setting in which it is being disseminated and the findings are being applied. This perhaps suggests that any attempts to broaden the accessibility of research must also consider tailoring the presentation of research for the schools that it hopes to serve.

c. Time and workload

This obstacle has emerged in the literature as the most prevalent and debilitating to teachers seeking to develop and maintain research-based practice (Chalmers and Keown, 2006; Christenson et al., 2002; Kirkwood and Christies, 2006), and yet it is that which received the fewest suggestions on how to overcome it. Ultimately, these studies point to the fact that teachers do not have enough time in their day which implies that the way to overcome this is to reduce teachers' timetables, whether in teaching hours or additional responsibilities, so that they are able to engage with research. In order to accommodate this, Kirkwood and Christie (2006) call for long term systematic changes (p.442).

Without such changes from school leaders or, more appropriately, political leaders in Education, it seems that this particular obstacle is, perhaps, the most insurmountable; the ways to increase the amount of time that teachers have for CPD, action-research, or reading research all require money. To quote my own principal in a recent school development

meeting 'I will do all that I can to ensure that we are meeting your needs so that you are able to concentrate on your teaching, but you can't have more money and you can't have more time'.

d. Collaboration and Support

Several suggestions are made in the literature as to how obstacles to collaboration may be overcome; one way is through the unification of academics and practitioners. As previously mentioned in the discussion of access to research, Battaglio and Scicchitano (2013) suggest collaboration *between* academics and practitioners in the form of professional meetings as they believe that this would provide opportunities for better knowledge transfer, whilst Cai et al. (2018) champion collaboration between researchers and teachers as being mutually beneficial due to their unique insights into the micro and macro issues of teaching and education, and suggests that more links are made between research institutions and teachers.

Dylan William, writing on what he calls teacher learning communities (TLCs) details the myriad practical issues of collaboration that most notably include timing (how often to meet up whilst still allowing time to plan and implement change in the classroom in time for the next meeting) and the number of teachers involved (enough to gather varied responses but not so many that it diluted the conversation surrounding each individual's experience), but ultimately advocates for TLCs and suggests a *trial-and-error* type approach to collaboration (TLCs) so that it can be made to work within the context of the school or teaching community (William and Leahy, 2014).

Netcoh et al. (2017) seem to suggest that it is through *voluntary* collaboration that PLCs and such initiatives can begin to flourish. Similarly, in New Zealand one study concluded that for PLCs to be truly helpful the practitioners need to engage voluntarily, not on a mandatory

basis (Chalmers and Keown, 2006). It is perhaps necessary to consider then, that whole school initiatives are limited when involvement is compulsory and that instead schools may need to work hard to promote the benefits of entering into CPD that promotes research-based practice so that teachers *volunteer*.

A further suggestion of how to overcome obstacles to collaboration is with regard to 'support' or more appropriately, perhaps, active hostility. Burn et al. (2010) emphasises the significant detriment that a lack of support can do to a second-year teacher, and likewise the immense benefit that collaboration can provide to the same individual, and consequently place great emphasis on use of teaching mentors. Though, one might argue that, in a particularly unsupportive setting, such an arrangement would be more difficult to find. Instead, Rodesiler and Pace (2015) suggest that teachers should turn to the internet to find their support; two of the many reported benefits in their study of English teachers' use of the internet for professional development were 'finding relief from a sense of isolation' and 'establishing networks of support' (p.355). This suggests that online communities can provide an appropriate substitute, or alternative, to in-school support *whilst* also being platforms for development.

v. Literature Review Conclusion

The conclusions that I have drawn from my review of the literature, that have consequently gone on to inform the creation of this research study into online CPD 'snippets', are: that CPD is most effective when it is founded in research, and that CPD must encourage teachers to engage in at least *some* action research of their own so that they familiarise themselves with the principals of research in order to be more receptive to its results and, consequently, to make all other CPD efforts more valuable due to increased appreciation for research.

Methodology

i. Intervention

The intervention that I designed for this study, in light of my observations in school and in the literature, was a CPD series of 'Research Snippets'. These were short PowerPoint presentations of condensed educational research that briefly summarised what the research *was,* how one could *apply it* to teaching, and made suggestions for classroom-research. These snippets were posted to a page on a closed online forum (padlet.co.uk) for teachers to access quickly and easily. I chose to post the snippets to this online forum so that teachers had the ability to look at the snippets as and when it suited them; this was designed to be extremely flexible so that teachers could organise their own time rather than having to schedule in meeting times the way that one does for more traditionally delivered CPD initiatives; the format of an online forum is suggested by researchers (Milam, 2003; Posner, 2009; Rodesiler and Pace, 2015). Furthermore, I chose the online forum 'padlet' as it is widely used among teachers so that the platform itself would not be intimidating in anyway.

In creating this intervention, I hoped to address the obstacles to research-based practice that had become evident in the literature: time and workload; inexperience with research; access to research; and, lack of collaboration and supportive environment.

ii. 'Snippet' Design – Overcoming obstacles to research-based practice

I created the snippets using educational research with which I already had some familiarity either through my own prior reading or through my involvement on the MSc in Learning and Teaching. I felt that this was an appropriate choice as it meant that I was more confident with the research and was better able to abridge it into clear and concise 'snippets' with suggested implementations for the classroom and ideas of how the participants could venture into their

own small-scale practitioner research. I ensured that no snippet was based on just one piece of research, but instead sought multiple publications so that I could try and give a more holistic overview of the subject or theory at hand. I aimed to be impartial in my presentation of the ideas and resisted adding commentary of my own experiences and interactions with the different theories and practices. Here, I outline how I designed my study in light of the obstacles (and the suggested ways to overcome them) that emerged my review of the literature:

a) inexperience with research;
b) access to research;
c) time and workload;
d) collaboration and support.

a. Inexperience with research

In light of the obstacle of 'inexperience with research' and the suggestion in the literature that teachers who did not have any experience of conducting research did not make use of research findings (Kirk, 2004; Kirkwood and Christie 2006; Mitchell and Hobson, 2011; Papasotiriou and Hannan, 2006), unlike teachers who *had* been involved in research, I designed the snippets to ensure that they encouraged small-scale practitioner research on the part of the participants. For example, in the second snippet the participants were encouraged to film their own teaching in order to then analyse it against either a generic rubric or against their own pre-determined 'success' criteria. In doing so, I hoped familiarise teachers (without research experience) with the principles of research and to incite curiosity for research which would stimulate an interest in using research findings.

b. Accessibility of research

I selected research that was relevant to a wide range of teaching subjects and ages so that all participants felt that the study was aimed at *them* and useful to their own needs (Rynes, 2002; Vanderline and van Braak (2010). I was very conscious of ensuring that I did not allow my own bias as an English teacher to sway me into creating snippets that were too heavily focused on key areas of humanities subjects such as writing and discussion. As such I selected: student voice; self-evaluation; 'triple impact marking' (dialogic marking – renamed to address the wording of the school marking policy); reading aloud; and interdisciplinary team teaching. Each of these were either focused on student-centred tools (such as listening to and using student voice) or methods pertaining more to teachers' identities (such as team teaching) to ensure that *all* participants felt that the material was useful regardless of their teaching experience, subject, school setting, or taught age range. Exhibiting the research in these digestible segments was also aimed at presenting the research as accessible rather than as 'out of their reach' and intimidating (Christenson et al., 2002, p.270).

Furthermore, in light of the literature's assertion that the language of research often alienates practitioners (Battaglio and Scicchitano, 2013; Stewart, 2006; Vanderlinde and van Braak, 2010), I ensured that I avoided the use of jargon and an academic style of writing and instead wrote much more simply. I made sure to follow the suggestion in the literature and focus on the *practical implications* of the results from the research as this is what is thought to be of most value to practitioners (Battaglio, and Scicchitano, 2013).

Despite my efforts to create impartial and widely applicable snippets however, I think it is necessary to account for the fact that, as an English teacher working on the design of these snippets alone, it is unlikely that I managed to create resources that were truly multi-

applicable in the way that I hoped that they would be as I lack the understanding of what is considered valuable in different subjects and key stages. Furthermore, by creating the snippets using research with which I was already familiar, I may have missed the opportunity to look more deeply into certain topics and in doing so, have made them more applicable to a wide range of participant backgrounds.

c. Time and workload

I posted these research snippets online at a frequency of one per month for five months. I chose this frequency as I felt that this addressed the obstacle of 'time and workload' (Chalmers and Keown, 2006; Christenson et al., 2002; Kirkwood & Christie, 2006) as it allowed time for teachers to find their own time to access the platform, to respond, to utilise the suggested actions, or to engage in their own practitioner research and then return to share their thoughts. I hoped that a gap of a month would also allow those who operate on a two-week rotating timetable the flexibility that they might need within that constraint so that if they chose to try any of the research-based practices with a certain class, they would have opportunities to see that class. Furthermore, by issuing the snippets monthly, and by not attaching them to any one school's term schedule, I hoped that the snippets would appear to transcend the differences between schools and exist as a separate entity so that teachers felt that the snippets were distanced from CPD initiatives provided by their own schools. Though this is the frequency that I felt best served the purpose of the study, it also had its limitations. For one, operating on a monthly release schedule meant that in certain months teachers were not in school much and thus less likely to use the research. In April for example, the two independent schools from which participants were recruited were on holiday for the majority of the month which may have had a significant impact on their interaction with that month's snippet.

iii. Collaboration

The initial design of this research was derailed following changes in my school setting (this is further dealt with later in this section and in the 'constraints' section). The first design of this study emerged out of close collaboration with my school's assistant principal and head of CPD and planned for collaborative work among participants. In the initial design I intended to facilitate the series of 'Research Snippets' in 5-10 minute talks during whole-school staff briefings at my school. The snippets would have been designed in the same way that they went on to be, but there would have been a more thorough exploration of them through peer discussion in the communal environment of the meetings. The intentions behind this were multiple:

Firstly, this would have ensured that the study reached a broad base of participants across a multitude of teaching subjects and ages as the staff briefings are for all staff at the school which encompasses an all-girls high school, an all-girls primary school, and an all-boys primary school. I thought that this would be particularly helpful as feedback from this wide range of teachers could have ensured that these snippets were truly wide-reaching in their applicability.

Secondly, and of critical importance, was the fact that in this original model the participants would not have had to sacrifice any of their own non-contact time and add to their workload unless they found a snippet or a suggested implication particularly interesting in which case they could have gone away to apply research findings to their teaching or carried out their own practitioner research in their own time. In doing so, I think that the study would have achieved a higher level of engagement. I had hoped that by inserting them into staff briefing, these snippets could be delivered to teachers without *adding* to their workload or *detracting*

from their time in any overt way; the initial time invested would have been absorbed by the briefing. This was my way of addressing the commonly cited issue, of time and workload, in the literature (Christenson et al., 2002; Kirkwood & Christie, 2006).

Thirdly, giving the snippets the time in this whole school setting would have been symbolic; the collaboration would have been perceived as school-approved and this would, I believe, have had a significant psychological impact on engagement with the study. I believe that this would have led to the study being considered something important and it seems likely that people would have been more invested in the project when surrounded by line managers and senior leaders as they tried to impress. Indeed, O'Brien et al. (2008) suggest that senior leadership's involvement in collaborative CPD can be instrumental in its success due to the impact of modelling on the staff body.

Lastly, I think that the collaboration *between participants* of the study would have flourished under this initial design; the participants would have been in the same physical space and would have been able to recognise that they were part of a community; they would have known that they were part of a bigger network of teachers who they could asked about the content or exchange teaching anecdotes with in light of the research. In particular I had hoped to capture the sense of collaboration and community that the literature indicates is essential to studies of this sort (Day, 1999;, Cordingley, Bell, Rundell & Evans, 2003; Cordingley, Bell, Thomason & Firth 2005a; Day et al, 2006). Moreover, in this collaborative setting, the participants would have been invited to speak to each other and myself, the facilitator, and to ask questions. I believe that this collaborative element would also have led to increased engagement.

Though this initial research design format *had* been agreed with the school's assistant principal and head of CPD well in advance, unfortunately this plan was abandoned by the school as they decided to create their own similar scheme that would run instead of this one. As such, my methodology has been heavily adapted and compromised into a format which I do not feel reflects the potential success that may have been seen, and which, of course, does not bear as much of a collaborative element as I would have liked.

Having said this, I ensured that the adjusted study *did* include a collaborative element as I was keen to avoid the obstacle to research-based practice that emerged in the literature of 'poor collaboration and an unsupportive school environment' (Day, 1999; Cordingley et al, 2003, 2005a, b; Day et al, 2006). I ensured that the forum that I selected (padlet) was one in which the participants could communicate with one another to compare experiences and share the approaches that they had taken towards implementing suggestions from the snippets, in a collaborative fashion. With each post I reminded the participants to 'comment below' if they tried out any of the suggested applications or classroom research and to 'let us know' if they had had any experience with similar ideas before. Through this I hoped to generate a feeling of community and collaboration between the participants (Rodesiler and Pace, 2015). I also thought that these comments would serve as a stimulus to encourage other participants to take their own turns at engaging in the suggested implementations and practitioner research. Assertions in the literature (Day, 1999; Cordingley et al, 2003, 2005a, b; Day et al, 2006) suggest that teachers' professional development is powerfully assisted by collaborative working and I hoped that this online community would, in some way, compensate for a school environment that perhaps did not champion the use of research and tackle any issues of isolation (Rodesiler and Pace, 2015).

Though this attempt at collaboration is, due to the changes, less encompassing than I initially intended, I consider the efficacy of my endeavour to include a collaborative element in this revised study in a subsection of my research and findings.

iv. Participant recruitment

I gathered my participants by recruiting in three places; firstly, via a whole-school email at the all-girls independent school in which I work, then via a whole school email at a local coeducational independent school (where I was granted permission by the head teacher, a former colleague), and lastly via a Facebook post in a forum for NQT+1 teachers who qualified from The University of Oxford PGCE. This recruitment process was logistical as these were the channels most easily accessible to me, but I was also pleased that this allowed me to open up my research beyond just my own school. Indeed, participants were drawn from a range of subjects at both primary and secondary level, as well as from state, academy, and independent schools. This method of recruitment also ensured that I adhered to the assertion made in the literature that teachers need to engage voluntarily, not on a mandatory basis, to ensure that they are truly willing to engage with the material (Chalmers and Keown, 2006; Netcoh et al., 2017).

There were three notable limitations with the recruitment process of this study; firstly, a majority of those who were asked to take part were known to myself (either because they worked with me or had trained with me) and as such they may have consented out of a feeling of obligation or friendship rather than genuine interest. Secondly, this study was very clearly advertised as an exercise in cultivating and maintaining a research-based approach to practice; this would appeal to teachers who were already interested in this concept or who felt that they had time for it which compromises the investigation of both motive and workload

management. Lastly, to (partially) recruit from my PGCE cohort was to recruit from a group of teachers who had been trained at an institution that promoted research-based practices and, again, this means that the participants did not necessarily reflect your 'average' teacher.

v. Data Collection

My methods of generating data for this study were dual and both qualitative; I interviewed a selection of participants about their involvement with the study, and I monitored comments and 'likes' on the online platform. I chose qualitative data collection for this study as I aimed to capture the nuances of teachers' interactions with the platform which I suspected would be different depending on each person's educational setting and their motivations for taking part in the study. I felt that qualitative data would provide the detail that this study needed without compromising the complexity and context of the research; there was no numerically measurable result (such as student progress) to be discovered as this study was an exploration of teachers' time, attitudes, and professional identities, for which qualitative data seemed more appropriate. Furthermore, the number of participants in this study was low, at 18, which I felt would have made the results of any quantitative data statistically insignificant and ultimately unhelpful. Having said this, I think this study would have benefitted from a third form of data collection; a qualitative questionnaire issued to all participants. This may have facilitated my ability to record responses from more or even all of the participants which, with such a small study of just 18, would have increased my data by up to 4. 5 times (from 5 to 18 respondents). This is because the interviews, as one of the two qualitative data collection methods used, were limited; firstly by the availability of participants (despite the fact that all of them agreed to the interview when they gave consent to join the research); and secondly, by the by the dynamic between myself, the researcher, and the interviewees who were also my colleagues and friends and who therefore were unlikely to be critical.

vi. Interview Design and Data

I designed my interview questions in line with my initial research questions in order to determine: whether participants saw a benefit to research-based practice; what obstacles they found to this practice; and how they found this attempt to facilitate research-based practice. In order to address these key research areas, I also questioned participants on; their motivation; their level of engagement and interaction with the study; their opinion on the *quality* of the research; and whether they would continue to use the platform. In light of the assertion by Edmonds and Lee (2002) that assessments of CPD tend to focus on delivery more than impact on teaching and learning, I also made sure to question the participants on whether or not the snippets had impacted their teaching and, consequently, their students. Ultimately, after all, the reported benefit of research-based practice on student attitudes and performance is a key reason for encouraging this approach to teaching (Cooper, 2007; Toom et al., 2010).

A key limitation of the interviews was that, as previously mentioned, the participants were drawn, largely, from a pool of people who already knew me. This meant that at the interview stage the participants may not have felt comfortable being critical of the snippets or of their experience with the study. Furthermore, the efficacy of interviews as a source of data collection was limited by logistics; not all participants were available to interview due to commitments and as such the sample size was small at just 5 out of 18 participants coming forward for interview.

vii. Comment Data

I monitored the frequency of visits to the platform as well as the frequency and nature of the comments left. I was interested to see whether my suspicions, that interest would fade over

time and that teachers would be too busy to engage, would be reflected in the quantity of comments. The limitation of monitoring this source of data however, was that the contributions were anonymised (rather than pseudonymised) which meant that it was impossible to determine whether comments were repeatedly left by the same proactive individuals, or whether many different participants were commenting less frequently. Similarly, monitoring the number of visits to the site proved limited as the padlet was unable to provide a breakdown of when the visits occurred, meaning that there was no way to assess the progression of the participants' engagement.

viii. Data Analysis

In order to answer the title question 'Can an online forum with monthly 'snippets' of condensed research be used to encourage busy teachers to maintain a research-based approach to their practice?' I analysed the data in line with the three research questions in order to determine the participants' view of this issue and whether or not they felt this study had achieved the goal of being a manageable way of cultivating and maintaining a research-based approach to practice.: What are the benefits of research-based practices? What are the obstacles to research-based practices? How can research-based practice be facilitated? As such, I analysed interview responses alongside comments on the padlet to create a clearer impression of the participants' attitudes.

ix. Constraints

The main constraint on this study was that of the school context; as discussed in the 'collaboration' section of this methodology, the original design of this research differed greatly from what took place after the school's assistant principal and head of CPD

abandoned our collaboration in favour of creating their own similar scheme that would run instead of the one I had designed.

Had I been able to conduct the research in the way that I had intended (detailed in the collaboration section) I would also have issued a questionnaire at the end of the final snippet presentation as, given the increased volume of participants of the original design, this would have enabled me to achieve some significant quantitative data (within the individual school setting). I would *also* have conducted the interviews and analysed the padlet comments to contextualise the quantitative data and to explore the nuances of individuals' engagement, but I think that this also would have had a higher uptake as, through these structured sessions, participants would have been more involved in the project and perhaps therefore more likely to feel that they had something to contribute at the interview stage.

Although I am pleased with the adjusted methodology of this study, I think that without this significant constraint, the study would have received a more engaged response. This is also a shame as I think that the results of the study that I had *intended* to run would have been of more significance to the school context and may have helped the assistant principal in their endeavour to improve the school CPD program.

Ethics

For the purposes of conducting an ethical study, this research was granted approval by the Oxford Central University Research Ethics Committee (CUREC). Ethical considerations were made regarding: informed consent; data collection and analysis; practices; and data storage.

a. Informed Consent

At the recruitment stage all potential participants were provided with an information sheet that detailed what the study would entail, what would be required of participants, how data would be recorded and collected, and their right to withdraw at any time. Once the potential participants had read this information and agreed to be involved, they were then sent a consent form in which they agreed to the terms of data collection and storage. Participants had the option of consenting to take part in the study either with, or without, also consenting to a brief follow up interview (with no obligation to conduct the latter) (BERA, 2018). All of the participants in this study consented to participation with the interview. Although each participant gave informed consent though this considered approach to the study, a further ethical consideration in the field of consent arose from the fact that a number of participants were my friends and close colleagues. As such, although they were provided with the same information and opportunity to withdraw at any point, many participants may have felt a sense of friendly obligation to sign up to, or to continue with, the study. This also triggered a difficult relationship between myself the researcher and the participants and research itself as, similarly to Roth's (2005) reflection on his research, I felt awkwardly as though I were asking participants for a favour. I managed this ethical concern to the best of my ability by endeavouring to treat all participants equally regardless of my relationship to them. This mostly involved ensuring that any communication about the research took place via email or

on the padlet as this provided an equalising form of communication, as opposed to allowing myself to converse with participant-friends in person. I believe I was successful in this distinction; however, due to my closeness to the study, it is impossible to know whether my actions fully negated this ethical issue.

b. Data Collection and Analysis - Comments

In order to achieve ethical data collection, at the point of consent the participants were asked to ensure that their contributions to the comment section of the padlet adhered to a set format; participants were asked to select a pseudonym for posting their own contributions to the comments and were reminded to anonymise all of their uploads so that no identifiable student data became part of the study. Participants were also made aware that anything that they posted to the padlet would be considered research data and that any intellectual property they did not wish to contribute as such should not be posted. The aforementioned issue of participants also being my friends also manifested itself in the comments as, despite my insistence that all data was anonymised and should be honest, I cannot be sure that some participants did not feel obliged to soften any negative criticisms or inflate any positive feedback and thus compromise their integrity.

c. Data Collection and Analysis - Interviews

Ethical interviews were conducted as participants were assured that they could withdraw at any point, and that interviews would be recorded and anonymised upon transcription. They were also assured that in the event that they identified a child, this would be struck from the record.

In the interviews I took time to ensure that the participants felt comfortable and I reiterated that their data would be securely stored and anonymised and neither the interviews nor any identifying interview information would pass to their employer. This was particularly important to participants who came from my own school context as I wanted to ensure that they felt that they could comment freely on their own school context without any fear of retribution. I also informed the participants that they could withdraw from the interview at any point should they wish to. In doing this, I hoped to ensure that the participants felt comfortable and reassured enough to speak candidly of their attitudes toward research-based practice and their experience with this study, and to manage the possible power-imbalance created by the interviewer/interviewee dynamic.

In order to achieve the amicable atmosphere in the interviews that I hoped would inspire more honest and sincere responses, I endeavoured to maintain a light tone of voice and to ask the questions in a conversational manner. To this end, I did not remain rigid to the order or exact phrasing of my planned questions and instead allowed the conversation to progress more organically, making slight adjustments where I saw fit. My aim in this was to see whether the participants would naturally open up to discuss their experience. I also used pauses in place of rushing to ask the next question so that participants might continue speaking and elaborate of their own volition without being led by myself. I tried to maintain a relatively neutral facial expression throughout the interviews; I did not want to steer the conversation in any way using non-verbal cues.

d. Practices

In order to account for the ethical issue of asking teachers to alter their practice, it was made clear to participants that regardless of what was posted on the padlet, they were only expected

to alter their professional practice within the limits of what was practicable for their own teaching context and curriculum and which is within the appropriate bounds of professional judgement; they were assured that they were not required to make any changes to their practice which they are not comfortable with. In addition to ensuring that this did not compromise the ethics of the teachers involved, this also ensured that *students* would only be subjected to changes that their teacher deemed appropriate and beneficial to them within the normal range of classroom practice. Similarly, in order to account for the ethical issue of asking teachers to give up their time (potentially detracting from their other responsibilities in school and to students) participants were assured that they needed only give as much time as they were willing and able to give and that they were under no expectation to respond to all posts in the forum. Reminding participants that they didn't *need* to share their experiences if they did not want to, also aimed to address the ethical issue of asking the participants to work somewhat collaboratively (by sharing their experiences on the forum) with other teachers who they did not know and with whom they may not have shared opinions on education.

Where a specific research snippet prompted further ethical questions to arise, these were dealt with on a snippet by snippet basis. For example, in the second snippet the participants were encouraged to film their own teaching in order to then analyse it against either a generic rubric or against their own pre-determined 'success' criteria. In this instance I created an 'ethics' section in the snippet in which made sure to remind the participants that they should only film *themselves* and that they should consult their school policy on this.

An ethical issue that underpinned this research specific to teachers' practices was that of challenging teachers' self-perceptions. In asking teachers to alter their practice and undertake small-scale classroom research, I was inherently implying that there was room for

improvement in their teaching – that they were not 'experts' (Miretzky, 2007, p. 274). Although I imagine most teachers would happily admit that there is always room for improvement, this may have sparked self-doubt or self-criticism in some participants which may have effected their confidence, potentially effecting their practice, and consequently their students.

e. Data Storage

In order to ensure ethical data storage participants were advised that the consent forms (for all participants whether being interviewed or not) would be returned via email and then stored securely. Similarly, they were advised that their comments on the padlet would be transcribed to a document for reference and that all audio data from interview would be recorded on a laptop and that there would be no transfer. Participants were informed that audio recordings of interviews would be pseudonymised immediately upon transcription and that any documentation linking the data to the pseudonyms would be securely stored.

Participants were informed at the consent stage that all data would be stored securely in a password protected iCloud that would only be accessed from a password protected laptop, and that all data would be destroyed after 2 years.

Findings and Discussion

I have presented integrated findings and discussion here, from both the interviews and the comments, in order of; motivation for taking part in the study; engagement with the research; opinion on the quality of the 'snippets'; obstacles to engagement; overcoming obstacles; collaboration; and, continued use of the platform. I have prefaced this with a brief summary of the interview process.

Interview Process

At the end of the study only 4 of the 18 participants volunteered for interview. Most simply ignored the request whilst some of those who were working in my school made verbal responses in which they apologised for not having enough time. Interestingly, this lack of time is what emerged in the interviews as a key obstacle to the participants engaging in the study as much as they wanted to. Despite my insistence that interviews would be gratefully received even by those who had not had a chance to look at the padlet (as it sought to *investigate* the constraints on teachers that prevent their involvement), many people declined on the grounds that they felt they had not been involved enough to comment.

In *all* cases, the participants prefaced the interviews with apologetic comments on their lack of engagement, 4 of them admitted prior to the start of recording that they had rushed to look at the padlet again in preparation for interview. This happened prior to any questions or even to recording and as such I also found myself spontaneously reassuring participants that their levels of engagement with the snippets did not matter as it was the conversation surrounding this that interested me as a researcher.

i. Motivation for taking part in the study

The interviews revealed some commonality in the participants' motivated to join the study; their interest in educational research. Confident assertions of this belief were expressed by three participants in response to the question 'what motivated you to take part in this study?'

> *Eilidh: I was motivated by my belief that research is crucial. I also don't want to become a stale classroom teacher and so hoped that there would be some tips I could pick up to refresh my practice.*

> *Padma: Being a recently graduated PGCE student I just felt like I needed a way of keeping up with current studies and stuff and it seemed logical and something that would be easy to keep up with despite being a very busy teacher.*

> *Leila: I thought it'd be good to get a look in on some research.*

Although not in response to the question of motivation, Leila also went on to indicate her strong positive feelings towards research-based practice later in the interview:

> *Leila: I think having research is always really important and it grounds your practice ad it makes you reflective of you own practice to keep you up to date and see whether or not things are coming in cycles or whether things are coming in a different way or marketing in a different way.*

A fourth participant more vaguely alluded to the importance of research in relation to their motivation. In two instances however, participants listed secondary motives: the desire to

support me as a friend and colleague; and the desire to further their careers in some way by showing that they had been involved in University of Oxford research. The fifth participant, on the other hand, expressed only a mild curiosity towards the research as a form of motivation when, instead, he stated that what motivated him was 'his wife'. This participant's wife is a colleague of mine and as such, it seems that she asked him to participate in this study.

These results indicate that each of the participants interviewed *did* have at least *some* interest in educational research. This is unsurprising as the fact that all of the participants had volunteered for a study with this as the focus was arguably a demonstrative expression of interest. However, though these responses indicate that the participants did deem educational research *important* (to varying degrees) there were other motivations for their engagement in this study which may have impacted how they interacted with it.

These are important motivations to note as, particularly in the case where the participant expressed that she had involved herself in the study out of loyalty to me, the researcher, it cannot be certain which motivation was more powerful and, consequently, how much value was actually placed on being research-based.

As a subsequent question to the participants' expression that 'research is important' I asked them 'why do you think research-based practice is important?' to which they responded:

> *Eilidh: I think it's important to stay current and not to fall into a rut with your teaching…you want to make sure you're keeping up.*

Leila: Well, like, you need to be up to date so that you can do your job well.

Padma: …research-based practices ensure that you are doing everything possible to meet the needs of your students and I think that by continuously referring to it, you develop as an individual teacher to a point where you're so much better at understanding the like, nuances of different educational approaches and you just get better and better at understanding what will work best for different learners. That in itself gives you more confidence as a teacher and I think it trickles down and gives your students confidence too.

Samson: It's important because really it makes sure you're doing your best at your job and keeping an awareness of the profession.

Rudolph: It's important because you wouldn't want to fall behind…you need to be thinking about that stuff when you can.

These responses are interesting as three out of the four of them refer to some sense of 'keeping up' and 'doing a good job' without any elaboration on what that might actually mean – either for teachers or students. This may suggest that the participants are used to the dialogue surrounding research-based practices without necessarily having an in depth understanding of why it is important. Interestingly, the most detailed response, and that which elaborated on the benefits of research-based practice for both students and teachers, came from the most recently qualified teacher, who trained at an institution that championed a research-based approach (further detailed in later questions). This result seems to reflect what the literature implies; that it is in teacher education and in the early stages of careers that

teachers can be encouraged to become research-based in their practices (Burn et al., 2010; Kirkwood and Christie, 2006; McKinsey, 2007; Niemi, 2008; Toom et al., 2010).

ii. Engagement with research:

In order to determine whether the assertion in the literature, that experience with research is integral to engaging with research (Mitchell and Hobson, 2011; Netcoh et al., 2017; Papasotiriou and Hannan, 2006), was true in this study, I asked the participants 'do you have any experience of practitioner research?' to which they responded:

- three responded 'yes' and went on to refer to their own higher education studies and PGCEs;
- one said 'yes' and qualified that they had not looked at any in a long time;
- one said 'yes' but also indicated that occasions of school-run CPD during inset were the only times that they looked at research.

This is interesting as the two participants who went on to most emphatically discuss their engagement with the padlet, and with research in general, were Eilidh and Padma who had expressed the greatest level of experience with, and interest in, research-based practice. This *directly* reflects the pattern in the literature that those with research experience go on to be those who *use* research findings to inform their practice (Mitchell and Hobson, 2011; Netcoh et al., 2017; Papasotiriou and Hannan, 2006). This also seems to suggest that if schools want their staff to be research-based teachers, they need to ensure that their staff have been involved in practitioner research and that they provide the opportunity for practitioner research in instances where this is not the case.

In the case of Padma, an NQT+2, this may also reflect the assertion in the literature that young teachers are more susceptible to research of this nature because teacher education has

developed (McKinsey, 2007) as teachers must now be expected to: ‘seek to base decisions on evidence of what works in schools in this country and internationally'; and 'to anticipate change and promote innovation' (DfEE, 1998, para. 13). The other participants had all been teachers for 10 or more years.

The five participants who were interviewed engaged with the snippets to varying degrees. In response to the question ‘did you engage with the research on the platform?’:

> *Eilidh: Umm, some of it I already did anyway so it wasn’t really a case of having to apply. Other parts of it for example, the idea of the reading, I think one of the comments on the padlet itself was about it maybe being redundant in the context of current educational climate. I don’t know if it was all entirely relevant to my teaching and the way that I run things. The padlet about student voice and how to do that, I probably spent the longest thinking about how to use that in the classroom but to be quite honest I haven’t got around to embedding that into any of my actual lessons yet but it still remains something that I intend to do.*

This response indicates that the research had been on the mind of the participant but had *not* necessarily inspired any action. Two of the other interviews indicated that the participants *had* adapted their teaching based on what they had read:

> *Leila: So I initially missed the first one because I was late to sign up but then I just logged on as you emailed us and looked at the advice given and either tried to apply it to a class where I felt comfortable and safe testing it or it was research that I had seen before and I had trialled and tested previously in my teaching career.*

> *Padma: I think I engaged with it. I would say that in some cases I didn't necessarily apply it but only because I was already kind of applying some of the stuff or had tried some of the stuff that came up but if it was anything new that I hadn't tried before or hadn't considered before then yeah I definitely engaged with it and tried it.*

Otherwise, one participant apologetically expressed that they he had not engaged with the research *much* and another expressed that they hadn't engaged at all with the research on the platform.

Of the four participants who *had* professed to have engaged at all with the platform (Eilidh, Leila, Padma, and to a lesser extent, Samson), two of the interviews revealed that the participants' engagement decreased after the first two to three months. This waning engagement is also reflected in the comments on the snippets; the first snippet received 8 comments, the second received 3 comments, the third received 3 comments, and the fourth and fifth received no comments. Even the most enthusiastic of the interviewed participants, Padma, who professed a comparatively high level of engagement, seems to have overestimated her own involvement in the project as, in response to the question 'did you comment on the padlet?' she replied '*yes, all of them'* despite the fact that the padlet shows that the last two were not commented on at all.

The comments on the snippets also revealed, to some extent, how much participants engaged with the research. Three indicated that the research motivated them to take action:

Comment 1 on Snippet 1: ...I will trial with my KS4 classes.

Comment 3 on Snippet 2: This is a great idea and something I would never have thought of to do myself! Definitely going to give it a go.

Comment 2 on Snippet 3: I really like the idea on slide 6

Several commented on the fact that the research supported methods that they were already using in the classroom:

Comment 1 on Snippet 1: ... It's good to know, too, that I already use some of these strategies!

Comment 3 on snippet 1: ...therefore this research is backing what I am trying to do.

Comment 5 on Snippet 1: Surprisingly, I do a lot of these instinctively and already. I've found it supports my differentiation. Quite like the fact that there's actually research evidence for the way I do things.

Comment 1 on Snippet 2: Used…[this suggested implementation] in the classroom before.

Comment 2 on Snippet 2: I would definitely repeat/recommend this although it is a little daunting having to watch yourself.

More comments related to the idea of teachers *already* using the snippets' suggested approaches and whilst this may be an encouraging reflection of evidence-based practices being ingrained in teaching, it is also possible that this is a demonstration of what was evident in the literature; that teachers are not comfortable admitting that they have something to learn and admitting that they're 'not experts' (Miretzsky, 2007).

A further item of data that could be used to track data was the quantitative measure of traffic to the padlet website; the padlet received 74 visits in 5 months. However, padlet provides no further details on when the visits were; this could easily indicate a regular flow of traffic from all participants but may also be the result of frequent visits at the start of the study that then declined as the months went by.

These varying levels of engagement among participants, and the waning levels as the months went by, indicate that even to the candidates who had the most seemingly emphatic commitment and enthusiasm to research and to the project, the obstacles outweighed their ability to engage with the research that was posted. This reflects the assertions by both Christenson et al. (2002) and Kirkwood & Christie (2006) that even in cases where teachers have a *positive* disposition towards research-based practices, and all the *intent* of undertaking research or using research findings, they were unable to follow through due to the obstacles that faced them.

iii. Obstacles to engagement:

All but one of the participants, even one of those who professed to have been engaged throughout the five months, expressed that they had not been able to engage with the platform of research as much as they had wished. When asked 'Do you mind telling me why you didn't engage with it as much as you had anticipated or expected to?' four of the

participants' cited time/workload as a key obstacle to their ability to look at the platform and engage with the research and discussion:

> *Eilidh: Because of time constraints really. Research and the ideas of educational research and keeping abreast of these things is actually something that I actually I believe very strongly in but trying to manage that even if it is condensed and something very bitesize and manageable and even trying to remember to do that and remembering to then logon to the padlet is something that sometimes had to go to the bottom of the list when managing competing priorities.*

> *Leila: I'm on a very full timetable so I don't have the leisure of going on [the padlet] as and when I wanted to.*

> *Samson: Well I guess really it has been an uncharacteristically busy year and I've been doing sort of two and a half jobs most of the year so I haven't had much time to get involved in it, I'm afraid. Ordinarily I would have done but time just got away from me*

> *Rudolph: I've just been completely snowed under really. Utterly and completely snowed under.*

In each of these interviews the obvious obstacle to further engagement with the research was timing (as a result of workload). Eilidh even took the opportunity to reiterate just how much she *wanted* to use the research and engage in practitioner research herself but said that she found that she could not prioritise it.

Padma, as previously detailed, was the one participant who did not feel that her participation had dropped (though she mistakenly asserted that she had 'commented on all' of the snippets) and yet even she, in response to this question, alluded to the fact that had she had more time or a reduced workload, she would have been more engaged with the research:

> *Padma: ...I think that if I wasn't so busy I would have liked to have tried out more of the suggestions of sort of my own research, if that makes sense? Like, I tried out a number of the different tips and stuff that were in the snippets, like filming myself and that, but I didn't do any of my own little research projects that I would have liked to do because they looked really interesting and like they'd have been really helpful. But yeah I just had too much on.*

This is further evidence of the fact that even those with every intention of being fully engaged with research-based practice cannot overcome obstacles (Christenson et al., 2002; Kirkwood & Christie, 2006) but more specifically, these findings support the common issue expressed in the literature; that teachers are too over-worked and consequently do not have enough time to make research (either reading, utilising, or conducting it) a priority (Christenson et al., 2002; Kirkwood & Christie, 2006; Chalmers and Keown, 2006).

It is unsurprising that the participants of this study found that time was the obstacle that most prevented their engagement with the study. This indicates that the intervention, whilst gaining some engagement and thus not being entirely unsuccessful, was unable to address this particular obstacle regardless of how condensed the research was.

iv. Overcoming obstacles to engagement

Despite the fact that four out of the five candidates interviewed expressed that they could not engage with the research as much as they wanted to due to an issue of workload and timing, a common suggestion of how to overcome this emerged in all five interviews:

All of the interviewed participants noted that there was a correlation between receiving an email blast to announce a new snippet, and their engagement with the research. Each of the participants said that they would have been more likely to engage had they received more emails as prompts for them to check the padlet:

> *Eilidh: I need to be reminded and prompts definitively helped. To be honest, when I'm working like that if I get something that I can do immediately and I am reminded of it I will tend to do that so I may well have looked at it more frequently if I had more prompts.*

> *Leila: It was very much connected to receiving the email because of my timetable – I'm on a very full timetable so I don't have the leisure of going on [the padlet] as and when I wanted to – that was my aim when I signed up – but the emails were nice as a prompt like 'you signed up to this platform – have a look'. More prompts would absolutely have got me to look more.*

> *Padma: I think as teachers we are so busy all the time so it's hard to remember to do all these different things so I quite liked the reminders and yeah I could have done more with more reminders.*

Samson: Yes to be completely honest I wouldn't have looked at all without a reminder. As it was, the first reminder I did look and the other reminders I just felt vaguely guilty for not looking but I wouldn't have given it a thought at all without the reminders. So yeh, they were significant.

Rudolph: I think if there had been more reminders I would have got stuck in but they were easy to ignore because there was only one a month.

This is interesting as the obstacle most cited by the participants was that of workload and time and yet the suggested change (of adding more prompts) that they all said would have induced them to engage more, does not actually address their key issue; it does not reduce their workload or grant them more time. All it does is remind them of a way in which they might *use* their time which suggests that, at least to some extent, the participants were actually experiencing an issue of time management rather than quantity of time. This discovery is potentially quite controversial as, of course, it implies a criticism of the way that these teachers were using their time. An alternate possible explanation for this trend however, is that the participants felt that they could only suggest a solution to the issue of their engagement *as it pertained to the study* and as such they did not include comments on external factors such as their timetabling, and general school commitments. It would be interesting in further studies to see if this is a conversation that could be broached with participants to see whether they would start to make suggestions that pertain to their school-assigned workloads and timetables. Then again, it would be important to strike a balance and ensure that prompts were not so regular that they became irritating and turned people against the research by association.

V. Collaboration

I measured the participants' feelings about the study as a collaborative endeavour through analysis of the comments on the padlet and through their *discussion* of the comments. This is because I had intended for the comments to be the platform for candidates to interact with one another. In response to the question 'Did you comment on the padlet?' only three of the five responded affirmatively.

Interestingly, however, four of the five participants interviewed expressed *great* interest in what *other* people had commented. In response to the question 'did you read other peoples' comments?' all of the participants responded positively, with Eilidh and Padma elaborating:

> *Eilidh: I did, yes… it was interesting to see what people had to say though especially when they confirmed what I might have been thinking anyway such as the one who said that the research was potentially redundant now but no not in terms of how to implement it.*

> *Padma: I did. I thought it was interesting because people were obviously from different educational settings in different schools so it was interesting to see other people's perspectives so I think it was almost just as useful as the research itself to see people commenting saying 'oh I used it this way' or 'I didn't find this particularly helpful' because it's kind of like similar to buying something off amazon when you might look at the reviews so I thought it was quite useful.*

This is interesting as, whilst all five of the participants interviewed valued reading other people's comments, only one of them felt confident contributing. This seems to indicate a

preference for a passive engagement with the platform as a trend; the participants wanted to see what other people had to say without adding their own insights and experiences. This suggests to me that the pool of participants needed to be larger in order to generate more comments, in order to account for the fact that many individuals would want to read but not contribute.

Much of the literature emphasises that collaboration is a key factor in promoting teachers as researchers and research-based practitioners (Burn et al., 2010; Cai et al., 2018; Cordingley et al, 2003, 2005a, b; Day, 1999;Day et al, 2006; King, 2002;). As such, I attempted to ensure that participants were able to interact with one another on the platform in order to establish a sense of a teaching community or network of research-based teachers (Rodesiler and Pace, 2015). Although all of the participants interviewed had all read and appreciated comments by other participants, when asked whether they felt any sense of collaboration or community in the project, the responses were unanimously negative.

Contrary to Rodesiler and Pace's (2015) suggestion finding that teachers found 'relief from a sense of isolation' and 'networks of support' (p.355), the interviewees in my study did not seem to *think* that they would have benefitted from an increase in collaboration or from the creation of a teaching community.

When I asked if they would have wanted the study to be more collaborative, they all responded no. This question directly asks the interviewees about possible improvement to the platform, however, and as such it is important to note that the participants may not have felt comfortable being too critical of the study directly to me. This is particularly likely in the instance of *Eilidh* who had already expressed that she was in

part motivated to participate in the study out of a sense of loyalty to myself. Furthermore, it is possible that the participants did not *miss* a feeling of collaboration because they did not see what it may have added, not having had it to begin with.

This underwhelming response to the suggestion of collaboration maybe a reflection of the fact that the literature seems to suggest a cultural tendency for collaborative teaching to be more valued in international settings whilst English studies found that many teachers were happy without this element; only 35% of participants in O'Brien et al.'s study (2002) of *perceptions* agreed that collaboration in a learning network would lead to transformation whilst 18% strongly disagreed and the remainder were neutral (O'Brien et al., 2002). This seems to indicate a sort of 'we don't know what is good for us' situation in which the benefits of collaboration are not anticipated by teachers and are only felt *after* participating in collaboration.

Despite the assertions of those interviewed that there was no collaborative spirit in the project, there is evidence in the comments of some participants attempting to establish a sense of a teaching community by sharing their own work and experience with others, and by recommending/warning each other of different practices:

> *Comment 8 on Snippet 1: I've used anonymous surveys from pupils on myself in the past and although it can be a little unsettling it provides amazing 'live' feedback from your classes rather than the rather dry, static feedback you get from traditional observations. I found that I could amend/adjust my pedagogical style much quicker for better results, the pupils felt listened to so engaged (even)*

more than they had previously. Happy to share my survey with anyone who wants to give it a try.

Comment 3 on Snippet 3: …do not be succoured into it being you main de facto marking policy! [sic]

Comment 2 on Snippet 2: I would definitely repeat/recommend this although it is a little daunting having to watch yourself.

These results seem to indicate that whilst the intervention could not be described as wholly collaborative, it met the needs of the participants; those who felt inclined to share their thoughts and experiences were able to do so, whilst those who felt too busy or were not of the disposition to involve themselves much (such as Eilidh) could simply observe other people's contributions. It may be that, in this regard, the padlet achieved the aim of overcoming the obstacle of collaboration. This would be an easier variable to explore with a greater participation base.

vi. Opinion on the quality of the snippets:

One of the obstacles highlighted in the literature was that of the accessibility of the research (Christenson et al., 2002; Miretzky, 2007; Vanderlinde and van Braak, 2010). This study aimed to make sure that the research was *physically* accessible (through the popular online forum of padlet) but also attempted to ensure that the *transference of information* was clear and accessible. As such, I questioned the interviewees on how they had found the snippets

themselves. In response to the question 'did you find the research user-friendly?' the participants said:

> *Eilidh: I thought it was really clear and I liked that you seemed to have really boiled down several bits of research to their core components. I found that I could get through the snippets really quickly but still take a lot away from them.*

> *Leila: … the initial kind of 'this is the research' and 'this is the premise' and the style of posts, I think it was really good and really concise.*

> *Padma: I thought the snippets did exactly what they said on the tin and it was so great that I could just spend a couple of minutes looking at them and then have all these ideas and things I could take away and try with my classes. They absolutely did their job.*

> *Samson: Again, I'm sorry for not really looking at that much of it but from what I saw in its current form it would suit middle leaders effectively – it was really good.*

> *Rudolph: I don't really remember as I didn't really look.*

This is promising as it suggests that the study had successfully circumvented the obstacle of access and had avoided the use of jargon, however, the dynamic of interviewing the participants myself, as the researcher, means that they may have felt pressured to withhold criticism.

Despite the fact that the comment section of the platform was intended to provide a space for the participants to share their *experiences* and attempts at engaging with the research, many of the comments also referred to the quality of the snippets themselves and provide data on the topic of access. As the comments are anonymous, this provides an interesting insight to a potentially more *honest* review of the snippets:

> *Comment 1: Really easy-to-read and interpret. These are useful ways of giving ownership and flattening hierarchies. It's good to know, too, that I already use some of these strategies! I will trial others with my KS4 classes.*

> *Comment 2: Very digestible research – definitely something to think about!*

Though limited, these are promising comments that further suggest that this intervention was successful in addressing the issue of access to research; the participants indicated that they could understand all of the information (Rynes et al., 2002).

vii. Continued use of the platform

In response to the question 'if it were to continue to run, would you continue to use this platform?' the interviewees, even those who had not used the platform much or at all, responded positively:

> *Eilidh: Yes I would absolutely. I didn't use it as much as I anticipated, like I said, but I liked that it was there and what I got out of it was really good so yes I think it's something I'd like to continue having access to.*

Leila: Well yeah because I think it's useful and I think having research is always really important and it grounds your practice ad it makes you reflective of you own practice to keep you up to date and see whether or not things are coming in cycles or whether things are coming in a different way or marketing in a different way.

Padma: Yes, definitely. And I would make sure that I shared it with more colleagues because, like I said, I think they'd really appreciate it too.

Samson: Yes I think I would. I'd obviously need to resume a normal workload first in order to have time but I liked what I saw and I'd want to use it.

Rudolph: If my workload lightened up at all then yes. Having said that I don't think that would happen.

The fact that each participant expressed that they *would* continue to log in to the platform indicates that they did indeed, to varying degrees, find the platform to be fit for purpose. Interestingly, once again the key obstacle of time and workload was cited as a prerequisite for the some of the participants to carry on using the platform. It is evident then that, in order for this intervention, or an intervention of its sort to run, teachers must be granted *specifically* allocated time to engage with it.

Conclusion

i. Summary of results:

I feel that this study drew two primary conclusions, each in line with the literature.

The first is that, as suspected, even teachers with the best intentions feel that they cannot make time to engage in educational research or their own action-research whilst they are stretched for time. This is a clear reflection of findings made in other studies (Chalmers and Keown, 2006; Christenson et al., 2002; Kirkwood & Christie, 2006;).

It seems that the accessible platform used in this study, the clear and concise dissemination of research, and the element of collaboration were each successful enough to have aided these teachers in conducting research and using research-based practice for a time. However, the obstacle of time and workload was, it seems, only able to be ignored in the beginning of the study whilst the project was a novelty, but quickly the teachers resumed their earlier patterns of behaviour due to necessity; they had other priorities (Chalmers and Keown, 2006; Christenson et al., 2002; Kirkwood & Christie, 2006).

The teachers in this study expressed that they will only feel that they are able to achieve research-based practice when there are fewer constraints on their time, enabling them to engage with the research. This conclusion poses the question to schools; do you value your teachers as research-based practitioners? And if so, what are you willing to do to ensure that your staff have the time to engage with research? It is, as Kirkwood & Christie (2006) state, only ‘long term systematic changes’ that can manage the constraints on teachers and create an uptake to a research-based approach (p.442).

The second conclusion is that those who had experience with research were the most likely to engage in and with research for the purpose of improving their practice and student outcomes (Burn et al., 2010; Mitchell and Hobson, 2011; Netcoh et al., 2017; Niemi, 2008; Papasotiriou and Hannan, 2006). Eilidh and Padma, with the most experience of research, were those who were most engaged with the platform and those who seemed to benefit most from having engaged with it. My conclusion from this is that if schools seek to develop and maintain a research-based teaching body, then they must ensure that they provide opportunities for their teachers to participate in action research, and in order to do so they may need to overhaul their approach to CPD. They must also, as extensive research suggests, endeavour to create a supportive and collaborative school environment (particularly surrounding CPD and action research) so that they may hope to get the best out of their staff and, consequently, their students.

ii. Reflections on Methodology:

As I have reflected on the methodology of this study, a number of possible improvements have occurred to me which I believe would have aided the efficacy of this research.

The Snippets:

When creating the snippets it may have been prudent to consult a small group of teachers of different subjects and age ranges to beta test the snippets before releasing them so that they could make suggestions of how to make them more widely applicable and relevant.

Furthermore, to manage the possibility that one month's snippet was irrelevant to someone's practice, I think it would have been sensible to have released two snippets per month that addressed different research topics so that the platform could have catered to a broader range

of tastes and experiences. Similarly, it would perhaps have been helpful to the participants for there to have been *some* subject specific snippets; the participants could have been more judicious about which research they investigated and applied.

In order to model the kind of interaction with the research that I hoped that the participants would engage in, and to 'break the ice' as it were, I could have added my own thoughts and experiences with the research in a separate comment or to a slide within the snippets. I think that this demonstration of tying out the suggested implementations and sharing my experiences of low-level practitioner research in response to the snippets may have been helpful in inspiring the participants to do the same.

I am not confident that the interaction available to participants in the comments section of padlet was a sufficient substitute for a more personable sense of community and collaboration, which is deemed important in the literature (Day, 1999; Cordingley et al, 2003, 2005a, b; Day et al, 2006) As such, I think that I would revise my methodology to use a platform on which participants would be able to reply to comments, rather than just add to a chain of comments, so that they could create more of a dialogue among themselves.

The Data

As expressed in the 'constraints' section of my methodology, this is not the study that I had envisioned. When I was forced to adjust my approach in order to conform to my school context, I also adjusted my methodology to reflect the fact that the number of participants had dropped dramatically. Due to the limited numbers, I decided to collect only qualitative data rather than a mixture of qualitative and quantitative. On reflection, however, I think that it would have been beneficial to collect some quantitative data despite the small sample size; a

set of simple of questions in which participants were asked to rate (e.g. out of 5) aspects of the snippets, and their approach to the snippets, may have allowed me to contextualise the interviews with greater clarity.

The collection of interview data also revealed limitations that I had not considered; conducting interviews in my own school setting, where a majority of the teaching body and consequently the participants are experienced teachers of 10 or more years, created an unusual power dynamic. As an NQT+2, there were instances in the interviews in which it seemed as though I may be being humoured or even patronised. Though this may have just been a self-conscious interpretation of the situation, I think that were I to develop this study I would seek to use a third-party interviewer to remove the potential for teaching hierarchies to have an impact on the interview results. Similarly, this study revealed that some participants took part out of a sense of obligation to myself and, as such, may have adjusted their responses to reflect what they thought I wanted to hear; a third-party interviewer would also provide the opportunity for these individuals to be more honest.

iii. Suggestions for future research:

In future research I think it would be valuable to investigate whether teachers who are given a reduced workload (particularly in terms of contact hours to reduce planning, marking, and data tracking) are found to increase their time spent on research. I wonder whether this is something that would arise naturally (given that so many have said that they wish they have the time for it), or whether it would still require some kind of school-led initiative or incentive to re-establish the habit. After all, in this study, all of the participants confidently asserted that they *would* have engaged more in these activities, had there been more frequent

email reminders. This suggests that *quantity* of time was not actually the issue, but that teachers were just not *making* time to engage with the research.

I suspect that teachers would find other ways to fill their time before they turned to research and that, as such, school-led research initiatives may be necessary or perhaps designated time for teachers to conduct research. It would be interesting to investigate whether school-led initiatives to encourage independent research would be well-received and utilised, given the assertion in the literature that for CPD to be valuable it must be voluntarily undertaken (Chalmers and Keown, 2006). I would like to use my findings from this study to revert back to my first iteration of this idea (delivering snippets in staff briefing) in an attempt to work within the confines of teachers' time.

iv. Implications for my future practice

In my own practice, I intend to maintain a research-based approach to teaching and to practice what I preach by engaging in low-level action research as I continue to try and improve to adapt to each class and each individual that I teach. I hope to utilise what I have learnt here, both through the literature and through my own findings, and to engage in and emphasise collaborative teaching and CPD initiatives in the schools that I work in to continue to promote research-based teaching.

I plan to conduct further investigation into research publications aimed at teachers such as the Cambridge University's Espresso Shots and Harvard University's 'Usable Knowledge' (Cambridge Mathematics, 2019; Harvard Graduate School of Education, 2019). I hope to either find, contribute to, and promote an effective equivalent in my own subject, or to

approach relevant institutions and experts so that I can either create or assist in the creation of a publication in the same style.

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