Examination of Collaborative Practices among Post-compulsory education Basic Skills and Vocational Teachers

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DECLARATION

"I certify that the work contained in this thesis, or any part of it, has not been accepted in substance for any previous degree awarded to me, and is not concurrently being submitted for any degree other than that of Doctorate in Education being studied at the University of Greenwich. I also declare that this work is the result of my own investigations, except where otherwise identified by references and that the contents are not the outcome of any form of research misconduct."

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ABSTRACT

This study was undertaken to examine the types of collaborative activities engaged in by 72 Post-compulsory education basic skills and vocational teachers in three colleges in south London and how these teachers experience and value collaborative practices in supporting students' learning. A sequential explanatory mixed methods design was utilised. The overall findings from this study reveal the nature and complexity of teacher collaboration. They indicate that despite the contention in the literature that the majority of teachers still prefer to work in isolation, many teachers in this study participated in different collaborative activities, although, largely in informal contexts. They found informal collaboration more convenient and effective in dealing with immediate issues than formal collaboration but at the same time, the findings also indicated that many teachers desired more formal collaboration.

Additionally, findings from this study revealed that teacher characteristics such as age, department, contract types and teaching experience can influence participation in collaborative activities. Furthermore, evidence from the study revealed that many teachers, especially older and more experienced ones, preferred collaborative activities which directly related to their classroom practices. Moreover, the findings indicate that teachers in this study identified learning new ideas as the main benefit of collaboration while excessive workload was regarded as the major barrier.

Finally, this study made recommendations and developed a conceptual model that may have application in the further education and vocational establishments.

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DEFINITION OF TERMS

Collaboration: “A direct interaction between at least two co-equal parties, voluntarily engaged in shared decision making as they work toward a common goal.” (Friend and Cook,1992).

Contrived collegiality: “Administratively contrived interactions among teachers where they work to meet and work to implement the curricula and instructional strategies developed by others” (Fullan, 1990).

Communities of practice (CoP): “A group of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis” (Wenger et al., 1998).

Collaborative culture: “Evolutionary relationships of openness, trust, and support among teachers where they define and develop their own purposes as a community**”** (Fullan, 1990).

Post-compulsory education sector: A wide and diverse sector covering areas such as the study of 14-19 education and training, further education, adult education, informal education, informal learning and lifelong learning (BERA, 2017).

CHAPTER ONE: INTRODUCTION

> *"As educators, we must renew our commitment to being students of collaboration in order to prepare ourselves to face the complexities and uncertainties of our field. No one of us can do it alone." (Friend*, 2000:160)

1.1: Overview

This study involves an examination of the different collaborative practices that post-compulsory education basic skills and vocational teachers engage in to support their students' learning and the value that teachers place on such collaborative activities. It also examines teacher characteristics that are likely to influence collaborative practices between post-compulsory education basic skills and vocational teachers. Additionally, the study seeks to find out teachers' perceived obstacles to collaboration and how these can be minimised. Finally, the study makes recommendations for improving collaboration and provides a framework for facilitating collaborative practices.

1.2: The UK Post-Compulsory Education Sector

The UK post-compulsory education sector, sometimes referred to as further education, which is the focus of this study, covers diverse areas including 14-19-year-old education, further education (hereafter FE), adult education, informal learning and lifelong learning (BERA, 2017). It provides for learners with complex backgrounds such as those rejected by other institutions, young people who did not achieve their qualifications at school, adults without basic skills such as English and mathematics, and those who aim to update their skills and qualifications (Barnfield, 2013; Hodgson and Spours, 2017). Essentially, these are usually learners outside compulsory primary and secondary education, or adult learners, needing qualifications to enable them to progress to higher-level vocational qualifications, university, or employment (Association of Colleges, 2017). FE provides courses including entry level (basic qualifications), GCSE, A Level and higher-education degree programmes (Bathmaker, 2005; Hodgson and Spours, 2017).

1.3: Personal and Professional Context

Over the past few years, there have been a plethora of reforms within the post-compulsory education sector such as requirements for teachers to meet recruitment, retention and achievement targets in order to secure adequate funding, and these have impacted on all aspects of lecturers' practices in colleges (Coffield et al., 2008). In the FE

sector, this has resulted in an emphasis on learner assessments in response to funding requirements which emphasises measurable outcomes (The Literacy Group, 2010). It has been noted that the introduction of Assessment for Learning (AFL), involving the use of assessment data to measure learners' achievement and improve their learning, has resulted in a focus on performance to the detriment of learning (Hargreaves, 2013).

This emphasis on productivity in education, according to Ball (2003:215), has created a "performativity culture" which, he opines, has resulted in individual teachers' focusing their effort on responding to "targets, indicators and evaluations," to the detriment of personal beliefs and commitments as they "live an existence of calculation." In the FE sector specifically, Hodgson and Spours (2015) note that increased marketisation of the education system, competition from sixth-form colleges and other independent providers, and the continuous reform of the qualifications system are among the factors that have seriously affected this sector.

Furthermore, learning and development are increasingly viewed as essential elements of the modern-day workforce (Meister and Willyerd, 2010). In the UK in particular, learning is regarded as crucial to a competitive economy, societal stability and participatory citizenship (Bathmaker, 2005). In the post-compulsory education sector, teachers are required to regularly update their skills through continuing professional development and to uphold professional standards including continuously updating skills and knowledge in their subject areas, assessing practice and its impact on learning, engaging in reflective practice and building collaborative relationships with teaching colleagues and learners (Education and Training Foundation, 2014).

In my view, these are demanding requirements on teachers that require joint effort through working with and supporting each other. It is less likely, therefore, that working in isolation will enable teachers to engage in effective critical practices that will enable them substantially to develop their practice. Furthermore, teachers are expected to adapt to technological innovations and acquire the ability to utilise them in their teaching practice (Lieberman and Mace, 2010).

However, there is concern that the professional development programmes being offered to teachers by their institutions may be insufficient to meet individual teachers' developmental needs as they tend to be initiated by management rather than based on teachers' preferences (OECD, 2014; Opfer and Pedder, 2011). Moreover, one of the key skills learners are expected to acquire prior to entering the employment market is the

ability to work collaboratively, which teachers are expected to teach them. Coke (2005) argues that teachers need to “practise what they preach” before they will be able to teach their learners these skills. This indicates that they have to exemplify the art of collaboration by working together in the classroom, which may then encourage their learners to imitate them.

In recent years, the policy that drives collaboration in the post-compulsory education sector in the UK was carved out of the drive to embed basic skills (specifically, basic English and maths) in vocational courses to make these subjects more relevant to learners’ real-life experiences. This resulted in increased emphasis on effective collaboration between the basic skills and vocational departments to achieve this objective (IFL, 2013; LSC, 2007).

As a basic skills lecturer in FE with several years’ teaching experience, I have long been fascinated by the concept of teacher collaboration: why some teachers prefer to work together while others choose to work alone. From my personal experience and observation, I have witnessed how teachers have worked diligently in meeting the demands of their departments and institutions, seeking to solve a variety of learner issues and working extra hours in order to meet deadlines and complete tasks that they were unable to deal with during teaching hours. In many cases, they have to deal with these complex teaching and learning issues solely by themselves.

My interest in the topic deepened during my role working across different vocational departments, teaching embedded English in vocational subjects. This experience left me with the impression that teacher-interaction is a complex issue that requires proactive effort by teachers and facilitation by management. How FE teachers cope daily with the demanding nature of their profession is highlighted by Spours (2017) who opines that, notwithstanding the high dedication of FE staff who work in disadvantaged conditions compared to their counterparts in schools, their efforts appear to go unrecognised and they are not provided with adequate funding to deal with learners with diverse backgrounds and needs.

Additionally, over the years, I have had experience of jointly teaching the same cohort of learners with teachers both within and outside my department. This experience was a mixed one. This is because, in the majority of cases, each teacher concentrated on delivering their own specific subjects and rarely communicated or coordinated their activities with one another. On the other hand, I also had positive experiences with a few

colleagues with whom I shared ideas and resources, regularly exchanged information on learners' progress and discussed classroom-management strategies. I have also had the opportunity to observe some colleagues informally in their classrooms and have equally allowed them to observe my teaching. This has provided me with valuable experience and knowledge which I still find useful in my own practice.

All these experiences influenced my interest in the concept of collaboration and my desire to explore the reasons for the variation in teachers' attitudes to collaboration, the factors that drive them to collaborate and those that discourage them. In addition, it is my opinion that teachers not only have to be masters of their own subjects and possess the ability to effectively deliver them, but they also need to be conversant with on-going developments in their practice if they are to make a positive impact on their learners' learning. Consequently, I believe that working collaboratively provides teachers with an avenue to achieve objectives that they may find difficult to achieve on their own.

In the post-compulsory education sector, there is the added pressure of regular observations (graded and ungraded) and monitoring of teachers not only by the institutions in which they work but also through inspections by the Office for Standards in Education (Ofsted). This can put tremendous pressure on teachers to meet performance standards (Hodgson and Spours, 2011). For example, where a college receives an "inadequate" grade, teachers and management in that college usually come under intense pressure to adopt changes that are expected to lead to improvements in teaching and learning, as well as in learners' outcomes.

Moreover, on an individual level, where a teacher is graded during formal lesson observations as "unsatisfactory or inadequate," this could result in "capability" (disciplinary) measures being taken against the affected teachers. This can have a negative impact on teachers' self-esteem and self-efficacy (O'Leary and Gewessler, 2014). While teacher observation is still used as a performance measurement tool, in recent years Ofsted has removed the grading of individual teachers' lessons and has instead placed more emphasis on identifying common strengths and areas for development across an institution (Ofsted, 2017). This can help to reduce the anxiety and stress that teachers may experience during Ofsted observations (Burnell, 2017). Regular interaction with colleagues can not only provide teachers with the opportunity to develop pedagogical skills but also provide them with access to the social and professional support they might need to cope with daily work pressures. Teachers need to interact with

colleagues across institutions in order to share expertise and innovative teaching ideas, to be exposed to a variety of knowledge, and to help them minimise feelings of isolation.

The next section briefly introduces the concept of communities of practice as a model for teacher collaboration.

1.4: Theoretical Framework: Communities of Practice

The communities of practice (CoP) framework of Lave and Wenger (1991) and Wenger (1998) was adopted as the underpinning theoretical framework for this study. The framework can offer a suitable platform for understanding collaborative practices by teachers in the context of the post-compulsory education sector in the UK. This study involves two subject departments: basic skills and vocational. These departments can be separately regarded as communities of practice. This is because each subject department has its own shared history, culture, curriculum and language, which can determine the way teachers "conceptualise the world, their roles within it, the nature of knowledge, and learning" (Langan-Fox and Cooper, 2014:9).

The concept of communities of practice will be explored further in the literature review in Chapter 2.

1.5: Research Questions

This research explores the following questions: What is the range of collaborative practices engaged in by post-compulsory education basic skills and vocational teachers, and how do these teachers experience and value collaborative practices in supporting their learners' learning?

In addition, the following subsidiary questions are discussed:

1) Which teachers' work-related characteristics are likely to influence collaborative activities among post-compulsory education teachers?

2) What factors do post-compulsory education basic skills and vocational teachers perceive as the benefits of collaboration?

3) What do teachers in post-compulsory education basic skills and vocational teachers identify as barriers to effective collaboration?

4) Which specific strategies do post-compulsory education basic skills and vocational teachers view as likely to facilitate collaboration among teachers?

1.6: Thesis Structure

The study is organised into the following six sections: Introduction, Literature Review, Methodology, Quantitative data collection and analysis, Qualitative data collection and analysis, and Conclusion, recommendations and implications for practice.
Chapter 1 (Introduction) provides the general outline of this study, the personal and professional context, the research questions and the theoretical framework of communities of practice that underpin the study. The chapter sets the scene, identifies the issues under investigation and defines the participants. In Chapter 2 (Literature Review), I discuss and synthesise key themes on teacher collaboration as analysed in the relevant literature. In Chapter 3 (Methodology), I discuss the research paradigm I adopted for this study (pragmatism) and its justification, the specific research design I adopted (sequential explanatory mixed methods), the rationale for doing so, and the data collection and analysis process.

I present the analysis and discussion of the quantitative analysis in Chapter 4 and also identify key themes that were followed up in the second phase qualitative study. In Chapter 5, I present and discuss the findings from the second stage qualitative study. This involves a thematic analysis of interview data. I also present a summary of both quantitative and qualitative findings.

Finally, in Chapter 6 (Conclusion, recommendations and implications for practice), I provide a summary of findings from the study, highlight its contribution to knowledge, make recommendations and discuss the implications for practice for teachers, management, policy makers and educational practitioners. I also present the conceptual model for a successful teacher-collaboration developed from this study and make suggestions for further research.

The next chapter (Chapter 2), consists of a review of the literature.

CHAPTER TWO: A REVIEW OF THE LITERATURE

2.0: Introduction

The literature review offers the context for the research undertaken within this study and is based on an analysis of papers and documents drawn from electronic databases, government documents, and gray literature. The online databases included EBSCOHost Research Database, Emerald Insight, Sage Journals, Taylor & Francis, e-books, together with government reports, conference proceedings, thesis dissertations and research reports, which are commonly referred to as gray literature.

Through the problem statement, keywords, database search and continuous search of relevant materials, five dominant themes emerged which were used to structure this chapter, namely: (1) the concept of teacher collaboration as a way of enhancing teacher practices and learner outcomes; (2) team teaching and peer observation as techniques for developing classroom practice; (3) continuing professional development (hereafter CPD); (4) obstacles to teacher collaboration; (5) strategies for facilitating teacher collaboration

Due to the paucity of literature on teacher collaboration in the UK post-compulsory education sector, the review incorporates literature from primary, secondary and higher education sectors, both in the UK and internationally. As collaboration is not limited to specific types of institutions, the inclusion of data from these sectors in the review was thought to be likely to provide a broader perspective on the phenomenon under investigation.

2.1: Keywords

The following keywords were used to search online databases and academic journals: *collaboration, collegiality, cooperation, interaction, isolation, learning, reflection, professional development, management, communities of practice, further education, post-compulsory.*

The next section provides a discussion of communities of practice which is the theoretical framework on which the study is based.

2.2: Communities of practice

The concept of communities of practice (hereafter CoP) originates from the work of Lave and Wenger (1991) and Wenger (1998). The concept is defined as:

> *"A group of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis."* (Wenger et al., 2002:4).

The CoP concept can be related to the theory of situated learning of Lave and Wenger (1991:31) which views learning not as an isolated construction of knowledge by individuals, but as "an integral and inseparable aspect of social practice." Postholm (2012) links learning to two paradigms: the cognitive paradigm, which views the construction of knowledge as an individual act based on learning and absorbing what the individual is being taught, and the constructivist paradigm, which emphasises the role of knowledge construction by individuals through social interaction with others in the environment in which they live and operate. The latter paradigm aligns with the concept of CoP.

The concept of CoP can also be linked to Vygotsky's (1978) socio-cultural theory which viewed learning as a social construction of knowledge which occurs as a result of interactions with other people in society. Vygotsky's concept was initially used to show how children learn, but it has since been adapted to adult learning. In the view of Lee (2015), the socio-cultural theory is a useful concept in understanding adult learning as it involves interaction, cultural participation, and elements of the teaching environment. It has also been used in examining teacher education (Warford, 2011).

Vygotsky (1978) used the zone of proximal development (ZPD) to explain how learning occurs. He defines the ZPD as:

> "*The distance between the actual developmental level determined by independent problem-solving and the level of potential development as determined through problem-solving under adult guidance or in collaboration with more capable peers."*

Figure 2.1 below shows how teachers bring their past knowledge and/or experiences into the workplace. Through interaction and collaboration with peers, they are able to exchange ideas, learn from each other and, as a result, develop and enhance their teaching practice. This improved development enables them to improve their learners' learning.

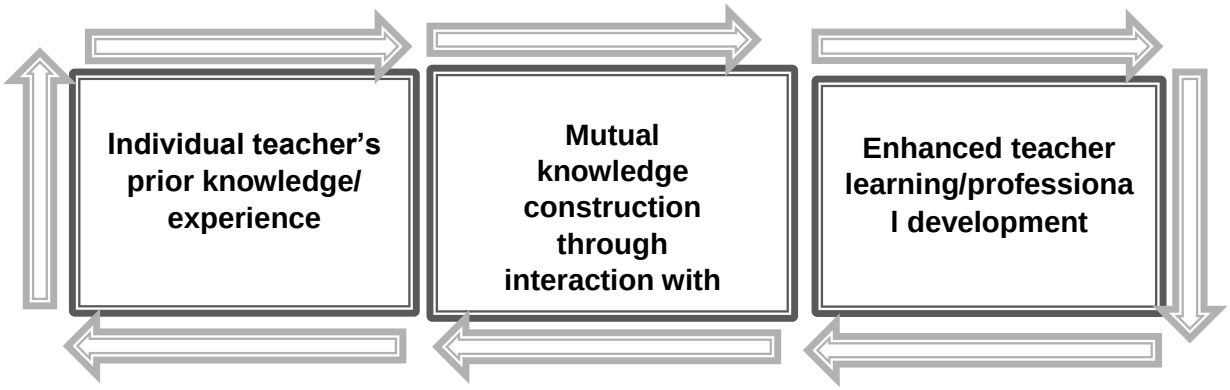


Figure 2.1: Application of ZPD to teacher collaboration

Similar to Vygotsky's concept of ZPD, Warford (2011) used the term zone of proximal teacher development (ZPTD) to denote the difference between what teachers are able to do on their own without assistance, and the maximum level of capability they can reach through assistance from more capable others such as teachers and supervisors. Again, this emphasises that learning is developed through interaction with others rather than as individuals.

Wenger (1998:69) highlights three characteristics of the CoP regarded as prerequisites for effective co-construction of knowledge: mutual engagement, shared repertoire, and joint enterprise.

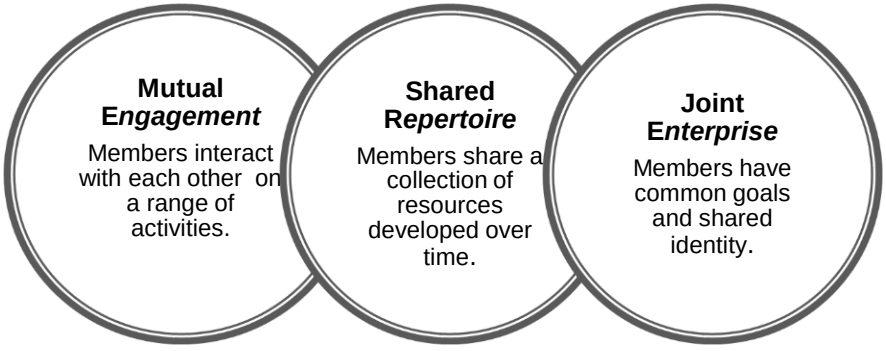


Figure 2.2: Three key elements of CoP. Source: Wenger (1998)

Mutual engagement involves a range of activities involving negotiation of meaning amongst members of a social relationship. Shared repertoire consists of shared resources such as symbols, language, shared history and customs which are created or implemented over a period of time. Joint enterprise relates to shared methods of communicating and a sense of shared characteristics that enable community members

to understand what they can share and which activities to participate in (Cheng and Lee, 2014).

In education, CoP involve professional staff working together to improve their students' learning (Hipp et al., 2008). These communities are regarded as methods of strengthening collaboration between teachers and developing teachers' knowledge (James et al., 2007; Levine and Marcus, 2010). CoP assume that teacher-development does not occur in isolation; hence, one of the intentions is to create learning communities where individuals can engage with each other to jointly construct knowledge and develop mutual relationships (Darling-Hammond and Bransford, 2005; Wenger, 2002).

In their theory of "legitimate peripheral participation," Lave and Wenger (1991:29) contend that:

> *"Learners inevitably participate in communities of practitioners and mastery of knowledge and skill requires newcomers to move toward full participation in the sociocultural practices of the community."*

The model suggests that novice learners start as apprentices, initially learn at the margin, then become full participants and ultimately become experts in their field. This process of "legitimate peripheral participation" is illustrated by the Literacy Study Group (2010) using the example of further-education student teachers in England, who become members of a college community through their placement experience in various colleges. The student teachers gradually acquire relevant local knowledge, practices, and skills under the guidance of a mentor and eventually become paid members of staff with teaching responsibilities.

The CoP model has however been criticised for its failure to take account of the fact that both novices and experienced members can learn from each other, and that newcomers can contribute new practices to the community from the past experiences that they bring into the community (Martyn, 2005).

Lave and Wenger (1991:116) appear to take this consideration into account when they note that:

> "*Shared participation is the stage on which the old and the new, the known and the unknown, the established and the hopeful, act out their differences and discover their commonalities, manifest their fear of one another, and come to terms with their need for one another."*

This suggests a recognition that both experienced and less experienced members of the community can learn and develop together through shared undertakings, mutual understanding, and mutual support. In teacher collaboration, the above quote can be described as teachers (experienced and inexperienced), with diverse views and interests, working out their "differing viewpoints and common stakes" through shared daily practice (Wenger, 1991:116). CoP not only provide opportunities for teachers to share knowledge and practice, they also enable them to engage in a critical review of their practice as they work jointly towards addressing the learning requirements of their educational institutions (Descombe, 2008; Murray, 2014; Stoll and Louis, 2007).

Another important feature of CoP is that they enable teachers to de-privatise their practice (Fullan, 2007; Vescio et al., 2008). According to Vescio et al. (2008:81), de-privatised practice "makes teaching public," resulting in pedagogical knowledge being shared with others, rather than being solely possessed by individual teachers (Horn, 2005). It also enables the involvement of other practitioners by allowing them to examine teaching, critique and authenticate teachers' practices (Lieberman and Mace, 2010). Additionally, deprivatised practice allows others to provide and receive feedback and creates opportunities for them to share the success and failures of their joint endeavours (Rigelman and Ruben, 2012; Stoll and Louis, 2007). Consequently, this leads to improvements in teachers' practice (Hadfield and Chapman, 2009). It also enables teachers to become trainers of their peers (Mourshed et al., 2010) through coaching and mentoring.

Although there is an argument that CoP should occur spontaneously and be led by teachers if they were to achieve the anticipated development outcomes (Chew and Andrews, 2010), they may also be structured (Ropes, 2010). Providing structured opportunities for teacher collaboration, focused on students' learning, can result in a significant improvement in learners' learning (Saunders et al., 2009). Additionally, when teachers engage in strong collegial interaction and participate in decision making within the CoP, they can achieve higher personal satisfaction, increased self-efficacy, and skills development that will support them in their practice (Futernick, 2007; Kurt, 2014).

However, there is an argument that the application of CoP can be challenging due to its different interpretations, the pressure to achieve personal development needs, and the cost an organisation can incur in an attempt to meet these needs (Li et al., 2009). Furthermore, Hargreaves (2013) observes that, despite the perceived benefits of CoP, there is no clear evidence that learning communities are connected to student

achievement. McGregor (2003) posits that CoP ignore the role of power dynamics within the community which can influence decision-making within that community. This suggests that dominant members of the community can exercise greater influence in making decisions to the disadvantage of less dominant members, who may remain in the periphery. As a result, decisions taken in CoP may not necessarily reflect the views of all the members of the community (Robert, 2006).

Conflicting interests can also affect the effective organisation of CoP. This is because they operate within a political context, involving government, policymakers, parents and senior management, who may have different priorities and interests from those of the community. Therefore, a conflict might arise where the priorities of the community are incompatible with those of other stakeholders, who might then view the community as a threat to their interests (Denscombe, 2008). Moreover, Wood (2007) observe that learning communities can be disrupted by factors such as insufficient participation, lack of influence in decision-making and outcomes, and lack of clarity of goals (see also Morrison, 2010).

Another obstacle is that collaboration in the community may be hijacked by unexpected personal discussions or crises, which may distract from the original intention of collaborative activities (Eaker, et al., 2002). Similarly, CoP can develop into cliques which are dominant, powerful and exclusive, and become resistant to evaluating each other's work (Wenger, 2002). Furthermore, Katz et al. (2009) warn that CoP are unlikely to achieve their goals if they lack focus or fail to address teachers' genuine needs. Hence the suggestion that CoP should focus on improving not just the learning needs of learners and teachers, but those of the educational institution as a whole (Jones, 2009; Murray, 2014).

Furthermore, the composition of members can impact on the effectiveness of CoP. For example, too large a membership can prevent the building of a cohesive community (Murillo, 2011), while a community that has too few members can become unproductive (Li et al., 2009). Moreover, there is a caution against CoP becoming a "one size fits all" approach, where management expect teachers to implement strategies in prescribed manners rather than encouraging them to question and test these strategies in ways that will lead to a review of their existing approaches to teaching and learning (Hargreaves, 2008:18).

This section has discussed the theoretical concept of CoP on which this study is based. It concludes that shortcomings notwithstanding, the concept is suitable for studying teachers' practice since it involves shared history, joint participation, joint knowledge-construction and shared resources in teachers' work settings.

The next section examines the concept of teacher collaboration.

2.3: The concept of teacher collaboration as a technique for enhancing teacher practices and achieving learner outcomes

This section examines the concept of teacher collaboration. It provides definitions of teacher collaboration and explores essential elements of collaborative practices and their impact on teacher development and learner outcomes.

2.3.1: Teacher collaboration: definitions and key features

The definition of teacher collaboration is diverse. Several terms such as collaborative learning, cooperation and collegiality have been used in place of collaboration (Slater, 2004). According to Friend and Cook (1992:5), it is "a direct interaction between at least two co-equal parties, voluntarily engaged in shared decision-making as they work toward a common goal." Kochhar-Bryant (2008:7) defines collaboration as "a process of participation through which people, groups and organizations form relationships and work together to achieve a set of agreed-upon results." Ludlow (2011) describes teacher collaboration as a professional team, who work on an equal basis to support one another in achieving reciprocal results. Mourshed et al. (2010) describe it as joint working between teachers and management to develop effective teaching practices with the sole aim of improving individual practice.

According to Hattie (2015:27):

> *"Collaboration is based on cooperativeness, learning from errors, seeking feedback about progress and venturing into the 'pit of unknown' together with expert help that provides nets and, ultimately, ways out of the pit."*

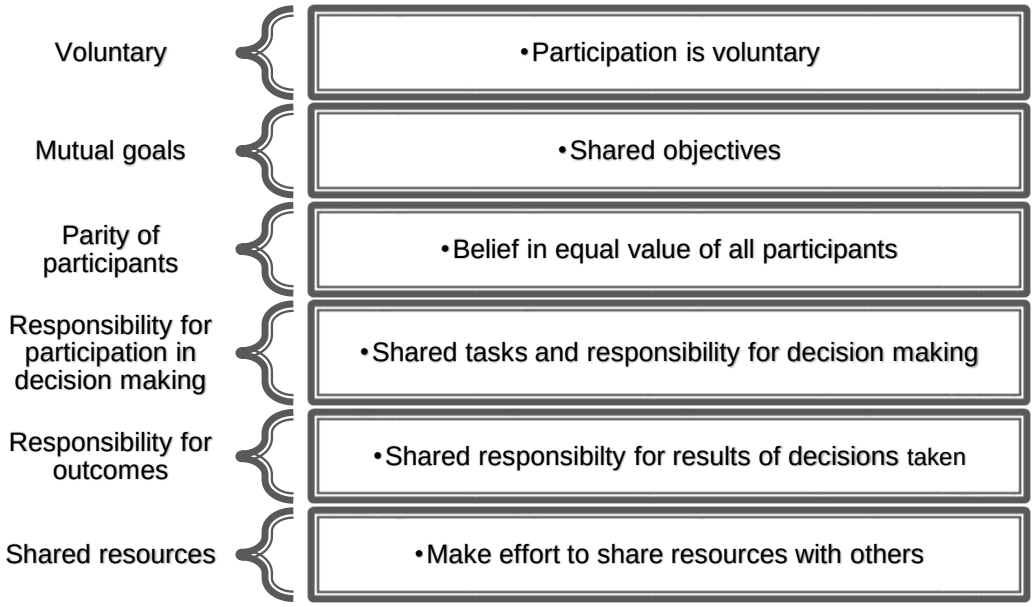
These definitions highlight the lack of consensus on the definition of teacher collaboration. While some view it a voluntary practice between teachers of equal status (Friend and Cook, 1992; Ludlow, 2011), others regard it as an activity that involves other professionals such as managers or experts (Hattie, 2015; Mourshed et al., 2010), indicating a more formalised form of collaboration. However, the common themes that run across these

definitions are joint working and mutual goals, thus highlighting the mutually beneficial nature of teacher collaboration.

Hargreaves (1994:186) categorises teacher collaborative practice as a “collaborative culture and contrived collegiality.” He views collaborative culture as an unplanned voluntary working relationship among peers, aimed at achieving common goals, while contrived collegiality is described as management-led, mandatory and predictable. This is similar to the classification of collaboration by Hua et al. (2010) into structured (formal) such as departmental and institutional meetings, and unstructured (informal) involving spontaneous meetings where teachers exchange opinions on issues they view as important.

As illustrated in Figure 2:3 below, Friend and Cook (1992) identify six key characteristics that a successful collaboration should possess:

Figure 2.3: Characteristics of a successful collaboration



Source: Friend and Cook (1992)

The common features in Figure 2.3 that define and characterise genuine collaboration are voluntary participation, shared objectives, equal participation and shared resources. However, Friend and Cook’s (1992) characteristics of a successful collaboration also include sharing of tasks and responsibility for making decisions and sharing responsibility for the result of those decisions.

This section has examined the definition and defining features of the concept of teacher collaboration. From the literature outlined in this section, teacher collaboration has a number of defined features: joint participation, shared objectives, shared responsibility, shared knowledge and shared resources, with the ultimate aim of improving professional practices and learners' learning and outcomes.

The section also discussed in more detail the concept of CoP, which is the framework on which this study is based. Despite the potential shortcomings outlined above, CoP can provide a good lens through which teacher collaborative practices can be observed since they involve interaction, mutual learning and sharing of knowledge within and among groups of teachers.

The next section examines the various types of collaboration that teachers participate in. It focuses on two key types of collaboration (team teaching and peer observation) that teachers engage in within their classrooms.

2.3.2: Types of collaborative practices

Collaboration enables teachers to shared objectives, share responsibilities and share expertise for joint decisions about their collective practice (Meirink et al., 2010). Among other activities, collaborative activities can range from attending staff meetings involving joint curriculum development (Coburn et al., 2012) to implementing new teaching practices (Cobb and Jackson, 2011) and jointly preparing and analysing lessons (Darling Hammond et al., 2010). It can also involve peer observation, where teachers attend each other's classes to observe lessons and give one another feedback (Byrne et al., 2010; Nash and Barnard, 2013).

Teacher collaboration can also involve team teaching, where two or more teachers jointly teach a cohort of learners (Ferguson and Wilson, 2011; Friend and Cook, 2007), or mentoring and coaching, where experienced teachers work jointly with less experienced teachers (Poet et al., 2010). It can also include building relationships resulting from regular contacts with peers in their departments as well as with colleagues from outside their departments (Fielding et al., 2005).

One of the most common collaborative activities involves joint analysis of learners' assessment data (Harris and Jones, 2012; Vescio et al., 2008). This involves examination of learners' assessments, identifying students' learning needs, devising effective strategies to meet these needs and reflecting on how they impact on learners' learning

(Wei et al., 2009). Joint identification of gaps in learners' learning and finding solutions to these gaps can lead to a collective improvement in teachers' practices (Darling-Hammond and Richardson, 2009).

There are however limitations to the analysis of learners' data. Ronfeldt et al. (2015) observe that the level to which collaboration on data positively impacts on learners' learning depends on the organisational contexts in which teachers work, such as support from leadership, existing organisational and cultural practices, and how data are normally used. Furthermore, Datnow and Park (2012) observe that the usefulness of collaboration data depends on whether teachers are able to use the information and ideas to change their teaching methods. They further note that inexperienced teachers in collaborating teams can misinterpret or misuse data. Furthermore, Hargraves and Shirley (2009:92) argue that, "data inform but do not drive judgment about practice." This suggests that the effectiveness of data is dependent on how teachers utilise them.

Collaborative practice can also take place within individual departments or across different departments. Rempe-Gillen (2017) observes that in England, the commonest form of collaboration involves groups of teachers within one department or school. However, collaboration across departments appears to be harder to organise than within. This is because teachers traditionally work within their individual departments and subject areas, limiting their ability to interact with other departments (Corcoran and Silander, 2009; Holley, 2009).

The predominance of departmental collaboration is due to teachers' shared experience and mutual goals in the form of a shared curriculum, a shared cohort of learners, and shared resources (Harris and Jones, 2009). In addition, collaboration within departments is more likely due to shared interests (Rempe-Gillen, 2017). These include teaching similar subjects or grade levels (Eschler, 2016). However, Meirink et al. (2010) argue that organising teachers into departments does not guarantee that they will work collaboratively on topics that will enable them to gain new knowledge, change their belief systems or improve their practice.

Research indicates that working collaboratively across departments can provide opportunities to engage in professional dialogue with teachers across departments, to learn different approaches to teaching and to aid the transformation of teachers and institutional practices (Hindin et al., 2007; Holley, 2009; Wenger, 2000). For example, engaging in interdisciplinary projects can give teachers access to a combination of

knowledge and innovative ideas from several disciplines (Wenger, 2000), which can in turn help to improve the school system as a whole (Mourshed et al., 2010). On the other hand, limited opportunity to work across departments can inhibit teachers' ability to access innovative teaching and learning ideas (Meirink et al., 2010).

As indicated earlier, collaboration can be formal or informal (Hua et al., 2010). A study by Hargraves (1994) into school development found that rigidly structured and highly centralised collaborative activities did not result in school improvement, but that voluntary, unplanned collaboration, focused on teacher development, was more likely to result in such improvement. This suggests that informal and spontaneous collaboration can be more effective than formal collaboration. Informal collaboration can occur in places such as staffrooms, print areas, coffee areas, kitchens and lounges where staff engage in impromptu conversations and in collaborative work (Hua et al., 2010). Teachers appear to prefer informal collaboration since they find it a more expedient method of dealing with their classroom practices and gaining quick answers to spontaneous queries and problems that they have to deal with in their daily practice (Goddard et al., 2007; Wilson and Demetriou, 2007).

A mixed-methods study by Stevenson (2004) of teachers' perceptions regarding informal collaboration on technology, found that management utilised the skills and knowledge of existing teachers by nominating "informally recognised experts" among colleagues who had knowledge of the curriculum and troubleshooting issues, passion for the subject, enthusiasm to share information and readiness to provide immediate assistance. These "informal experts" were found by participants in the study to be valuable and innovative. The idea may be regarded as a semi-structured form of collaboration and can be used as a bridge between formal and informal collaboration.

This section has examined the concept of teacher collaboration and the variety of collaborative activities in which teachers in primary, secondary and higher education engage in order to support their professional development and their learners' learning. Next, I will seek to examine which of these activities the teachers in my study engage in.

2.3.3: Benefits and importance of teacher collaboration on teaching and learning

Several studies have shown that the success or failure of a school system depends largely on the quality of teachers and the level of collaboration that takes place within those schools (Darling-Hammond, 2010; Department of Education, 2010; Williams, 2014). As Hattie (2015:2) notes:

> *"The greatest influence on student progression in learning is having highly expert, inspired and passionate teachers and school leaders working together to maximise the effect of their teaching on all students in their care."*

Williams (2014) emphasises the importance of prioritising improvement in teacher quality. Teachers' quality can be enhanced by working with colleagues to build knowledge and find solutions to teaching and learning problems that will benefit both them and their learners (Hunzicker, 2010; Little, 1992; Musanti and Pence, 2010). Such collaboration enables teachers to benefit from their colleagues' skill and expertise (Sawyer, 2007). Exposure to different ways of solving problems can encourage teachers to review and improve their own current practice (Meirink et al, 2007).

This increased emphasis on collaboration arises from concern about the isolated manner in which many teachers normally work. Lortie (1975) identifies three factors in teaching that hinder improvement in education. These are (1) individualism, where teachers work in isolation and rely on their own judgement of effectiveness; (2) presentism, where teachers are satisfied with short-term outcomes and are not interested in broadening their knowledge to improve their practice; and (3) conservatism, where teachers feel comfortable with the status-quo and are resistant to changes in institutional practice.

Many teachers are said to be comfortable with a "culture of individualism" (Hargreaves, 1994:425) that enables them to "exercise independence within the privacy of their classrooms." Hargreaves observes that this culture may make teachers reluctant to share problems they encounter in their work for fear of appearing incompetent. Other studies across all education sectors (primary, secondary and university) have confirmed that teachers prefer to work largely alone and rarely participate in professional collaboration specifically aimed at improving their students' learning (Levine and Marcus, 2010; OECD, 2011; Rigelman and Ruben, 2012). Regarding collaboration on improving students' learning, Hattie (2015:23) notes:

> *"We create staffrooms for teachers to work and debate together, but the discussions are typically dominated by curriculum, students and assessments, rarely by learning and even more rarely by the impact of teaching on student learning."*

The results of the Organisation for Economic Cooperation and Development's 2013 teaching and learning survey (OECD, 2014), which collected data from 34 countries around the world, revealed not only that many teachers work in isolation, but that over half of them had never or had infrequently taken part in team-teaching or observed their colleagues' teaching. Proponents of teacher collaboration view it as a way of encouraging

teachers to break this isolation culture. Nieto (2009:12) notes that teaching can be “an incredibly lonely profession” and that teachers need allies in order to “remain fresh, committed, and hopeful.” Working collaboratively, not as isolated individuals, can enable teachers to develop their expertise through learning from their colleagues and working towards achieving common goals for their students’ learning (Sawyer, 2007).

Collaboration can result in a change of perception when teachers share knowledge, have increased access to learning, listen to their colleagues and observe how they resolve intellectually challenging and practical issues (Hindin et al., 2007). Moreover, collaboration provides opportunities for school improvement and professional development of teachers as a result of knowledge acquired and the opportunity to work towards common teaching and learning goals of their institutions (Stoll and Louis, 2007). Collaboration can also lead to increased confidence and improved practice (Jackson and Bruegmann, 2009; Levine and Marcus, 2010).

A few studies have found an association between learner improvement and teacher collaboration. However, these links are complex. For instance, research by Goddard et al. (2007) into improvement in schools and student attainment, involving 47 primary schools, 452 teachers and 2,536 learners in the USA, found that schools with higher teacher collaboration produced significantly better success rates for students. However, they cautioned against generalising this finding since the research was solely based on primary schools.

Another study was conducted by Ronfeldt et al. (2015) into the quality of teacher collaborative practices and their impact on learner achievement. This study examined 9,000 teachers in 336 American schools, using survey and administrative data over a two-year period. The results indicated that the majority of teachers reported improved practice as a result of collaboration. However, the same research also found that collaboration was insufficient in managing learners’ classroom behaviour. Other researchers have also indicated that dealing with learners with challenging behavioural issues is one of the major challenges that teachers encounter in the classroom and can result in stress and teacher burnout (Lambeth et al., 2009; Murali, 2016). This indicates that, in addition to collaboration, teachers require support and guidance, including training to support them in dealing with students’ behaviour (Hytten, 2011; Murali, 2016).

Research also indicates that teachers who engage in collaboration become more motivated and their attitude towards work improves (Stoll, 2015, York-Barr et al., 2007).

As noted by Little (1987:218):

> *"For teachers, collegiality breaks the isolation of the classroom and brings career rewards and daily satisfactions. It avoids end-of-year burnout and stimulates enthusiasm."*

This suggests that collaboration can contribute to teacher-motivation and helps in reducing work-related stress. However, collaboration does not necessarily result in teacher motivation. For example, a meta-review of the literature by Shakenova (2017) involving 33 articles and 52 books, concluded that, despite the perceived positive influence of collaboration on student learning and teaching practice, it can lead to a reduction in teachers' motivation if it is controlled by management, and perceived as a reduction in teacher autonomy. This is in line with the notion of contrived collegiality where collaboration is management-controlled rather than a voluntary and spontaneous action by teachers (Hargreaves, 1994).

Another positive effect of collaboration is that it can result in increased teacher self-efficacy, which is defined as "a judgment of one's capability to accomplish a given level of performance" (Bandura, 1986:391). In other words, it relates to the confidence which teachers possess regarding their ability to perform their job effectively and influence their learners' learning and performance (Kurt, 2014; Meirink, 2007). Evidence shows that teachers with high efficacy tend to produce higher student achievement (Bruce et al., 2010) and that high efficacy beliefs can prevent stress and burnt-out (Ross, 1998). Collaboration involves social interaction, which can provide teachers with the opportunity to receive emotional support from their peers when they are facing difficulties in their work and can also assist them in reducing work-related stress (Chadbourne, 2004).

Stoll (2015) notes that collaboration can build trust and relationships that allow teachers to engage in critical conversation as well as challenge each other's practice through the exchange of diverse views, and engagement in professional dialogues. Collaboration can also result in a shift towards teaching and learning and a change in teacher belief (Hindin et al., 2007; Meirink et al., 2007).

A study by Mierink et al. (2007) looked at how individual teachers learn in interdisciplinary collaboration. Involving five Dutch upper secondary schools and 34 teachers from five interdisciplinary teams, it found that 21 of these 34 teachers significantly changed their beliefs about teaching and learning. Collaboration can also facilitate good relations among teachers and lead to improvement in teaching practice (Goddard et al., 2007; Harris, 2014; Lieberman and Miller, 2011). It can also result in teacher-innovation and

joint learning and development (Harris and Jones, 2009). This is because effective collaboration requires a focus on pedagogic discussions involving teachers' sharing and critically examining each other's practices (Pollard, 2010).

Opfer and Peddar (2011), however, maintain that teachers do not necessarily learn from collaboration. They regard collaboration as a "double-edged sword" which should be exercised in moderation. If practiced to excess, they argue, collaboration can restrict teachers' learning since it has the potential to encourage adherence to group norms at the cost of individual creativity. On the other hand, they recognise, insufficient or lack of collaboration can result in teacher isolation and restrict opportunities for learning from others.

Effective communication is regarded as a key factor for effective collaboration, though it too may be a double-edged sword. On the one hand, good communication can encourage cooperation, mutual support and sharing of views among teachers (Engeström, 2007) and can also help in resolving complex problems (Dixon et al., 2005). On the other hand, ineffective communication may create tension and disagreements between participants due to differences in ideas and concerns raised by each collaborating side (Lefstein, 2010).

Research indicates a link between gender and collaboration. A study by the OECD (2009) on teaching and learning in 24 countries around the world, involving 200 schools and 4,000 teachers, established that female teacher are more likely to engage in collaboration than their male counterparts. Similarly, mixed methods study in the UK by ATL (2005), comprising 1,000 teachers from primary and secondary schools, found that female primary-school teachers tend to work more collaboratively than their male colleagues.

Ronfeldt et al. (2015), in their study mentioned earlier, found that more experienced teachers tend to engage less in high-level collaboration. Likewise, Hargreaves, (2005) note that experienced teachers tend to be more resistant to change, engage less in collaboration and suffer a decline in their improvement than less experienced teachers. However, research by Papay and Craft (2016) into how teachers improve by using standardised test results over a 10-year period in a US school, found no negative link between years of experience and teacher collaboration. Rather, they found that experienced teachers continue to develop late into their careers with 35% of teachers enjoying an improvement in their career after 10 years and likely to continue to engage in different forms of collaboration.

Nevertheless, the researchers found variations in the how teachers improve during the course of their profession and that experienced teachers who work in schools with effective peer-collaboration systems tend to develop faster than those in schools with less effective peer-collaboration systems. However, the methods used by each researcher is different and this could account for the variation in results. Ronfeldt et al. (2015) utilised survey questionnaires and administrative data over a two-year period, while Papay and Craft (2016) used standardised test scores of experienced teachers in a longitudinal study over a 10-year period.

2.3.4: Summary

This section examined the benefits and importance of teacher collaboration for teaching and learning. The evidence suggests that teachers still generally prefer to work alone rather than working collaboratively. Research also shows that collaboration has mixed results in its impact on students' learning. Collaboration is however regarded as a way of reducing teacher isolation since it enables teachers to engage in professional interaction, share different perspectives, and learn innovative teaching practices. Additionally, teachers mainly tend to collaborate in individual departments and to engage less in cross-departmental collaboration. Lastly, teacher collaboration is more likely to occur informally than formally.

The next section examines the collaborative techniques of team teaching and peer observation.

2.4: Team teaching and peer observation as techniques for enhancing classroom practice and learners' learning

This section examines two of the collaborative practices whereby teachers directly put the concept of collaboration into practice in the classroom. The two practices are regarded as useful for developing teaching practice and improving learners' learning.

2.4.1: Team teaching

Several terms including "collaborative teaching," "cooperative teaching" and "co-teaching" have been used interchangeably with team teaching (Carpenter et al., 2007). This study will adopt this approach. Team teaching is regarded as one of the strategies for developing teaching practice and learners' learning (Colburn et al., 2012). It is described by Friend and Cook (2007) as a condition where two or more professionals teach learners

within the same classroom as a way of responding to the complex and diverse teaching and learning needs of learners, which are increasingly difficult for a single teacher to handle (Ferguson and Wilson, 2011).

According to Friend (2016:21), team teaching is “less a marriage and more like a business partnership,” where individual teacher “brings important knowledge and skills to the classroom, and they learn from each other.” This suggests that team teaching partners have equal status as each brings individual knowledge, experience, and skills which they then jointly use to support learners’ learning in the classroom.

Lester and Evans (2009) note that engaging in team teaching enables teachers to share insights about pedagogy and the content of the subject they jointly teach. A qualitative study by Kohler-Evans (2006), which explored teachers’ experience and perceptions of a team-taught class, found that team teaching enabled teachers to gain improved pedagogical and content knowledge of their subjects. The study also found that teachers improved their confidence and gained access to new ideas, while learners were able to experience different teaching techniques that meet their diverse learning styles and needs.

Research outcomes into the impact of team teaching on learners’ learning and achievement is mixed. For example, Bacharach et al. (2010) conducted a four-year mixed-methods study involving 826 teaching pairs in a US elementary school; they used learners’ standardised test scores to find out whether there are variations between team-taught classes and non-team-taught classes and the achievement of learners. They found that students in the classroom using team teaching had higher performance levels than those who were taught in classrooms without team teaching.

One of the limitations of this research is that it was conducted in only one school district, which limits its generalisation. This research was however backed up by Colburn et al. (2012) in their investigation into the effect of team teaching on learner achievement involving 50 undergraduate learners in three sections of a business department. They found that previously low achieving learners gained higher than expected results in a team-taught course. Again, they noted that the generalisabilty of the research was limited by the low number of learners involved in the study and the fact that only one department was studied.

On the other hand, a recent qualitative study was conducted in the UK by Money and Coughlan (2016) on the experiences of undergraduate learners on team-taught and

individually taught courses. They found that learners preferred individually taught over team-taught courses. Some of the reasons attributed to this are a clear understanding of a single teacher's requirement about the course, familiarity with a single teacher's teaching style as opposed to those of multiple teachers, and the continuity that results from being taught by the same teacher all the time.

Barriers to team teaching include difficulty in allocating workload among the team-teaching team (Plank, 2011). In addition, a survey by Ross-Hill (2009) of 73 teachers from three primary and secondary schools in the USA, involving special and general education teachers' attitudes to inclusive classrooms, found that lack of sustained training over time can result in frustration and stress among team teaching participants and students.

Differences in teaching philosophy and techniques can also create difficulties between team teaching partners. For example, the OECD (2009) found that female teachers tended to hold constructivist views of learning (that is, to view learners as active participants to knowledge acquisition), while male teachers tended to hold a direct transmission view of student learning (that is, to view the teacher's role as the transmission of knowledge). Moreover, Kohler-Evans (2006) opines that team teaching can be time-consuming since it requires individual teachers to spend extra time planning and preparing for their section of the lesson. She suggests the provision of common planning time for team teaching teams.

In summary, team teaching is one of the collaborative practices engaged in by teachers to enhance their teaching practice and their learners' learning. Despite its attributed benefits such as mutual contribution to classroom practice and the ability to meet the different needs of learners through sharing of responsibility for teaching, it can be hindered by factors such as lack of time for planning, different teaching philosophies and lack of training.

The next section discusses the technique of peer observation, another collaborative practice perceived as improving teachers' practice and learners' learning.

2.4.2: Peer observation

Peer observation relates to the practice whereby teachers observe other teachers' lessons and provide feedback with the aim of improving the quality of teaching as well as learners' achievement (Brown and Challen, 2010; Byrne et al., 2010; Nash and Barnard, 2013). One of the aims of peer observation is to encourage teachers to engage in planned

conversation about learning through mutual analysis of one another's practice in an atmosphere of trust and a non- threatening environment (Martin, 2011). This is in contrast with the mandatory observation of lessons carried in FE by management or Ofsted to check the quality of teaching in the classroom (Burnell, 2017).

A range of authors also emphasise the role of peer observation in enabling teachers to engage in reflective action as a result of jointly working with peers, observing how their peers engage in teaching and solve any practical problems they run into, and evaluating their experiences in order to improve their own practice (Horne and Little, 2010; Purnell and Monk, 2012; Wilkins and Shin, 2011).

Critical reflection is regarded as an important element in peer observation. Brookfield (2017:8) argues that:

> *"Inviting colleagues to watch what we do, or engaging in critical conversations with them, helps us to notice aspects of our practice that are hidden from us, and provides opportunities for colleagues to "suggest perspectives we might have missed and responses to situations in which we feel clueless."*

This suggests that engaging in peer observation enables teachers to reassess their teaching strategies as they observe colleagues, learn new techniques and exchange feedback on how to improve teaching and learning (Bell and Cooper, 2013). Not only do observed teachers receive feedback on their practice; the observer also gets the opportunity to reflect on his or her teaching practice through watching colleagues teach successfully (Bell and Cooper, 2013; Hendry, 2014).

Assessments of the impact of peer observation on teachers' practice are mixed. In a study by Hendry and Oliver (2012), teachers reported that peer observation not only reconfirmed their current self-efficacy but also increased it. Additionally, they found feedback from colleagues beneficial and motivating. By contrast, Lomas and Nicholls (2005) found no conclusive evidence connecting peer observation and improved teacher practice across departments or institutions.

Moreover, research by Lomas and Kinchin (2006), aimed at evaluating the effectiveness of peer observation in a UK university and involving interviews of 20 teachers, found that teachers were suspicious of peer observation. They were wary of perceived interference in their academic freedom and expressed doubts about the accuracy of what was observed and the objectivity of observing colleagues. However, this research is limited by the low number of participants and the fact that it was conducted in only one university.

Burnell (2017) opines that the mandatory observation of lessons, especially by Ofsted, has had a massive impact on the lives of FE managers and teachers, and has serious implications for classroom practice and careers prospects. Furthermore, O'Leary and Gewessler (2014) suggest that lesson observations can create a "culture of fear." This, in turn, can increase teachers' stress and anxiety, resulting in high levels of sickness and absences, and adversely affect self-confidence and self-efficacy. Additionally, research by Bell and Cooper (2013) contends that teachers are often fearful that feedback from observation could be used by managers for individual performance appraisal or that colleagues might have access to the observation data.

Kholer-Evans (2006) opines that many teachers feel uncomfortable and unwilling to allow their colleagues to observe their teaching, especially if those colleagues are experts in their field. Another study by Shortland (2010), which used 10 peer observations from UK higher education institutions as a single case-study, concluded that feedback from observations can be viewed by the observed teacher as subjective, personal or unreasonably critical, even though that might not be the observer's intention.

To militate against the fear of observation, Hendry (2014) argues that the focus of observation should be the observing teacher rather than the observed teacher. This suggests focusing peer observation on what the observer gains from the observation. Other suggestions include ensuring that the decision to share observation data with others should be at the observed teacher's discretion (Crisp et al., 2009) and that voluntary participation and equal status between the observed and the observer should be observed (Bell and Cooper, 2013). This supports the notion advanced by Hargreaves (1994) and Friend and Cook (1992) of collaboration as a voluntary and informal exercise; furthermore, Friend and Cook (1992) argue for the equal value of participants as a condition for successful collaboration.

This section has examined the collaborative practices of team teaching and peer observation. While the techniques can allow teachers to mutually observe and learn from each other and provide feedback for further improvement, it can also be seen by teachers as an unwelcome intrusion of their privacy and erosion of their authority. Additionally, teachers appear suspicious of management's use of information gathered through peer observation. The study will seek to explore the degree to which participants participated in team teaching and peer observation and their perceptions of the techniques.

The next section discusses some of the constraints to effective collaboration among teachers.

2.5: Constraining factors on effective teacher collaboration

Although evidence shows that teacher collaboration is one of the techniques for improving teachers' practices, this section discusses some of the constraints that could affect effectiveness.

2.5.1: Excessive workload

One of the major barriers to teacher collaboration is excessive workload. It is regarded as a major factor which limits the amount of time and motivation teachers have for collaboration (DuFour, 2011; Mather et al., 2007; Searle, 2011). A study conducted by the UK Department for Education (2015) found that activities such as recording and inputting, monitoring and analysing, marking, preparing lessons and weekly planning, administrative and support tasks, attending staff meetings and implementing new initiatives contributed heavily to teachers' workload. Other activities that added to teachers' workload included reporting on learners' progress, and setting and reviewing learners' targets (Carpenter et al., 2007; Mather et al, 2007; Ofsted, 2014).

Similarly, a Guardian (2016) survey of teachers' lives found that a high number of teachers (82%) reported that their workload had increased to an unmanageable level to the detriment of their physical and mental health, while one- third of teachers reportedly worked more than 60 hours a week. Coffield (2008:23) questioned where teachers would find the time to collaborate "if nothing is done about increasing workloads and endless, repetitive administration." In view of this, Ofsted (2014) recommended a reduction and simplification of planning documents, which they assessed as having a negative impact on teachers' flexibility and creativity.

Correspondingly, a report by the Department for Education (2016) into teachers' workloads noted that preparation such as detailed lesson plans "can become a box-ticking exercise and create an unnecessary workload for teachers." The Department of Education (2016) suggested that, in order to reduce teachers' workload, time spent on planning could be more productively spent on collaborative planning and professional development activities that were focused on specific classroom contexts.

However, there appears to be a contradiction between Coffield's (2008) argument that excessive workload makes it almost impossible for teachers to find time to collaborate and the Department for Education's (2016) suggestion that joint collaborative activities could help in reducing teachers' workload.

2.5.2: Lack of trust

Another important factor that can hinder collaboration is lack of trust. This is because a low level of trust can make teachers to become reluctant to share teaching ideas or their learners' work with colleagues (Smith, 2014). Additionally, lack of trust is likely to reduce teachers' interest in taking risks and becoming innovative (Reina and Reina, 2007). Similarly, Fullan (2005) notes that lack of trust within an organisation hinders knowledge transformation by individuals.

By contrast, a trusting environment can motivate teachers to work jointly towards achieving mutual objectives of their institutions (Fullan, 2010). Working in a trusting environment can embolden teachers to take risks, commit errors, learn from these errors, and engage in innovation and reflective activities (Hattie, 2015; Murray, 2014). The importance of a trusting environment is emphasised by Hattie (2015:25) who notes:

> *"Professional conversation must take place in an atmosphere of trust, without which teachers will close ranks, put up shutters and retreat to old and tried methods behind a closed classroom door, claiming they have evidence they can improve learning."*

This suggests that, without trust, teachers will be unwilling to seek professional help when they need it. A study by Jameson (2010) into trust and leadership in the post-compulsory education sector in the UK, found that creating a trusting environment encourages involvement in collaboration, openness between managers and staff, as well as a leadership culture based on common professional values that prioritise learners' needs. Similarly, Nieto (2009:11) notes that an atmosphere of openness that enables teachers to challenge management policies and practices is more beneficial than "running a school like a fiefdom in which teachers have little and feel they are treated more as technicians than as professionals."

2.5.3: Clarity of collaboration objectives

Effective collaboration can be hindered by lack of clear goals and purpose (Troen and Boles, 2012; Kochhar-Bryant, 2008; Muijs et al. 2011). Therefore, making the goals of collaboration explicit and involving teachers in determining those goals is likely to

empower and motivate them to engage in collaborative ventures (Waldron and Mclesky, 2010), and make them more likely to commit to ensuring the success of those ventures (Friend and Cook, 2000).

2.5.4: Teacher attitude/personality

Individual personality is regarded as one of the key influences on teachers' behaviour and attitude, their relationships within an organisation and their willingness to share knowledge and resources (Jadin et al., 2013). When teachers collaborate with their colleagues, it can foster good relations and consequently result in improved practice (Harris, 2014). However, collaborative groups consist of teachers who are likely to have different personalities, perspectives, belief systems and professional aims, and this can result in irreconcilable differences with negative consequences for effective collaboration (Jao and McDougall; 2016; Kwakman, 2003; Williams, 2010).

Despite the stated benefits of collaboration, some teachers prefer to work alone and are unwilling to share ideas and resources (Cowan, 2000). This preference has been linked to various factors such as lack of interactional and collaborative skills (Friend, 2000; Ross-Hill, 2009), and protection against perceived intrusion on their territory (DuFour et al., 2004). This can result in a reluctance by teachers to seek assistance from colleagues even when faced with difficulties (Troen and Boles, 2010). Consequently, isolation can prolong teachers' lack of self-confidence about their pedagogic ability because of their reluctance to open their work to scrutiny for fear of exposing their weaknesses to colleagues (Little, 1993).

There is also concern that teacher collaboration can result in "group think," which Janus (1982:12) refers to as a situation in a group where "loyalty requires each member to avoid raising controversial issues." Scribner et al. (2007:72) opine that groupthink in collaborative groups can result in "unduly convergent thinking," which occurs when collaborating members are more interested in reaching consensus on decisions than in looking for the most effective decision. This suggests that collaborating groups could make decisions based on group unanimity, solidarity, and cohesion at the expense of the best decision possible. Another reason why teachers might be reluctant to engage in collaboration is the perception that it is an undervalued activity that is normally unmonitored (Goddard et al., 2007; Brook et al., 2007). This could give the impression that management is indifferent to the idea and therefore teachers might regard collaboration as unnecessary and a waste of time.

2.5.5: Administrative support

Effective collaboration requires the provision of adequate administrative support (Wells and Feun, 2007). When teachers are provided with the necessary organisational support, they can improve their own ability and, consequently, their students' learning (Kraft et al., 2015). However, Mourshed et al. (2010) observe that sustained and effective collaboration requires more than just an adjustment in an organisation's structures and systems, but also a change in teachers' attitude to change. This is because there is an assumption that many teachers are reluctant to embrace change (Brown and Knowles, 2007). It is important for teachers to break the culture of isolation through their willingness to embrace change and engage with their peers (Bunker, 2008).

This section has discussed some individual and institutional factors that can militate against effective teacher collaboration. It shows that individual factors such as teachers' personality or attitude, as well as institutional factors such as the presence of lack of clear goals, trusting relationships, and administrative support, can facilitate or hinder collaboration. Excessive workload can be a further problem hindering collaboration.

The following section identifies some strategies for enhancing collaboration among teachers.

2.6: Strategy for enhancing collaboration

This section discusses some of the approaches that can facilitate effective collaboration among teachers.

2.6.1: Dedicated collaboration time

A number of studies have suggested that structured collaboration times and days should be embedded within the teaching schedule and not outside it, in order to encourage teachers to collaborate (DuFour 2011; Saunders et al., 2009; Wimberley, 2012). The notion is that, if collaboration is embedded within teachers' normal teaching, they will come to view these periods as part of their normal daily routine rather than as extra activities organised after an exhausting teaching day (Buffum et al., 2009). In order to use the allocated periods effectively and to avoid distraction from the real objectives, Friend and Cook (2009) and Mourshed et al. (2010) suggest that teachers should be given specific goals to focus on. However, this suggestion contradicts the idea of collaboration as a voluntary activity among peers (Friend and Cook, 1992; Hargreaves,1994) and

raises the issues of formal collaboration and trust between teachers and management (Fullan, 2010; Smith, 2015).

2.6.2: Encouraging collaboration culture

DuFour and Mattos (2013) suggest that a collaborative culture, with emphasis on collective responsibility, is required if teaching and learning are to be significantly improved. Papay and Kraft (2016) suggest that such a culture depends on the key role management plays in fostering a productive environment with well-structured teams, whose goals and interests take teachers' needs into account, providing administrative support, and encouraging institution-wide cultures.

Again, this suggests a formal form of collaboration. Equally, management needs to encourage an atmosphere where errors are regarded as "a learning opportunity," and "teachers can feel safe to learn, re-learn, and explore knowledge and understanding" (Hattie, 2009:9). Therefore, according to these authors, effective and sustainable collaboration requires a total organisational approach, where the entire teaching staff and management of an organisation work collaboratively for the collective good, in order to achieve a whole-system reform (Fullan, 2010; Seashore Louis et al., 2010).

2.6.3: Promoting and rewarding collaboration efforts

Teachers can be encouraged to participate in collaborative endeavours if collaboration is promoted and teachers' collaborative efforts are valued and rewarded (Ash and D'Auria, 2013; DuFour et al., 2005). The reward may take the form of or non-financial financial incentives. For example, teachers may be provided with financial rewards such as monetary vouchers, while non-financial incentives can involve awarding recognition certificates and showcasing teachers' collaborative efforts (D'Auria, 2013; OECD, 2012). Public recognition of teachers' work by management and colleagues has been linked to teacher self-efficacy (OECD, 2012).

2.6.4: Workplace design

Design of the workplace is regarded as an enabler of collaboration among colleagues (Hua et al., 2010; Parrino, 2015). One such design is an open-plan workplace where teachers are in rooms without walls, leading to increased communication and interactions (Parkin, 2011). A report by Pinder et al. (2009), involving an 18-month study of academic workspace design in UK higher education institutions, found that open-plan workspace

design provided teachers with more opportunities for interaction with colleagues than when they worked in cellular offices. However, the report also found that surrounding noise in an open-plan workspace can result in distractions, lack of privacy and difficulty in conducting serious conversations.

This section has discussed some of the strategies that can facilitate teacher collaboration. These include providing dedicated collaboration-time preferably embedded with the teaching hours, encouraging a culture of collaboration, promoting and rewarding collaboration efforts, and designing the workplace to enable interaction among teachers. The next section discusses teachers CPD development activities.

2.7: Continuing Professional Development

One of the common ways in which teachers formally interact with colleagues within and across departments is through CPD activities organised by management. The OECD (2014) notes that professional development programmes are aimed at improving teachers' pedagogical and subject knowledge, as well as their self-confidence, self-efficacy and job satisfaction. Bubb and Earley (2013) observe that most professional development activities take place within institutions and only rarely occur outside institutions. They are normally organised either at the end of a working day or for a whole day or more when there is no teaching, such as during holiday breaks.

However, a qualitative study by teachers in English secondary schools found that some teachers viewed continuing professional programmes as "tick box" exercises that only benefit the management in meeting Ofsted requirements (Minett, 2015). Similarly, in their survey of teacher professional development involving 1,126 teachers in England, Opfer and Pedder (2011) found that teachers placed low importance on collaborative professional development activities. Their study also found that some teachers did not regard these development activities as beneficial to their immediate professional needs and were viewed as not providing them with the support and resources they required to succeed (Opfer and Pedder, 2011; Troen and Boles, 2012). This could be due to what Nieto (2009:13) refers to as "mandated professional activities," where management selects topics and teachers become "captive audience for a half or the whole day." Again, this may be related to contrived collegiality (Hargreaves, 1994), where teachers might attend such activities in order to obey management's directives rather than because of a genuine interest in the activities.

Opfer and Pedder (2011) opine that the value teachers place on professional development activities is based on their perception of their effectiveness on their classroom practice and improvement in their learners' learning. However, they also caution against imposing narrowly-defined performance-oriented training on teachers as this could be counterproductive. Similarly, Nieto (2009:10) argues that such training can become unproductive, lead to waste of time and resources and result in frustration by teachers and management. It can also result in contrived collegiality (Hargreaves, 1994). On the other hand, Quick et al. (2009) opine that, when teachers understand how professional development activities are related to them and their institutions and can see the "big picture," they are likely to participate in these activities.

In order to encourage teacher participation in collaborative professional development activities, Nieto (2009:10) emphasises the need for management to take account of teachers' "intelligence and goodwill," and empower them to have a voice in the topics that they believe will develop them further. This suggests that teachers should be trusted and given the discretion to determine which collaborative activities suit their developmental requirements. This means it is important to take teachers' individualised content and skills requirements into account when designing developmental activities (Carpenter, 2016). Furthermore, it highlights the issue of structured collaboration initiated by management versus unstructured activity decided by teachers on a voluntary basis.

This section has examined the teacher CPD, one of the collaborative activities organised by management to foster teacher interaction and develop teachers' learning. While there is an acknowledgement of the role of professional development activities in fostering teacher interaction and improvement in teaching practice, some teachers appear to have an unfavourable perception of professional development activities.

2.8 Summary

In this chapter, I conducted a review of the literature to identify issues emerging in the conceptualisation and implementation of teacher collaborative activities. I also examined the concept of CoP, which was utilised as the theoretical concept for this study. From the literature, teacher collaboration appears to have a number of defining features: interaction between teachers; mutual objectives; sharing ideas, knowledge and resources; improving professional practice and learners' learning. This study will seek to explore the concept of teacher collaboration through these features. It will also seek to establish their

presence or absence, and how they have influenced collaborative practices of teachers in this study.

This review also examines a variety of collaborative activities that teachers in primary, secondary and higher education engaged in to support their professional development and their learners' learning and improvement. I will explore which of the activities are engaged in by post-compulsory education teachers and their perception of these activities. Additionally, the review seeks to identify obstacles to effective collaboration and to determine how collaboration can be facilitated. Furthermore, the review examines two specific types of collaborative practices (team teaching and peer observation), viewed as techniques for enhancing teachers' classroom practice and learners' learning. This is significant because it relates to the structure of collaborative practices rather than to the collaborators.

Therefore, analysis of this study will not be limited to either structure or participants. Rather, it will explore manifestations of both. It will engage with collaboration in the context both of the collaborators and of the framework within which the collaboration occurs. Admittedly, the main contexts of the literature review have been primary, secondary and higher education. Nonetheless, they set a solid base for my exploration of the post-compulsory education sector. They also provide frameworks through which the understanding and implementation of teacher collaboration in the post-compulsory education sector can be analysed.

A summary of what the literature offers concludes that:

1) Most teachers still prefer to work in isolation than to collaborate;
2) Teacher collaboration is associated with teachers' development and learners' improvement;
3) Teachers are more likely to collaborate informally than formally;
4) Teacher characteristics such as age, gender and teaching experience are likely to influence the level and types of their collaboration;
5) Excessive workload is a major barrier to teacher collaboration;
6) Management plays a crucial role in facilitating teacher collaboration;
7) Team teaching and peer observation help to improve classroom practice;
8) There is a scarcity of research on teacher collaboration in the UK post-compulsory education sector.

The next chapter (Chapter 3) discusses the research approach this study has adopted.

CHAPTER THREE: METHODOLOGY

3.1: Introduction

This study explores the types of collaborative activities engaged in by post-compulsory education basic skills and vocational department and the value that teachers place on collaborative activities. This chapter discusses the methodological and theoretical perspectives adopted in the study, its ethical basis, its research design, how participants were selected, the pilot study, and how the data were collected.

The methodological and theoretical perspective involve discussion of the paradigm of pragmatism, one of the paradigms generally adopted by mixed method researchers. There is also a discussion of quantitative, qualitative and mixed methods, including an examination of their advantages and shortcomings. The specific research design adopted for this study is a sequential explanatory design, which involves a two-stage quantitative and qualitative study (Creswell, 2015).

3.2: Theoretical Perspective: Pragmatism

3.2.1: Pragmatism as a theory

Historically, pragmatism was developed in the 20th century by American scholars Charles Pierce (1839–1914), William James (1842–1910) and John Dewey (1859– 1952). Biesenthal (2014) observes that pragmatism emerged as a response to the view that knowledge exists independently of the knower and there is an objective truth to be discovered. Pragmatists reject the idea of objective and fixed truth, and believe that truth is an ongoing occurrence in people's experience that cannot be separated from the context and people's actions (Biesenthal, 2014).

The commonality of views on pragmatism between Peirce, James and Dewey is their emphasis on the usefulness and practicability of ideas and concepts. Pragmatists regard research as a regular transaction between researchers and the environment, and a means of solving practical problems (Nowell, 2015; Peirce,1878; Shintaro Kono, 2017). Similarly, James' (1908) stance was that truth is not a static concept but one that changes through experience, and as more facts are added, new truth is produced. This suggests the existence of multiple realities, depending on whether people regard these ideas and beliefs as having an impact on their life experiences (Saunders et al., 2012).

Pragmatic researchers consider truth about knowledge as dependent on people's world experience and interests, therefore making truth contextual to the environment in which it occurs (Dewey, 1938; Nowell, 2015). This is because people's past beliefs might be inadequate to resolves issues they currently experience that occur in specific contexts (Morgan, 2014). Additionally, Rylander (2012) notes that the traditional definition of pragmatism suggests that people should reflect on the practical consequences of their beliefs and theories must relate to people's practical experiences. Furthermore, Rosenthal and Thayler (2011) opine that pragmatism is based on the principle that the value of ideas, policies and plans should be judged on whether they are useful, workable and practical.

Pragmatism philosophy is connected to this research due to its emphasis on multiple perspective, practical outcomes of concepts and ideas, and specifically, Dewey's (1908) emphasis on practicality and context. Teacher collaboration not only involves the pedagogical theory, it also has practical implications in form of teachers' development and learners' outcomes. Pragmatism theory is also in line with this researcher's adopted conceptual framework of communities of practice Communities of practice model posits that knowledge acquisition is not a solitary endeavour but a result of mutual engagement in teaching and learning activities, and sharing ideas and knowledge with colleagues in social and cultural settings (Lave and Wenger, 1991). Denscombe (2008:280) argues that CoP represent a pragmatic research method that "accommodates the variety of ways in which mixed methods are used, and the variety of motives researchers might have for adopting a mixed methods approach."

In this study therefore, in using a pragmatic approach, I will be drawing data from quantitative study which allows me to have a general understanding of the concept of collaboration. I will then obtain qualitative data to enable me gain a deeper understanding of key results from the quantitative study.

3.2.2: Pragmatism as the current research paradigm

This study examines teachers' collaborative practices and their perceptions of these practices. Teachers' practice involves both theory and practical application. Adopting a pragmatic approach for this research allows both sides of this practice to be examined. A pragmatic approach will be a suitable framework for studying how teachers in the Post-compulsory education interact with their colleagues and the context in which these interactions take place.

Crotty (1998:8) describes a theoretical perspective or paradigm as “a way of looking at the world and making sense of it.” It relates to assumptions about the best way of investigating the nature of the world (Easterby-Smith et al., 2008). Therefore, a paradigm relates to a researcher’s “worldview or belief in the nature of reality (ontology), the nature of knowledge (epistemology), and the role of values in research (axiology).” Creswell (2007:16) defines paradigm as *“*The philosophical stance informing the methodology and thus providing a context for the process and grounding its logic and criteria” (Crotty, 1998:3).

According to Creswell (2015:16) “We all bring a worldview (or paradigm) to our research, whether we make it explicit or not.” This suggests that the assumptions that researchers make about human knowledge and realities are likely to shape the “meaning of research questions, the purposiveness of research methodologies and the interpretability of research findings,” and it is important to make those assumptions explicit (Crotty, 1998:17). This view is supported by Mertens (2010) who emphasises the importance of researchers’ making clear their philosophical assumptions and theoretical frameworks at the beginning of the research process. This is because doing so helps to determine a researcher’s position with respect to relevant knowledge and research methodology (Guba and Lincoln, 1994).

Discussions about research paradigms have previously involved quantitative and qualitative purists who hold uncompromising positions on how to conduct research, with both sides maintaining that paradigms and methods should not be mixed due to their ontological differences (Curtis and Curtis, 2011). Quantitative purists (positivist paradigms) have argued for the avoidance of biases by researchers’ remaining “emotionally detached and uninvolved with the object of study,” and justifying their declared hypotheses (Cohen et al., 2011:7). This position assumes that there is a “discoverable truth in existence, which is independent of the researcher” (Pring, 2000:59). Accordingly, positivist researchers tend to generalise results by assuming that different researchers observing the same phenomenon using similar research process could reproduce the same result (Creswell, 2009).

On the other hand, qualitative purists (constructive or interpretive paradigm) argue that research cannot be “context-free” because research is “value-bound,” involving multiple-constructions of realities where the “knower and known cannot be separated because the subjective knower is the only source of reality” (Green, 2008; Onwuegbuzie, 2004:14). This means that the researcher cannot be detached from what is being studied and reality

is a subjective interpretation by individuals depending on the context in which the research is taking place.

However, a third paradigm, the pragmatic approach, generally referred to as “mixed methods,” has emerged. Feilzer (2010:7) notes that the advent of mixed methods is:

> “*A response to the long-lasting, circular, and remarkably unproductive debates discussing the advantages and disadvantages of quantitative versus qualitative research as a result of the paradigm ‘wars’.”*

According to Teddlie and Tashakkori (2010:7), pragmatism is “the approach most commonly associated with mixed methods research and a philosophical approach, which brings qualitative and quantitative methods together in a single study.” Creswell and Piano Clark (2007) also note that pragmatist researchers are more concerned with solving practical problems. Pragmatism combines positivist and interpretive epistemologies (quantitative and qualitative methods of inquiry), depends on the fitness of purpose and applicability of methods and regards reality as socially constructed (Johnson and Onwuegbuzie, 2004).

Hence, a pragmatic approach uses different types of methods to achieve significant results that are appropriate and meaningful to certain populations in a study (Creswell and Plano Clark, 2011). For its advocates, pragmatism is regarded as offering flexibility in addressing different research questions and enables empirical accuracy to be combined with descriptive precision (Onwuegbuzie and Leech, 2005).

This section discussed quantitative, qualitative and mixed methods research designs including their benefits and drawbacks. The follow-on section discusses the research design adopted in this study.

3.3 Mixed Methods Study

Educational research can be generally categorised into three distinct approaches. These are (1) quantitative research, which is designed with a focus on hypothesis and theory testing; (2) qualitative design, which emphasises the development and generation of theories; and (3) mixed methods, where quantitative and qualitative research are combined into a single study (Creswell and Plano Clark, 2011; Teddlie and Tashkkori, 2009).

3.3.1: Quantitative Research

Topping (2015:163) defines quantitative research as:

> *"A broad umbrella term that uses methods that collect evidence that can be transformed into numerical data and are based upon a positivist position."*

Quantitative research can help to provide large, representative samples, establish cause-and-effect relationships among ideas, confirm or invalidate theoretical hypotheses and clearly summarises numerical data (Fassinger and Morrow, 2013; Willig, 2008). There is an assertion that researchers adopting this method aim for structure and objectivity and the avoidance of any type of bias that may influence research outcomes (Bryman, 2012). Additionally, quantitative research aims to achieve an "ordered, controllable, predictable, standardised, objective, deterministic, impersonal view of the world which can be studied through empirical means of scientific method" (Cohen et al., 2011:26). Hence quantitative researchers aim to generate measurable and trustworthy data which can be generalised to a large population.

Nevertheless, there are weaknesses associated with quantitative research. This includes the reliance on statistics to explain a phenomenon while ignoring the role of human behaviour. In addition, quantitative research is regarded as "impersonal or dry, does not record the words of participants, provides a limited understanding of the context of participants and is largely researcher driven" (Creswell, 2015:5).

Unlike qualitative research, where the researcher is more involved with the participants, researchers conducting quantitative research are normally in the background and rarely discuss their personal interpretations and biases (Creswell and Plano-Clark, 2011). Although Mason (2006) acknowledges the ability of quantitative methods to identify, predict and analyse data, he also recognises their limited ability to explain and understand the associations between variables.

3.3.2: Qualitative Research

According to Kumar (2014:132), the focus of qualitative research is to "understand, explain, explore, discover and clarify situations, feelings, perceptions, attitudes, values, beliefs and experience of a group of people." It is grounded in the concept that an individual's reality is constructed in their interactions within their social settings.

As stated by Creswell (2007:37):

> *"Qualitative research begins with assumptions, worldview, the possible use of a theoretical lens, and study of research problems inquiring into the meaning individuals or groups ascribe to a social or human problem."*

In addition, qualitative researchers are generally acknowledged to hold a set of beliefs or values and assumptions which might influence how they undertake their study (Guba, 1990). They conduct their research by exploring social phenomena through observing participants in their natural setting Creswell and Piano-Clark (2007). Similarly, Denzin and Lincoln (2008:4) view a qualitative study as:

> *"The studied use and collection of a variety of empirical materials—case study; personal experience; introspection; life story; interview; artifacts; cultural texts and productions; observational, historical, interactional and visual texts that describe routine and problematic moments and meanings in individuals' lives."*

Qualitative research usually deals with "what," "how" and "why" questions (Silverman, 2010:11). It is concerned with the understanding of human activities and recognising people's experience and practices within their environment (Gillies and Edwards, 2005). This suggests that people's experiences, and how they interpret these experiences, usually depend on the situation, context and environment in which they operate. However, according to Creswell and Piano-Clark (2007:9):

> "*Qualitative research is seen as deficient because of the personal interpretations made by the researcher, the ensuing bias created by this, and the difficulty in generalising findings to a large group because of the limited number of participants studied."*

Similarly, Bryman (2007) opined that results from qualitative research are too subjective (because they rely on what the researcher considers as significant and important), hard to replicate (they depend on the researcher's creativity with its unstructured nature), lack transparency (it is difficult to establish what the researcher does and how conclusions were arrived at) and not generalisable (they are based on small numbers of participants and specific contexts). The subjective nature of qualitative research can be attributed to different participants' having a different interpretation of events according to their individual understanding of the phenomena under investigation and the context in which the investigation occurs, in contrast to quantitative research which is more structured.

3.3.3: Mixed Methods Design

This section discusses mixed methods, which is the research design adopted in this study. It also explains the rationale for using both mixed methods and sequential explanatory designs, including their benefits and drawbacks.

Johnson et al. (2007) suggest that presenting educational research solely in quantitative and qualitative terms will reduce the capacity of researchers to explore the third paradigm of mixed methods. There is also an argument that, rather than emphasising the differences that separate quantitative and qualitative approaches, using mixed methods recognises their similarities (Onwuegbuzie and Leech, 2005). As noted earlier, mixed methods research is also regarded as providing a pragmatic worldview (Morgan, 2007) and is viewed as a deliberate option for researchers with a diverse orientation towards paradigms. This means that researchers using a mixed methods approach view the world from different perspectives, rather than using a single way of making sense of the world (Greene, 2008).

According to Creswell (2007:23):

> *"Individuals using this worldview will use multiple methods of data collection to best answer the research question, employ both quantitative and qualitative sources of data collection, focus on practical implication of the research and emphasise the importance of conducting research that best addresses the research problem."*

This is in line with the view of Bell (2016) who notes that, unlike quantitative methods which measure limited sets of questions, qualitative methods provide a study with a flexible structure that allows it to provide a comprehensive focus on specific questions that the researcher seeks to answer.

In other words, mixed methods approach is "practice-driven" rather than ideologically driven (Denscombe, 2008:280), and is focus on making sure that investigators can "discover answers to their research problem irrespective of whether the data are quantitative or qualitative" (Feilzer, 2010:14). Consequently, the central basis of mixed methods research is that the combination of quantitative and qualitative methods provides a better understanding of research problems than either approach alone (Creswell and Plano-Clark, 2011).

Advocates argue that using mixed methods design enables the strengths of quantitative and qualitative studies to be combined and provides an opportunity for answering a combination of research questions and drawing conclusions and inferences from similar or conflicting results (Teddlie and Tashakkori, 2010). Consequently, it is argued that combined quantitative and qualitative methods enable the researcher to offset the disadvantages of one method by the strengths of the other method (Bergman, 2008; Denscombe, 2008).

In the view of Creswell and Plano-Clark (2011:35):

> *"A problem exists when the quantitative results are inadequate to provide explanations of outcomes, and the problem can best be understood by using qualitative data to enrich and explain the quantitative results in the words of the participants."*

Although I have adopted a mixed method approach in this study, I am equally aware of the drawbacks associated with the method. For example, (Guba, 1990; Morgan, 2007) argue that qualitative and quantitative methods entail divergent epistemological positions that enable them to view the world differently, and that this makes them incompatible. However, Teddlie and Tashakkori (2011) disagree with this incompatibility notion, and instead suggest that mixed methods complement each other.

Similarly, Bryman (2012:37) observes that, even though quantitative and qualitative approaches have ontological and epistemological differences, "the distinction is not a hard-and-fast one." A number of authors agree that there are no rigid rules that prevent the two approaches from being combined within the same research (Edmonds and Kennedy, 2012; Tashakkori 2011). Creswell (2015) identifies three basic mixed method designs: convergent design, explanatory sequential design, and sequential explanatory design. The aim of the convergent design is to collect quantitative and qualitative data, analyse them, merge the two forms of data, and compare the results. Sequential explanatory design involves the collection of quantitative and qualitative data; it then uses qualitative data to help clarify the results in detail. In a sequential explanatory design, the intention is to first explore a problem with qualitative methods and then use the findings to build a second quantitative phase of the project.

The next section discusses sequential explanatory design, which is the specific mixed methods design used in this study. It will offer the rationale for choosing this design and discuss some of the drawbacks.

3.3.4: Sequential Explanatory Mixed Methods Design

The study utilised a sequential explanatory mixed methods design, which integrates two stages of data collection and analysis (QUAN) and qualitative (QUAL) sequence (Creswell and Plano Clark, 2011; Wallace et al., 2012). The key results which emerged from the quantitative study were then used to identify the questions that were asked in the second phase interviews.

As the qualitative study was aimed at explaining the findings from the quantitative phase, Kumar (2015) notes that interview participants would normally be drawn from the list of those who partake in the quantitative study. Therefore, I chose participants for the second phase of this study from the pool of respondents who indicated their interest in participating in the follow-up interviews.

As advised by Creswell (2015), a visual diagram illustrating the sequence of the collection and analysis of data is shown in Figure 3.1 below:

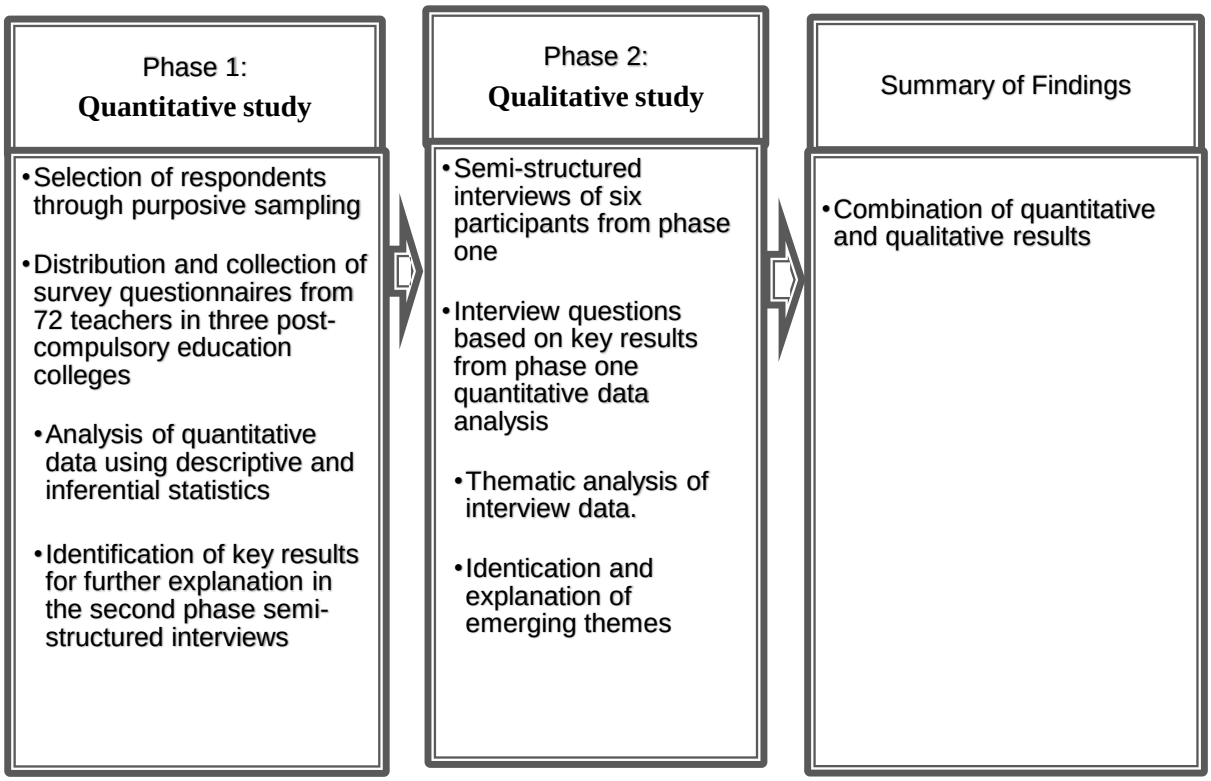


Figure 3.1: Stages of sequential explanatory design in this study

3.3.5: Rationale for Sequential Mixed Methods Explanatory Design

I adopted the sequential explanatory design for the study as I believe it is appropriate to have broad survey to explore how the issues highlighted in the literature review were experienced by further education teachers. I then utilised the interviews to follow up on areas which needed further explanation and interpretation. Consequently, the second stage qualitative study was directly informed by the first phase quantitative survey (Creswell, 2015). This is likely to increase the validity of the study.

The face-to-face semi-structured interviews were utilised to further explain key results from the quantitative study. This provided me with the opportunity to examine the deeper meaning and sense-making processes of the teachers involved by asking them to explain some of the quantitative findings further. A digital recorder was used to capture the interview. However, some of the major drawbacks of sequential explanatory design include how to decide the priority to be accorded to the quantitative and qualitative data collection and analysis, the order of data collection and analysis and at what stage both stages are combined.

Initially, I intended to prioritise the qualitative phase of the study because I regarded this as my area of strength. However, the quantitative study yielded a high volume of valuable data, which was difficult to ignore; hence, my shift in emphasis to the quantitative study. Another drawback is the need for researchers to decide what aspect of the quantitative results to follow up at the qualitative stage. After analysing the survey questionnaires, I identified key themes which emerged from the quantitative results and followed them up for further explanation in the qualitative phase following guidance from Creswell (2015) and Terrell (2012).

Additionally, there was the problem regarding which participants to sample and which questions to ask at the follow-up stage. I chose the participants for the follow-up interviews from the pool of respondents who indicated, in the information letter provided, their willingness to take part in the interview. However, I only drew my interviewees from two out of the three colleges involved in the quantitative study as no teacher from the third college indicated their interest in the second stage of the study. The third college consisted of mainly part-time teachers, and time availability may have influenced their decision not to take part in the second stage.

Another limitation of mixed methods research is that it tends to be more complex than a single method. This is because it requires researchers to have knowledge of using both qualitative and quantitative designs (Bartholomew and Brown, 2012; Creswell, 2015) and involves the extensive collection of data and resources (McMillan and Schumacher, 2006). Moreover, sequential explanatory design can be time-consuming as "it takes time to implement two distinct phases in sequence" (Creswell, 2015:38). Although I encountered a delay in collecting the data at the initial phase of the study, which consequently led to a delay in the collection and analysis of the qualitative material, I believe the benefits outweigh the drawbacks. I found adopting mixed methods in this study very challenging and time-consuming, but it provided me with broad experience and skills which will assist me in any future research.

The next section addresses the issues of piloting the survey questionnaires, selecting criteria, and collecting and analysing quantitative data.

3.4: Pilot Testing of Survey Questionnaires

Before launching the main study, I conducted a pilot testing of the survey questionnaires with ten teachers in my workplace, who did not take part in the final study. The pilot test was aimed at receiving feedback about the clarity of the questions and checking how long it would take respondents to complete the questionnaires. This enabled me to "remove items which did not yield usable data" (Bell, 2010:151). It was also aimed at increasing the validity of this study and enabling the study to be replicated elsewhere.

Feedback from the pilot study gave me an opportunity to rephrase and amend some of the research questions in order to avoid ambiguity in their interpretation. For example, in the general information section, "including ESOL" (standing for "English for Speakers of Other Languages") was added to basic skills department in order to adequately reflect the general composition of teachers in the department.

In addition, the response category in the Length of Service question was extended from the original "less than 1 year up to over 5 years" to include "over 15 years." The response categories for contract type were also increased from two ("full-time" and "part-time") to five by adding "fixed term contract," "agency staff" and "other." Similarly, "level of learners taught" was extended from "Level 1-3" to "Level 1- 5" in order to incorporate more courses taught in the post-compulsory education sector, especially in vocational departments.

Moreover, the Likert responses, *1=strongly agree, 2=agree, 3=indifferent, 4=disagree, 5=strongly disagree*, were added to all the pages of the questionnaires as a reminder to respondents when completing the survey questionnaires.

3.5: Selection Criteria for the Quantitative Phase

The teachers selected for the study were from the basic skills and vocational departments in three post-compulsory colleges in south London, teaching basic skills (basic knowledge) learners from Entry Level to Level 2 and vocational learners from Level 1 to Level 5 (Higher National Diploma) qualifications.

The term basic skills in this study means departments delivering English and mathematics to learners whose first language is English and students whose first language is not English (ESOL). Vocational learners in this study refer to learners studying courses that are employment-related such as business, travel and tourism, health and social care and catering. The rationale for selecting these departments was, first, that this is my specific area of interest as a teacher of basic skills. Secondly, in the current climate, these are the two dominant disciplines in the post-compulsory education sector.

Moreover, in recent years, policy that drives collaboration in the post-compulsory education sector in the UK was carved out of the drive to embed core skills (lately referred to as “functional skills”) in vocational courses to make them more relevant to learners, and the need for increased collaboration between teachers in these two departments in achieving this goal (LSC, 2007; IFL, 2013). This makes the two departments interesting groups to study because of the level of collaboration they are expected to engage in.

The three colleges in this study were chosen in order to reflect the diverse spectrum of colleges generally represented within the post-compulsory education sector in the UK (Further Education colleges, Adult Community colleges and Sixth Form colleges). The teachers comprised both full- and part-time, who taught young and adult learners at different levels (see Table 3.1 below).

Table 3. 1: College and Respondent Types

College	Type of college	Teacher contract type	Type of learners
College AL	Further Education College (FE)	Full and part-time	16-18-year-olds and adults
College BC	Adult Community Learning College	Part-time	Adults
College CM	Sixth Form College	Full and part-time	16-18-year-olds

The table above displays details of the types of colleges and respondents who took part in the first phase quantitative study. Pseudonyms (AL, BC, CM) were used for the colleges to ensure their anonymity.

FE delivers technical and professional education and training to young people (generally 16-18-year olds), adult learners and employees. Sixth Form colleges offer academic qualifications to 16-18-year-olds that allow them to progress to higher level vocational qualifications or university, while Adult Community Learning colleges are publicly-funded providers specialising in providing learning to the local community (Association of Colleges, 2017).

3.6: Sampling

I used a purposive sampling technique to gather information in the first phase of this research. This sampling method is regarded as appropriate when researchers "hand-pick" the cases to be included in the sample on the basis of their judgment of their typicality or possession of particular characteristics being sought" (Cohen et al., 2011:156). Therefore, participants in my study were purposively selected rather than

randomly sampled, which might have resulted in the inclusion of people who are “largely ignorant of the particular issues and unable to comment on matters of interest to this researcher” (Cohen et al., 2011:157).

The respondents in this study were selected based on their employment at the colleges and their roles as teachers in the basic skills and vocational departments. This involved purposively selecting respondents who, in my judgment, were best positioned to supply the information I needed to meet my study aims ((Cohen et al, 2011; Kumar, 2015). I aimed to ensure that, as experienced teachers, these respondents had the expertise to provide crucial information on collaboration that I might not be able to obtain by other means.

3.7: Questionnaire

One of the main advantages of a survey questionnaire is that it provides results that are easy to analyse and tabulate, and is an economical way to contact many respondents simultaneously (Patten, 2017). Its results can be generalised to a larger population, “within given parameters” (Cohen et al, 2011:257). Survey questionnaires are quicker and more convenient to administer than other types of data collection such as structured interviews (Bowling, 2009). Moreover, they involve less face-to-face interaction between respondents and the researcher, which can help to increase the likelihood of obtaining accurate information, especially where sensitive questions are included (Kumar, 2015). Moreover, survey questionnaires enable questions to be standardised in a way that allows participants to provide similar answers (Flick. 2011).

However, one of the disadvantages of a questionnaire is that it asks questions in retrospect, hence relying on respondents’ memory, which can be affected by their current state of mind and therefore result in bias (Jones and Rattray, 2015). Additionally, Bryman (2012) highlights the tendency for questionnaires to be detached from respondents’ everyday life of because of their over-dependence on measurement processes, which can result in a false sense of accuracy.

Questionnaire approach has also been criticised for providing only a snapshot instead of in-depth information about the topic under investigation, and respondents may provide answers which they deem to be socially acceptable (Patten, 2017). Furthermore, survey questionnaires can only be applied to the literate population. They can have a low response or non-response rate due to respondents’ unwillingness to answer certain questions or to complete the survey (Weems et al., 2003).

The survey questionnaire in this study was organised into five sections (refer to Appendix 1). The first section contained respondents' background information such as age, gender and department, while the second asked for the types of collaborative activities respondents engaged in. The third section asked respondents how they perceived the importance of collaboration, while the fourth asked about perceived barriers to collaboration. The fifth section requested respondents to indicate which strategy they believed could improve teacher collaboration. Finally, an open-ended question invited respondents to offer additional information on collaboration.

All the questions (apart from section one and the open-ended question), were organised on a five-point Likert scale as follows: *1=strongly agree, 2=agree, 3=indifferent, 4=disagree, 5=strongly disagree.*

The Likert scale is commonly used for examining perceptions and attitudes and is easy to construct (Ho, 2017; Kumar, 2015). It asks respondents to rate the degree of their agreement or disagreement with a specific statement. Using the Likert scale allowed me to arrange the questions in an easy and understandable manner and enabled consistency in the answers provided by respondents. The Likert scale can also be a quick and economical way to administer scores and provides a reliable assessment of respondents' attitudes (Ho, 2017). It also enables the researcher to combine "flexible response with the ability to determine frequencies, correlations and other forms of quantitative analysis" (Cohen et al, 2011: 387).

However, one of the disadvantages of Likert scale is that the middle intervals between points on the scale can be difficult to interpret as they do not represent equal changes in the attitude for all individuals (Cohen et al., 2011). For example, one respondent's "agree" may be another respondent's "strongly agree" (Cohen et al., 2011:387). Moreover, the respondents' level of literacy may affect their ability to discriminate between categories. Therefore, a researcher's sample choice might influence the suitability of the Likert scale (Chachamovich et al., 2009). There is also a possibility that, when completing survey questionnaires, respondents may provide answers that they deem to be socially acceptable (Patten, 2017).

The purpose of the questionnaire was to obtain a broad understanding of the experience of collaboration by teachers in this study and then follow up key results that require further explanation or clarification in a qualitative study. The questionnaire was based on issues highlighted in the literature review. These included types of teacher collaboration, benefits

of collaboration, barriers to collaboration and strategies for enhancing collaboration. Prior to the distribution of the survey questionnaires, I arranged face-to-face meetings with heads of departments or curriculum managers of the basic skills and vocational departments in the three colleges under study, where I fully explained the aim of my research and consent forms were duly signed (refer to Appendix 4).

I sought the assistance of gatekeepers (course leaders) who helped me to deliver and collect the questionnaires. McFadyen and Rankin (2016) describe gatekeepers as people within an organisation who facilitate access to research locations and participants and can enable research activities to run smoothly. In two of the colleges, the department heads introduced me to course leaders who became my contact points during the administration and collection of the questionnaires and subsequent interviews. In my workplace, I personally distributed and collected the questionnaires in my department (basic skills). After receiving authorisation to undertake my research from the head of the department, I contacted the course leader in the vocational department who agreed to administer and collect the questionnaires on my behalf.

A total of 72 questionnaires were returned out of the 80 distributed. This represents 90% response rate. The high response rate might be due to the several follow-ups and clarifications I made to ensure that the questionnaires were duly completed and that any unclear issues were addressed. As Polit and Beck (2012) opine, personally delivering questionnaires provides a researcher with an opportunity to clarify issues which can then motivate respondents and lead to high response rates.

Initially, my intention was to conduct a survey of 60 teachers in three colleges. However, I had difficulty collecting the questionnaires that I had distributed to one of the colleges. This was due to a prolonged industrial dispute by teachers at the college. At the end of the dispute, I was informed by the department manager of the college that the survey could no longer proceed as planned because teachers were no longer willing to go ahead with it. I had to search for a replacement college which took additional time to find. At the same time, I was of the view that the number of teachers I had initially proposed for the survey was insufficient to cover the geographical spread of the post-compulsory education colleges in the south London area and the spread of respondents that were relevant to the intended data. I finally obtained access to another college and this provided me with the opportunity to increase the sample size.

Finally, as this study was guided by existing literature on teacher collaboration and was pilot-tested among a small group of teachers before the final distribution to respondents, the questionnaires can, therefore, be replicated for similar or larger studies investigating teacher collaborative activities.

3.8: Phase 1 Quantitative Data Analysis

As noted above, teachers were asked to respond to 42 items on a five-point Likert scale (refer to appendix 1). A final item was an open-ended question inviting respondents to add any additional information they might have. The questionnaires were analysed using the Statistical Packages for the Social Sciences (SPSS) software programme to obtain descriptive and inferential statistics. I analysed the survey data using both descriptive and inferential statistics. This involved analyses of frequencies and percentages of responses and using tables and graphs for illustrations. Inferential statistics comprised of Pearson's Chi-square Test for independence examined whether there were significant associations between collaboration and selected variables.

The purpose of descriptive statistics was to provide a summary of responses to my research questions in a clear and understandable manner. Hence, descriptive statistics were calculated for each item on the questionnaire. This provided the opportunity to observe patterns and trends in the data (Moxham, 2012) using frequencies and percentages, supported by graphs and tables (Burns and Grove, 2009). In addition, inferential statistics were utilised to make inferences and predictions based on the data obtained for this study. In this study, Chi-square was used to measure whether there were significant associations between collaborations. To find out whether associations are significant, a p-value of less than 5% ($p=<0.05$) is generally used (Polit and Hungler, 2013).

Furthermore, to comply with the assumptions of the Chi-square test, which requires less than 20 percent (<20%) of cells to have an expected count of less than 5, the 5-point Likert scale response categories were collapsed into three (strongly agree or agree; neutral; strongly disagree or disagree). In addition, demographic variables, age, length of service, level of learners taught and contract type were also collapsed into three (Davis et al., 2007; Ray et al., 2015). One of the main disadvantages of collapsing responses is its ability to reduce the power of measurement with regards to reliability and normal distribution of responses (Lovelace and Brickman, 2013). Bond and Fox (2007) argue that response categories can be collapsed if test assumptions are violated but caution

that this must be done with valid justification. The use of mixed methods design in this study is expected to enhance the validity of the study as the qualitative study will be used to provide more explanation of the findings of the quantitative study.

The initial Chi-square tests I conducted revealed that some cells violated the Chi-square assumptions stated earlier regarding expected counts of cells. This provides the rationale for the collapsing of categories in order to increase the number of response options (Lovelace and Brickman, 2013). In this study, the Chi-square tests (refer to Appendix 6) were used to find out if there were statistically significant associations between the types of collaborative activities that respondents engaged in and teachers' background variables. Only statements with statistically significant results were reported. Demographic variables used for the tests were respondents' departments, age, gender, length of service, contract type and level of learners.

3.9: Phase 2 Semi-Structured Interviews

In the second phase of the study, I gathered data through semi-structured interviews with six teachers. These interviews enabled me to seek further clarification of some of the key results from the quantitative phase of the study (Creswell, 2015; Creswell and Plano Clark, 2011).

Interview participants were selected from the pool of teachers who took part in the initial survey and who had indicated their interest in a follow-up interview by ticking the box in the information letter provided as well as in the questionnaire. However, teachers from only two of the three colleges which took part in the survey indicated interest in the interviews. Initially, eight teachers volunteered to take part in the interviews but two of them withdrew, citing their busy schedules as the reason for their unavailability.

Semi-structured interviews were valid and reliable since they were informed by the results of the survey questionnaires in the first part of the study. In addition, the interviews were conducted according to the ethical guidelines for researchers provided by the British Educational Research Association (BERA, 2011); these include informed consent, confidentiality and anonymity. All these measures were likely to add to the validity and replicability of this research.

The next section discusses the data analysis of the second phase qualitative study.

I analysed the data using thematic analysis, guided by the six stages of conducting thematic analysis (Braun and Clarke, 2006).

Table 3. 2: Thematic Analysis of Data

1. Familiarisation with the data	Transcribing the data, reading and re-reading for familiarity
2. Generating initial codes	Identification and labelling of important elements of the data that are essential in answering research questions
3. Searching for themes	Examination of codes and data for identification of the broader pattern of meanings
4. Reviewing themes	Checking the themes against dataset to ensure they tell a convincing story that answers the research questions
5. Defining and naming themes	Analysing each theme in detail and giving them suitable names
6. Writing a report	Writing a that brings together the narrative and data extracts

Source: (Braun and Clarke, 2006).

I followed the thematic analysis process described by Braun and Clarke (2006) above for analysing the interview data. First, I transcribed all the six interviews by listening to the audio recorder and typing the data into a Word document. Secondly, I began to identify the initial codes by underlining and emboldening keywords, phrases or sentences that appeared significant in the texts (refer to Appendix 7) for a selected data analysis grid.

Thirdly, I identified themes by merging some of the initial codes together under different headings. Finally, the transcripts were checked several times against the audio tape to ensure that they accurately reflected the data gathered, and necessary changes were made. All the processes described above required a reiterative process, where I continuously revisited, refined and renamed themes and codes to ensure that I had

captured key concepts in the data. A total of 10 themes, which formed the basis for discussion in the qualitative data presentation section, were identified.

3.10: Ethical Considerations

As noted above, the ethical considerations in this study were informed by guidelines for researchers from BERA (2011). I received Central University Research Ethics Committee (CUREC) clearance for this study from my university in June 2014. I then proceeded to conduct the first phase of my study involving the distribution, as described above, of survey questionnaires for completion. Participating teachers were provided with detailed information about the purpose of my research and their consent to participate in the study was gained (refer to Appendix 2). I made it clear at the outset that participating in the research was voluntary and that respondents could withdraw from the process at any time.

The respondents were also guaranteed the confidentiality of the data provided and the protection of their anonymity. All the colleges that took part in the study were identified only by pseudonym codes to ensure that they are not identifiable. In addition, all the data gathered were held securely on a password protected laptop for security purposes. Furthermore, respondents were asked to indicate their interest in taking part in the follow-up interviews by ticking a box in the “Information to Participant” letter (refer to Appendix 3).

During the second phase, meetings were arranged with six of the interested participants. At the interviews, each participant was reminded that the interview would be recorded on an audio device and they had the right to withdraw from participating at any point. They were also reassured that information gathered would be kept strictly confidential. To ensure anonymity, personal details were separated from the recorded data and kept in a secure place. Pseudonyms were also used to break the link between data and identifiable individuals. Data were held securely on a password-protected laptop.

3.11: Summary

This chapter has discussed the research process adopted in the current study. I examined some of the arguments surrounding positivist and interpretive paradigms. I also discussed the positive and negative aspects quantitative and qualitative research methods. In addition, I discussed the specific sequential mixed methods design that I adopted and the rationale for choosing this design. Furthermore, I provided information regarding the

selection of participants, data collection and analysis techniques and the ethical considerations that guided the study.

The following chapter, (Chapter 4) presents the data analysis and findings of the quantitative phase.

CHAPTER FOUR: QUANTITATIVE DATA PRESENTATION AND DISCUSSION

4.1: Introduction

This chapter presents the analysis of statistical data and discussion concerning the study's research questions. It involves the analysis of the survey questionnaires distributed to teachers in the basic skills and vocational departments in three colleges in south London. A total of 72 questionnaires were returned out of the 80. This represents 90% response rate. The high response rate resulted from the researcher's deliberate decision to personally deliver and collect the questionnaires. It required several follow-ups, clarification of issues and reminders to ensure that the questionnaires were duly completed.

The main research question that the study aimed to answer is: What is the range of collaborative practices engaged in by post-compulsory education basic skills and vocational teachers, and how do these teachers experience and value collaborative practices in supporting their learners' learning?

In addition, the following subsidiary questions were asked:

1) Which teacher characteristics are likely to influence collaborative activities among post-compulsory education teachers?

2) What factors do post-compulsory education basic skills and vocational teachers perceive as the benefits of collaboration?

3) What do teachers in post-compulsory education basic skills and vocational teachers identify as barriers to effective collaboration?

4) Which specific strategies do post-compulsory education basic skills and vocational teachers view as likely to facilitate collaboration among teachers?

The first part of the analysis (statements 1-6) involves the demographic and work-related background of respondents (college name, department, the age of respondents, gender, length of service, contract type and level of learners mainly taught). This is followed by an analysis of the research questions.

To answer the research questions, statements from the questionnaire were grouped into different sections as follows: the main research question regarding the range of collaborative activities (statements 7-17, 25, 27). The second part of this question, regarding the value teachers place on collaborative activities, is answered in the qualitative phase analysis in Chapter 5. Subsidiary questions were answered as follows: subsidiary question 1, relating to teacher characteristics (statements 1-6, 7-17, 25, 27); subsidiary question 2, involving the benefits of collaboration (statements 18-24, 26); subsidiary question 3, relating to barriers to collaboration (statements 28-33); and subsidiary question 4, identifying strategies likely to facilitate collaboration (statements 34-40). Finally, the open question (statement 41) was analysed.

The table below provides the descriptive statistics on respondents' demographic background and work-related information.

Table 4.1: Background variables: college and departments

Respondents' background variables	No of teachers who responded out of 72	Percentage of responses (%)
College		
LS (FE college)	36	50
MR (adult community college)	10	14
CT (sixth-form college)	26	36
Department		
Basic skills	39	54
Vocational	33	46

The table shows that LS (further education college), had the highest number of respondents (50%). This could be because respondents were from my workplace where I had more opportunity to contact participants directly. This was followed by CT (sixth-form college) which had 36% of respondents. MR (adult community college) had the lowest number of respondents (14%). Respondents from MR college were mainly part-timers, some of whom work few days a week. This may account for the lower level of interest in the survey than other colleges in the study. The result also shows that 54% of respondents were from the basic skills department, while 46% were from the vocational department. This indicates that the split of respondents was roughly equal between the basic skills and vocational departments.

The next table presents the information on respondents' age and gender.

Table 4. 2: Background variables: age and gender

Respondents' background variables	Number of teachers who responded out of 72	Percentage of responses (%)
Age		
20-25	2	3
26-30	5	7
31-40	13	18
41-50	28	39
51-60	18	25
60+	6	8
Gender		
Male	39	54
Female	33	46

Here the data show that the majority of teachers who participated in the survey were between the ages of 41-50 years, representing 39% of all respondents, while 25% of the respondents were aged 51-60 years**.** This is broadly comparable to data from the Education and Training Foundation (2017) (hereafter ETF) which show that the average age of teachers in FE is 46 years, and that 40% of teaching staff are aged 55 years and above. In addition, teachers aged 31-40 constituted 18% of survey participants, while only 10% of participants were aged 30 years and under, showing that this age group was under-represented in my study. Again, this is broadly comparable to figures from the ETF (2016). which indicate that FE teachers aged 30-39 years comprise 11%, while 9% of teachers are aged 29 years and under.

The gender composition indicates that there were more male respondents (54%) compared to female (46%). However, figures from the ETF (2015) show that the majority of FE teaching staff are female (59%) whereas male teaching staff makes up 41%; this suggests that males were more heavily represented in my respondent group than in the general FE teaching profession.

The next table presents data on respondents' length of service, contract type and level of learners taught.

Table 4. 3: Background variables: length of service, contract type and level of learners

Respondents' background variables	No of responses out of 72	Percentage of responses (%)
Length of service (years)		
1-3	11	15
4-7	18	25
8-11	11	15
12-15	15	21
Over 15	17	24
Contract type		
Permanent full-time	44	61
Permanent part-time	15	21
Fixed contract	3	4
Agency staff	3	4
Other	7	10
Level of learners		
E3	18	25
L1	7	10
L2	15	21
L3	30	42
L4	1	1
L5	1	1

Table 4.3 reveals that the spread of responses regarding the length of service was fairly even, with the biggest spread at 4-7 years (25%) and over 15 years (24%). Figures also show that the majority of respondents (61%) were on full-time permanent contracts while 39% were on permanent part-time or non-permanent contracts (fixed contract, agency staff and other). Figures from the ETF (2015) provide a direct contrast, indicating that there are more part-time (62%) than full-time teaching staff (38%) in FE in general. This

disparity could be explained by the fact that this researcher was more likely to have encountered full-time staff during the study than part-time staff who are normally at work for fewer days. However, the ETF's (2015) figures did not provide a breakdown of what constituted permanent and non-permanent teaching staff as is the case in this study. Therefore, it is not possible to gauge how representative my sample was.

The table also reveals that the majority of respondents (42%) mainly taught courses at Level 3 (A-Level equivalent), while 31% taught courses at Levels 1 (GCSE Grades D-G equivalent) and Level 2 (GSCE Grades A-C or First Diploma equivalent). In addition, 25% mainly taught courses at Entry Level (basic knowledge and skills qualifications). Only one of the respondents mainly taught at Level 4 and Level 5 respectively (Higher National Certificate and Higher National Diploma equivalent).

This section presents the descriptive statistics on the demographic information of respondents in this study using the frequency and percentage of responses. The result indicates that the age categories were broadly representative of FE teachers in general. However, there were more males than females in this study compared to findings from the literature. Based on my own findings, I will examine whether gender had an impact on collaboration among the teachers in this study. The next section provides an analysis of the research questions that this study aimed to answer.

4.2: Analysis of Research questions

This section presents the quantitative data analysis and discussion of the research questions in this study. It will go through the research questions in turn, except for the second part of the main research question, which is just answered by qualitative data in Chapter 5.

4.2.1: Main Research Question: What is the range of collaborative practices engaged in by post-compulsory education basic skills and vocational teachers, and how do these teachers experience and value collaborative practices in supporting their learners' learning?

Table 4. 4: Response to the statement on the range of collaborative practices engaged in by respondents

Statements on collaborative activities respondents engaged in (Statements 7-17, 25, 27).	**Number and percentage of responses out of 72 respondents**				
	Strongly agree (1)	**Agree (2)**	**Neutral (3)**	**Disagree (4)**	**Strongly disagree (5)**
7: I regularly collaborate with teachers in my department.	**29 (40%)**	**25 (35%)**	9 (12%)	7 (10%)	2 (3%)
8: I regularly collaborate with teachers in other departments.	10 (14%)	21 (29%)	13 (18%)	20 (28%)	8 (11%)
9: I discuss teaching and learning strategies with other teachers.	**24 (33%)**	**28 (39%)**	17 (24%)	1 (1%)	2 (3%)
10: I regularly collaborate with colleagues on lesson planning.	22 (31%)	19 (26%)	18 (25%)	10 (14%)	3 (4%)
11: I regularly share teaching and learning materials with colleagues.	18 (25%)	30 (42%)	17 (24%)	6 (8%)	1 (1%)
12: I discuss teaching and learning strategies with other teachers.	13 (18%)	32 (45%)	19 (26%)	7 (10%)	1 (1%)
13: I usually engage in informal conversation about my courses with colleagues.	**34 (47%)**	**29 (40%)**	6 (9%)	1 (%)	2 (3%)
14: I engage in team teaching with colleagues.	13 (17%)	17 (25%)	15 (22%)	15 (21%)	12 (15%)
15: I engage in peer observations with my colleagues.	23 (32%)	13 (18%)	12 (17%)	16 (22%)	(8 (11%)
16: I regularly discuss students' performance with my colleagues.	**28 (39%)**	**28 (39%)**	9 (13%)	6 (8%)	1 (1%)
17: I work with colleagues in carrying out course-related projects.	10 (14%)	19 (26%)	21 (28%)	16 (24%)	6 (8%)
25: I work with other teachers regularly to help solve students' problems.	**21 (29%)**	**29 (41%)**	11 (15%)	7 (10%)	4 (5%)
27: I participate in professional development activities that encourage teachers to work together.	23 (32%)	21 (29%)	10 (14%)	14 (19%)	4 (6%)

*Significant results are highlighted in bold.

The result indicates a strong response on collaboration within departments with 75% of respondents strongly agreeing or agreeing that they regularly collaborated with teachers in their departments, while 13% strongly disagreed or disagreed and 12% were neutral. The result also shows that 43% of respondents strongly agreed or agreed that they engaged in cross-departmental collaboration. However, 39 % of respondents strongly

disagreed or disagreed, while 18% were neutral, suggesting that nearly 60% of respondents did not engage or were uninterested in cross-departmental collaboration. This finding will be followed up and explained further in the qualitative phase.

A high number of respondents (72%) strongly agreed or agreed that they engaged in discussions about teaching strategies and only 4% strongly disagreed or disagreed. The result also shows that a relatively large number of respondents (24%) were neutral. On students' performance, the finding indicates that 78% of respondents engaged in this activity, 8% disagreed, while 13% were neutral. In response to the statement on lesson planning, 57% of respondents strongly agreed or agreed that they collaborated on lesson planning, while 18% strongly disagreed or disagreed. Although the level of response to this question is less than those on teaching strategies, the number of neutral responses (25%) is similar.

The finding reveals that 67% of respondents strongly agreed or agreed that they shared teaching and learning materials with their colleagues, 24% were neutral, while 9% strongly agreed or disagreed. This indicates that respondents collaborated more on sharing teaching and learning materials than on lesson planning. In relation to collaboration on assessment strategies, 63% of respondents strongly agreed or agreed that they regularly discussed assessment strategies with colleagues, 26% were neutral, while 11% strongly disagreed or disagreed.

Even though the response to this question is stronger than the response to lesson planning, they both have similar neutral responses. This strongest form of collaboration so far involved 88% of respondents who strongly agreed or agreed that they engaged in informal conversation about their courses, while 9% strongly disagreed or disagreed and a few respondents (4%) were neutral. The result, therefore, established that the majority of respondents collaborated more in informal settings than informal ones. This result is followed up and discussed further in the qualitative phase.

One of the lowest collaborative activities that respondents indicated they engaged in was team teaching. Only 42% of respondents strongly agreed or agreed that they engaged in team teaching. However, the result also shows a high level of respondents who strongly disagreed or disagreed (36%) and who were neutral (22%). The result of peer observation also reveals that half of the respondents (50%) strongly agreed or agreed that they engaged in peer observation with colleagues. Although the figure is slightly higher than

the previous result on team teaching, it also shows a high number of respondents who strongly agreed or disagreed (33%), and a neutral response of 17%.

The finding also shows that 78% of respondents strongly agreed or agreed that they regularly discussed their students' performance with colleagues, 9% strongly disagreed or disagreed and 13% were neutral. This is another strong response comparable to those in collaboration within departments and discussing teaching strategies, although it has a lower neutral response. This result will be followed up and explained further in the qualitative phase. Another high response in this section relates to collaboration on solving student problems. The result shows that 69% of respondents strongly agreed or agreed, 15% were neutral, and 16% strongly disagreed or disagreed. This response is comparable to previous results on discussing teaching and learning strategies but with a lower neutral response.

Regarding the statement on professional development activities, the result also shows that 61% of respondents strongly agreed or agreed that they engaged in collaborative professional development activities, 14% were neutral, while 25% strongly disagreed or disagreed. This result is comparable to the one on assessment strategies, and the sharing of teaching and learning materials. However, it has a higher level of respondents who strongly disagreed or disagreed and a lower neutral response.

The lowest response in this section, suggesting the least collaborative activities that respondents engaged in. was on course-related projects. The result shows that 40% of respondents strongly agreed or agreed that they collaborated with colleagues in course-related projects, 32% strongly disagreed or disagreed, while 28% were neutral. This indicates that 60% of respondents did not collaborate on course-related projects.

4.2.2: Summary

The table below presents a summary of the types of collaborative activities engaged in by respondents in this study engaged in.

Table 4. 5: Summary of types of collaborative activities teachers engaged in

Types of collaborative activities	Percentage (%) of respondents who strongly agreed or agreed
Informal conversation	88
Discuss students' performance	78
Collaborate with teachers in my department	75
Discuss teaching and learning strategies	72
Helps solve students' problems	70
Share teaching and learning materials	67
Collaborative professional development activities	61
Collaborate on lesson planning	57
Peer observations	50
Collaborate with teachers in other departments.	43
Team teaching	42
Carrying out course-related projects	40

Table 4.5 illustrates that the top five collaborative activities engaged in by respondents in this study are informal conversation (88%), discussion of students' performance (78%), collaboration within departments (75%), discussing teaching strategies (72%) and collaboration on solving students' problems (70%). The findings illustrate that informal collaboration was the highest level (88%) of activity the vast majority of teachers engaged

in. This result is supported by previous findings in the literature indicating that teachers prefer informal to formal collaboration. They perceive informal collaboration as more convenient because it helps them to resolve the immediate teaching and learning issues that they face in their daily practice (Goddard et al, 2007; Hua et al., 2010). This result will be explored further at the qualitative stage.

The next highest result is collaboration on students' performance identified by 78% of respondents. This result is unsurprising considering the emphasis placed on learner achievement, which makes collaboration in this area important (Hargreaves, 2013). The result confirms findings in the literature which indicate that teachers collaborate to jointly analyse their learners' data (Harris and Jones, 2012; Wei et al., 2009). Collaboration within departments is shown to be higher than across departments, with 75% of respondents indicating that they had engaged in collaboration with teachers in their departments compared to 43% who had engaged in cross-departmental collaboration. The findings are supported by other research which found that teachers tend to collaborate with their departmental colleagues more than with those in other departments (Corcoran and Silander, 2009; Eschler, 2016). Further explanation of this finding will be sought at the qualitative stage.

Table 4.5 reveals that 72% of respondents collaborated on teaching and learning strategies. Studies show that collaboration is an effective method for developing teacher effectiveness and confidence in their practice (Levine and Marcus, 2010; Stoll and Seashore-Louis, 2007). In relation to collaboration on solving learners' problems, the finding indicates that 70% of respondents engaged in this collaborative activity. Research shows that learning how to deal with learners' classroom issues is one of the major reasons why teachers engage in collaboration (Murali, 2016) as it can provide them with the skills they need to solve learners' problems (Hytten, 2011).

According to the table, 67% of respondents engaged in activities involving sharing teaching and learning materials. This is in line with findings that show that working together allows teachers to share expertise, teaching and learning ideas, and resources that help them improve their teaching practice and gain new perspectives (Harris and Jones, 2010). Additionally, the result found that 61% of respondents engaged in collaborative professional development activities. Engaging in collaborative professional development activities has been found to enhance teachers' practice (Levine and Marcus, 2010; Stoll and Seashore-Louis, 2007).

At the lower end of the results, the table reveals that half of the respondents (50%) engaged in peer observation while only 42% participated in team teaching. Because of the importance placed on team teaching and peer observation as tools for developing teaching practice, findings on these two activities will be developed further in the second phase qualitative interviews. The lowest response in this section was collaboration on course-related projects, with only 40% engaging in this activity.

This next section provides an analysis of subsidiary questions that the study aimed to answer.

4.3. Subsidiary Question 1: *Which teachers' characteristics are likely to influence collaborative activities among post-compulsory education teachers?*

In order to answer this question, Chi-square tests of association between teachers' background information and self-reported collaborative activities were conducted. The teacher characteristics used in the tests are department, gender, age, length of service, contract type and level of learners taught. Only results containing significant associations, which are highlighted in bold and colour, are discussed.

Table 4. 6: Relationship between teacher background information and collaboration within individual departments

Statement 7	Department	Gender	Age	Length of service	Contract type	Level of learner
I regularly collaborate with teachers in my department	x^2=.203, df=2, p=.904	x^2=.996, df=1, p=.318	**x^2=21.504, df=2, p=.001**	x^2=1.391, df=2 p=.499	**x^2=7.028, df=2, p=.030**	**x^2=12.571, df=2, p=.002**

*Significant results are highlighted in bold

A Chi-square test was used to explore the association between respondents' background variables and self-reported collaboration. No significant association was found between department, gender, length of service and self-reported collaboration within departments. However, a significant association was found between respondents' age, contract type, level of learners and collaboration within individual departments.

The result also found that respondents under the age of 40 were more likely to participate in collaborative activities within individual departments compared to those of 40 and over.

This could be because younger and early-career respondents tend to initially build up relationships within their individual departments due to familiarity and shared experience. On the other hand, older respondents are more likely to have built up collaborative relationships over many years and feel less need to collaborate. The result also shows that full-time respondents were more likely to engage in collaboration than non-full-time respondents. This is unsurprising as full-time respondents would normally spend more days and time at work than non-full-time respondents and would therefore, be more likely to have opportunities for collaboration.

Additionally, the test reveals that respondents who taught learners at Level 3 and above were likely to collaborate more than those who taught Entry Level learners and Levels 1 and 2 learners. This may be because L3 teachers have more common higher-order objectives than Levels 1 and 2 learners; hence the need for teachers to share common knowledge and resources. It could also reflect the fact that Level 3 is the concluding part of college-level qualification that requires "imposed collaboration" as it is the level from which learners progress to higher education or into employment. Teachers at this level tend to teach several subjects that make up a vocational qualification; hence the need for teachers to engage in close interaction and to share ideas and resources in order to ensure that the industry requirements and examining boards' standards are met effectively.

Some of the subjects taught by vocational departments require practical knowledge of the industry, meaning that teachers would need to cooperate and share specialised skills, pedagogical knowledge and resources with other teachers to ensure that curriculum and industry requirements are met effectively and are benchmarked for standards.

Table 4. 7: Relationship between teachers' background and collaboration across departments

Statement 8	**Department**	**Gender**	**Age**	**Length of service**	**Contract type**	**Level of learner**
I regularly collaborate with teachers in other departments.	x^2=4.213, df=3, p=.239	x^2=3.982, df=2, p=.137	x^2=5.359, df=2, p=.252	**x^2=9.825, df=4, .043**	x^2=3.072, df=4, p=.546	**x^2=10.545, df=4, p=.032**

*Significant results are highlighted in bold.

A Chi-square test was used to explore the association between respondents' backgrounds and self-reported collaboration with other departments. There was no significant association between department, gender, age, contract type and self-reported cross-departmental collaboration. However, significant relationships were found between length of service, level of learners taught and self-reported collaboration with other departments.

Respondents with 12 or more years of experience tend to collaborate more across departments compared with those with less than 12 years' experience. The result links to an earlier result which indicated that, within departments, younger respondents tend to collaborate more than older ones. This could be attributed to the fact that effective collaboration takes time to nurture as it requires the build-up of relationships in a community of practice. Hence, collaboration by younger teachers is likely to be limited initially to their departments.

A significant association was also found between the level of learners and collaboration with other departments. Similar to the previous result of collaboration within departments, respondents who taught learners at Level 3 and above were found to have collaborated more across departments than those who taught learners below that level. As indicated earlier, this could be due to common higher goals and the fact that this is the highest level qualification at the college level before progression to higher education or employment, and that it may require the mutual exchange of ideas and resources. It could also be that higher-level teachers are more likely to be more experienced teachers who have built up relationships with colleagues across their institutions over many years. This suggests that both level and experience lead to more collaboration.

Table 4. 8: Relationship between teachers' background information and informal collaboration

Statement 13	**Department**	**Gender**	**Age**	**Length of service**	**Contract type**	**Level of learner**
I usually engage in informal conversation about my courses with colleagues.	x^2=.440, df=2, p=.803	x^2=2.007, df=2, p=.367	x^2=.097, df=4, p=.999	x^2=3.593, df=4, p=.464	**x^2=9.455, df=3, p=0.02**	x^2=2.564, df=4, p=.633

*Significant results are highlighted in bold.

A Chi-square test was used to explore the association between respondents' background and self-reported informal collaboration. There was no significant association between department, gender, age, length of service, level of learners and informal collaboration. However, respondents' contract type respondents indicated a statistically significant association with informal collaboration. Full-time teaching respondents tend to collaborate more informally than non-full-time respondents. As previously stated, this can be related to the level of interaction which is likely to take place because full-time respondents usually have more time available at work than their part-time colleagues.

Table 4. 9: Relationship between teachers' background and collaboration on students' performance

Statement 16	Department	Gender	Age	Length of service	Contract type	Level of learner
I regularly discuss students' performance with my colleagues.	x^2=1.645, df=1, p=.229	x^2=.630, df=1, p=.471	**x^2=9.848, df=4, p=.043**	x^2=,2.204, df=2, p=.332	**x^2=7.606, df=2, p=.022**	**x^2=40.909, df=2, p=.000**

*Significant results are highlighted in bold.

A Chi-square test was used to explore the association between respondents' backgrounds and self-reported collaboration on students' performance. No significant association was found between department, gender and discussing students' performance. However, a significant association was found between age, contract type, level of learner and discussing students' performance. Respondents aged 41-50 years tend to collaborate more on students' performance compared to those aged 20-40.

Although earlier result showed that teachers over 40 years of age collaborated less with colleagues in their department, this finding indicates that they are more likely to collaborate on collaborative activities that they perceive will help in improving their learners' outcomes. The test also shows that full-time permanent respondents discussed students' performance more than part-time permanent and non-permanent respondents did.

Additionally, respondents who taught learners at Level 1-2 tend to collaborate more on students' performance than those who taught learners at Entry Level and Level 3. This could be because learners at Levels 1 and 2 (especially basic skills learners) tend to

undertake externally-assessed examinations which enable them to progress to vocational courses. This puts teachers under pressure to meet achievement targets (Coffield et al., 2007). Therefore, teachers teaching learners at this level are more likely to focus on examining learners' assessment data and discussing strategies for maximising their achievement in these examinations, which might be harder to achieve by working individually.

Table 4. 10: Relationship between teachers' background information and collaboration on course-related projects

Statement 17	Department	Gender	Age	Length of service	Contract type	Level of learner
I work with colleagues in carrying out course-related projects.	**x^2=8.085, df=2, p=.018**	x^2=1.740, df=2, p=.419	x^2=,3.084, df=4, p=.544	**x^2=13.212, df=4, p=.010**	x^2=7.187, df=4, p=.128	x^2=4.722, df=4, p=.317

*Significant results are highlighted in bold.

A Chi-square test was carried out to examine the association between background variables and self-reported collaboration on course-related projects. No significant association was found between gender, age, contract, learner level and collaboration on course-related projects. However, a significant association was found between department, length of service and collaboration on course-related projects.

Respondents from vocational departments tend to engage more on course-related projects than those from the basic skills department. This could be attributed to the nature of vocational courses which normally include more projects and coursework than the basic skills course. In addition, respondents with over 12 years' length of service indicated the highest level of collaboration on course-related projects.

Table 4. 11: Relationship between teachers' background and collaboration on solving learners' problems

Statement 25	Department	Gender	Age	Length of service	Contract type	Level of learner
I work with other teachers regularly to help solve students' problems.	x^2=,4.396, df=2, p=.111	x^2=4.154, df=2, p=.125	**x^2=13.320, df=4, p=.010**	x^2=8.675, df=4, p=.070	x^2=5.226, df=4, p=.265	x^2=2.202, df=4, p=.699

*Significant results are highlighted in bold.

A Chi-square test was used to examine the association between background information and self-reported collaboration on solving students' problems. No significant association was found between department, gender, length of service, contract type and learner level. However, a significant association was found between age and collaboration on solving learners' problems. Respondents aged 41-50 years had the highest level of collaboration on solving learners' problems.

Table 4. 12: Relationship between teachers' background information and collaboration on professional development activities

Statement 27	Department	Gender	Age	Length of service	Contract type	Level of learner
I participate in professional development activities that encourage teachers to work together.	x^2=2.410, df=2, p=.300	x^2=.109, df=2, p=.947	x^2=2.138, df=4, p=.710	x^2=2.456, df=4, p=.652	**x^2=17.325, df=4, p=.002**	**x^2=9.479, df=4, p=.050**

*Significant results are highlighted in bold.

A Chi-square test was used to examine the association between background variables and self-reported collaboration on professional development activities. No association was found between department, gender, age, length of service and participation in professional development activities. However, a significant association was found between contract type, level of learners and participation in professional development activities. Respondents with full-time permanent contracts tend to engage more in

collaborative professional development programmes than do respondents with part-time permanent contracts and non-permanent contracts. This is understandable as part-time respondents are usually around less than full-time ones.

The test also revealed that respondents who taught learners at Level 3 and above tend to engage more in collaborative professional development activities than those who taught at Entry Level and Level 1-2. Again, as mentioned earlier, Level 3 is the highest level college qualification. Unlike Entry Level to Level 2 qualifications, which largely support learners in updating basic level education, Level 3 courses involve learners in gaining both theoretical knowledge in the classroom and practical industry experiences. Teachers of this level might feel the need to regularly update their skills and knowledge about innovations in the industry.

The table below provides a summary of contextual factors likely to influence teachers' collaborative activities.

Table 4. 13: Summary of relationship between teacher contextual characteristics and collaboration

Teacher characteristics		**Collaborative activities**
Age		Under 40 years: Individual departments 41-50 years: Students' performance, solving learners' problems
Department		Vocational: course-related projects
Length of service		Over 12 years: cross departments, course-related projects
Contract type		Full-time: individual departments, informal collaboration, student performance, professional development activities
Level of learners		Level 3 and above: individual department, cross-department, professional development activities Level 1-2: student performance

Table 4.13 summarises the teacher contextual characteristics likely to influence collaborative activities. It shows that teachers up to 40 years of age are more likely to collaborate with individual departments, while those aged 41 and above are more likely to collaboration on students' performance and solving learners' problems. This indicates

that older teachers tend to focus their collaborative activities on learner-specific issues rather than on collaboration in general; since they feel confident in their subject knowledge and skills, they view other forms of collaboration as irrelevant to their needs.

The table also indicates that vocational teachers and teachers with over 12 years' teaching experience are more likely to engage in course-related collaborative projects than their basic skills counterparts. Additionally, teachers with over 12 years' teaching experience are more likely to engage in cross-departmental collaboration than those with 12 or fewer years' experience. This might be because these teachers have had the opportunity to form relationships with colleagues over an extended period of their career. Full-time teachers were also more likely to engage in collaboration with individual departments, students' performance, and professional development activities than their part-time colleagues. This might be because full-time staff tend to be more available at work than part-time staff.

Moreover, teachers of Level 3 learners are more likely to collaborate both within and across departments than are teachers of lower-level learners. They are also more likely to engage in collaborative professional development activities. However, Level 1 and Level 2 teachers are more likely to engage in collaboration on student performance than are Entry Level and Level 3 teachers. This can be attributed to the need to need to prepare their learners for externally-assessed examinations and to meet achievement targets.

The next section discusses how teachers perceive the benefits of collaboration.

4.4. Subsidiary question 2: *What factors do post-compulsory education basic skills and vocational teachers perceive as the benefits of collaboration?*

Table 4. 14: Response to respondents' perceived benefits of collaboration

Statements on respondents' perceived benefits of collaboration (Statements 18-24, 26).	**Degree of agreement or disagreement in number and percentages (%) out of 72 respondents**				
	Strongly agree (1)	**Agree (2)**	**Neutral (3)**	**Disagree (4)**	**Strongly disagree (5)**
18 I benefit from learning new ideas when I collaborate with others.	**44 61%**	**23 32%**	4 6%	0 0%	1 1%
19 Collaboration has highly increased my motivation to work effectively.	20 33%	24 28%	22 31%	4 5%	2 3%
20 I find collaboration to be an effective use of my time.	**28 39%**	**30 42%**	10 14%	3 4%	1 1%
21 Collaboration helps me to reflect on my teaching practice.	**31 43%**	**29 40%**	11 16%	0 0%	1 1%
22 Achieving the college's teaching and learning goals depends on the ability of teachers to work well together	**31 43%**	**32 45%**	6 8%	2 3%	1 1%
23 Collaboration helps me to adapt teaching to meet the different needs of my students.	**21 29%**	**34 47%**	15 21%	2 3%	0 0%
24 Collaboration provides guidance and support on how to effectively manage the classroom.	**19 27%**	**34 47%**	13 18%	5 7%	1 1%
26 Collaborating with other teachers helps to improve my students' learning.	**23 32%**	**31 43%**	12 17%	2 3%	4 6%

*Significant results are highlighted in bold.

The figure reveals that 93% of respondents strongly agreed or agreed that they learned new ideas through collaboration, 6% were neutral, while only 1% strongly disagreed. This is the most important benefit of collaboration identified by respondents. This indicates respondents' acknowledgment that collaboration provides them with new insights into their teaching practice. Table 4.14 also shows that 61% of respondents strongly agreed or agreed that collaboration improved their motivation to work. This is a smaller percentage of response compared with the previous response on learning new ideas. It also has a higher number of neutral responses (31%).

Additionally, evidence from the table shows that 81% of respondents strongly agreed or agreed that they found collaboration to be an effective use of their time, 14% were neutral, while 3% strongly disagreed or disagreed. This is a higher response than the previous one on motivation. The result also suggests that 83% of respondents strongly agreed or agreed that they reflect on their teaching as a result of collaboration, 16% were neutral and only 1% strongly disagreed. This is the third highest response in this section.

The second highest benefit identified by respondents is the achievement of teaching and learning goals, with 88% of respondents strongly agreeing or agreeing, 8% being neutral, while 4% strongly disagreed or disagreed. The result is an indication that collaboration can be an effective way of achieving institutional teaching and learning objectives. It can be seen from Table 4.14 that 76% of respondents strongly agreed or agreed that collaboration helps them to adapt their teaching to meet the diverse needs of their learners. This is a higher response than the previous result on achieving teaching and learning goals (88%), but with a higher neutral response.

According to Table 4.14, 74% of respondents strongly agreed or agreed that, through collaboration, they learn to effectively manage their classrooms, while 18% were neutral. The response is similar to the previous response on adapting teaching to learners' needs. Figures from Table 4.14 show that 75% of respondents strongly agreed or agreed that their students' learning improves through their own collaboration with colleagues. Again, the result is comparable to the last two results on adapting teaching to learners' needs and effectively managing the classroom. However, 17% of respondents were neutral, while 9% strongly disagreed or disagreed. This compares with the previous result relating to classroom management.

This section presented the results of the summary of response to the benefits of collaboration.

Table 4. 15: Summary of respondents' perceived benefits of collaboration

Benefits of collaboration	Percentage (%) of respondents who strongly agreed or agreed
Learning new ideas	93
Achieving the college's teaching and learning goals.	88
Reflect on teaching practice	83
An effective use of time	81
Adapt teaching to learners' needs	76
Improvement in students' learning	75
Guidance and support on managing the classroom	74
Increased motivation to work	61

As indicated in Table 4.15, the overwhelming number of respondents (93%) identified learning new ideas as the main benefit of collaboration. This result will be explored further in the follow-up interviews. A high percentage of respondents (88%) also viewed collaboration as a way of meeting a college's teaching and learning goals. This is the second highest benefit identified by respondents. It indicates that a striking number of respondents perceived collaboration as an effective way of achieving the overall teaching and learning objectives of their departments and the institutions in which they work. Consequently, it is important that management encourages a collaborative atmosphere among teachers to facilitate the achievement of these objectives.

In addition, 83% of teachers strongly agreed or agreed that, through collaboration, they could reflect on their teaching. This is likely due to exposure to diverse teaching strategies which enable them to re-assess their own teaching practice. However, 16% of respondents were either neutral or disagreed. Reflection is regarded as an important outcome of teacher-collaboration as it enables teachers to re-evaluate their teaching and learning practices and develop new ways of addressing pedagogical issues (Musanti and Pence, 2010). This suggests that teachers learn from each other and re-adjust their practice for the benefit of their learners when they work collectively to evaluate each other's work (Brookfield, 2017:8; Hendry et al., 2014; Horn and Little, 2010).

The results also illustrate that 81% of teachers viewed collaboration as an effective use of their time. However, the result also reveals that a significant number of teachers (19%) were neutral or did not find collaboration an effective use of their time. The result suggests

that teachers may save time when they work jointly rather than when they work on their own. However, if collaboration is not properly organised, it can become time-consuming and lead to interruptions that can deviate from the intended collaborative activities (Eaker et al, 2002). In such cases, teachers might regard collaboration as a waste of their time and feel that they could achieve more on their own than teaming up with others.

Teachers also view collaboration as increasing their motivation to work, with 61% strongly agreeing or agreeing. However, 39% of respondents were neutral or disagreed. Increased motivation might be due to increased teacher self-efficacy which is developed through working and learning new ideas from others, as well as confidence and belief about teachers' ability to have a positive impact on their learners in the form of increased learner learning and achievement (Bandura, 1977; Bruce et al, 2010).

Motivation can also be due to just the pleasure teachers derive from socialising and working with others, in addition to the exchange of ideas. This result is explored further in the qualitative phase. It could also be due to the pleasure of working with others and exchanging ideas. However, nearly 40% of teachers did not view collaboration as improving their motivation to work. This is a significant number of respondents. It could be that these teachers felt that they had little opportunity or time for implementing ideas gained from collaboration or that they received little support from management in implementing them. Some teachers might also consider collaboration an extra burden and distraction from their teaching activities (Little, 2003). This result is explored further in the qualitative phase.

Additionally, 76% of teachers indicated that collaboration enabled them to adapt their teaching to their learners' different needs, although, 24% were either neutral or disagreed. Furthermore, a total of 75% of teachers believed that collaboration enabled them to improve their learners' learning. This result links to the previous one, showing that teachers could adapt their teaching to their learners' needs. However, 25% were either neutral or disagreed.

Several researchers have pointed out the positive impact of collaboration in improving students' learning and helping them to learn at a higher level (DuFour, 2007; Hattie, 2009; Goddard et al. 2007; Ronfeldt et al., 2015). On the other hand, others have noted that the link between collaboration and learners' learning and improvement is weak and that not all collaboration leads to learners' improvement (Joyce 2004; Horn and Little, 2010). Moreover, 74% of teachers strongly indicated that collaboration enabled them to learn

how to effectively manage their classrooms. However, 18% of teachers were neutral, while 8% strongly disagreed or disagreed.

The next section discusses the barriers to effective teacher collaboration.

4.5. Subsidiary Question 3: *What do teachers in post-compulsory education basic skills and vocational teachers identify as barriers to effective collaboration?*

Table 4.16 below provides the response relating to barriers to collaboration.

Table 4. 16: Respondents' perceived barriers to collaboration

	Degree of agreement or disagreement in percentages (%) out of 72 respondents				
Barriers to collaboration (Statements 28-33).	**Strongly agree (1)**	**Agree (2)**	**Neutral (3)**	**Disagree (4)**	**Strongly disagree (5)**
28. Teachers' workload prevents them from effectively collaborating.	**51**	**27**	11	8	3
29. Some teachers are not good at working with others.	**31**	**35**	26	7	1
30. Difference in personalities is a major barrier to collaboration.	24	26	28	0	22
31. There is insufficient time allocated for teachers to collaborate.	**57**	**22**	14	6	1
32. Difference in teaching methods can affect the level of collaboration.	17	36	22	19	6
33. Teachers are generally reluctant to share ideas and resources.	15	25	28	22	10

*Significant results are highlighted in bold.

The result demonstrates that 79% of respondents strongly agreed or agreed that insufficient time is a barrier to collaboration, 14% were neutral while 7% strongly disagreed or disagreed. In addition, the result shows that 78% of respondents strongly agreed or agreed that workload is a major barrier to effective collaboration, 11% strongly disagreed or disagreed, with a corresponding percentage of neutrals at 11%. This

supports the argument regarding the difficulty of finding time for collaboration as a result of excessive workload (Coffield, 2008) and the idea that working jointly saves teachers' time (Department for Education, 2016).

The result indicates that 66% of respondents strongly agreed or agreed that some teachers are not good at working with their colleagues. This is a lower response than the previous result but with a higher level of neutrals (26%), while only 8% strongly disagreed or disagreed. The table illustrates that half of the respondents (50%) strongly agreed or agreed that collaboration can be affected by a difference in personalities. However, as in the previous result, there was a significant number of neutrals (28%), while 22% disagreed. This is the second lowest response to the question in this section. The finding is in line with evidence which indicates that personality differences can be detrimental to successful collaboration.

According to Table 4.16, just over half of respondents (53%) strongly agreed or agreed that difference in teaching approaches can affect the level of collaboration, 25% strongly disagreed or disagreed, while the number neutral of response was 22%. Although other findings have suggested that differences in teaching techniques and beliefs can result in a lack of teacher collaboration (Ferguson and Wilson, 2011; OECD; 2009) because they lead to conflicting views on teaching and learning that can be difficult to reconcile (Lynch, 2006; Williams. 2010), respondents in this study showed a pretty mixed view of this.

Differences in teaching approaches might be more relevant to team teaching and peer observations, two of the collaborative practices involving joint teaching and joint observation of teaching. The result also indicates that only 40% of respondents were of the view that collaboration is affected by teachers' reluctance to share ideas and resources, while 32% strongly disagreed or disagreed. However, 28% of respondents were neutral. This is the lowest response in this section and indicates the varied experiences and perceptions of respondents on the issue of sharing ideas and resources.

Table 4.17 below shows summarises respondents' perceptions of barriers to collaboration.

Table 4. 17: Table Summary of respondents' perceived barriers to collaboration

Barriers	**Percentage (%) of respondents who strongly agreed or agreed**
Insufficient time	79
Teachers' workload	78
Willingness to work with others	66
Difference in teaching methods	53
Difference in personalities	50
Reluctance to share ideas and resources	40

The above table shows insufficient time as the highest barrier to collaboration identified by respondents (79%) followed by teachers' workload (78%). These two factors are directly related. This is because, apart from teaching responsibilities, teachers are expected to undertake increased administrative duties, which can be time-consuming and leave them little or no time for collaboration (Coffield, 2008; Little, 2003; Mather et al., 2007). However, the earlier finding in the previous section on the benefits of collaboration suggests that collaboration can save time if it is properly organised.

The result also illustrates that 66% of respondents were of the view that some teachers find it difficult to work with their colleagues. Research suggests that some teachers might be reluctant to collaborate due to such factors as lack of interpersonal skills (Friend, 2000:132), distrust of colleagues or perception of collaboration as an interference in their autonomy (Lomas and Kinchin, 2006). addition, the table shows that 50% of the respondents agreed that differences in personalities can negatively affect collaboration, although 28% were neutral about this while 22% disagreed. This is in line with evidence

which shows that personality differences can affect teacher collaboration (Jao and McDougall; 2016; Williams, 2010). However, other research found no link between teachers' personalities and collaboration (Kwakman, 2003; Lynch, 2006).

Similarly, the result also illustrates that slightly over half of respondents (52%) strongly supported the view that difference in teaching methods affects the level of collaboration: 25% strongly disagreed or disagreed, while 22% were neutral. The result is supported by other findings that suggest that differences in teaching techniques and philosophies can result in a lack of teacher collaboration (Ferguson and Wilson, 2011; OECD, 2009) and can lead to conflicting views on teaching and learning that can be difficult to reconcile (Lynch, 2006; Williams, 2010).

However, half of the respondents did not support this view. Differences in teaching approaches might be more relevant to team teaching and peer observation, as these are some of the few activities where teachers directly collaborate within the classroom. The table also reveals that 35% of respondents strongly agreed or agreed that collaboration is affected by teachers' reluctance to share ideas and resources, 28% were neutral while 30% strongly disagreed or disagreed.

This section discussed the result of respondents' responses to barriers to collaboration. The top three barriers are insufficient collaboration time, teachers' workload. and willingness to work with others. The next section discusses the results of research question 4 relating to teachers' perceived strategies for improving collaboration.

4.6. Subsidiary Question 4: *Which specific strategies do post-compulsory education basic skills and vocational teachers view as likely to facilitate collaboration among teachers?*

This section provides results of participants' suggested ideas on improving teacher collaboration.

Table 4. 18: Strategies for facilitating teacher collaboration

	Degree of agreement or disagreement in percentages (%) out of 72 respondents				
Improvement strategy (Statements 34-40).	**Strongly agree (1)**	**Agree (2)**	**Neutral (3)**	**Disagree (4)**	**Strongly disagree (5)**
34. Formal collaboration should be more about classroom practice than about policies and structures.	**46**	**28**	15	8	3
35. Specific times and days should be allocated for teacher collaboration.	**50**	**35**	6	8	1
36. Teachers' workloads should be reduced to allow time for collaboration.	64	19	13	3	1
37. There should be official recognition of teachers' collaborative work by management.	46	35	17	1	1
38. Collaboration among teachers across the whole college should be encouraged.	**58**	**36**	3	2	1
39. Teachers should form collaborative groups for the purpose of sharing ideas and resources.	**54**	**28**	11	3	4
40. Effective collaboration requires strong commitment from management.	**69**	**18**	6	6	1

*Significant results are highlighted in bold.

The highest response to the statements indicates that 94% of respondents were in favour of encouraging cross-disciplinary collaboration, with few neutrals and disagreements. This shows that respondents acknowledged the significance of collaboration across departments even though less than half of respondents in this study had engaged in

cross-college collaborative activities. The result also reveals that a high percentage of respondents (87%) identified management commitment as a way of improving collaboration, with only 6% neutrals and 7% disagreeing. This is the second highest response in this section and indicates respondents' view of the importance of management's role in facilitating teacher collaboration. Further explanation of this result was sought in the follow-up interviews.

Additionally, the result shows that a high number of respondents (85%), preferred to have specific days and times reserved for collaboration, 9% strongly disagreed or disagreed and only 6% were neutral. This is the third major response in this section and higher than the last response on classroom practice. This result was also explored further in the interviews. Table 4.18 also shows that a high number of respondents (74%), preferred collaborative activities, focused on classroom practice, rather than on policies and structures. This indicates that respondents were more interested in the type of collaboration which has a direct impact their classroom activities. However, 15% were neutral, while 11% strongly disagreed or disagreed.

According to Table 4.18, 83% of respondents advocated a reduction in teachers' workload as a strategy for enhancing collaboration, 12% were neutral while only 4% strongly disagreed or disagreed. This result is similar to earlier findings, which indicated that excessive workload is a barrier to effective collaboration. The finding also indicates that 81% of respondents were of the view that teachers' collaborative efforts should be given official recognition. This percentage is comparable to the response which regarded workload as a barrier to teacher collaboration. However, 17% were neutral, while only 2% strongly disagreed or disagreed.

The table also shows that 82% of respondents were in favour of teachers' creating collaborative groups where they could share ideas and resources, 11% were neutral while 7% strongly disagreed or disagreed. This percentage is comparable to the responses on official recognition of collaboration. It also indicates respondents' willingness to engage in CoP.

4.6.1: Summary of teacher collaboration facilitators

Table 4.19 below shows the summary of respondents' suggestions for improving collaboration.

Table 4. 19: Summary of suggested strategies for facilitating teacher collaboration

Strategies for facilitating collaboration	Percentage (%) of respondents who strongly agreed or agreed
Cross-college collaboration	94%
Management commitment	87%
Specific times and days	85%
Reduction in workload	83%
Forming collaborative groups	82%
Official recognition of collaboration	81%
Focus on classroom practice	74%

The results suggest that, despite the study's revealing that respondents engaged in and valued informal collaboration, they equally wanted more formal collaboration. Despite results indicating the predominance of collaboration within individual departments, an overwhelming number of respondents (94%) were in favour of cross-departmental collaboration. This is despite the earlier result in this study indicating that only 43% of respondents engaged in cross-departmental collaboration. This is an indication that respondents recognised the importance of working with colleagues in other departments.

Evidence indicates that engaging in cross-departmental collaboration can enable teachers to engage in wider professional dialogues with colleagues as they are exposed to new teaching and learning approaches practised by those departments (Meirink et al., 2010). However, cross-departmental collaboration can be hindered by the structure of

educational institutions as they are traditionally organised by subject areas and grade levels, which can limit the level of interaction outside individual departments (Corcoran and Silander, 2009; Eschler, 2016; Holley, 2009). This finding was explored further in the qualitative phase.

Another strong result is the number of respondents (87%) who suggested the need for management commitment to teacher collaboration. This indicates that many of the respondents might be uncertain about the degree to which management is so committed. Goddard et al. (2007) note that one of the reasons why teachers do not collaborate is their perception that collaboration is undervalued. This reinforces the need to foster a collaborative and trusting atmosphere that encourages teachers to work together in achieving mutual objectives of their institutions (Fullan, 2010). Further clarification of this result was sought at the second-stage interview phase.

In addition, the result shows that 85% of teachers supported the idea of allocating designated days and times for interaction. Previous research suggested that specific periods should be provided for teachers to engage in collaboration. For example, some researchers suggested incorporating collaboration periods into the regular timetable of teachers rather than outside their teaching hours (DuFour, 2011; Wimberley, 2012). This is to ensure that collaborative activities take place during the day, when teachers are still focused, rather than at the end of an exhausting teaching day (Buffum et al., 2009). This finding was also explored further in the interview.

Furthermore, results reveal that 83% of respondents supported a reduction in teachers' workload. Teachers in this study highlighted excessive workload as a major barrier to effective collaboration. It is therefore unsurprising that they would be in favour of a reduction in their workload. Bridges and Searle (2011) argue that reduction in workload is likely to make collaboration more attractive to teachers. Results also reveal that 82% of respondents were in support of creating collaborative groups to enhance collegial interactions.

Research shows that creating collaborative groups in form of CoP can enhance teachers' ability to work and learn together, engage in reflective practices and share creative ideas (Levine and Marcus, 2010; Murray, 2014, Stoll and Seashore-Louis, 2007). Engaging in reflective practice provides professionals with the opportunity to develop an improve knowledge of their profession and become more efficient in their practice (Kapelari, 2015).

The result also indicates that 81% of respondents were in favour of official recognition of collaborative work. This suggests that many respondents might not feel that their collaborative efforts are given the deserved recognition by management. Officially recognising teachers who engage in collaborative practices will indicate that their efforts are being noticed and valued, and can result in more teachers collaborating. Ash and D'Auria (2013) suggest that collaborative efforts should be recognised in order to motivate collaborating teams. Some suggestions for recognising and promoting collaboration include show-casing collaborating teams (Eaker and DuFour, 2005; OECD, 2009).

Furthermore, 74% of respondents indicated that collaboration should be mainly focused on classroom practice and that less emphasis should be placed on policies and structures. However, 26% of respondents were either neural or strongly disagreed or disagreed. The result indicates that teachers are more likely to engage in collaborative activities if they are directed at improving their classroom practice and are perceived as likely to lead to an improvement in their learners' learning.

This section discussed the respondents' suggestions for improving teacher collaboration. The following section discusses the result of the only open-ended question in the survey questionnaire.

4.7: Response to the statement 41: **"**Any other comments about teacher collaboration you might wish to add."

This section presents the outcomes of the only open-ended question (question 41) in the survey questionnaire. The aim of the question was to enable respondents to add any other comments on teacher collaboration they considered appropriate in their own words. As recommended by Pallant (2013), the range of responses were carefully examined and summarised into different categories. Each of the response categories was then allocated a number for the purpose of entering them into the SPSS software for statistical analysis as follows: 1=frequency of collaboration, 2=collaboration across departments, 3=sharing good practice, 4=work culture, 5=planning for collaboration, 6=atmosphere of trust and 99=no response.

Figure 4.1 shows the result of the SPSS analysis of respondents' responses.

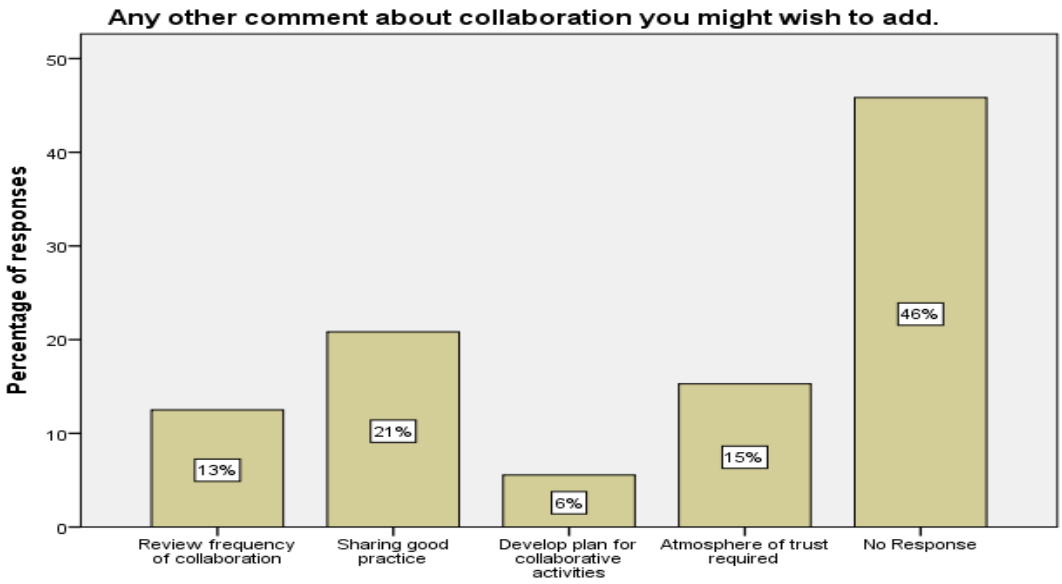


Figure 4. 1: Open question

Figure 4.1 indicates that just over half of the respondents (54%) answered the question, while 46% did not respond. Sharing good practice emerged as the highest suggestion (21%). For example, one respondent said, "Teachers should help their colleagues by sharing what they know." This is followed by establishing an atmosphere of trust (15%). For example, one of the respondents noted, "You need trust to work with others." Reviewing frequency of collaboration was suggested by 12% of respondents. For example, one respondent said, "Result of collaboration should be reviewed regularly." Developing a plan for collaboration was suggested by 6% of respondents. For example, one respondent suggested, "There should be a plan on when and how to collaborate."

Overall, the only new finding which emerged from the open-ended question was the idea of regularly reviewing collaborative practice. Other results were a repetition of some of the findings in this quantitative phase.

The next section provides the summary of quantitative data presentation.

4.8: Summary of quantitative data presentation

This chapter has discussed the findings of the first phase quantitative results of this study, using percentages and numbers. Analysis of demographic information indicates that the percentages of respondents from the basic skills and vocational department were roughly

the same. The majority of respondents were between the ages of 41-50 years while the smallest age group was between 31-40 years.

Gender composition indicates that there were more male than female respondents. Additionally, respondents with 4-7 years' teaching experience have the largest spread while the majority of respondents (full-time and part-time) were on full-time permanent contracts. The results also indicate that the majority of respondents taught courses at Level 3. Furthermore, the findings showed that the five main collaborative activities that respondents engaged in were informal conversation (88%), discussion of student performance (78%), departmental collaboration (75%), discussion of teaching strategies (72%) and solving learners' problems (70%), while the activity that respondents engaged in least was course-related collaboration (40%).

In addition to descriptive statistics, inferential statistics were also conducted to determine whether there were associations between teacher characteristics and collaboration. The teacher characteristics used were age, department, gender, length of service, contract type and level of learners. Apart from gender, which has no relationship to any of these characteristics, associations were found with all other teacher characteristics. Some of the key findings are explored further in the qualitative study.

The following chapter presents the data and discussions of the second phase quantitative study.

CHAPTER FIVE: QUALITATIVE DATA PRESENTATION AND DISCUSSION

5.1: Introduction

This section presents analysis and discussions of the qualitative interviews aimed at elaborating on the key findings from the quantitative phase. The findings explored further are: lack of engagement in collaboration, informal conversation, inter-departmental collaboration, preferred collaborative activities, learning new ideas, team teaching, peer observation, motivation, lack of time, allocation of specific times and days, and management commitment. Interview data were analysed using thematic analysis.

5.2: Demographic profile of interviewees

Table 5.1 below provides the demographic profile of the teachers who participated in the second phase interview stage.

Table 5.1: Interviewees' profiles

Participants	College	Age	Department	Gender	Service length	Contract type	Learner level
MC	LS	42	Basic skills	F	12	Full-time	Entry 3
ZJ	LS	35	Basic skills	F	8	Part-time	Level 1
AT	LS	40	Basic skills	F	10	Part-time	Entry 2
ID	LS	45	Vocational	M	9	Full-time	Level 5
GA	CT	55	Vocational	M	5	Full-time	Level 3
SA	CT	38	Vocational	F	4	Full-time	Level 3

As shown in Table 4:1 above, there were six participants from the two departments under study (basic skills and vocational); four females and two male teachers, aged between 35 and 55 years. The teachers had between four to 12 years' teaching experience each. Basic skills teachers mainly taught courses from Entry Level 3 to Level 2 which is the usual level taught by FE teachers in this department. These are learners at the lower end of the qualifications scale, while vocational tutors mostly taught courses at the upper end (Levels 3-5).

Teachers from only two colleges out the initial three in the quantitative phase participated in the interviews. This is because the third college consisted of mainly part-time teachers who were unable to take part in the interviews due to time constraints. The questions used in the interviews are shown in Table 5.2 below.

Table 5. 2: Interview questions

Q 1	*Evidence from my research shows that many teachers engage in collaboration. However, the result also indicates that one-quarter of teachers were not interested or did not engage in collaboration. What is your view on this?*
Q 2	*The majority of teachers in my study identified informal conversation as the main type of collaborative activity they engaged in. What is your opinion on this?*
Q 3	*My study also found that teachers mainly collaborated with their departments and less often with colleagues outside their departments. What is your own experience on this?*
Q 4	*Given the different activities involved in collaboration, which specific collaborative activities do you have preference for and why?*
Q 5	*Learning new ideas was identified as the main benefit of collaboration by teachers in this study. What is your own view on this?*
Q 6	*Team teaching is regarded as an effective method of improving teaching practice but was not rated very highly in my study. What is your experience on this?*
Q 7	*Another activity usually promoted as a way of improving teachers' practice is peer observation. However, half of the teachers in my study disagreed with or were neutral about the idea of peer observation. What is your own view?*
Q 8	*Although many teachers in this study indicated that they were motivated to work as a result of collaborating with others, a significant number did not think so. What is your opinion?*
Q 9	*This study found lack of time as a major barrier to collaboration. Do you agree and why?*
Q 10	*What do you think about the idea of creating specific times and days for teachers to collaborate?*

Table 5. 3: Themes developed from qualitative data on aspects that the interviewees regarded as influencing collaboration

Through thematic analysis of data, the following key themes were identified (refer to section 3.2 and appendix 7).

Theme 1	Personality and workplace relationships
Theme 2	Culture of informal interaction and workplace design
Theme 3	Mutual objectives and experience and staff location
Theme 4	Sharing resources, learner improvement and management strategies
Theme 5	Developing innovative approaches
Theme 6	Mutual learning and peer support
Theme 7	Anxieties and misgivings about observation practice
Theme 8	Improved confidence in practice
Theme 9	Excessive workload and coping strategy
Theme 10	Desire for proactive management involvement

The following section consists of analysis and discussion of interview questions.

5.2: Interview Question 1: *I asked, "Evidence from my research shows that many teachers engage in collaboration. However, the result also indicates that one-quarter of teachers were not interested or did not engage in collaboration. What is your view on this?"*

One key theme emerged in response to this question: personality and workplace relationships.

Personality and workplace relationships

The qualitative findings revealed that four of the six interviewees identified individual personality as a key factor in either fostering or hindering intensity of collaboration. Similarly, teacher personality was also found to be a barrier in the quantitative study, albeit by only 50% of respondents. This is understandable as collaborating groups would normally consist of teachers with different dispositions and perspectives.

Research indicates that collaborative activities can be affected by different personalities and belief systems, which can result in conflicting views that are difficult to resolve (Jao and McDougall; 2016; Williams, 2010). Personality traits which participants cited as a hindrance to collaboration were difficulties in forming relationships, lack of confidence,

lack of interaction skills and preference for working alone. These factors are discussed individually below:

Some teachers highlighted the difficulty in forming relationships:

> *"It's hard to form relationships with other colleagues. Sometimes human nature as well: some people choose not to collaborate because of their personalities."* MC

Other teachers identified lack of confidence as a reason why teachers do not engage in collaboration.

> *"Unfortunately, professionalism like I said, will only go so far but sometimes, it's a personality thing. Some people are scared... they don't want to do it [collaborate]." ZJ*

> *"Some others may not be confident enough to want to collaborate with others as they feel their weaknesses could be exposed to others, and this would make them feel uncomfortable." GA*

Other teachers highlighted the unwillingness of colleagues to share resources and ideas, while others opined that some teachers are unwilling to collaborate because they enjoy working in isolation.

> *"Sometimes, … the staff get protective of their resources and about knowledge and information, maybe, that other staff don't have." ZJ*

> *"I think some teachers just don't like to work with other people and some teachers on the whole just like to get their own things done." SA*

One of the positive personality traits identified as fostering collaboration is friendly relationships.

> *"The type of collaboration that happens in our staffroom, basically, is that I share materials with my friends [laughs] and they share with me, and I also share with anyone outside my personal friendship circle… I just find I always share with certain members of staff, whom I get on with anyway." ZJ*

> *"Sometimes, collaboration doesn't even come down to who is even in your area of work but it's just whom you are closer to." MC*

The findings from these data support the assertion that personality affects teachers' behaviour and attitude, their relationship within an organisation and their willingness to share knowledge and resources (Hawkins and Mothersbaugh, 2013; Jadin et al., 2013). This indicates that positive personality traits can foster collaboration while negative traits can constitute barriers to collaboration, resulting in a restriction in sharing knowledge and resources.

Additionally, the result indicates that relationship building can be a complex exercise and take time to achieve. It suggests that teachers tend to collaborate more with colleagues with whom they have close relationships within or outside their departments. One of the interviewees noted the tendency of some teachers to be protective of their resources and knowledge. Coker (2014) opined that teachers might be reluctant to share resources due to the perception that others might not be investing as much time as they do in creating resources.

This supports the notion that shared responsibility and equal contributions are requisite for a successful collaboration and CoP (Friend and Cook, 1992; Stoll et al., 2006).

5.3: Interview Question 2: *I asked, "The majority of teachers in my study identified informal conversation as the main type of collaborative activity they engaged in. What is your opinion on this?"*

All participants agreed that they mainly engage in informal collaboration. The main factors cited are a culture of informal peer interaction, workplace design and lack of time/excessive workload. The rest of this section explores these factors in more detail.

5.3.1: Culture of informal interaction and workplace design

The majority of participants (four out of six) suggested that teachers have historically collaborated informally on matters relating to their daily activities, including teaching and learning strategies.

> *"I think it's just a habit more than anything else. That's how it's been going for so long and it's just habitual now to contact a colleague and try and get some support or ideas or updated information, practices but you get some support informally." ID*

> *"Most people do end up having informal communication and collaboration about things that affect their day-to-day working conditions and teaching ideas and practices. I think it is definitely mostly informal." MC*

The teachers generally appeared to find informal collaboration convenient and productive. This is supported by research, which shows that teachers find informal collaboration easier and more effective than formal collaboration especially on matters relating to their daily practices, which require immediate solutions (Poet et al., 2010; Wilson and Demetriou, 2007). It also reinforces the idea of the voluntary and spontaneous nature of genuine collaboration or CoP (Chew and Andrews, 2010; Friend and Cook, 1992).

Additionally, it indicates the situatedness of the idea of collaboration in regard to the prevailing culture of an institution. However, some researchers suggest that informal collaboration can become ineffective due to unproductive personal dialogues that are not linked to the task at hand, and that it can also result in conflicting views which are difficult to resolve (DuFour, 2011; Lefstein, 2010).

5.3.2: Workplace design

One of the participants suggested that seating arrangements and the space in which teachers work facilitate improved interaction:

> *"Obviously, it helps that we are in an open plan office. We can talk to each other; ask for help if we need information about something or resources. But if we are not sitting near each other, then we are not going to understand each other, or what each other is doing." ZJ*

This finding is supported by evidence which shows physical proximity is an enabler of collaboration (Hua et al., 2012; Parrino, 2015). Specifically, and in support of the above statement, Saval (2014) found that an open-plan office can increase the level of informal collaboration as lack of physical demarcation can make interaction and communication easier.

However, there is also an argument that an open-plan office can result in distractions and lack of privacy, which can make it difficult to focus on tasks that require high levels of concentration (Pinder et al., 2009). The finding also confirms the situatedness of teacher collaboration, indicating that collaboration can be facilitated or hindered by the structural design of an institution.

5.4: Interview question 3: *I asked, "My study also found that teachers mainly collaborated with their departments and less often with colleagues outside their departments. What is your own experience on this?"*

The key themes that emerged were to do with mutual objectives and experience, and staff location.

5.4.1: Mutual objectives and experience and staff location

All the interviewees referred to shared objectives and shared experience as the reasons why teachers collaborate more with their departments and less across departments. Shared objectives and experiences include curriculum, resources and the location of the teaching staff.

"It is my own experience [shared objectives and experience] because I think as a department, we normally have meetings and we normally work on the same certification..." SA

"I don't have time to talk to outside my department that's the bottom line. We don't really get to venture out outside our department and why we need to collaborate with them, I never know." ZJ

"The level of collaboration among teachers is likely to be high among people that are within the same department because you work together as a team, you are likely to share resources and you are likely to interact on issues that relate to your subject areas, rather than to other people from other departments." GA

The finding is in accord with the research, which suggests that teachers working within the same department tend to share experience, curriculum, resources and a similar cohort of learners (Eschler, 2016; Harris and Jones, 2010; Rivera, 2010). Having common objectives is one of the major characteristics of an effective collaboration (Friend and Cook, 1992). It is also a key element of successful CoP (Fullan, 2010). It also indicates the importance of shared repertoire in form of shared history, language and resources (Wenger, 1998).

5.4.2: Staff location

Half of the interviewees identified staff location as a facilitator of cross-departmental collaboration. In the context of this study, staff location refers to the locations where teachers are primarily based or other sites or campuses where they undertake teaching activities. The result indicates that participants who worked across departments tended to engage more in inter-disciplinary collaboration than those who did not.

"I am based away from my colleagues, so I tend to collaborate with people working in different departments because I have no choice." MC

"If you teach across the college, if you are teaching Functional Skills, you would have to collaborate with teachers in vocational areas. AT

The finding reveals that teachers with teaching responsibilities across departments have more prospects of engaging in inter-disciplinary collaboration than those who do not. However, the use of phrases such as "You would have to" and "I have no choice" suggests that these interactions were due to unavoidable assignments outside the teachers' base locations, which makes interaction and collaboration inevitable, and not necessarily a deliberate attempt to engage in collaboration by individual teachers. This can be linked to the notion of contrived collegiality (Hargreaves,1994).

The two responses above are from Functional Skills (basic skills) teachers involved in delivering basic skills subject to learners on vocational programmes. The Institute for Learning (2013) emphasises the need for Functional Skills teachers to work collaboratively with vocational tutors to ensure that schemes of work are jointly designed to ensure that English and maths are linked to vocational units. This shows the need for management to foster cross-departmental collaboration as it can enable teachers to gain cross-disciplinary knowledge and exposure to other departments' activities, including teaching and learning issues that can help transform individuals and institutions (Holley, 2009). The findings also support the view that collaboration among FE teachers is a situated activity which is influenced by the context in which teachers practice (Lave and Wenger, 1991) as well as the culture of the institution in which they are based (Fullan, 2009).

5.5: Interview question 4: *I asked, "Given the different activities involved in collaboration, which specific collaborative activities do you have a preference for and why?"*

This question was designed to answer the second part of the main research question, concerning the value placed on collaborative activities by teachers.

Sharing ideas and resources, learner improvement and learner management

All participants identified collaborative activities which enabled them to share diverse teaching and learning strategies and resources as their preferred method of collaboration. The main activities identified were discussing assessment strategies, discussing students' performance and progress, sharing teaching and learning materials and learner behaviour management.

The majority of participants (four out six) identified collaboration on assessment strategies as their preferred activity. This is comparable to the result of the survey in which 63% of respondents collaborated on assessment strategies.

> *"Well, as a business teacher, what I often do is, sometimes, I want to see whether my own assessment method can be corroborated with the assessment methods of my colleagues on similar learners." ID*
>
> *"I often discuss assessment strategies, particularly recently, because of the progression tests we are doing." AT*

The finding indicates that respondents valued collaboration on assessment to improve the learning of their learners. It also emphasises the high profile of assessment in our educational culture as a highly valued task where parity is required. Previous research

found that collaboration on assessment strategy enables teachers to re-evaluate their practice, confirm how effective their own assessment techniques are, and gain a better understanding of strategies that will help them focus on their learners' learning (Dufour, 2007; Harris and Jones, 2012; Horn and Little, 2010).

Half of the interviewees identified activities relating to students' performance and progress:

> *"We might talk about how students have really progressed. For example, on adult ESOL courses. We'll have students that have plateaued [reached their peak in learning] and we sometimes discuss what to do with them." AT*

> *"Sometimes, if for example, you have a student in particular and that student in is not making enough progress, another teacher that the student is making good progress with can help you." SA*

The result indicates that collaborating with others can help teachers to resolve difficulties regarding students' performance and progression, which would otherwise be challenging for individual teachers on their own. Previous research indicates that collaboration can help teachers to improve their students' performance (Goddard et al., 2007; Ronfeldt et al., 2015)) and can influence the ability of students to perform at a higher level (Hattie, 2009).

Four out of six interviewees preferred sharing teaching and learning materials. Similarly, 67% of respondents in the initial survey collaborated on sharing teaching and learning materials.

> *"The type of collaboration I prefer is basically, sharing materials and ideas with my friends and they share with me. I sometimes share with anyone outside my personal friendship circle. I don't mind." ZJ*

> *"When it comes to resources, when it comes to sharing administrative documents and ideas, you know it's usually a bit more uniform in practice if you are working with teachers in your department." MC*

The finding confirms that collaboration enables teachers to mutually engage in sharing ideas and resources and consequently, be exposed to different views and strategies, which are likely to enhance their teaching practice. This is supported by other findings which suggest that engaging in collaboration enables teachers to share mutually beneficial ideas and resources that can result in a positive change in approaches and perspectives that would enable them to address their learners' needs (DuFour et al., 2005; Dyrud, 2010). This supports the idea of co-construction of knowledge and shared resources which are required for an effective collaboration and CoP.

In relation to managing learner needs and behaviour, half of the participants identified this as their preferred collaborative activity.

> *"And then you can work with teachers regularly to help with approaches to students' issues because some of the students we have are quite challenged educationally, socially, financially and emotionally." MC*
>
> *"Sometimes it can be about students' attendance and punctuality and student behaviour." AT*
>
> *"We support each other even in disciplinary matters." GA*

The statements indicate that teachers collaborate to find more effective ways to resolve learner issues, particularly classroom behavioural issues. It also suggests that, through collaboration, teachers can learn different strategies for managing learner-behaviour and receive support from their peers when required. Previous studies have found that dealing with learners with challenging behaviour in the classroom is one of the key concern of teachers. and that teachers need support and training in this area (Hytten, 2011; Murali, 2016). In FE in particular, teachers might sometimes struggle to deal with learners from diverse backgrounds and with complex social, economic and educational needs (Barnfield, 2013; Hodgson and Spours, 2017).

The overall response to the question regarding interviewees' preferred collaborative activities indicates that respondents preferred activities that enabled them to improve their classroom practice. It also shows a strong focus on informal collaboration.

5.6: Interview question 5: *I asked, "Learning new ideas was identified as the main benefit of collaboration by teachers in the initial survey in this study. What is your own view on this?"*

The majority of interviewees regarded learning new teaching ideas as the main benefit of collaboration. This adds weight to the key finding emerging in the previous section. This section explores this further.

Developing innovative teaching approaches

The initial quantitative results indicated that 93% of respondents viewed learning new ideas as the key benefit derived from collaboration. Similarly, the majority of interviewees (four out of six) agreed with the statement. The interviewees noted that they learned new approaches to teaching and learning because of interaction with their colleagues.

> *"Yes, you are right because during the recent collaboration I did with my colleague in [name of site withheld], who teaches business, and who has about 15 years' teaching experience, I discovered a new way of checking previous learning from him." ID*

> "*When you interact with colleagues from the same profession, you gain new ideas you know. They give you new perspectives about things, new development that you are not aware of, and it helps to enrich your knowledge and your practice as a teacher." GA*

> *"We do often share ideas about how they teach certain things. For example, the Brexit and the EU referendum and ideas about different lesson plans and strategies on how we can integrate grammar and vocabulary into our topic." AT*

Although these three interviewees had between five to 12 years' teaching experience between them, they all found collaboration helpful in gaining new ideas and perspectives. This finding indicates that teachers continue to collaborate and learn regardless of their years of experience. This is in line with similar findings by Papay and Craft (2016) who found that years of experience were not a barrier to teacher collaboration and development. The finding supposes that, within the CoP, all teachers, regardless of their experience, develop their knowledge and capability through participating in peer collaboration. When linked to the zone of proximal development (ZDP) (Vygotsky, 1978), it indicates that both experienced and less experienced teachers learn from each other and develop their practice.

However, one interviewee had a slightly different perspective and emphasised "sharing ideas" as the main benefit rather than "learning ideas."

> *"Generally, I think sharing, more than learning is probably more apt in relation to teachers because individuals have got their own approach, every teacher delivers differently, everyone approaches certain things in their own way and everybody has their own individual style." MC*

The statement suggests that teacher collaboration involves the mutual contribution of knowledge. Another interviewee had a different focus and regarded students' progress and achievement as the main benefit of collaboration, but again, focused on the "mutual" aspect of collaboration.

> *"I think it is students' progress. I think as teachers, we underestimate how much we learn when we work together. For me, collaboration is linked to achievement and progress for all* students*; it doesn't matter the ability or capability." SA*

These findings generally suggest that FE teachers value collaboration because it enables them to engage in mutual learning and sharing of ideas and resources which helps them

improve their learners' learning. Levine and Marcus (2010) opined that, through collaborative practices, teachers are exposed to new teaching and learning approaches arising from the opportunities available to them for discussion, observation and sharing practice. The emphasis by one of the interviewees on "sharing" highlights the mutual contribution and co-construction of knowledge which characterises CoP (Murray, 2014; Lave and Wenger, 1991).

5.7: Interview question 6: *I asked, "Team teaching is regarded as an effective method of improving teaching practice but was not rated very highly in my study. What is your experience on this?"*

The majority of participants displayed a positive perception of team teaching but also acknowledged its shortcoming. The main theme that emerged involves mutual learning and classroom management.

Mutual learning and classroom management

All participants acknowledged team teaching as a technique for improving their teaching and it involves mutually learning from each other. However, the finding contrasts with the survey result which found that only 42% of respondents engaged in team teaching.

MC summarised the views of most of the interviewees when she said:

> *"If you have two heads working together with different approaches; the Yin and Yang, it is an effective way of delivering to learners."* MC

The Chinese term "Yin and Yang" in the above quote emphasises the benefits of working together to achieve a balance between opposing but complimentary ideas (Dattillo, 2015).

This links to the statement by another interviewee:

> *"Sometimes, where another teacher is unable to fully explain a point to students, the other teacher with whom they are team-teaching would explain it further." SA*

Again, this highlights the mutual support derived from engaging in team-teaching. Some other teachers regarded team teaching as useful for managing learners in the classroom. This is because, as one teacher teaches, the other teacher would be able to monitor the learners.

> *"It also helps too in class management because when two teachers are there, it reduces the level of distraction that could possibly happen in the class. So it could increase the level of attention of the learners." GA*

The results show that most of the interviewees had a positive attitude towards team teaching and recognised its benefits for teachers and learners. The interviewees suggested that team teaching enables teachers to complement each other's skills and assists with managing the classroom. These findings link with the views of Furr and Bacharach (2008) and Ferguson and Wilson (2011) that team teaching supports teachers with classroom management.

The findings also suggest that teachers gain new teaching perspectives as a result of team teaching. This links with the work of Dyrud (2010) suggesting that team teaching can be an effective way of improving pedagogical knowledge. It also reinforces the statements above with regards to Ying and Yang's different approaches and different explanations by different teachers. Again, the findings highlight the reciprocal relationships, through joint initiatives and shared practice, epitomised by CoP (Denscombe, 2008; Wenger, 1998).

However, some participants highlighted some constraints of team teaching including lack of confidence, teachers' lack of receptiveness to feedback, lack of planning time, ineffective organisation and perception of team teaching as an activity for early-career teachers. These factors are explained further below.

One of the barriers to team teaching identified by some interviewees is lack of confidence:

> *"Some teachers are embarrassed to teach in the presence of colleagues; perhaps because they are not confident enough." GA*

It has been suggested elsewhere that teachers' lack of self-confidence about their pedagogic ability can prevent them from engaging in team teaching (Little, 1993; Ross-Hill, 2009). In addition, one interviewee identified the difference in teaching styles as a barrier to team teaching. Just over half (53%) of respondents in the quantitative study also viewed the difference in teaching approaches as a barrier to team teaching.

> *"If it's not well-managed, it could be disruptive. Learners could equally be disengaged because each teacher has his own teaching style." ID*

As different teachers possess diverse perspectives and approaches to teaching, this could become an obstacle if there is no effective communication and rapport between the teachers involved in team teaching. Researchers have found that irreconcilable differences in teaching approaches can constitute a barrier to collaboration (Jao and McDougall; 2016; Williams, 2010). However, as indicated earlier in the Yin and Yang philosophy, it points out the complexity of this issue and shows that differences in

teaching philosophies and approaches can be complementary rather than resulting in a clash.

Another participant highlighted the dual planning involved in team teaching.

> *"It is a collaborating system anyway but the problem about team teaching is that it takes a lot of double planning on both sides." ID*

This result indicates that effective team teaching involves extra planning between the teachers involved. This additional responsibility can be time-consuming and deter teachers from fully embracing team teaching. To minimise this problem, it has been suggested that teachers should be allocated joint planning time by management (Carpenter et al., 2007; Kohler-Evans, 2006). Joint planning is regarded as an important part of an effective collaboration (Department of Education, 2016; Little, 1992).

Furthermore, some teachers viewed team teaching as an activity undertaken in an early teaching career or during teacher training:

> *"Team teaching is something you normally do during the qualifying years when you were training to become a teacher." SA*

> *"I have been involved in team teaching very early on in my teaching career and I thought it worked quite effectively in the classroom because you share strengths, you share ideas and you share approaches." MC*

The quotes above indicate why some teachers attach low value to team teaching. The findings suggest that experienced teachers might find team teaching irrelevant to their current needs and perceive it to be more suited to new or less experienced teachers. This may explain why some teachers are less enthusiastic about team teaching. This finding aligns with the "legitimate peripheral participation" of Lave and Wenger (1991) which signifies that new teachers learn from experienced teachers to acquire the skills that allow them to "move towards to full participation the sociocultural practices of the community." In Vygotsky's (1978) ZPD, new or trainee teachers are considered as novices, who are guided by more capable experienced peers, such as teacher trainers and mentors, in acquiring the required skills.

5.8: Interview question 7: *I asked, "Another activity that is usually promoted as a way of improving teachers' practice is peer observation. However, half of the teachers in my study disagreed with or were neutral about the idea of peer observation. What is your own view?"*

Anxieties and misgivings about observation practice

The majority of participants (four out of six), had a negative perception of peer observation. Some interviewees noted the connotation attached to the word "observation" which creates deep suspicion and fear in teachers' minds.

> *"They are scared. The word observation, I think, just scares everyone. It creates this aura of mistrust among colleagues and you start getting paranoid and feel that are they coming to watch you or get feedback from the line manager about how bad your teaching is. Weird fear culture?" ZJ*

> *"I dislike the word observation as a whole because I feel uncomfortable with senior managers, or your colleagues, walking into your lesson. Observation is sometimes used as a tool against teachers." SA*

These statements highlight the type of apprehension that can be created by peer observation. The relevance and effectiveness of feedback from peer observation were also highlighted by one of the respondents:

> *"The feedback that they give is not usually effective and these observers do not put the suggestions they offer into practice themselves. Sometimes when you are observed, you get feedback that is far from the point." SA*

Again, the above quotes show the interviewees' lack of confidence and trust in the observer's judgment. One participant also noted that peer observation is mainly used by managers to meet their administrative requirements:

> "*Well, honestly, in my opinion, it's not really taken that seriously because peer observation is seen as something which is only being be done by managers to meet their paperwork needs."*

This finding indicates lack of trust in management's intentions. However, some of the participants acknowledged the role of peer observation in enhancing teaching practice.

> *"I think it's probably another effective way of i*nforming *your own practice or developing your own practice but it just depends on how effectively it's promoted in the classroom or in the institution you are working in." MC*

> *"Peer observation helps a lot because you discover that, as teachers, we have different strategies and one can learn from each other when you observe other teachers teaching." GA*

These statements indicate participants' acknowledgement of team teaching as a technique for enhancing teaching practice.

The overall findings provide possible reasons why there was a poor response from the initial survey on peer observation, suggesting that many teachers were uncomfortable with the idea. The last statement emphasises the mutual learning that takes place between the observer and the observed and reinforces the view of Hendry et al. (2014) that peer observation should not be solely focused on the observed teacher but should involve learning from both the observed and the observer. It also supports the idea of CoP in fostering mutual learning.

Additionally, the findings are indications that teachers can be territorial in their field of expertise and their classrooms. Lomas and Kinchin (2006) attributed the resistance to teachers' guarding against what they perceive as interference in their classrooms and protecting their academic freedom. This is supported by O'Leary and Gewessler (2014) who observed that lesson observations can create a "culture of fear" with negative consequences including increased stress, anxiety, sickness and absence rates, and low self-esteem. Even though O'Leary and Gewessler (2014) were referring to formal graded lesson observations, it appears that the negative experience, fear and suspicion that some teachers have about graded observations have resulted in their negative perception of observations in general.

Some interviewees highlighted how peer observation can negatively affect relationships with colleagues. For example, they pointed out the tendency of the observed teachers to view feedback from colleagues as criticism which might discourage the observer from giving constructive feedback:

> *"Sometimes you might get someone who is not really receptive to feedback and they take it critically and they feel that you have come to watch them. So it depends on the individual." ZJ*

> *" I think if you're observing a colleague or a friend, you might be reluctant to criticise their teaching methodology; although I probably won't do it." AT*

Again, the statements reinforce earlier findings regarding the suspicion that participants hold about peer observation and the difficulty of providing feedback to colleagues.

This indicates the importance of clear communication and mutual understanding between the observed and the observer. There is a need for mutual discussion and agreement on the purpose of peer observation and an agreed plan on how feedback should be given.

This is important since a badly planned process aimed at fostering interaction might result in mutual suspicion, which can ultimately result in negative relationships among teachers, rather than enhanced collaboration.

Another participant pointed out the reluctance of some teachers to show their weaknesses to colleagues through peer observation:

> *"There is the fear that one could be exposed to one's colleagues and peers in a way that may not be positive. ID*

To mitigate against this fear, one of the participants suggested that peer observation should focus mainly on the positive aspects of the observation and ignore what was regarded as "negatives."

> *"The person that is observing should be able to go there with a positive mind, not to look at the negatives but to look at the positives that can be used to improve the practice." GA*

This suggests that focusing on positive feedback could result in improving an observed teachers' morale. However, without a reference to some areas for development, teachers might not understand what skills they are required to improve.

Another participant also suggested that peer observation should be made mandatory.

> *"It's a constitutional thing, it's a policy thing. It should be written in one of the operational policies of the institution that maybe once or twice a year, you do peer mentoring. It is expected as part of your professional development to do that; it is monitored so you can see how effective it has been." MC*

This indicates that some teachers prefer some collaborative activities to be structured. However, other teachers might resist this suggestion of mandatory collaboration as a further erosion of their authority and autonomy. It could diminish teachers' perceptions of peer-to-peer observation as a voluntary participation among equals for developmental purposes (Bell and Cooper, 2013; Friend and Cook, 1992) and rather equate it with graded evaluative observation.

In summary, the section discussed the collaborative practice of peer observation and teachers' perception of this practice. It showed that, while some interviewees acknowledged the possible contribution of peer observation to teaching practice, others were apprehensive about the idea. This was mainly due the perception of interference in teachers' autonomy in their classrooms and the mistrust of the use of observation data.

5.9: Interview question 8*:* *I asked, "Although many teachers in this study indicated that they were motivated to work as a result of collaborating with others, a significant number did not think so. What is your opinion?"*

The majority of teachers agreed that collaboration motivates them to work. They cited learning diverse teaching and learning strategies as the main reason for their motivation.

Improved confidence in practice

The majority of participants (four out of six) agreed that they were motivated to work through working collaboratively with colleagues. This is comparable to the percentage of participants in the survey (61%) who agreed that they were motivated to work by collaboration.

> *"I am highly motivated in seeing my colleagues doing very well, coming out with very good ideas and I want to equally do similar things." ID*
>
> *"The motivation is probably because, if you are working alone, if you don't have any ideas from other people, then teaching could become quite stale." AT*

The finding suggests that teachers can become motivated through learning new ideas or techniques. and that the social support they receive through interaction can enhance their confidence and ability to successfully incorporate the new ideas they have learned into their classrooms practice. Research shows that engaging in collaboration can result in an increase in teacher motivation (Fullan 2010; York-Barr et al. 2007; Stoll, 2015).

However, one interviewee disagreed that collaboration motivated them to work. This participant listed factors other than collaboration that motivate teachers.

> *"Collaboration actually is not the only thing that motivates one to work. It is a friendly atmosphere, the way we interact within the department here, mutual respect, interacting freely with one another, sharing jokes and getting along well with each other. Also, we don't hide resources from one another and nobody feels too big to ask for help." GA*

The above finding suggests that teacher motivation requires more than collaboration but also needs a positive and friendly atmosphere.

Another interviewee also underscored the need for creating a conducive environment for collaboration:

> *"Sometimes managers need to create a positive environment for people to interact." ZJ*

This result is supported by previous findings which showed that successful collaboration requires a trusting and conducive environment that allows teachers to work together (Fullan, 2010; Hattie, 2015). This can improve the confidence of teachers to freely interact with their colleagues and lead to improved practice (Hattie, 2015; Murray 2014).

5.10: Interview question 9: *I asked, "This study found lack of time as a major barrier to collaboration. Do you agree and why?"*

Excessive workload

The majority of participants identified excessive workload as a disincentive to collaboration. Similarly, the quantitative result showed that a high number of respondents (78%), viewed excessive workload as an impediment to effective collaboration. Interviewees were of the opinion that teachers' workload, in the form of tight teaching schedules and administrative responsibilities, left them with little or no room for collaboration. On interviewee noted:

> *"Some teachers are neutral or did not engage in collaboration for the following reasons: their heavy workload -- lesson preparation, assessing and providing feedback to students (marking)." G.A.*

This indicates a link between excessive workload and lack of time for collaboration. All interview participants linked the lack of time for collaboration to excessive workload. This coincides with the survey results which indicated that the vast majority of respondents (79%) viewed excessive workload as the main barrier to collaboration. The interviewees said that tight teaching schedules and administrative responsibilities left them with little or no time for collaboration.

> *"I think everybody just gets their heads down and wants to get the paperwork done and then, any free time we have, you just want to relax because we don't get much time for a break either." AT*

> *"You don't have the time because administration has become such a large part of your job, and banal [routine] monitoring of quite unnecessary things… then, it's going to have a negative impact on your teaching because you spend so much time doing other things." MC*

> *"We just don't have that time because we have to do marking and planning. So, time is a major factor due to school workload, target setting and policies and procedures." SA*

The results show the negative impact of excessive workload on teachers' ability to collaborate. This is supported by other studies which found that excessive workload leads to insufficient time for collaboration, reduces teachers' ability to develop collaborative relationships and makes teacher collaboration and interaction less attractive (DuFour, 2011; Mather et al, 2007; Bridges and Searle, 2011).

Teachers say that their workload has reached an excessive and unmanageable level in recent years (*The Guardian*, 2016). Some of these tasks are regarded as unnecessary and unproductive and only add to teachers' workload (Department for Education, 2016; Ofsted; 2017). There is a suggestion that teaching documents, such as lesson plans, should be simplified into more manageable forms in order to reduce the time teachers spend on administrative tasks (Ofsted, 2017).

5.11: Interview question 10: *I asked, "What do you think about the idea of creating specific times and days for teachers to collaborate?"*

Support for dedicated collaboration time

Four of the participants supported the notion of creating specific times and days for collaborative activities.

> *"There should be a specific time and date, the tasks should be clear and we should know exactly what the outcome would be at the end of that collaboration. We should all be timetabled to do it." SA*

> *"I think it is worthwhile probably setting time aside so that teachers know it is the time to collaborate. Collaboration should not just be in the staffroom or in the corridor but at set times for discussing things that are normally discussed in passing in the staffroom." MC*

The finding reveals that these interviewees were in favour of the idea of setting aside specific periods and times for collaboration. This implies formal, as opposed to informal collaboration. The result is unsurprising as nearly 80% of respondents in the survey highlighted insufficient time as a major obstacle to their participation in collaboration. Therefore, this makes the idea of having dedicated periods, totally devoted to collaborative activities, an attractive option.

However, some interviewees objected to or had reservations about the idea. Again, they cited lack of time, linked to teachers' excessive workload.

> *"I will strongly object to that because we should manage our own time. When you've got such a lot of work to do such as when you are marking and when you*

are calling students. So, I think it will be a hindrance to have a specific time to do these things." SA

Collaboration time should be a little bit more flexible. I don't think that rigid times are going to help, to be fair. ZJ

The result also indicates the difficulty of finding a balance between formal and informal teacher collaboration. While some respondents viewed the idea of formalised collaboration, which fixed periods denotes, attractive, others regarded it as a distraction from their teaching responsibilities and would prefer more informal and flexible forms of interaction. This shows that, unless teachers' contact time (teaching hours) or workload is reduced, it will be difficult to envisage how dedicated time will help to deal with the outstanding work that teachers still have to complete, regardless of collaboration time. There is a suggestion that teachers' timetables should be adjusted to include collaboration time rather than providing separate hours after the teaching day, when most teachers would have been exhausted (DuFour, 2011; Buffum et al., 2009; Wimberley, 2012).

5.12: Interview question 11: I asked, "*The majority of participants believe that successful collaboration requires strong management commitment. What is your own view on this issue?"*

5.12.1: Desire for a proactive management involvement

All the participants agreed that successful teacher collaboration requires an active commitment by management. Similarly, the survey result indicates that 87% of respondents supported this view. Many participants suggested the promotion and recognition of collaboration and clarification of collaboration aims and objectives.

5.12.1.1: Promotion and recognition of collaboration

In the view of some participants, it is important for collaboration to be promoted and recognised by management to encourage participation.

"And it is through managers' encouraging and promoting collaboration that teachers can develop their practice, get to learn more, understand why people are doing some things and be able to reflect on their practice as well." GA

"I don't think school leaders, although they talk about collaboration, and they have it in their whole goal or strategic plan, they're not investing the time and the resources to encourage collaboration within schools." SA

"People don't see it as an important part of their teaching, so why should they collaborate with anybody when it's not something that is encouraged or promoted to enable you to develop professionally?" MC

The finding is indicative of the view that promoting the value of collaboration could encourage more teachers to participate in it. It also shows the need for management to promote collaborative practice among teachers. The result also indicates participants' desire for more formal collaboration through management policies and actions. The finding is supported by the argument of Ash and D'Auria (2013) that it is necessary for management to promote collaborative activities if teaching practice is to be improved. It is also in line with other researchers who advocate a more formalised form of teacher collaboration (DuFour, 2011; Saunders et al. (2009).

5.12.1.2: Clarity of purpose and value of collaboration

Some participants suggested the need for management to make teachers understand the motives and relevance of collaboration.

"Well, I believe that teachers need to be made aware of the objectives and benefits of collaboration." ID

"I think the objectives of why teachers are collaborating need to be made clear. But if school leaders just group teachers together for just the sake of collaboration, then, people are not going to be interested." SA

The findings show that teachers require a clear understanding of why they are engaging in collaboration and how this is linked to their practice if they are to fully engage in it. This underlines the importance making the aims of collaborative activities explicit and involving teachers in the determination of these goals if they are to be convinced about the value of collaboration. This echoes the findings of (Kochhar-Bryant, 2008; Waldron and McLesky, 2010). Some participants were unsupportive of professional development programmes organised by management.

"If we have this massive cross-college development programme and nothing new is coming out of it, then, many teachers will find it a waste of time because it might be something they've done a million times before." ZJ

The statement shows the negative perception which some teachers have about formalised collaboration in form of teacher professional development programmes organised by management. It suggests that some of these programmes are perceived as a repetition of previous programmes, lacking innovation and failing to meet teachers' developmental needs. Although 67% of respondents in the quantitative study strongly supported engagement in formal professional development activities aimed at developing

teaching practice, this finding suggests these can be regarded by some teachers as irrelevant in meeting their individual developmental needs.

This is in line with the study by Minett (2015) in which some teachers view professional development programmes as “tick box” exercises beneficial only to the management. Additionally, the effectiveness of professional learning activities is seen as dependent on teachers’ perception of whether these activities will be valuable to them in the classroom and lead to improvement in their students’ learning (Opfer and Pedder, 2011). It is therefore important that, if management wants to formally implement collaboration, they should endeavor to ensure that collaborative activities are creative and geared towards the specific and varied needs of teachers.

Furthermore, one of the participants argued that collaborative efforts deserve recognition both locally and at the national level:

> *“I believe that collaboration should be embraced even nationally. So, that could be a way for teachers to encourage teachers to take part in collaboration.” ID*

This finding suggests the desire for local and national recognition of teacher collaborative practices. It is supported by other researchers who have argued for collaborative efforts to be recognised and rewarded through incentives such as public recognition of collaborative efforts or showcasing collaborative work (Ash and D’Auria, 2013; DuFour et al., 2005; OECD, 2011). The aim is to promote a culture of collaboration among teachers throughout the institution.

Finally, some participants particularly mentioned the lack of promotion of cross-departmental collaboration.

> *“I think it’s true to some extent that management does not promote collaboration. Collaboration with other departments has not been given a priority in FE colleges.” ID*

> *“There’s not really an organised way that staff is encouraged to work together with other departments because sometimes, you need a bit of leadership; maybe you need your line manager or someone to say, Right, English team, get together.” ZJ*

The findings indicate that the majority of interviewees acknowledged the importance of cross-departmental collaboration and the role of management in fostering it. Again, this is an indication of a desire for more formalised collaboration. There was the also the perception that management has not prioritised and promoted cross-departmental collaboration. This partly explains why results of this study showed that collaborative

activities occurred mainly within individual departments. Additionally, it emphasises the situated nature of teacher collaboration where the culture of an institution plays an important role in its embrace.

This section provided an analysis of the second stage qualitative data. It explained further key themes emerging from the quantitative study. These included personality and workplace relationships, lack of time and excessive workload, shared experience and perception, unclear aims and value, the culture of informal peer interaction, workplace design and structure; and the importance of management commitment.

The next section presents the summary of the quantitative and qualitative findings.

5.13: Summary of quantitative and qualitative findings

Having discussed the outcomes of the quantitative and qualitative data individually, this section summarises the results from both phases of the sequential explanatory mixed methods study, based on the research questions.

The main research question: What is the range of collaborative practices engaged in by post-compulsory education basic skills and vocational teachers and how do these teachers experience and value collaborative practices in supporting their learners' learning?

The survey found that the majority of teachers said they engaged in collaborative activities although some teachers were neither interested nor engaged in collaboration. The top five collaborative activities engaged in by respondents were: informal conversation (88%), discussion of students' performance (78%), collaboration with teachers in own departments (75%), discussing teaching strategies (72%) and helping to solve students' problems (70%).

Interviewees identified the reasons for the unwillingness or lack of interest of some teachers to collaborate as down to their personality and workplace relationships. These include lack of confidence, unwillingness to collaborate, and lack of interaction skills. On the other hand, a friendly relationship was considered as a major facilitator of collaboration among teachers. It allows teachers to communicate easily and exchange ideas and resources.

The quantitative result also indicated that respondents mainly collaborated with their departments and less across departments. Interviewees in the second phase qualitative

study attributed this to mutual objectives and common experience and the location of staff. Mutual objectives and experience include shared curriculum, resources and experience of teaching similar groups of learners.

Another survey result suggested that the majority of respondents (88%) mainly engaged in informal collaboration. The result was supported by the qualitative study which showed that teachers found informal collaboration a more convenient and easily available means of addressing their immediate teaching needs. Interviewees identified the structure of the workplace such as seating arrangements, proximity and the culture of informal collaboration, as enablers of informal collaboration. Despite the preference for informal collaboration, the majority of interviewees and survey respondents appear to want formal collaboration.

The two activities least engaged in by survey respondents were team teaching (42%) and peer observation (50%). In the follow-up interviews, participants expressed mainly positive views of team teaching as an effective means of improving teaching practice, while the majority of participants viewed peer observation negatively. One reason was the participants' perception that observation data could be used negatively against them. Some respondents also regarded peer observation as an intrusion of their private space.

The second part of Question 1, relating to the value teachers place on collaboration, was explored in the follow-up interviews. The findings indicated that all the participants preferred collaborative activities linked to their classroom activities such as sharing ideas and resources on learner improvement and dealing with learners' problems. The results underline the importance of sharing as a key element of collaboration. Participants valued sharing ideas on assessment strategies that will enable them to reflect on their own assessment methods aimed at improving students' learning and progression.

Another activity valued by participants was the sharing of teaching and learning ideas and materials, which they viewed as exposing them to new ideas and allowing them to improve their teaching practice. Wenger (1998) identified shared resources, actions and concepts as important elements of CoP. Additionally, participants valued collaborative activities centered on strategies for managing learners' needs and classroom behaviour.

Subsidiary Question 1: *Which teacher characteristics are likely to influence collaborative activities among post-compulsory education teachers?*

In answer to this question, Chi-Square tests were conducted to establish whether relationships existed between respondents' background information and collaborative activities. Respondents' background information, department, age, gender, length of service, contract type and level of learners mainly taught were used to conduct the test of association. Only significant results with $p>0.05$ are discussed here.

A strong relationship was established between age and collaboration within departments ($p=.001$), showing that respondents below the age of 40 were more likely to collaborate with their departments than those over 40 years. This could be down to the tendency for younger and early-career teachers to build relationships with colleagues within their departments and their mutual objectives and shared interests in terms of shared curriculum, resources and cohort of learners.

On the other hand, respondents aged 41-50 years were found to have engaged in collaboration focused on solving learners' needs. This suggests that these are experienced teachers who view collaboration in terms of improving the learning and achievement of their learners and who might not regard other types of collaboration as the best use of their time.

Although the quantitative result showed no association between departmental and cross-departmental collaboration, the qualitative findings suggested that basic skills teachers tend to engage more in cross-departmental collaboration than vocational teachers. This is because the basic skills teachers had teaching responsibilities within the vocational departments which necessitated interacting with teachers in those departments.

However, respondents from vocational departments collaborated more than those from basic skills on course-related projects ($p=.018$). This might be because vocational qualifications in FE usually include course projects as part of the overall qualification, which may require coordination among the teachers who contribute to teaching these courses.

Respondents' contract type is also linked to collaboration within departments, ($p=.030$). As expected, respondents on full-time contracts were found to have collaborated more than non-full-time respondents. This can be attributed to the fact that full-time respondents are likely to have more opportunities for interaction as they spend more time

at work than their part-time colleagues. Coffield et al. (2007) suggest that part-time teachers in FE might be unwilling or unable to engage in collaboration unless management compensates them for the cost of attendance.

The level of learners taught was found to be related to collaboration within departments (p=.002) and cross-department collaboration (p=.032). The results indicated that teachers of higher-level learners (Level 3 and above) engaged more in collaboration with departments than those who taught Entry Level to Level 2 learners. Learners on Level 3 and above are usually on vocational courses while the highest basic skills qualification is normally L2 unless the college has a provision for A-Level qualifications, which are equivalents of Level 3 qualifications. Vocational courses usually involve different units that make up a vocational qualification. These units are normally taught by a combination of teachers. Therefore, some form of collaboration will be unavoidable to ensure that learners achieve their overall qualification.

The result also found that length of service is associated with collaboration. Respondents with over 12 years' experience tend to collaborate more across departments than those with up to 12 years (p=.043). Length of service is also related to collaboration on course-related projects (p=.010). This suggests that experienced teachers are more likely to have formed relationships over time with colleagues across their institutions than less experienced colleagues. This could, in turn, explain why younger respondents tend to collaborate more than older ones in their individual departments.

Finally, the level of learners taught was also related to collaboration on professional development activities (p=.050). Respondents who taught learners on Level 3 and above engaged more in professional development activities than those who taught learners below this level. As indicated earlier, this might be due to the fact that this is the highest level at the college level and might require a higher order objective than those on lower-level courses. However, respondents who taught learners at Level 1-2 had the highest level of collaboration on students' performance. It also suggests that L3 teachers tend to have higher order objectives than lower-level teachers since their learners are prepared for higher education courses or entry into employment. This might necessitate collaboration between L3 teachers.

Subsidiary Question 2: *What factors do post-compulsory education basic skills and vocational teachers perceive as the benefits of collaboration?*

Results from the quantitative study showed that learning new ideas was identified as the main benefit of collaboration by 93% of respondents. Further clarification of this finding in the quantitative study indicated that the majority of interviewees supported this finding. They noted that collaboration enabled them to learn innovative ideas through exposure to different pedagogical techniques that allowed them to reflect on their teaching and, consequently, to improve their learners' learning. Other benefits with high response rates were achieving the college's teaching and learning goals (88%), reflecting on teaching practice (83%) and making effective use of time (81%).

The least valued benefit of collaboration, as identified by 61% of respondents in the survey, was that collaboration increases teachers' motivation to work. The majority of interview-participants supported this view. However, one interviewee had a different perspective on what motivates teachers, noting that factors such as cordial relationships, a trustful environment, and mutual respect motivate teachers rather than collaboration on its own.

Subsidiary Question 3: *What do teachers in post-compulsory education basic skills and vocational teachers identify as barriers to effective collaboration?*

The question aimed to find out what teachers in this study perceived as the constraints of collaboration. The vast majority of respondents in the quantitative study identified insufficient time as the major obstacle to collaboration. All the participants in the interviews agreed with this. They blamed lack of time on excessive workloads. Teachers were of the view that that administrative tasks, in addition to their busy teaching schedules, hindered participation in collaborative activities.

Subsidiary Question 4: *Which specific strategies do Post-compulsory education basic skills and vocational teachers view as likely to facilitate collaboration among teachers?*

The top four suggestions from the quantitative study were encouraging cross-departmental collaboration (94%), management commitment (87%), allocation of specific time and place for collaboration (85%) and reduction in workload (83%).

Although, both stages of the study indicated that teachers engaged less in cross-departmental collaboration, the suggestion by the overwhelming number of interviewees for its promotion was quite revealing. It showed that teachers value this form of collaboration and would be more inclined engage with colleagues in other departments if they are provided with the opportunity and time to do so. The qualitative result also showed that basic skills teachers tend to engage in more cross-departmental than vocational teachers. As earlier stated, this can be attributed to their teaching engagements in the vocational departments which requires them to interact with colleagues in that department.

In relation to management commitment, the majority of interviewees agreed that more commitment is required from management if teachers are to be motivated to collaborate. Management's responsibilities identified by interviewees include setting clear objective and purpose of collaboration, promoting and rewarding collaboration and creating a trusting environment for teachers to interact.

In order to reduce teachers' workload, the majority of participants suggested the devotion of specific days and time, with minimal or no teaching, to collaboration. This suggests a formalised collaboration. However, not all the teachers were supportive of the idea as some viewed it as additional burden and diversion from their classroom activities. They appeared to prefer a more informal form of collaboration that gives teachers the flexibility to choose when to collaborate and the type of collaboration to engage in. Again, the interviewees cited insufficient time as the reason for their reservation, opining that collaboration takes time rather than saves it. The next section provides the conclusion to this study, recommends areas for improvement and highlights implications for practice.

CHAPTER 6: CONCLUSION, RECOMMENDATIONS AND IMPLICATIONS FOR PRACTICE

This section discusses the conclusion, recommendations and implications for practice of this study. It highlights the study's original contribution to knowledge and presents a conceptual model for successful collaboration. Additionally, it highlights the study's implications for practice and makes suggestions for future research.

6.1: Conclusion

The sequential explanatory study was used to examine the type of collaborative activities engaged in by post-compulsory education and basic skills teachers in supporting their learners' learning, and the value that the teachers involved place on collaborative activities.

The main research question that this study aimed to answer was: What is the range of collaborative practices engaged in by post-compulsory education basic skills and vocational teachers, and how do these teachers experience and value collaborative practices in supporting their learners' learning?

Additionally, the study aimed to answer the following subsidiary questions:

1) Which teacher characteristics are likely to influence collaborative activities among post-compulsory education teachers?

2) What do post-compulsory education basic skills and vocational teachers see as the benefits of collaboration?

3) What do teachers in post-compulsory education basic skills and vocational teachers identify as barriers to effective collaboration?

4) Which specific strategies do post-compulsory education basic skills and vocational teachers view as likely to facilitate collaboration among teachers?

The results of this study highlight the complexity of the concept of collaboration. They also support the concept of communities of practice (CoP) which provides the theoretical framework used in the study. Additionally, the study's findings indicate the situatedness of collaborative practices as activities that are influenced by the context in which teachers practise.

Contrary to suggestions in the literature that the majority of teachers still work in isolation, findings from this study suggest that the majority of teachers who took part in the survey engaged in various collaborative activities. The high level of collaboration might be explained by the fact the survey was self-reported and those who responded were likely to favour collaboration because of the demanding nature of their work and the pressure they were under to work with diverse learners with complex issues.

However, the study also found that a relatively significant number of teachers did not engage in collaboration. This was attributed to such factors as excessive workloads which reduce the time available for collaboration, lack of confidence and interactive skills which might impede the formation of professional relationships, differences in teaching and learning philosophies, and unwillingness to share knowledge and materials.

The quantitative study found that 88% of teachers mainly collaborated informally. Interview participants explained that this was due to the existing culture of informally resolving issues and said that they found this an expedient and productive way of getting immediate answers to the teaching and learning issues they face in their daily practice. The predominance of informal collaboration by participants in the study is in line with the concept of CoP as voluntary and spontaneous ventures (Friend and Cook,1992; Wenger, 1998).

However, many participants also showed that they valued and desired more formal collaboration, although there were mixed views about this. Some participants suggested embedding collaboration within the curriculum both locally and nationally in order to promote the concept and encourage more teachers to collaborate. Other participants advocated a more formalised structure such as the allocation of dedicated days and times for collaboration. However, not all teachers were willing to embrace this idea. Some viewed it as an unwelcome addition to their workload and a less judicious use of their time, calling instead for more flexible and informal collaboration.

Both quantitative and qualitative findings in this study revealed that collaboration within departments was more common than across departments. This was attributed to common objectives, experience and interests such as shared curricula and resources, familiarity with departmental colleagues and shared cohorts of learners. This is line with the key elements of CoP: mutual engagement, joint enterprise, joint enterprise and shared repertoire (Wenger, 1998). Despite the predominance of departmental collaboration, the majority of teachers indicated that they valued cross-departmental collaboration and

suggested an increase in this activity. Again, this suggests a desire for more structured collaboration. These findings also support the socio-cultural perspective of Vygotsky (1978) and the situated learning theory of Lave and Wenger (1991), both of which view teacher learning and development as a collective exercise with peers, situated in the cultural, historical and institutional context in which they practise.

One fundamental revelation indicates that although the majority of teachers engaged in collaboration and recognised its importance, not all collaborative activities were rated or viewed positively. The four least rated collaborative activities were peer observation, inter-departmental collaboration, team teaching and course-related projects. For example, peer observation was viewed negatively and with suspicion by some teachers due to their distrust of management.

Despite the voluntary nature of peer observation, there appears to be a reluctance to embrace it fully. Teachers appeared to be suspicious that observation data could be used for evaluation rather than for developmental purposes. Evidence from the study also suggests that some teachers were uncomfortable with their peers' making what they viewed as subjective judgements about their teaching. Additionally, some teachers had reservations about of the professional development activities organised by management, which some perceived as repetitive, lacking in innovation and inadequate in meeting their personal developmental needs.

Another key finding in this investigation suggests that collaborative practices can be influenced by the contextual realities of the institutions in which teachers work, thus confirming the situatedness of teacher collaboration in the post-compulsory education sector. However, no association was found between gender and the types of collaborative practices examined in the study. This suggests that both male and female respondents engaged equally in collaborative practices. This is in contrast to some findings in the literature suggesting a link between gender and collaboration and indicating that female teachers are more likely to engage in collaboration than their male counterparts (ATL, 2005; OECD, 2009).

An association was established between department and collaboration to a limited extent. Only course-related projects were linked to vocational departments. On the other hand, evidence from the qualitative findings suggested basic skills teachers tend to engage more in cross-departmental collaboration due to unavoidable teaching responsibilities in

those departments. This suggests a structured and mandated collaboration rather than a voluntarily and informal engagement in collaboration.

In this study, primary evidence established an association between age and teacher collaboration, indicating that younger teachers tend to collaborate more within their departments than outside it, while more experienced teachers are more likely to engage in cross-departmental collaboration than their less experienced colleagues. This could be because younger teachers are initially more likely to build relationships in their departments and familiarise themselves with colleagues with whom they share interests and goals before going on to build relationships outside their departments. Older teachers, on the other hand, are more likely to have built up relationships across departments over the years. It is also evident from the study that older and more experienced teachers prefer collaborative activities which are directly related to improving their classroom activities. These teachers might feel that they are sufficiently knowledgeable and familiar with their subjects and therefore need to collaborate only on specific activities that they perceive as useful to them and their learners.

The level of learners taught was also associated with collaboration. Empirical data from the field in this study suggest that teachers of learners on higher level courses (Level 3 and above) collaborated more within and across departments and on professional development activities than other teachers. As indicated earlier, this could be because this level requires higher order goals than lower-level courses.

Having higher order goals is assumed to be a precondition for teacher collaboration. It can also necessitate working with and learning from peers in order to achieve these joint goals. Additionally, in the FE sector, Level 3 is the highest college level qualification before the progression of learners to higher education or the employment market. This tends to involve vocational qualifications comprising theoretical and practical application of concepts, usually taught by more than one teacher. This is likely to involve coordination among these teachers.

However, teachers of Levels 1 to 2 were found to be engaged in activities related to student performance. This may be attributed to the fact that, at this level, preparing learners for externally assessed examinations and maximising achievement targets necessitates working with other teachers. It may also be related to the emphasis placed on assessment as a way of improving learners' success.

Another teacher characteristic associated with collaboration found in this research is a teacher's length of service. This research found that teachers with over 12 years' experience engaged more in cross-department collaboration and course-related projects than those with less than 12 years' experience. These experienced teachers could possibly be the older teachers who have built up relationships across their institutions over time and have therefore had the opportunity to interact with colleagues across their institutions.

Teachers' employment contract type was also found to be associated with collaboration in this study. This study established that full-time teachers participated in collaboration and professional development activities more than their part-time peers. This can be attributed to the fact that full time teachers are more likely to be available at work than their part-time colleagues and, as Coffield et al. (2007) suggest, part-time teachers may be unable or unwilling to participate in collaboration unless their attendance is compensated by management.

Overall, most participants in the study engaged in collaboration and viewed it as a way of participating in collective learning and developing practice as envisaged in CoP. One of the key themes that featured regularly in this study is the idea of mutual learning and sharing. Teachers regarded learning new ideas to be a major benefit of collaboration since it enables them to gain new perspectives and improve their practice. Sharing knowledge and resources is a key characteristic of CoP and effective collaboration (Friend and Cook, 1992; Lave and Wenger; 1991). Participants regarded lack of time, due to excessive workloads, as the major hindrance to collaboration.

Consequently, this research reveals that more effort is required to convince some teachers about the value of collaboration. This requires management to create a supportive environment where teachers are able to interact easily, to design collaborative activities that meet teachers' development needs, and to make collaborative efforts attractive by showcasing teachers' collaborative endeavours.

The next section discusses the recommendation and implications for practice of this study.

6.2: Recommendations and implications for practice

6.2.1: Harmonising and recognising formal and informal interactions

The majority of teachers studied in research were found to have collaborated more informally than formally. However, teachers also showed a preference for more formal activities such as structured time for collaboration and cross-departmental collaboration. Therefore, management should consider harmonising and recognising both types of collaboration. Evidence from the literature indicates that both formal and informal collaboration contributes to teacher learning (Burford et al, 2013; Friend and Cook, 1992). In addition, teachers who participated in this study mainly collaborated informally, suggesting that this method is preferable to formal collaboration. Therefore, it is important that both types of learning should be facilitated and recognised so that their benefits can be captured.

This can be achieved by encouraging teachers to record both the formal and the informal collaboration they undertake and to present their experiences for discussion with colleagues on dedicated collaboration periods or during professional development activities. This could also be added to teachers' continued professional development records to show that their collaborative efforts, both formal and informal, are valued and officially recognised. It is also likely to motivate other teachers who were hitherto reluctant to collaborate to do so.

6.2.2: Creating a collegial atmosphere

The study revealed that trust is an important factor that can facilitate or (in its absence) hinder collaboration. For example, some teachers were suspicious of or showed indifference to structured collaborative practices such as peer observation and professional development activities. Management should foster a trusting and collegial atmosphere where teachers are able to express both supporting and dissenting views. For example, teachers should be encouraged to visit each other's classes periodically and on a voluntary basis without the need for management involvement.

In the event that peer observation records are required, management should reassure teachers that data collected during these activities will be utilised solely for developmental and not evaluation purposes. This is likely to facilitate genuine collaboration among teachers, encourage the sharing of good practice and reduce the suspicion and fear attached to observations. It will also facilitate a "de-privatised" practice (Fullan, 2007) as

teachers will feel more comfortable exposing their strengths and weaknesses in front of colleagues, and receiving constructive feedback that can help improve their teaching practice.

6.2.3 Design of workplace

This research found that workplace design can help to facilitate collaboration, in particular, the close proximity of teachers. It is therefore suggested that staffrooms be designed to facilitate easy interaction among staff. One of the suggestions for achieving this was the creation of open-plan staffrooms without walls or physical barriers separating teachers. This would facilitate easy and regular interaction among teachers and easy access for requesting assistance and support from their colleagues without the need to go to separate offices or rooms. However, open-plan offices might not be suitable for all collaborative ventures because of distractions that can occur if the environment is noisy. It is important therefore to have a combination of closed and open offices. While open-plan offices can facilitate teacher interactions, collaborative activities that require high levels of concentration and privacy can be organised in closed offices.

Admittedly, open-plan offices might be feasible mainly where new buildings are planned. However, it is suggested that existing structures should be adapted to ensure that seating arrangements are organised in ways that facilitate easy movement and communication among teachers. Dedicated areas can be created within institutions, where teachers can relax during their free time. This will facilitate more informal interactions across the institution as teachers from different departments will have the opportunity to socialise and discuss personal and professional issues.

6.2.4: Support for less experienced teachers

Findings from this study show that less experienced teachers engage in less collaboration than their more experienced colleagues both within and across departments. As indicated previously in Chapter 4, this could be because less experienced teachers require time to adapt to their new teaching environment and to build relationships. These teachers should be supported through careful placement with more experienced teachers to enable them to learn, develop and build up their confidence. This is in line with Vygotsky's (1978:86) idea of "problem-solving under adult guidance or in collaboration with more capable peers." It also aligns with Lave and Wenger's (1998) theory of "legitimate peripheral participation," where less experienced teachers learn from more experienced ones until they become experts of their own.

This study found that teachers in the vocational department and more experienced teachers with over 12 years' experience highly collabrated on course-related issues. This suggests a need for more cross-departmental interaction. Management should encourage cross-departmental collaboration through course projects based on activities of common interest to participating departments. For example, basic skills and vocational teachers should be encouraged to participate in joint projects that involve incorporating elements of English and mathematics. This will enable teachers from these two departments to share expertise and different perspectives, and also allow insights to be gained into the ways each other's department function. Consequently, this is likely to promote reflective action and improvement in practice.

6.2.5: Reduction in workload

This study found that the majority of teachers perceived excessive workload as the major obstacle to collaboration. Senior managers and policymakers need to recognise this issue and provide effective administrative support that will help reduce excessive workloads. This can be achieved by providing dedicated administrative assistants in departments or institutions who are assigned responsibilities such as entering and retrieving data on the system, making phone calls and sending messages to students, parents and other stakeholders.

Although this research note that this idea can be hindered by financial considerations if there are insufficient existing staff to undertake the administrative tasks mentioned, and additional are recruited to carry out these tasks. However, a reduction in administrative responsibilities is likely to reduce the pressure on teachers, allow them to focus more on their teaching and provide them with more time for collaboration.

6.2.6: Promoting and rewarding

One of the suggestions for improving collaboration is that management should recognise and reward collaborative endeavours. In this way, management can show that they value teachers' efforts. This may be done through financial and non-financial rewards such as payment vouchers, showcasing collaborative initiatives during award ceremonies (DuFour et al., 2005; OECD, 2011). When teachers witness their collaborative efforts being given recognition in front of their colleagues, it is likely to encourage them to continuously engage in collaboration. Similarly, when others see their colleagues being rewarded for their endeavours, they can also be motivated to participate.

6.2.7: Dedicated days for collaboration

The majority of teachers in the study were in favour of dedicating days and times for collaboration. Management can create an “Interaction Day” focused on teacher interaction. Formal activities can be geared towards specific teaching and learning objectives such as implementing government and institutional policy initiatives, while informal activities should be flexible and focused on facilitating familiarisation, social interaction and professional relationships.

6.2.8: Teacher's voice

One significant revelation in this study is the need for the objectives of formal collaborative activities to be made explicit so that teachers are fully aware of their purpose and value. Management should be empowered and motivated by involving them in setting the objectives and designng collaborative activities. Burnell (2017) notes that many teachers would like to be more involved at the consultation stage of policy initiatives before their implementation but are rarely given the opportunity. Giving teachers a voice in these activities, and the flexibility to attend programmes they deem useful to their teaching and learning requirements, is likely to encourage more participation in collaboration and to reduce the negative perception attached to professional development programmes.

6.3: Original contribution to knowledge

There is limited research which directly focuses on teacher collaboration within the UK post-compulsory education sector (ATL, 2005; Avis and Fisher, 2006; Bell, 2016; HMIE, 2002). This study is therefore unique because unlike previous research, it focused specifically on collaborative practices by post-compulsory education teachers in the United Kingdom. It also identified some specific collaborative types that these teachers prefer and value. This is significant because, regardless of the type and number of strategies developed by management to encourage collaboration among teachers, these strategies would be ineffective if teachers themselves do not support them. Therefore, understanding teachers’ collaborative preferences would result in more effective strategies to be devised which would motivate them to engage more in collaboration.

Research on teacher collaboration in the UK in recent years has focused on the higher education sector (Shortland, 2010), secondary sector (Bell, 2016) and primary sector (Rempe-Gillen (2017). Furthermore, research on collaboration has focused on inter-institutional collaboration (Muijs et al., 2011; Sandals and Bryant, 2014; Stoll, 2015) rather

than on collaboration within individual institutions such as FE. There are researchers who have focused on specific elements of teacher collaboration such as CoP (Literacy Study Group, 2010), teacher's professional development (Lofthouse and Thomas, 2017; Opfer and Pedder; Williams, 2013), rather than specifically on teacher collaboration. In addition, research projects have been carried out in the USA (Goddard et al., 2007; Levine and Marcus, 2010; Ronfeldt et al., 2015), Finland (Eschler, 2016) and the Netherlands (Meirink et al., 2010).

It is the purpose of this research that, in examining teachers' perception on collaborative practice within the post-compulsory education sector—an under-researched group—and in using a mixed methods approach, this study will contribute to body of knowledge in the field. It is also envisaged that this study will contribute to academic knowledge in the following ways:

- Providing a comprehensive academic study of a hitherto unexplored post-compulsory education sector, which enables me to make a definite statement about attitude, structure, barriers and prospects on collaborative practices in the UK post-compulsory education sector;
- Establishing an understanding of which teacher characteristics in the post-compulsory education sector can influence or limit participation in collaboration;
- Significantly revealing an insight into teachers' general attitudes and preferences for specific collaborative practices;
- Providing post-compulsory education college leaders with an instrument to create effective frameworks for the implementation of collaborative practices;
- Extending and contributing to limited research in the UK post-compulsory education sector in general (Solvason and Elliot, 2013).

The next section provides a conceptual model for effective teacher collaboration.

6.4: Conceptual model for successful teacher collaboration

This section provides a conceptual model for successful collaboration. It was created using the findings from this study and Lave and Wenger's (1991) model of Cop.

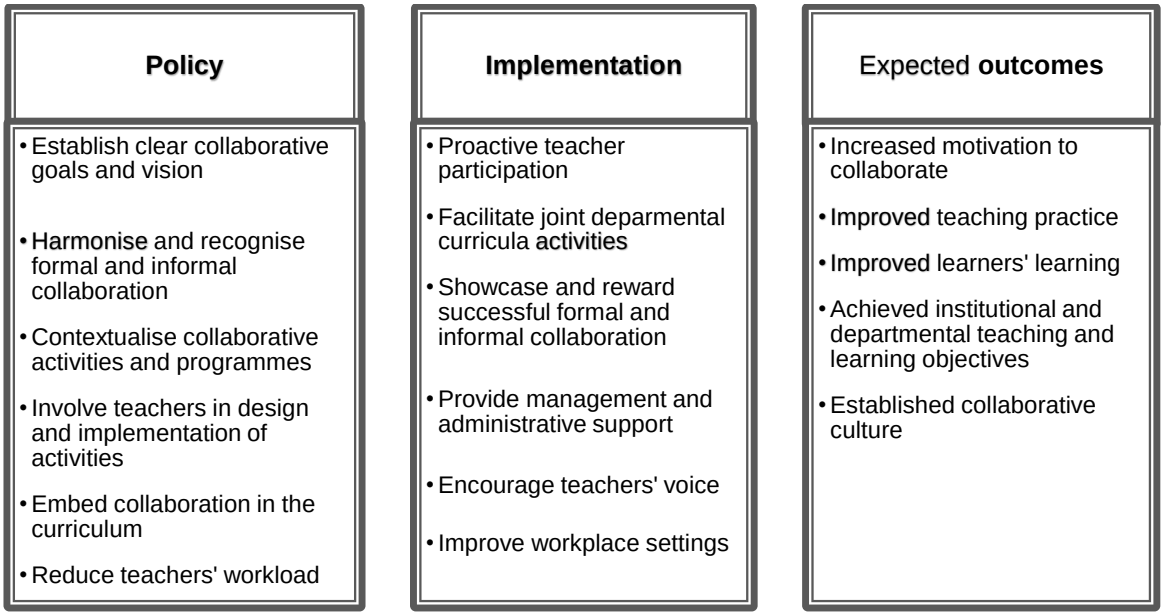


Figure 6. 1: Conceptual model for facilitating successful teacher collaboration

6.4.1 Policy

It is important to ensure clarity in the institutional and departmental goals so that all teachers are working towards the same teaching and learning objectives. This will ensure that they have a clear understanding of why they need to work together and how collaboration can assist in improving their practice.

Harmonising and recognising both formal and informal collaboration is likely to encourage teachers to participate in collaboration. For example, publicly showcasing teachers' collaborative activities can inspire other teachers to emulate their collaborating colleagues and create the feeling that management values collaboration.

Management should involve teachers in the design and implementation of collaborative ventures. Collaborative initiatives should be discussed and agreed with teachers before implementation. This could be done through discussion at staff meetings, at teachers' forums or through a survey of teachers' ideas and preferences. Providing teachers with a voice is likely to encourage them to support initiatives derived from the consultations. Furthermore, embedding collaborative activities within the curriculum will ensure that

teachers take part in them during their teaching time. This means that a suitable time within working hours needs to be identified.

One of the ways to encourage collaboration between teachers is by reducing their workload. The majority of teachers in this study viewed excessive workload as the main barrier to collaboration. Workload reduction can be achieved through the provision of administrative support. This will create more time for teachers to participate in collaborative activities. The findings suggest a mixed response to the idea of creating specific days and times for collaboration. Collaboration time can be incorporated into the teaching schedule so that it is regarded as part of teachers' routine and not as an extra activity to be done at the end of a teaching day.

6.4.2: Implementation

Rather than relying on management-led initiatives, teachers should take a proactive approach to collaboration. Active participation in joint formal and informal activities such as joint curriculum design, joint schemes of work, joint lesson planning, joint projects, team teaching and peer observation can increase teacher interaction and learning and help them develop their teaching practice. These activities need to be mutually agreed among participating teachers.

Taking a proactive approach to collaboration will give teachers a voice in deciding what types of collaborative ventures are specific to their individual needs. This requires positive character traits such as respect for peers, friendliness and willingness to share ideas and resources. Proactive participation will result in mutual benefits and, consequently, improved teachers' practice and learners' learning. Additionally, creating inter-disciplinary projects can increase cross-departmental collaboration and provide opportunities for teachers to interact and familiarise themselves with colleagues outside their departments.

It is important that management provide a supportive environment which fosters mutual trust between teachers and management and between peers. Management should create an atmosphere where experienced and less experienced teachers are confident and willing to display their strengths and weakness in the presence of their colleagues. Opportunities for training should also be provided for teachers who need to improve their interaction skills.

6.4.3: Expected outcomes

The proposed model is expected to increase collaborative practice among teachers and improve teaching practice and their learners' learning. This derives from the assumption that, when teachers collaborate with their colleagues, they learn from them through shared ideas and resources and engage in reflective actions that allow them to evaluate and adjust their teaching practices. Collaboration can also provide teachers with opportunities to engage in social interactions, solicit personal and professional advice and receive support from colleagues. This access to peer support can motivate teachers and make their jobs less stressful.

The improved teacher learning and practice that result from collaboration can lead to improved learners' learning as teachers acquire fresh perspectives, gain confidence and learn skills that enable them to deliver their teaching more effectively. This can result in a collaborative culture in which teachers view collaboration as an important part of their practice.

6.5: Limitations

The study was limited to teacher collaborative practices in three post-compulsory education colleges in south London and cannot, therefore, be generalised to all educational institutions in the UK. However, I believe that the findings are transferrable to research conducted in similar contexts to those of this study.

Although three colleges originally participated in the initial quantitative study, I could conduct the second phase qualitative study in only two colleges where teachers had consented to take part. The third college consisted of mainly part-time teachers who were unwilling or found it difficult to take part in interviews.

Finally, this study examined teacher collaborative practices that occurred face-to-face at the three colleges involved in this research. It did not include online collaborative activities using internet technology and social media platforms, which can provide teachers with alternative opportunities for interactions other than physical interactions.

6.6: Implication for practice

The findings in this study have implications for teachers, managers, policy makers and education practitioners in the post-compulsory education sector. Research findings indicate the importance of collaboration among teachers if they are to continuously

improve their practice and their students' learning. The majority of teachers in this study engaged more in informal than in informal collaboration. It is therefore important that managers design a mechanism for incorporating and recognising these two forms of collaboration in order to take advantage of the learning, knowledge acquisition and sharing that occur in both forms of collaboration.

The exchange of ideas and resources and the social interactions that teacher collaboration entails make it necessary that collaboration should be recognised and encouraged by management. This study shows that collaboration can lead to reflection among teachers and change in practice when they observe different teaching and learning techniques used by their colleagues in the classroom.

However, it is not enough for teachers to rely on senior management's organised collaborative activities. They need to be proactive in taking responsibility for their own personal and professional development. Engaging in CoP is one of the ways in which teachers can take advantage of the diverse experience, skills and expertise of their peers.

Equally, it is essential that management take into consideration the fact that teachers consist of a group of people with diverse interests, personalities, experience, motivation and interaction skills. Managers need to encourage innovative professional development activities from which both new and experienced teachers can gain new ideas, rather than recycling the same activities as before.

Finally, policymakers both locally and nationally can promote teacher collaboration by incentivising it through the promotion and reward of collaborative efforts and incorporating it into the curriculum. This too will encourage a culture of collaboration.

6.7: Suggestions for further research

The study examined collaborative practices of 72 teachers in two departments of three post-compulsory education colleges in south London. It would be useful to conduct future studies involving larger samples, more departments and extended geographical locations in the UK. Future research can also involve a comparative study of teacher collaborative practices between the post-compulsory education and the higher education sectors in order to examine similarities and variations in approaches.

The importance of inter-departmental collaboration is revealed by this study, even though fewer teachers engaged in it than in departmental collaboration. Future studies can examine specific factors which facilitate or hinder inter-departmental collaboration in the post-compulsory sector.

Finally, further studies can examine the relationship between collaboration by post-compulsory education teachers using wider contextual characteristics than those utilised in these study. For example, characteristics such as qualifications, subject knowledge and pedagogical beliefs can be further explored.

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APPENDICES

APPENDIX 1: SURVEY QUESTIONNAIRE

Teacher Collaboration Survey

Dear Participant

Thank you for accepting to take part in this survey by signing the Participant Consent Form. I would be grateful if you could spare some time in completing the attached survey questionnaire.

Your answers will help me to identify the types of collaboration taking place among post-compulsory education basic skills and vocational teachers and how it is used to support students' learning.
There are no right or wrong answers. Just circle the one you consider best describes your opinion.

All questionnaires are totally confidential and the information will only be used for research purposes.

Thank you very much for your help.

Toyin Coker

EdD Researcher

If you require further information regarding this survey, please contact me on:

020 8331 8058/ ct818@gre.ac.uk.

Please Note: All information collected will be kept strictly confidential.

General Information

Please tick appropriate box.

1**. Department**

Basic Skills (Including ESOL) ☐ Vocational ☐

2. **Gender**

Male ☐ Female ☐

3. **Length of Service**

0-3 years ☐ 4- 7 years ☐ 8- 11 years ☐ 12-15 ☐ Over 15years ☐

4. **Age Range**

20-25 ☐ 26-30 ☐ 31-40 ☐ 41-50 ☐ 51-60 ☐ 60+ ☐

5**. Contract Type**

Permanent Full-time ☐ Permanent Part-time ☐ Fixed Term Contract ☐

Agency staff ☐ Other ☐ (Please state) _____

6. **Level of Learners mainly taught (Please tick only one)**

Entry Level ☐ Level 1 ☐ Level 2 ☐ Level 3 ☐ Level 4 ☐ Level 5 ☐

Instructions

Please complete this survey on collaboration within basic skills and vocational departments. All questions in this questionnaire make use of rating scales with 5 places. Please **circle** the number that best describes your opinion.

Use the following scale where appropriate: 1 (strongly agree), 2 (agree), 3 (indifferent), 4 (disagree), 5 (strongly disagree). When choosing your answers, please remember the following points:

- Please ensure that you answer all the questions.
- **Do not circle** more than one number on a single scale.

Please answer the following questions by circling the numbers that best describe your opinion. Please read each question carefully.

1 (strongly agree), 2 (agree), 3 (indifferent), 4 (disagree), 5 (strongly disagree).

Types of Collaboration

7. I regularly collaborate with teachers in my department.

1 2 3 4 5

8. I regularly collaborate with teachers in other departments.

1 2 3 4 5

9. I discuss teaching and learning strategies with other teachers.

1 2 3 4 5

10. I regularly collaborate with colleagues on lesson planning.

1 2 3 4 5

11. I regularly share teaching and learning materials with colleagues.

1 2 3 4 5

12. I often discuss assessment strategies with colleagues.

1 2 3 4 5

13. I usually engage in informal conversation about my courses with colleagues.

1 2 3 4 5

14. I engage in team teaching with colleagues.

1 2 3 4 5

15. I engage in Peer observation with my colleagues.

1 2 3 4 5

16. I regularly discuss students' performance with my colleagues.

1 **2** **3** **4** **5**

17. I work with colleagues on course-related projects.

1 **2** **3** **4** **5**

Importance of collaboration

1 (strongly agree), 2 (agree), 3 (indifferent), 4 (disagree), 5 (strongly disagree).

18. “I benefit from learning new ideas when I collaborate with others.”

1 2 3 4 5

19. Collaboration has highly increased my motivation to work effectively.

1 2 3 4 5

20. I find collaboration to be an effective use of my time.

1 2 3 4 5

21. Collaboration helps me to reflect on my teaching practice.

1 2 3 4 5

22. Working together enables the college’s teaching and learning goals to be met.

1 2 3 4 5

23. Collaboration helps me to adapt teaching to meet the different needs of my students.

1 2 3 4 5

24. Collaboration provides guidance and support on how to effectively manage the classroom.

1 2 3 4 5

25. I work with other teachers regularly to help solve students’ problems.

1 2 3 4 5

26. “Collaborating with others teachers helps to improve my students’ learning.”

	1	2	3	4	5

27. I participate in professional development activities that encourage teachers to work together.

	1	2	3	4	5

Barriers to collaboration

1 (strongly agree), 2 (agree), 3 (indifferent), 4 (disagree), 5 (strongly disagree).

28. Teachers' workload prevents them from effectively collaborating.

1 2 3 4 5

29. Some teachers are not good at working with others.

1 2 3 4 5

30. Difference in personalities is a major barrier to collaboration.

1 2 3 4 5

31. There is insufficient time allocated for teachers to collaborate.

1 2 3 4 5

32. Difference in teaching methods can affect the level of collaboration.

1 2 3 4 5

33. Teachers are generally reluctant to share ideas and resources.

1 2 3 4 5

34. Formal collaboration should be more about classroom practice than about policies and structures.

1 2 3 4 5

Improvement Strategies

1 (strongly agree), 2 (agree), 3 (indifferent), 4 (disagree), 5 (strongly disagree).

35. Specific times and days should be allocated for teacher collaboration.

1 2 3 4 5

36. Teachers' workload should be reduced to allow time for collaboration.

1 2 3 4 5

37. There should be official recognition of collaborative work.

1 2 3 4 5

38. Collaboration among teachers across the whole college should be encouraged.

1 2 3 4 5

39. Teachers should form collaborative groups for the purpose of sharing ideas and resources.

1 2 3 4 5

40. Effective collaboration requires strong commitment from management.

1 2 3 4 5

41. Any other comments about teacher collaboration you might wish to add.

_____
_____
_____
_____
_____
_____
_____

Thank you for your time.

APPENDIX 2: PARTICIPANT CONSENT FORM

To be completed by the participants.

- I have read the information about this study
- I have had an opportunity to ask questions and discuss this study
- I have received satisfactory answers to all my questions
- I have received enough information about this study
- I understand that I am free to withdraw from this study:
    - At any time (until such date as this will no longer be possible, which I have been told)
    - Without giving a reason for withdrawing
- I understand that my research data may be used for a further project in anonymous form, but I am able to opt out of this if I so wish, by ticking here. ☐
- I agree to take part in this study

Name in block letters:	Date:
Signed (participant):	
Name in block letters TOYIN COKER	
Signature of researcher:	Date:
This project is supervised by: Dr Jane Barnard (J.M.Barnard@gre.ac.uk) and Dr Hatice Choli (H.Choli@gre.ac.uk) of University of Greenwich (Faculty of Education and Health).	
Researcher's contact details (including telephone number and e-mail address): Toyin Coker (Faculty of Education and Health) 020 8331 8058/ct818@gre.ac.uk	

APPENDIX 3: INFORMATION TO RESPONDENTS

Research Title: Examination of collaborative practices engaged in by post-compulsory education basic skills and vocational teachers in supporting students' learning?

Dear Participant

I am conducting a research as part of my doctorate degree programme at Greenwich University. The purpose of the study is to examine the types of collaboration taking place among post-compulsory education basic skills and vocational teachers and how it is used to support students' learning. This project will be conducted under the supervision of Dr Jane Barnard (J.M.Barnard@gre.ac.uk) and Dr Hatice Choli (H.Choli@gre.ac.uk) of University of Greenwich who can be contacted for further information.

There is evidence that collaboration enables teachers to learn from one another and improve their daily practices. It is also seen as an effective way of helping learners to improve their learning. I would like you to fill in a questionnaire containing questions about the collaborative activities which post-compulsory teachers engage in to improve their learners' learning. The questionnaire should take about approximately 20 minutes to complete.

Taking part in this survey is voluntary. If you do decide to take part, you will be free to withdraw at any time up until you submit the survey without giving a reason. All the information about your participation in this study will be kept confidential.

Please tick the box if you are interested in being involved further by taking part in an interview and complete the details below. ☐

Name: _____

Contact No: /Email address

APPENDIX 4: CONSENT LETTER TO DEPARTMENT HEADS/CURRICULUM MANAGERS OF POST-COMPULSORYCOLLEGES

Dear _____

My name is Toyin Coker and I am conducting a research as part of my doctorate degree programme at Greenwich University. The purpose of the study is to identify the types of collaboration taking place among post-compulsory education basic skills and vocational teachers and how it is used to support students' learning. This project will be conducted under the supervision of Dr Jane Barnard (J.M.Barnard@gre.ac.uk) and Dr Hatice Choli (H.Choli@gre.ac.uk) of University of Greenwich who can be contacted for further information.

I am hereby seeking consent to distribute survey questionnaires to teachers in your department. Completion of the survey is expected to take approximately 20 minutes. The information provided on the survey questionnaire will be kept confidential. Names of participants will be protected by either assigning numbers or aliases. As a participant in this research, they are entitled to withdraw at any time, without giving a reason and their information/data will not be used.

Thank you for your consideration.

Toyin Coker (ct818@gre.ac.uk)

I _____ as Head of School/ Curriculum Manager of _____department having been fully informed as to the nature of the research to be conducted in identifying the range of collaborative practices engaged in by post-compulsory education basic skills and vocational teachers in supporting students' learning, give my permission for the study to be conducted. I reserve the right to withdraw this permission at any time.
Signature: _____ Date: _____

APPENDIX 5: INTERVIEW GUIDE

Interview Question	**Possible prompts or probes**
Q1: Evidence from my research shows that many teachers engage in collaboration. However, the result also indicates that one quarter of teachers were not interested or did not engage in collaboration. What is your view on this?	Probe for reasons.
Q2: The majority of teachers in my study identified informal conversation as the main type of collaborative activity they engaged in. What is your opinion on this?	Probe for individual experience and reasons.
Q3: My study also found that teachers mainly collaborated within their departments and less often with colleagues outside their departments. What is your own experience on this?	Probe for individual experience and reasons.
Q4: Given the different activities involved in collaboration, which specific collaborative activities do you have preference for and why?	Ask respondents to choose from a list of activities in the survey questionnaire and add options not on the list if necessary.
Q5: Learning new ideas was identified as the main benefit of collaboration by teachers in this study. What is your own view on this?	Probe for individual experience and reasons.
Q6: Team teaching is regarded as an effective method of improving teaching practice but was not rated very highly in my study. What is your experience on this?	Probe for individual experience and reasons.
Q7: Another activity usually promoted as a way of improving teachers' practice is Peer observation. However, half of the teachers	

in my study disagreed with or were neutral about the idea of Peer observation. What is your own view? **Q8:** Although, many teachers in this study indicated that they were motivated to work as a result of collaborating with others, a significant number did not think so. What is your opinion?	Probe for individual experience and reasons.
Q9: This study found lack of time as a major barrier to collaboration. Do you agree and why?	Prompt for reasons individual experience.
Q10: What do you think about the idea of creating specific times and days for teachers to collaborate?	Prompt for explanations.

APPENDIX 6: CHI-SQUARE TEST RESULTS

Chi-Square Test Results (N=72)							
Item	**Statement**	**Department**	**Gender**	**Age**	**Length of service**	**Contract type**	**Level of learner**
7	I regularly collaborate with teachers in my department.	x^2=.203, df=2, p=.904	x^2=.996, df=1, p=.318	**x^2=21.504, df=2, p=.001**	x^2=1.391, df=2 p=.499	**x^2=7.028, df=2, p=.030**	**x^2=12.571, df=2, p=.002**
8	I regularly collaborate with teachers in other departments.	x^2=4.213, df=3, p=.239	x^2=3.982, df=2, p=.137	x^2=5.359, df=2, p=.252	**x^2=9.825, df=4, .043**	x^2=3.072, df=4, p=.546	**x^2=10.545, df=4, p=.032**
9	I discuss teaching and learning strategies with other teachers.	x^2=5.146a, df=2, p=.076	x^2=3.261, df=2, p=.196	x^2=.510, df=4, p=.973	x^2=4.903, df=4, p=.297	x^2=1.648, df=4, p=	x^2=5.679, df=4, p=.224
10	I regularly collaborate with colleagues on lesson planning.	x^2=4.408, df=2, p=.110	x^2=2.458, df=2, p=.293	x^2=2.070, df=4, p=.723	x^2=5.601, df=4, p=.231	x^2=7.034a, df=4, p=.134	x^2=1.934, df=4, p=.748
11	I regularly share teaching and learning materials with colleagues.	x^2=.492, df=2, p=.782	x^2=.854, df=2, .p=653, ,	x^2=, 5.107, df=4, p=.277	x^2=4.293, df=4, p=.368	x^2=7.034, df=4, p=.134	x^2=1.648, df=4, p=.800
12	I often discuss assessment strategies with colleagues.	x^2=2.531, df=2, p=.282	x^2=.922, df=2, p=.631	x^2=1.218, df=4, p=.875	x^2=3.592, df=4, p=.464	x^2=8.313, df=4, p=.081	x^2=4.500, df=4, p=.343
13	I usually engage in informal conversation about my courses with colleagues.	x^2=.440, df=2, p=.803	x^2=2.007, df=2, p=.367	x^2=.097, df=4, p=.999	x^2=3.593, df=4, p=.464	**x^2=9.455, df=3, p=0.02**	x^2=2.564, df=4, p=.633
14	I engage in team teaching with colleagues	x^2=1.353 df=2 p=.508	x^2=.432 df=2 p=.806	x^2=3.168 df=4 p=.530	x^2= 3.611 df=4 p=.461	x^2=1.865 df=4, p=.761	x^2=6.318 df=4 p=.177
15	I engage in Peer observation with my colleagues.	x^2=177 df=2 p=.915	x^2=.534 df=2 p=.766	x^2=1.377 df=4 p=.848	x^2=4.120 df=4 p=.390	x^2=4.953 df=4 p=.292	x^2=1.281 df=4 p=.865
16	I regularly discuss students' performance with my colleagues.	x^2=1.645, df=1, p=.229	x^2=.630, df=1, p=.471	**x^2=9.848, df=4, p=.043**	**x^2=,2.204, df=2, p=.332**	**x^2=7.606, df=2, p=.022**	**x^2=40.909, df=2, p=.000**
17	I work with colleagues in carrying out course-related projects.	**x^2=8.085, df=2, p=.018**	x^2=1.740, df=2, p=.419	x^2=,3.084, df=4, p=.544	**x^2=13.212, df=4, p=.010**	x^2=7.187, df=4, p=.128	x^2=4.722, df=4, p=.317

25	I work with other teachers regularly to help solve students' problems.	x^2=,4.396, df=2, p=.111	x^2=4.154, df=2, p=.125	**x^2=13.320, df=4, p=.010**	x^2=8.675, df=4, p=.070	x^2=5.226, df=4, p=.265	x^2=2.202, df=4, p=.699
27	I participate in professional development activities that encourage teachers to work together.	x^2=2.410, df=2, p=.300	x^2=.109, df=2, p=.947	x^2=2.138, df=4, p=.710	x^2=2.456, df=4, p=.652	**x^2=17.325, df=4, p=.002**	**x^2=9.479, df=4, p=.050**

APPENDIX 7: QUALITATIVE DATA ANALYSIS GRID

Interview questions	**Selected quotes**	**initial codes**	**Final themes**
Q1: Evidence from my research shows that many teachers engage in collaboration. However, the result also indicates that one quarter of teachers were not interested or did not engage in collaboration. What is your view on this?	*"It's **hard to form relationships** with other colleagues. Sometimes **human nature** as well some people chose not to collaborate because of their personalities." MC*	Working with others Interaction difficulty	**Theme 1:** Personality and workplace relationships
Q2: The majority of teachers in my study identified informal conversation as the main type of collaborative activity they engaged in. What is your opinion on this?	*"I think it's just **a habit** more than anything else. That's **how it's been going for so long** and it's just **habitual** now to contact a colleague and try and get some support or ideas or updated information, practices but you get some support informally" ID* *"It helps that we are **open plan office**, we can sort of talk to each other, ask for help all I need this such and such thing do you have or whatever." ZJ*	Habitual	**Theme 2:** Culture of informal interaction and workplace design
Q3: My study also found that teachers mainly collaborated within	*"The level of collaboration among teachers is likely to be high among people*	Shared interests	**Theme 3:** Mutual objectives and

their departments and less often with colleagues outside their departments. What is your own experience on this?	*that are within the **same department** because you work together as a team, you are likely to **share resources** and you are likely to interact on **issues that relate to your subject areas**, rather than to other people from other departments." GA* *"I am **based away** from my colleagues so I tend to collaborate with people working in different departments because **I have no choice.**" MC*		experience and staff location
Q4: Given the different activities involved in collaboration, which specific collaborative activities do you have preference for and why?	*"The type of collaboration I prefer is basically, **sharing materials** and ideas **with my friends** and they share with me. I sometimes share with **anyone outside my personal friendship** circle. I don't mind." ZJ* *"And then you can work with teachers regularly to help with **approaches to students' issues** because some of the students we have are **quite challenged** educationally, socially, financially and emotionally." MC*	Assessment techniques Resource sharing Managing learner	**Theme 4:** Sharing resources, learner improvement and management strategies
Q5: Learning new ideas was identified as the main benefit of collaboration by teachers in this	*"Yes, you are right because during the recent collaboration I did with my colleague in (name of site*	New strategies	**Theme 5:** Developing innovative approaches

study. What is your own view on this?	*withheld), who teaches business, and who has about 15 years teaching experience, I **discovered a new way of checking previous learning** from him." ID*		
Q6: Team teaching is regarded as an effective method of improving teaching practice but was not rated very highly in my study. What is your experience on this? **Q7:** Another activity usually promoted as a way of improving teachers' practice is Peer observation. However, half of the teachers in my study disagreed with or were neutral about the idea of Peer observation. What is your own view?	*"If you have **two heads working together** with different approaches; the Yin and Yan [two people **complementary** to one another]. It is an **effective way of delivering** to learners." MC* *"They are **scared.** The word observation, I think, just scares everyone. It creates this **aura of mistrust** among colleagues and you start getting paranoid and feel that are they **coming to watch you** or get feedback for the line manager about **how bad your teaching is**. **Weird fear culture**?" ZJ*	Mutual benefits Distrust of motives	**Theme 6**: Mutual learning and peer support **Theme 7:** Anxieties and misgivings about observation practice
Q8: Although, many teachers in this study indicated that they were motivated to work as a result of collaborating with others, a significant number did not think so. What is your opinion?	*"I am highly motivated in seeing my **colleagues doing very well**, coming out with very **good ideas** and I want to **equally do similar things**. "ID*	Encouragement	**Theme 8:** Improved confidence in practice

Q9: This study found lack of time as a major barrier to collaboration. Do you agree and why? **Q10:** What do you think about the idea of creating specific times and days for teachers to collaborate?"	*"Some teachers are neutral [not interested] or did not engage in collaboration for the following reasons: their* ***heavy workload -*** *lesson preparation, assessing and providing feedback to students (marking). So, some teachers* ***don't feel they have a nee****d to collaborate." GA* *"I think it is* ***worthwhile*** *probably setting time aside so that teachers know it is the* ***time to collaborate****. Collaboration should not just be in the staffroom or in the corridor but at set times for discussing things that are* ***normally discussed in passing*** *in the staffroom." MC*	Heavy workload Dedicated interaction periods	**Theme 9:** Excessive workload and coping strategy
Q11 The majority of participants believe that successful collaboration requires strong management commitment. What is your own view on this issue?"	*"And it is through managers* ***encouraging and promoting collaboration*** *that teachers can develop their practice, get to learn more, understand why people are doing some things and be* ***able to reflect*** *on their practice as well." GA*		**Theme 10:** Desire for proactive management involvement.