Case Study of Teachers' Perceptions and Practices Related to Collaborative Curriculum Planning

Matthew Warren Caughell

Dissertation Submitted to the Doctoral Program
of the American College of Education
in partial fulfillment of the requirements for the degree of
DOCTOR OF EDUCATION in EDUCATIONAL LEADERSHIP

June 2021

Case Study of Teachers' Perceptions and Practices Related to Collaborative Curriculum Planning

Matthew Warren Caughell

Approved by:

Dissertation Chair: Sandra Quiatkowski, PhD

Committee Member: Rebecca Curtis, EdD

Copyright © 2021

Matthew Warren Caughell

Abstract

The problem is a lack of understanding about how teachers use and perceive collaborative curriculum planning (CCP) time provided within the scheduled school day. Collecting data on CCP perceptions and practices can lead to a better understanding of how to support teachers and ways leaders can put systems in place to increase the effectiveness of CCP. A gap in literature existed of studies examining how teachers perceive CCP and practices occurring during CCP. Collective intelligence was the conceptual framework. The purpose of the qualitative case study was to investigate practices and perceptions of five teams of middle school teachers participating in CCP at middle schools. Three research questions focused on exploring common and differing practices grades 6–8 middle school teachers demonstrated during CCP, middle school teachers' perceptions of CCP, and how middle school teachers' perceptions of CCP compare to practices observed during CCP. Middle school teachers working in teams throughout the district during CCP time were observed and then interviewed. Seventeen teachers working in teams consisting of at least three teachers each served as the sample. Collected data were coded with the aid of Atlas.ti software. Five major themes emerged as practices occurring during CCP, along with five common perceptions about CCP. Alignment of practices to teachers' perceptions varied. CCP time is important to teachers, and school leaders should consider how to create and support effective CCP teams.

Keywords: collaborative curriculum planning, middle schools, teacher practices, collective intelligence

Dedication

This dissertation is dedicated to my family and friends who provided endless support and encouragement. I have been blessed with an amazing family and friends who always stand beside me through thick and thin. I hope I have inspired my children to pursue their dreams. You can accomplish anything through hard work and perseverance.

Acknowledgments

I would like to express gratitude to the staff of the American College of Education for support and guidance. Feedback and guidance from instructors were instrumental to the completion of this dissertation. Special thanks goes out to Dr. Sandra Quiatkowski, my committee chair, for the encouraging words and advice throughout the process. I also would like to recognize committee member, Dr. Rebecca Curtis for contributing valuable feedback. Finally, I thank colleagues for participating in the study, as well as coworkers who provided recommendations and contributed to the completion of my doctoral journey.

Table of Contents

List of Tables	10
Chapter 1: Introduction	11
Background of the Problem	112
Statement of the Problem	13
Purpose of the Study	14
Significance of the Study	
Research Questions	
Conceptual Framework	16
Definitions of Terms	16
Assumptions	17
Scope and Delimitations	18
Limitations	19
Chapter Summary	20
Chapter 2: Literature Review	211
Literature Search Strategy	222
Theoretical Framework	233
Research Literature Review	255
Teacher Planning of Content	266
Teacher Collaboration	299
Support for CCP	37
Impact of CCP on Student Achievement	40
Counterarguments	442

COLLABORATIVE PLANNING PERCEPTIONS AND PRACTICES	8
Gap in Literature	46
Chapter Summary	46
Chapter 3: Methodology	51
Research Design and Rationale	51
Role of the Researcher	53
Research Procedures	55
Population and Sample Selection	55
Instrumentation	57
Data Collection	59
Data Preparation	61
Data Analysis	62
Reliability and Validity	63
Ethical Procedures	65
Chapter Summary	66
Chapter 4: Research Findings and Data Analysis Results	67
Data Collection	68
Data Analysis and Results	71
Research Question 1	71
Research Question 2	74
Research Question 3	76
Reliability and Validity	79
Chapter Summary	79
Chapter 5: Discussion and Conclusion	81

Findings, Interpretations, Conclusions	. 82
Limitations	. 86
Recommendations	. 87
Implications for Leadership	. 87
Conclusion	. 89
References	. 91
Appendix A: Email Asking for Volunteers to Participate	102
Appendix B: School District IRB Approval to Conduct Study	103
Appendix C: Informed Consent Letter	104
Appendix D: Modified Collaborative Curriculum Planning Observation Protocol	108
Appendix E: Modified CCP Time Interview Protocol	112
Appendix F: Permission to Modify and Use Research Instruments	117
Appendix G: Site Approval from School District	127

List of Tables

1. Observation and Interview Durations	69
2. Observed Minutes Engaged in Activities During Collaborative Curriculum Planning	72
3. Themes Related to Teachers' Perceptions of Collaborative Curriculum Planning	74
4. Teachers' Perceived Uses of Collaborative Curriculum Planning Compared to Practices	
Observed During Collaborative Curriculum Planning	77

Chapter 1: Introduction

Accountability has forced educators to examine practices and procedures in schools and districts. The implementation of No Child Left Behind in early 2002 caused many schools to delegate time for teams of teachers to meet in order to plan instructions and examine data (Thessin, 2015). President Obama signed the Every Student Succeeds Act (2015) into law updating No Child Left Behind policies requiring every student be taught rigorous standards. Planning is an important component of effective teaching, and teachers need adequate time to plan (Merritt, 2016).

In middle schools serving students in grades 6–8, teachers are often provided time to plan the curriculum collaboratively. The average kindergarten through Grade 12 (K-12) teacher in the United States has around 45 minutes built into the scheduled school day for planning (Merritt, 2016). Teachers in the United States receive less time for planning than teachers in most high-performing countries around the world (Snyder & Bae, 2017). Time spent in planning should be used effectively and efficiently to provide quality instruction to students. This dissertation is an investigative study focused on discovering practices and perceptions of teachers engaged in collaborative curriculum planning (CCP). Study results could lead to further quantitative studies on CCP.

Chapter 1 includes background for the study and a brief explanation of some existing research related to CCP. A statement of the problem addressed by the study and purpose of the study are described. The significance of the study depicts how the study may advance knowledge on the topic of CCP and potential benefits. Three research questions drive the study, the conceptual framework is introduced, and key terms used in the study are defined. Assumptions

critical to conducting the qualitative research, the scope and delimitations for the study, and limitations for the study are acknowledged.

Background of the Problem

Research related to collaborative planning of curriculum and instruction has mainly focused on benefits, support needed for implementation, and arguments against the effectiveness of requiring teacher collaboration. Planning for instruction, finding curriculum materials, and developing instructional resources are demanding, time-consuming tasks (Merritt, 2016).

Collaboration can make instructional planning more efficient and effective than planning individually, while increasing teacher pedagogical knowledge, teacher retention rates, and job satisfaction (Schleifer et al., 2017). Teachers actively engaging in collaborative planning demonstrated positive impacts on student achievement (Goddard et al., 2015; Ronfeldt et al., 2015; Schleifer et al., 2017). Collaborative planning requires support and cooperation from school administrators and district leaders (Anrig, 2015). Counterarguments against the effectiveness of CCP include the claim it reduces teacher autonomy (Carpenter, 2017; Ostovar-Nameghi & Sheikhahmadi, 2016), it is an inefficient use of teacher time (Bae, 2017), and there is insufficient leadership to support teachers during CCP (Lomascolo & Angelle, 2017).

Education is continually evolving and changing based on research and the needs of society. Teachers spend several hours a day with students in isolated classrooms. Schools are arranged to promote privacy and teacher independence, which can limit collaborative learning among teachers (Bae, 2017). Many educational leaders make providing time for collaboration a priority to allow teachers time to meet the needs of learners. Research by DuFour (2004) on effective professional learning communities (PLCs) has influenced collaborative practices of

educators and led to the implementation of time for teacher collaboration in schools. Collective intelligence was the conceptual framework for the study, as the focus was on exploring how individuals perform when working in teams.

Statement of the Problem

The problem was a lack of understanding about how teachers use and perceive CCP time provided within the scheduled school day. Managing teacher collaboration can be challenging for school leaders (Brown et al., 2018). The background of the problem is teachers across the school district have exhibited inconsistent practices during CCP, and teachers have a variety of perceptions about CCP. Effectiveness of collaboration varied greatly among groups of teachers (Ronfeldt et al., 2015).

The importance of examining the problem is developing awareness of practices and teachers' perceptions related to CCP. Collecting data on CCP perceptions and practices can lead to a better understanding of how to support teachers and ways leaders can put systems in place to increase the effectiveness of CCP. When not properly facilitated, collaborative efforts often became unproductive (Powell & Kusuma-Powell, 2015). School leaders need to be able to understand how to develop effective collaborative relationships throughout the school (Stein, 2016). The extent of the problem is middle schools across the district had teachers engaging in CCP during the school day with a lack of consistent procedures and support; this problem extends to schools throughout the United States of America.

Those impacted by the problem were teachers, administrators, district leaders, and students enrolled in classes of teachers participating in CCP. Often, teachers with minimal training on CCP received little guidance from colleagues and administration during CCP, which

resulted in varying levels of effectiveness (Goddard et al., 2015). School district leaders require an understanding of what is occurring during CCP to decide how to provide the appropriate supports for teachers. A gap in the literature exists in teachers' applications and perceptions of CCP practices.

Purpose of the Study

The purpose of this qualitative case study was to investigate practices and perceptions of teams of middle school teachers participating in CCP at middle schools. A study was necessary to understand what was actually happening during CCP and how teachers perceived the effectiveness of CCP. The desired outcome of the study was for leaders in the district to have a better understanding of how teachers used and perceived CCP. Teams of teachers needed support from school leaders and a supportive environment, which can build trust (Voogt et al., 2016). If research into CCP practices and teacher perceptions was not conducted, administrators and district leaders could continue to make decisions about CCP based on assumptions.

The study contributed to the knowledge base by providing a qualitative exploration of current practices during CCP in a South Carolina school district as well as middle school teachers perceived effectiveness of CCP. As a result of the study, district leaders and administrators will have a better understanding of how teachers utilize their time in collaborative planning sessions as well as their perceptions of CCP, and further quantitative studies could be conducted based on findings. School leaders need to be recognized as proficient to have a positive influence on collaboration among teachers (Hallam et al., 2015). The research study is designed to be shared with district and school-level leaders.

Significance of the Study

Individuals leading schools need to be more than just effective managers; school administrators need to be effective educational leaders (Stein, 2016). Cultivating teacher planning to support teachers in delivering instruction should be a focus for school leaders. School leaders should develop a school vision and mission to support curriculum development (Shahadan & Oliver, 2016). The study advanced knowledge of CCP use and the perceptions of teachers pertaining to their CCP experiences in the school district. Using the results from the study, school leaders can align goals and policies to support teachers in collaborative planning. Encouraging teaching practices to increase student achievement and provide an environment to support cooperation among teachers is a vital role of school leaders (Shahadan & Oliver, 2016). The study contributed to the field of knowledge. An exploratory case study can provide new insights to prompt further studies, which can lead to the creation of new policies (Mills et al., 2010).

Research Questions

Teachers at the middle schools serving as the research sites planned lessons and curriculum independently and with teams of teachers who taught the same grade level and content. Individuals utilize different strategies to teach students, prepare lessons, and make curricular decisions. Collaborative planning time during the school day allows teachers to share strategies, plan the curriculum, and develop lesson plans using a collective approach. Teachers are often unmonitored during scheduled CCP time and use of the time varies among teams of teachers. The following research questions guided the case study:

Research Question 1. What common and differing practices do grade 6–8 middle school teachers exhibit during CCP?

Research Question 2. How do grade 6–8 middle school teachers perceive the effectiveness of CCP?

Research Question 3. How do Grade 6–8 middle school teachers' perceived uses of CCP compare to practices observed during CCP?

Conceptual Framework

Individual teachers within a CCP team may be able to plan the curriculum effectively. This study focused on how placing teachers on teams for planning impacted behaviors and perceptions. Collective intelligence was the conceptual framework for the study. Woolley et al. (2010) introduced the concept of collective intelligence, stating the effectiveness of groups on one task can determine the ability to perform on future tasks. The study explored the tasks being accomplished by the CCP team of teachers and how team members perceived the performance of the team. Based on the conceptual framework, administrators may need to consider team dynamics and collective intelligence when establishing CCP teams. A more thorough explanation of how collective intelligence formed a conceptual framework for the study is included in Chapter 2.

Definitions of Terms

Certain terms have different meanings and interpretations depending on context. A clear understanding of terms used within the study helps to establish meaning. The following list explains how identified terms were used for the purpose of this study.

Administrators. For the purpose of this study, the term *administrators* refers to principals and vice principals employed by K-12 schools.

Curriculum. The definition of curriculum can vary. The use of the term *curriculum* in this study is aligned with Steiner's (2017) definition. Steiner suggested K-12 schools commonly use the term *curriculum* as "the substance of what is taught and how instruction is delivered" (p. 4).

Collaborative curriculum planning (CCP). The process used by teachers during designated time established in schools for teachers of the same subject and grade level to meet and plan curriculum.

Educators. For the purpose of this study, *educators* refers to individuals employed in the field of educating students and responsible for the learning of students. This term includes district office staff and school-based staff.

Middle schools. Middle schools serve students in grades 6–8, with teachers often arranged into teams.

Professional learning community (PLC). A group of school staff working together with a focus on student learning (DuFour, 2004).

School leaders. The term *school leaders* is used to describe district personnel including coaches, the superintendent, assistant superintendents, directors, and coordinators, as well as school-based leaders such as principals, vice principals, and coaches.

Assumptions

Certain assumptions were required to conduct the study. Data collection occurred in an environment where teachers were aware of the observation occurring. There was no way to

determine how an awareness of the study occurring impacted how teachers engaged in CCP. Research was conducted under the premise teachers engage in CCP in a natural way as if no study was occurring. Another assumption made was teachers were honest when providing responses during the interview. Selecting participants who do not work directly with the researcher and reminding participants of confidentially measures taken before conducting observations and interviews were performed to minimize bias. The need to observe teachers in classrooms where CCP occurred and collect data related to teacher perception data through interviews made the use of overt observations necessary.

Scope and Delimitations

Schools selected as sites for the study were limited to five public neighborhood middle schools drawing students based on attendance zones within a single school district. The scope of qualitative case study research is often impacted by funding, time, and travel limitations (Mills et al., 2010). Teachers in middle schools within the school district received a common planning time with similar grade levels and content peers. The middle school magnet school and alternative school teachers were excluded as possible participants from the study because the schools serve a special population of students. To be selected for the study, individual teachers engaging in collaborative planning worked in CCP teams of at least three science, three language arts, or three math teachers. Selecting small numbers of similar cases creates more construct validity in a case study than combining together large numbers of participants to get a larger sample size (Bennett, 2015). The trade-off for a high level of construct validity is less generalizable results to the wider population (Bennett, 2015). Observations were limited to one collaborative planning session during the school day.

The study consisted of five teams of teachers to provide data from schools located across the district. Yin (2009) found, "Having multiple cases within your case study may require greater effort. However, the benefit will be a more strongly designed case study, where the cases may replicate or otherwise complement each other's experiences" (p. 26). The potential to generalize results was limited due to the specific context in a case study and the large number of variables present. An exploratory case study can provide a base of ideas for quantitative research to test to generate generalizable results (Mills et al., 2010).

Limitations

The study focused on a small number of participants within a specific context because, "Potential limitations of case studies, though not inherent in every one, include indeterminacy or inability to exclude all but one explanation, lack of independence of cases, and the impossibility of perfectly controlling case comparisons" (Bennett, 2015, p. 20). Selecting separate cases in different schools provided increased credibility for the study compared to selecting a single case. Use of a small number of similar cases offers higher construct validity but limits the generalizability of results to a wider population to due contextual restraints (Bennett, 2015; Miles, 2015; Mills et al., 2010).

Bias can impact the credibility and validity of a qualitative study. Case studies examine practices, actions, and perceptions of particular groups of people during a certain point in time within a context (Miles, 2015). As the study was designed to explore teachers' perspectives, meaning could be constructed from participant responses. Subjectivism is an important element, and not a factor decreasing credibility in a case study as the methodology is used to determine perspectives (Mills et al., 2010).

Researcher interpretations are likely to influence coding of qualitative data (Graue, 2015). To reduce bias, members verified themes as accurate representations of observations and teacher perceptions. Atlas.ti qualitative data analysis software was used for coding. The teams selected for the study were randomly selected from the five middle schools. A preexisting instrument, which has demonstrated reliability, was modified and used for data collection during interviews to reduce the potential to influence participant responses.

Chapter Summary

Chapter 1 provided an introduction to the exploratory case study on teachers' perceptions of effectiveness and practices in CCP and a background for context. The problem statement, purpose for the study, and significance of the study were presented, along with three research questions to guide the study. The conceptual framework of collective intelligence was introduced and is further explained in Chapter 2. Key terms were defined based on application to the study. Assumptions, scope and delimitations, and limitations for the study were considered and addressed in Chapter 1. Chapter 2 includes the process used to collect relevant literature, the conceptual framework for the study, existing literature related to CCP, and the gap in literature addressed by this study.

Chapter 2: Literature Review

Teachers in middle schools around the United States receive time dedicated to planning instruction collaboratively. Mandates and policies regulating time for planning can be set in place, but interpretation and implementation of planning time can vary greatly across schools and within a school (Farley-Ripple & Buttram, 2014; Ronfeldt et al., 2015). The problem was there existed a lack of understanding among educators about how teachers use and perceive collaborative planning time. To address the problem, the purpose of this study was to investigate practices and perceptions of teams of middle school teachers participating in CCP at middle schools. A qualitative case study methodology was used to explore the practices and perceptions of participants. Data were collected using observations and interviews. Collected data were analyzed to determine alignment with trends and findings in the existing literature.

Existing literature provided information on processes occurring during CCP and a look at some of the factors influencing CCP time and PLCs (DuFour, 2004). The role of leadership and impact of accountability on planning and deciding instructional practices are common themes in literature related to CCP. Use of data for instructional decision-making is prevalent. Teacher morale and a culture supportive of professional learning and continuous professional growth are key elements commonly addressed in scholarly literature. Another topic impacting CCP addressed in the literature is the importance of shared leadership and trust when working in collaborative teams.

This literature review addresses the strategies used to find relevant literature pertaining to the topic of CCP. The theoretical framework of collective intelligence is introduced and a description of how collective intelligence supports the study is provided. Research on the

processes and challenges involved in teachers' planning of content is addressed. Collaboration among teachers is a vital component of CCP, and findings on the topic are shared. Systems of support and the role of leaders in supporting CCP are explained, and this literature review includes findings on the impact of CCP on student achievement and supporting diverse learning populations in literature. Counterarguments against the use and effectiveness of CCP are included. The gap in literature addressed by this study is established, followed by a chapter summary.

Literature Search Strategy

Before engaging in the study, a thorough review of existing literature was conducted. The EBSCO Discovery Service accessed through the American College of Education library was used to find relevant literature. In addition, articles and research were found using the ERIC database and Google Scholar search engine. An emphasis was placed on using peer-reviewed articles and articles appearing in scholarly journals. Ninety percent of the articles reviewed in the literature review were published within five years of the study, ensuring the research and literature reviewed were current and applicable. Terms used included *collective intelligence*, *collaborative planning, professional learning communities, teacher planning of content, instructional planning, teacher burnout, collaboration and teacher turnover, curriculum planning, teacher collaboration and student achievement, leadership and teacher collaboration, teacher perceptions of planning time*, and *common planning time*.

Article reliability and credibility were considered before selecting any literature for inclusion in the literature review. Literature selected included references to scholarly work and was found in credible sources. The majority of the existing research found for this literature

review related to teacher collaboration, teacher curriculum planning, and PLCs was qualitative but included some quantitative studies. All findings from previous studies and existing literature were cited.

Theoretical Framework

The theoretical framework for the study was collective intelligence (Woolley et al., 2010). Woolley et al. (2010) described collective intelligence as a group's collective ability to perform tasks. How well a team performs on one task can provide insight into how well the same team may perform on other tasks (Woolley et al., 2010). Studies have provided insight on the impact of collective intelligence on group performance. Credé and Howardson (2017) argued against a single factor to determine the performance of a group across a variety of tasks but suggested collective intelligence could help further understanding of group performance.

To ensure individuals are qualified to be teachers, every state in the United States requires teachers to meet certain criteria. Criteria to obtain teaching credentials include achieving a minimum level of education, passing assessments, and completing teacher preparation programs (Teacher.org, 2021). Certified teachers planning collaboratively have established an ability to be proficient in planning and delivering instruction to students. Teachers develop strategies, instructional techniques, and planning routines over many years to accommodate individual styles. A teacher's willingness to engage in CCP and effectiveness when engaging in CCP are influenced by individual experiences and abilities. Specifically, a major factor impacting group performance is the individual IQ of group members (Bates & Gupta, 2017).

Individual talent and intelligence among group members does not guarantee a highperforming team (Woolley et al., 2015). Whereas each individual may have been proficient in planning instruction, a collective intelligence framework focused the study on how well groups planned collaboratively. When grouped together, individuals operating at similar levels could create groups with large disparities in performance (Woolley et al., 2015). Individual experience was often the greatest factor in determining performance, but collective intelligence could significantly predict group performance on tasks (Kim et al., 2017). Leaders should consider the collective intelligence of a team of teachers assigned to work together to plan collaboratively.

Studies have shown different factors influence a group's collective intelligence. Social perceptiveness and diversity are critical factors in determining collective intelligence (Woolley et al., 2015). As social perceptiveness increases, collective intelligence increases (Chikersal et al., 2017). Gender and ethnic diversity are shown to increase collective intelligence (Chikersal et al., 2017). Other factors influencing collective intelligence are the ages of group members and generational differences. Large gaps in age promoted collective intelligence, whereas smaller degrees of age diversity, due to a hierarchical quality, were detrimental to collective intelligence (Chikersal et al., 2017). Diversity of group members brings unique perspectives and differing ideas. Creative, radical thinking should be encouraged. Rewarding, unique, beneficial, opinions, not common among group members, positively influenced group performance (Mann & Helbing, 2017). Establishing diverse teams of teachers could lead to the creation of more meaningful and creative lessons.

When examining teachers working in collaborative groups, leaders may consider how effectively the team is performing and monitor signs of productive collaboration, such as communication. Groups with higher levels of collective intelligence communicate often and the members contribute more equally than groups with lower levels of collective intelligence

(Woolley et al., 2015). Effective collaboration for planning instruction and curriculum requires hard work, cooperation, mutual agreement, and commitment from every member of the team (Carpenter, 2017; DuFour, 2004). Although whole-group consensus is not necessary for every decision, every voice and concern should be heard before making decisions. Effective leaders monitor the level of communication and cooperation occurring during CCP and intervene as necessary to encourage a healthy exchange of ideas and information.

Groups evolve, change, and adapt as individuals spend more time together interacting and collaborating. Collective intelligence provided greater benefits for teams who stayed together over time and were committed to each other (Kim et al., 2017). People working in groups tend to mirror each other's actions, a phenomenon known as synchrony (Chikersal et al., 2017). Synchrony positively influenced collaboration and task completion (Chikersal et al., 2017). Groups with a collective vision and common understandings can be more efficient and spend less time trying to convey messages. Not only does the potential to accomplish more increase with increased collective intelligence, but also individuals are likely to benefit by being more cohesive. Peers engaging in collaborative lesson study with similar goals led to enhanced collective thinking and learning and the development of individual expertise (Gutierez, 2015). Research on collective intelligence has suggested teams of teachers planning together perform at varying levels of success, and the success of the team does not necessarily rely on the ability of group members' individual abilities.

Research Literature Review

This literature review presents existing literature on arguments for and against the use of CCP in schools. Previous studies have looked at the impact of CCP and factors influencing CCP.

A synthesis of the literature related to CCP is provided to establish what is known on the topic and the need for further study.

Teacher Planning of Content

Sustainable results and lasting success in organizations require planning. Teachers require a substantial amount of time for planning (Merritt, 2016). Educators consistently plan and reflect on instructional techniques, curricular resources, and student achievement. Teachers are tasked with aligning standards to instruction and assessments (Abrams et al., 2016). Educators are held accountable for student achievement, and time is required to design assessments. Teachers created and utilized a variety of assessment methods to guide instructional decisions (Abrams et al., 2016). Once assessments are given, student achievement data should be used to make decisions. Educators are expected to use data for instructional decision-making (Farley-Ripple & Buttram, 2014). The extensive demands on teachers and accountability require a significant amount of professional knowledge, experience, and time.

Teachers should, and are often required to, have concrete plans for delivery of content in their subjects. A teacher's curricular decisions can greatly impact student learning (Steiner, 2017). Planning requires consideration of factors such as time spent on each topic, learning targets for students, strategies for presenting information, and methodology for assessing student understanding (Hofer & Harris, 2019). Learning targets should be aligned to learning standards mandated by governing bodies and district curriculum guides (Hofer & Harris, 2019). Even after plans are made, teachers consistently modify and adapt plans and pacing based on observations, student assessment data, and unanticipated interruptions (Powell & Kusuma-Powell, 2015). The many curricular decisions teachers make daily require considerable time and effort to manage.

Delivering instruction and assessing student learning requires the use of a variety of resources and multiple phases of planning. Teachers used a wide variety of sources for instruction, in a variety of formats, and often developed unique materials (Steiner, 2017). A variety of assessment methods were created and used to guide instructional decisions (Abrams et al., 2016). Technology is improving and being integrated into schools and curriculums. The addition of instructional technology has become another element of planning which teachers consider and contemplate (Hofer & Harris, 2019). In a case study, Harris et al. (2017) described how one ambitious world history teacher went through three phases of planning: the skeletal planning phase when the teacher mapped out a yearlong plan for the course; the unit planning when the teacher planned for weekly instruction on topics; and the reflective planning when the teacher considered what could be reused, modified, or changed for the future. Planning is a necessary element of the teaching profession, and practices during planning vary among teachers.

Teachers should meet the needs of diverse learners. Educators learn about strategies and discover resources through professional development, personal experiences, and professional learning opportunities. Meeting the needs of students requires a variety of instructional strategies and practices (Gaitas & Alves Martins, 2017). Having extensive knowledge about students when making instructional decisions is important for teachers (Gaitas & Alves Martins, 2017). Resources often require modification to meet the needs of students at different levels and from diverse cultural backgrounds. Learning about students and adapting the curriculum to support students are factors teachers should consider when planning instruction.

Individuals working together are likely to participate in a variety of different professional learning experiences. Interacting with colleagues provides opportunities to learn new strategies and techniques and increase pedagogical content knowledge. Varied experiences and perspectives increased professional learning (Barton & Stepanek, 2012). Sharing experiences with other teachers and a desire to contribute to a team can motivate individuals to reflect and improve. Teacher reflection is crucial for growth and instructional improvement (Gutierez, 2015). Collaborative efforts and dividing tasks can lead members of the team to become more ambitious and innovative when planning individually (Carpenter, 2017).

Time provided to teachers for planning during the school day is limited and completing the myriad of tasks required of teachers is challenging. Many teachers indicated the school day does not provide enough time to complete all required tasks effectively and still plan valuable lessons (Bae, 2017). Limited school funding has led to larger class sizes, which increases the workload on teachers. To avoid extensive amounts of personal time being used for planning, dedicated time may be set aside within the school day to plan collaboratively to reduce teacher stress and workload (Bae, 2017). Teachers in the United States spend a majority of the time at work providing instruction, which creates challenges in finding time to complete all necessary tasks and still have time to plan quality instruction (Snyder & Bae, 2017). More time spent delivering instruction means teachers spend the planning time provided during the school day grading and engaging in managerial tasks such as discipline, attending meetings, and contacting parents.

Experience and time teaching the same content area over the course of multiple years make planning easier. Early-career teachers do not benefit from having extensive experience.

Individuals new to the teaching profession often lacked support and feedback required to develop instructional practices (Glover & Wissing, 2017). A lack of experience and resources can lead to more amounts of time planning instruction, compared to veteran teachers (Glover & Wissing, 2017). Demands on early-career teachers can create an unhealthy work-life balance and lead to exhaustion and burnout (Salazar Noguera & McCluskey, 2017).

Teacher Collaboration

High-stakes testing and accountability generate pressure on teachers. Teachers who feel an excessive workload exhibit poor performance at work (Özberk et al., 2017). In 1994, accountability for teachers became an emphasis as government regulations began to require teachers to prepare students for assessments based on standards (Abrams et al., 2016). Many middle schools have created teams of teachers to plan and learn together, known as PLCs. Healthy PLCs practice true transparency, acknowledge challenges, and seek support to overcome problems (Easton, 2017). Working in PLCs created feelings of shared accountability and reduced feelings of isolation among teachers (Hallam et al., 2015; Kelly & Cherkowski, 2015; Owen, 2014). In middle schools, where teachers provide instruction on specific content areas, teachers are often provided time to work in PLCs with grade-level content colleagues for CCP.

Collaboration provides opportunities to make planning time more effective for teachers. During collaboration, knowledge is generated among teachers, and the curriculum is aligned (Voogt et al., 2016). Collaborative planning provides opportunities to reduce the workload on teachers by dividing tasks and sharing ideas. Technology has made the collaborative efforts of teachers more efficient than in the past. Creating and sharing lessons online among colleagues

allows teachers to save time in lesson creation and provides opportunities to modify and adjust lessons as necessary (Devenyi et al., 2018).

In the early 2000s, DuFour did extensive research on PLCs and explained characteristics of effective PLCs. He found elements of effective PLCs included a collaborative focus on student learning, a culture of collaboration throughout the school, collective use of data as part of the decision-making process, and hardworking, committed individuals (DuFour, 2004). Many educators have created PLCs based on DuFour's work, and researchers have referenced his work. Teachers often define collaboration as simply getting along and agreeing on policies and procedures, whereas meaningful collaboration requires routinely, systematically examining, and modifying practices (DuFour, 2004). Frequent interaction does not guarantee efficient and effective CCP. When positive relationships and trust are maintained among colleagues, collaboration tends to be beneficial (Snyder & Bae, 2017). CCP is more beneficial when teachers approach the time together with a growth mindset. Teachers not only need to stay positive and trust colleagues working within the team, but they should also be task-oriented. Collaboration should remain focused on how to promote student achievement (Barton & Stepanek, 2012).

A wealth of knowledge and resources for content delivery in major school subjects already exists. Finding, aligning, and adapting resources to fit the needs of individual teachers and students can be challenging. The participant in the case study by Harris et al. (2017) felt finding a sufficient amount of curricular materials and establishing curricular context to appropriately challenge students required extensive time and effort. Research found CCP can aid teachers in locating and creating instructional materials. Teachers working in teams generated concrete materials for curriculum and lesson delivery (Voogt et al., 2016). Redesigning and

adaptation of curricular materials was a commonly incorporated strategy during teacher collaboration yielding positive results (Voogt et al., 2015). Time saved trying to locate resources can be used to examine data or complete other tasks required to deliver quality instruction.

A large amount of the existing research on CCP has focused on the impact of collaboration on teaching practices and pedagogy. Research has shown collaboration influences teachers' knowledge and techniques. Professional conversations and collaboration allowed reflection on self-practices and opportunities to stay current on pedagogy and content knowledge to improve instructional strategies (Goddard et al., 2007; Schleifer et al., 2017; Voogt et al., 2016). Riveros (2012) found working in PLCs fostered learning for teachers and influenced teaching practices. In middle schools and high schools, teachers should have a firm understanding of content knowledge to address the standards properly. Collaboration led to a deepening of content knowledge among participating members (Howell & Saye, 2016).

Increased accountability has led to an increased focus on using data for decision-making in education. Teachers need to create formative assessments aligned to standards and student learning objectives. Assessments based on observed needs should be developed through collaborative efforts (Carpenter, 2017; DuFour, 2004; McBrayer et al., 2018). Data from assessments should be used to modify the curriculum and instructional practices as necessary. Teachers should make a collective effort to adjust and modify strategies based on data (DuFour, 2004). Data in isolation can be misleading and fail to provide meaningful information, yet data can be compared to drive improvement and collaboration (DuFour, 2004). When several teachers come together and share data in an open and trusting collaborative environment, trends and patterns can be identified. The data trends can help teachers develop understandings about

teaching and learning. Effective PLCs are focused on student learning determined by evidence, not just teaching (DuFour, 2004).

Reflection should be an important part of the collaboration process for teachers engaging in decision-making. Teachers came together with a common focus and used data for improvement during collaborative planning (Jones-Goods, 2018). Providing feedback to each other on curricular materials, as well as creating and sharing curriculum design experiences, leads to increased curriculum design expertise (Huizinga et al., 2015). Learning happens when adults collaborate and reflect on experiences (Kelly & Cherkowski, 2015). Collaborative reflection allows diverse thinkers to share ideas and opinions, which can make lessons more applicable to a wide variety of students. Collective reflection allowed teachers to consider challenges and consider different approaches to address weaknesses (Gaitas & Alves Martins, 2017). Meaningful feedback and a critique of ideas and practices among peers led to an advancement of practices (Gutierez, 2015). Strategies resulting from collaboration are effective because the methods are grounded in real life and practical application (Voogt et al., 2015). The teachers who are in the classrooms every day can generate and share ideas to increase student achievement during collaboration.

Teachers should have a shared vision of what effective instructional practices look like (Bae, 2017; Snyder & Bae, 2017). Once the vision is clearly articulated and agreed upon, teachers can develop goals to focus efforts. Schools are made up of individuals who all contribute to the whole and work toward a common goal together; this is more effective than a group of individuals pursing goals individually (Bailey, 2014). Collaborative planning aligns teachers' efforts. Teachers planning together developed common goals (Kelly & Cherkowski,

2015). Goal setting is an essential component of effective collaboration focused on lesson planning to increase student achievement (Carpenter, 2017; McBrayer et al., 2018). Setting high expectations and holding professional conversations increases rigor and challenges teachers to justify decisions made regarding instruction. Collaboration allowed teacher groups to focus on targeted areas for desired gains (Jones-Goods, 2018). In PLCs studied, teachers engaged in debates and common visions emerged (Owen, 2014).

Teachers with a common vision benefit from having a designated time for collaboration, developing a common language, and exhibiting a willingness to compromise. Conditions for collaboration should be set, agreed upon, and self-enforced by participating teachers. Norms were important for CCP time to be productive and stay focused (Carpenter, 2017). Coherence and shared understanding are only achieved through frequent and consistent interaction (Fullan & Hargreaves, 2016; Gutierez, 2015). Cohesiveness and shared experiences over time increase the collective intelligence of a group. Collaboration should not be perceived as a task, but as an opportunity to save time and share responsibility for student learning. A collaborative environment allows a teacher to discuss student progress and increase the ability to create effective lessons, while reducing repetition in designing activities (Banerjee et al., 2017).

Whereas coherence and teamwork are crucial to CCP, different teaching styles often require teachers to adjust plans. Teachers' characteristics likely influence the impact of collaborative practices (Ronfeldt et al., 2015). A culture rich in collaboration does not mean all teachers are doing the exact same thing at the same time (Fullan & Hargreaves, 2016). Teachers are freely exchanging ideas and understand the teaching styles and methods preferred by colleagues in an effective CCP team.

Providing CCP time for teachers can build morale for teachers and promote a sense of camaraderie. A majority of teacher time at work is spent delivering instruction, which leaves limited time to interact with colleagues. Collaboration increased job satisfaction among teachers and decreased feelings of isolation (Banerjee et al., 2017; Barton & Stepanek, 2012; Burke et al., 2015; Glover & Wissing, 2017; Snyder & Bae, 2017). Practitioners and administrators have institutionalized collaboration as a means to combat teacher isolation (Ronfeldt et al., 2015). Not all teachers have a desire to work with others, as some prefer autonomy and independence. Even when teachers do work together, a degree of trust is required among the members of the CCP team. Teachers often adjust perceptions and beliefs about instructional practices and overcome professional isolation for collaborative efforts to be meaningful (Burke et al., 2015; Howell & Saye, 2016).

A sense of confidence in the abilities of colleagues helps a collaborative culture thrive. When confronted with a problem or seeking advice, most teachers attempt to find help within the school building. Teachers were less likely to pursue outside guidance or support for teaching methods and more likely to ask for advice and suggestions from colleagues with similar experiences (Ostovar-Nameghi & Sheikhahmadi, 2016). When advice is coming from colleagues working with the same or similar student populations and within the same environment, teachers are more receptive and more likely to try suggestions. A culture of shared responsibility for student learning is more beneficial than a competitive atmosphere where teachers on the same team are trying to get students to outperform the students of other teachers on the team.

Establishing and sustaining a culture of shared responsibility and shared experiences with

reciprocal participation among members can combat a sense of competition among teachers (Lampi et al., 2015).

Team members should be willing to contribute, and each teacher on the CCP team should be willing to accept the ideas and suggestions of others and be willing to try new ideas. All members of the team should participate to maximize benefits of CCP (Carpenter, 2017). If members are not provided opportunities to contribute, the environment can become toxic and counterproductive. PLC members and teams should not be competitive but should be willing to offer support to other individuals and PLC teams (Easton, 2017). In a healthy PLC, individuals are provided opportunities to utilize different areas of expertise to solve problems (Snyder & Bae, 2017). Having diverse team members can lead to more effective and productive teams. Collective intelligence studies suggested teams displaying diverse genders and ethnic backgrounds had higher levels of collective intelligence (Snyder & Bae, 2017).

Collaboration and support from colleagues decreased the likelihood early-career teachers left schools (Burke et al., 2015). Establishing a strong culture of collaboration helped school administrators retain teachers, minimize turnover, and increase teacher commitment to a school (Schleifer et al., 2017). Many early-career teachers are assigned mentors to help with planning and seek out colleagues for resources and advice. New teachers valued advice from experienced teachers as well as the sharing of resources (Burke et al., 2015). Collaborative planning provides opportunities for experienced teachers to clear up novice teachers' misconceptions (Pylman, 2018). CCP time provided within the day can provide structured time to help novice teachers create resources and plan lessons. The decreased workload can lead to an increase in job satisfaction.

A common problem in schools is high turnover rates. Combined with a shortage of quality teachers across the United States, high turnover rates have made retaining quality teachers a priority for school leaders (Ansley et al., 2019). Teachers arriving in new schools face many challenges such as learning how to operate new technology and learning new systems, procedures, and curricula. When adapting to new schools, teachers need and appreciate support with planning. Collaboration is important to support teachers at schools with high turnover rates, as new teachers may not be familiar with the curriculum (Jones-Goods, 2018). New teachers to teams should be provided opportunities to contribute to plans. Welcoming ideas of new teachers to CCP teams can provide empowerment and help new members feel appreciated. Teachers working cohesively within a positive relationship increased job satisfaction (Ansley et al., 2019).

Research has indicated CCP led to a wider knowledge base for teachers, and knowledge was put into practice. Riveros (2012) found conversations and dialogue among colleagues result in action and new ideas. Time for collaboration encouraged teachers to move past practices viewed as comfortable and try new techniques (Goddard et al., 2007; Schleifer et al., 2017). CCP can lead to innovative methodology implementation in schools. Collaboration leads to academic conversations and intellectual stimulation, which promotes innovation (Carpenter, 2017).

Differentiating instruction to meet the needs of students with diverse learning styles at varying levels of understanding requires creativity. Multiple perspectives led to more creative and engaging lessons to meet the needs of diverse learners (Bae, 2017). Having diverse teams can increase collective intelligence. A high level of collective intelligence is an indicator a team likely will function at a high level when working on tasks. Diversity and differing perspectives are encouraged in strong cultures of collaboration (Fullan & Hargreaves, 2016).

Support for CCP

District and school leaders should put systems in place to support teachers engaging in CCP. Teachers in PLCs benefited from support provided by the school district (Thessin, 2015). Informed administrators involved in CCP are more likely to know how to support teachers. Sohmen (2015) suggested collaborative teams under the guidance of creative leadership could be innovative problem solvers. To support teachers in CCP, district leaders should select transformational leaders with a desire to practice shared decision-making and encourage collaboration. Hiring administrative leaders with an ability to foster collegiality can lead to more trust throughout the school and increase the likelihood of teachers learning from each other (Banerjee et al., 2017). When support is provided from the top down within a school system, CCP is more likely to yield benefits for teachers and students.

A culture of continuous professional learning with administrators acting as active instructional leaders supports CCP. Instructional leaders use data to support instructional decisions and decide on learning targets. Leaders are more effective when knowledgeable in instruction and data used to support CCP (Farley-Ripple & Buttram, 2014). Teachers and leaders should regularly practice data-based decision-making. Leaders have to be aware of the data available and provide teachers access to the data needed. Data and resources should be easily accessible for teachers (Farley-Ripple & Buttram, 2014). Leaders should model how to use data effectively through professional development and participation in CCP time.

Goal setting is an important part of education to provide measures for student achievement. An important part of leadership is establishing and communicating a shared vision and common goals within a school (Farley-Ripple & Buttram, 2014). Teachers are generally

confident determining what to teach and how. Teams of teachers usually determined goals to accomplish during PLCs (Brown et al., 2018). When teachers are able to align goals with each other, a sense of shared accountability for student achievement develops. The sense of shared accountability leads to increased collaboration and cooperation.

Conversely, forced collaboration and strictly regulating CCP can lead to a toxic environment. Support should be at the request of teachers, as forced collaboration led teachers to perceive administrators did not trust them to make sound instructional decisions independently (Ostovar-Nameghi & Sheikhahmadi, 2016). Teachers should take ownership of CCP. Leaders should seek input from teachers to determine levels of desired support and communicate the benefits provided by collaborating. Shared decision-making is important to implement meaningful CCP time, with teachers providing input into program processes and freely voicing concerns (Bae, 2017). Leaders should address teachers' concerns and suggestions and openly communicate why decisions are made. If teachers' voices are heard, but never used for decision-making, trust can deteriorate (Bailey, 2014). Transparency in decision-making and keeping staff informed help maintain a culture of trust and shared responsibility.

Establishing a culture of collaboration in schools can be a challenging task for school leaders. Accountability systems in place across the United States tend to create competition in education, which can negatively impact collaboration. Educational leaders and policy makers should put measures in place to ensure competition does not hinder collaboration (Fullan & Hargreaves, 2016). Collaborative efforts not supported by school leaders could intensify job dissatisfaction among teachers and negatively impact student achievement (Banerjee et al., 2017). Leaders should carefully consider the personalities of teachers assigned to plan together.

Conflict is likely to occur when individual educators with diverse perspectives come together, and leaders have to be able to intervene to avoid negative outcomes (Bailey, 2014). Leaders should not force collaboration, but simply anticipate and remove barriers preventing collaboration to let creativity emerge (Bailey, 2014; Sterret et al., 2018).

Whereas teachers benefit from guidance and leadership, often school leaders assume teachers are meeting and accomplishing tasks without any supervision. Teachers meeting during the school day for CCP are often unmonitored, but studies have shown teachers do want assistance. Mausethagen and Mølstad (2015) found teachers desired autonomy in making instructional decisions but desired a curricular framework and support in selecting teaching methodologies. Administrators can empower teachers while holding team members accountable (Kruse & Gates, 2016). Faculty members cannot be allowed to make excuses to avoid collaboration (DuFour, 2004). Clearly defined guidelines and conditions for CCP should be determined and communicated early and often to CCP teams. Ongoing support can be provided to maintain effective CCP teams. Problems arising should be quickly addressed. Teachers and CCP teams benefited from leaders providing both proactive and reactive support (Huizinga et al., 2015).

Having the right systems in place supported effective collaboration (Colmer, 2017; Farley-Ripple & Buttram, 2014; Sterret et al., 2018). Logistics impacting teachers working on CCP teams such as time, funding, and alignment of teachers' schedules should be considered. Administrators should set time aside for teacher collaboration, encourage communication, and set expectations (Bae, 2017; DuFour, 2004; Farley-Ripple & Buttram, 2014; McBrayer et al., 2018). Teachers need allocated time to complete the myriad of tasks required and time allotted to

meet and plan together. Often administrators come up with creative solutions to provide teachers the time needed. Principals are responsible for creating schedules to reserve time for collaborative planning (Schleifer et al., 2017). Teachers should be organized into both interdisciplinary teams and teams of teachers working in the same subject and grade level (Carpenter, 2017). Administrators must consider the experience levels, personalities, and expertise of individual teachers when creating CCP teams.

Administrators working in schools are frequently impacted by decisions made by district office leaders. Central office funding to schools is crucial to allow time for collaborative planning in schools (Bae, 2017). Limited funding has led to increased class sizes and at times has forced teachers to spend more time delivering instruction and less time planning. District leaders should make funding professional collaboration time a priority. PLCs benefited from district interventions, supports, and professional development (Thessin, 2015). Principals and assistant principals should have a voice in determining the level of support from the district office. District office officials should provide freedom to schools to decide how to make CCP work based on the schedules and available resources (Bae, 2017).

Impact of CCP on Student Achievement

CCP has been shown to impact student achievement in elementary and middle schools. Goddard et al. (2007) found increased teacher collaboration led to higher levels of student achievement in one study of elementary schools. Schools with a strong professional community and aligned curriculum had gains in reading and math (Schleifer et al., 2017). After a common planning time was established for middle school language arts teachers, students in the classes of participating teachers showed measurable gains in reading and writing (Lawrence & Jefferson,

2015). Making collaboration meaningful is important as, "Schools and teachers that have better quality collaboration across instructional domains (i.e., *general* collaboration factor) also have higher achievement gains, and usually at statistically significant and meaningful levels" (Ronfeldt et al., 2015, p. 32). Research on the connection between teacher collaboration and student achievement has shown student achievement improves as the quality and consistency of teacher collaboration increases.

Working collaboratively with colleagues resulted in teachers feeling their instructional techniques improved and led to more student understanding of content. Teachers substantiated the idea of a culture of collaboration having a positive impact on student achievement (Jones-Goods, 2018). A school environment rich in collaboration can lead to an overall improvement in student achievement, even for students of teachers not fully engaged in collaborative planning. Ronfeldt et al. (2015) found collaborative efforts in schools had a spillover effect on student populations, where the improved instructional methods and teacher communication impacted students throughout a school, even if those students' teachers were not directly involved in the collaboration.

Teachers face the challenge of educating a diverse population of students performing at different proficiency levels. CCP helped teachers address the need for equitable opportunities for all students (Jones-Goods, 2018). When student achievement does not meet expectations, teachers can use problem solving and inquiry to improve student academic outcomes (Carpenter, 2017). CCP can help by creating opportunities for discussion and discovering trends in student achievement data.

Quality instruction requires planning and preparation. Individual teachers improve instructional practices through collaboration, which leads to increased student achievement (Ronfeldt et al., 2015). If collaboration can make planning more effective and efficient, student achievement is likely to be impacted. Student learning is significantly impacted by the quality of instruction (Fullan & Hargreaves, 2016). Focused and productive CCP can lead to improved student performance. Teacher collaboration with an instructional focus was associated with positive gains in student achievement (Goddard et al., 2015). The consistency of findings related to CCP impacting student achievement across different grade levels and environments is an area eliciting more collection of data.

Working collaboratively, teachers can utilize data to track student learning. Teachers who use assessment data during planning can impact student achievement. Collaboration centered on student assessment was an area shown to have a significant impact on student achievement (Ronfeldt et al., 2015). Analyzing assessments allows teachers to identify gaps in knowledge collectively and consider the factors preventing learning. Teams of teachers can work together to identify barriers to student learning (Gaitas & Alves Martins, 2017).

Counterarguments

Not all research has shown CCP is effective and beneficial to teachers. In the study by Mausethagen and Mølstad (2015), teachers noted the importance of autonomy and choice in selecting strategies and materials necessary to meet students' needs. If administrators require collaborating teachers to use similar lessons and assessments, teacher autonomy diminishes. Forced collaboration time should not be imposed on teachers, as requiring teachers to make uniform decisions decreases teacher autonomy and diminishes a culture of true collaboration

(Carpenter, 2017; Ostovar-Nameghi & Sheikhahmadi, 2016; Schleifer et al., 2017). Teachers need to be empowered to make the instructional decisions most likely to lead to improved student achievement and success.

Working in teams does not always result in increased performance among team members. With collective intelligence, even high levels of individual performance among team members does not necessarily indicate the team can perform at a high level. Developing shared leadership and trust among group members can be challenging. Groups planning together had a tendency to result in one or two members of the groups making the decisions for the entire group (Carpenter, 2017). Teachers come from diverse backgrounds and have different opinions and perspectives. Building relationships necessary for productive collaboration can be challenging, especially if some members of the team are extremely independent (Bae, 2017). Collaboration requires members of the team to be vulnerable and accepting of criticism from others. PLCs often rely on informal accountability and the integrity of the individual team members (Easton, 2017). Collaboration can create anxiety for teachers, who may feel safer working alone (DuFour, 2004; Fullan & Hargreaves, 2016). Increasing stress and pressure to perform can cause teachers to be resistant to CCP. Administrators should carefully consider the personalities of the teachers planning together and create teams with high levels of collective intelligence. Staffing decisions for administrators in middle schools are often limited due to teacher certifications and qualifications.

Quality of leadership influences CCP. Leaders have to elicit teacher buy-in. Poor leadership and lack of teacher buy-in led to collaborative planning time being unproductive (Lomascolo & Angelle, 2017). Leadership should develop capacity among teachers to perform as

a CCP team and motivate teachers to seek continuous improvement. Practices and decisions in PLCs are often left to the discretion of teachers, and freedom is given to teachers to perform the tasks seen as necessary based on the assumption the teachers are using the time to improve student achievement (Carpenter, 2017). School administrators have to tend to many tasks requiring extensive amounts of time. If leaders do not intentionally schedule time to participate, monitor, and support CCP, CCP may transpire with a low level of fidelity. When the success of CCP is the sole responsibility of teachers without guidance from leaders, teachers may be hesitant to engage in difficult decisions with the potential to strain relationships with colleagues. Points of conflict or disagreement during mandatory PLC times were often not shared or resolved by team members, but internalized, which reduced sharing and cooperation and led to dysfunctional teams (Carpenter, 2017). If leaders are not effective at establishing open channels of communication among staff members and cultures of acceptance for constructive criticism, CCP time could become ineffective.

Teachers and students benefit when teachers utilize time wisely. Some teachers indicated too much time during the school day is spent in meetings, which becomes counterproductive and causes fatigue (Bae, 2017). Forced collaboration limits teachers' abilities to tend to small necessary tasks such as making copies or grading papers (Bae, 2017). Modern computer software and programs have made sharing resources and ideas more convenient, and technology makes staying connected easier for teachers. Technology allows teachers to consistently update and modify shared lessons online (Devenyi et al., 2018). Teachers may not need to spend time meeting face to face if tasks and lessons are completed and shared online. Issues requiring attention from teachers may arise during CCP time, which limits time for actual instructional

planning. Interdisciplinary teams spent a majority of planning time focusing on individual students and behavior, instead of creating lessons, units, projects, or assessments (Lomascolo & Angelle, 2017).

Individuals develop styles of teaching matched to personalities and based on the needs of students. Teachers may believe the experiences of individual teachers are not generalizable to other classrooms, as teachers have unique styles and students (Howell & Saye, 2016). A strategy may be highly effective for one teacher or class and ineffective for another teacher or class.

Teachers not using data to support decisions and failing to engage in reflective practices during CCP can lead entire teams of teachers to generate ineffective plans. Collaboration can lead to the sharing and use of minimally effective methods (Fullan & Hargreaves, 2016).

Teachers with a minimal desire to engage in CCP are not likely to benefit from the process. Among teachers who showed little job satisfaction, consistent collaborative planning did not correlate with improved student reading achievement (Banerjee et al., 2017). Teachers with a fixed mindset participating in CCP are not likely to actively participate and contribute.

Collaboration can provide a channel to spread negativity, which makes planning counterproductive (Barton & Stepanek, 2012).

Plans and courses of action decided during CCP may not be functional for all teachers participating. Teachers had a tendency to focus on aligning schedules during collaborative planning (Pylman, 2018). Even after the pace was decided, teachers found staying on the pace decided during collaborative planning difficult and negotiating decisions challenging (Brown et al., 2018). A group approach may not be necessary to complete tasks. Topics needing immediate attention from teachers may not be appropriate for allocated CCP time. For some tasks, a

collaborative approach is inefficient (Powell & Kusuma-Powell, 2015). If teachers perceive the time spent in collaborative planning is unproductive and is eliminating time to complete other individual tasks, CCP can generate stress and increase teachers' anxiety.

Gap in Literature

A gap in literature existed for how teachers perceive CCP and practices occurring during CCP. Kelly and Cherkowski, (2015) suggested the need for further studies to determine how PLCs are implemented in schools. Trust among teachers was critical to effective collaboration (Hallam et al., 2015; Kelly & Cherkowski, 2015). Hallam et al. found teachers who did not trust colleagues were reluctant to use suggestions made during collaboration and recommended future studies explore ways to establish trust in PLCs. An environment conducive to risk-taking and open communication is important to successful PLCs (Kelly & Cherkowski, 2015).

To add to existing knowledge on CCP, this study involved observation of teachers engaging in CCP during dedicated periods within the normal school day in a natural environment. The perceptions of teachers were investigated to explore how practices and perceptions aligned. Studying perceptions and practices during CCP could allow leaders to more effectively support teams of teachers planning curriculum collaboratively. Understanding how collaboration supports teachers' practices is becoming more important as more school leaders emphasize the use of collaborative practices (Ronfeldt et al., 2015). Supporting teachers during CCP can provide benefits to teachers and students.

Chapter Summary

Across the country, CCP is occurring in middle schools. Teachers are expected to collaborate to design more effective practices and increase student achievement. Collective

intelligence was introduced as the theoretical framework for the study. Research suggested the collective intelligence of a group can predict how well the group performs on future tasks.

Leaders can consider the collective intelligence of groups of teachers working together on CCP teams during the assigned time and determine whether assigning time for teacher collaboration is beneficial.

Accountability and standards for learning have placed an emphasis on using data to design effective instruction and monitor student progress. Finding resources and planning meaningful instruction requires time and effort. Teachers are expected to differentiate instruction, as well as to adapt instructional practices and techniques to meet the needs of diverse learners in classrooms. Attending to tasks leaves minimal time for teachers to analyze data and plan instruction, and CCP can lead to more efficient planning when used correctly. Planning collaboratively can be especially beneficial for early-career teachers, as novice teachers often have limited experience making decisions.

Collaboration is an integral part of education. PLCs have become popular in middle schools as a way to promote professional learning and shared responsibility for teaching and learning. Collaboration can make locating resources and determining strategies to address standards more efficient and effective. A growth mindset and positive relationships among teams of teachers are important to establish an advantageous collaborative culture in schools. Planning with colleagues collaboratively provides benefits for the individuals involved in the process, including increased pedagogical and content knowledge. Assessments created by collaborative teams can be utilized to provide data for comparison, and data can be reflected on to provide a rationale for instructional decisions. Teachers working in teams should be open to feedback and

criticism. Sharing a common vision and developing common goals help guide and focus collaborative efforts and lead to coherence and compromise among participating teachers. Diversity among CCP members can be a strength if teachers are open to new ideas and willing to contribute ideas. Collaboration can combat negative effects associated with high turnover rates and increase job satisfaction for teachers. CCP can lead to synergy among teachers as well as innovative and creative instructional practices.

CCP is not likely to succeed without appropriate support and leadership. Leadership plays an instrumental role in the success of CCP in middle schools. Effective leaders are knowledgeable in instructional practices and the use of data. Instructional leaders should model effective teaming and data use for the teachers. A clear vision and goals should be consistently communicated, and teachers should be provided a voice and be an integral part of the CCP decision-making process. Typically, teachers desire a level of autonomy in decision making, while still receiving support and guidance from administrators. Leadership can support CCP teams by establishing an environment of shared responsibility and accountability, as opposed to a culture of competition and forced cooperation. Time set aside for teachers to be able to meet is critical, and teachers should have access to resources and data required for planning. District leaders should provide the funding and support necessary to school-based leaders while providing school-based administrators the authority to make decisions related to CCP.

Decisions in schools should be made with a focus on improving student achievement.

Although research examining the impact of CCP on student achievement is limited, existing literature has shown collaborative planning has had a positive effect on student achievement.

Utilizing diverse instructional practices provided by working in teams helps to meet the needs of

diverse learners. Quality instruction by teachers leads to increased student learning and achievement. Teachers indicated participation in CCP has a positive influence on the quality of instruction.

Existing literature provided challenges to establishing effective CCP teams and claims in opposition to the value of CCP. Forced collaboration and requiring teachers to align instructional practices and pacing can reduce teacher autonomy, and teachers may have a desire to maintain autonomy and independence. Preserving autonomy allows teachers to make decisions and use time as deemed necessary. Solid relationships are necessary for collaboration to be successful, and teachers assigned to work together may fail to maintain positive relationships. Some members of the CCP team may have a fixed mindset or negative outlook, and if teachers believe the time is unproductive and unnecessary and approach collaborative planning with negativity, the negativity can spread to create a toxic environment. Strong PLCs require transformational leadership. Some school leaders and administrators may not possess the skills and knowledge required to monitor and support CCP teams. Teachers may not find the suggestions of other team members applicable or feasible. If the CCP time becomes toxic, administrators may not be able to reassign teachers to different content areas or grade levels due to teaching certifications.

Maintaining the proper conditions for meaningful CCP is a challenging task.

Although the majority of literature suggested CCP time yields positive benefits, if not carefully monitored, CCP can become counterproductive. There was a gap in the literature concerning the perceptions and practices occurring during CCP. This study was necessary to investigate perceptions and practices of teachers engaging in CCP and explore how the practices

and perceptions aligned. The findings helped district and school leaders decide how to design and support teacher teams planning collaboratively.

The case study methodology used for data collection and analysis is explained in Chapter 3, including explanations of the research design and rationale, role of the researcher, research procedures, instrumentation, data collection and analysis processes, measures to establish validity and reliability, and ethical considerations. A qualitative study was conducted to collect data to investigate practices occurring during CCP and perceptions of teachers participating in CCP. Teachers were observed while participating in CCP, and participants were individually interviewed after participating in CCP time. The data analysis process and safeguards to ensure data security and maintain participant confidentiality are explained.

Chapter 3: Methodology

The problem was there existed a lack of understanding about how teachers use and perceive CCP time provided within the scheduled school day. The purpose of this qualitative case study was to investigate practices and perceptions of teams of middle school teachers participating in CCP time at schools. Basic research seeks to explore phenomena to generate new ideas and increase the knowledge base on a topic (Organisation for Economic and Co-operative Development, 2002). A basic research approach focused on three research questions: (a) What common and differing practices do grades 6–8 middle school teachers exhibit during CCP, (b) how do grade 6–8 middle school teachers perceive the effectiveness of CCP, and (c) how do grades 6–8 middle school teachers perceived uses of CCP compare to practices observed during CCP?

Chapter 3 includes the research design and rationale to explain how the design of the study fits the context and is tied to the theoretical framework. The researcher's role, predispositions, and measures to minimize bias are described. In the research procedures section, processes for sampling, instrumentation, data collection, and data preparation are explained. Systematic, research-supported methods to analyze data are described in the data analysis. How reliability and validity were attained for the study is explained along with safeguards to protect participants and measures taken for data security. The chapter summary provides a short synopsis of the main ideas in Chapter 3 and a preview of the next chapter.

Research Design and Rationale

The research questions were designed to focus the study on the exploration of practices and perceptions of teachers in middle schools. Time is a valuable resource for educators. Large

amounts of time are being designated to CCP in middle schools, and this study explored how teachers utilized the time. Case studies provide a way to understand and analyze complex practices occurring within a context (Miles, 2015). Observations and interviews are combined during a case study to generate an understanding of a phenomena or situation. Open-ended interviews provide insight into the participant's reality (Yin, 2009). Administrators and other individuals making decisions may not fully understand the complex nature of CCP, as school leaders are not involved in the process. Use of both observations and interviews increased credibility. A strength of case study methodology is the use of multiple methods to collect data (Mills et al., 2010).

CCP time occurred at middle schools across the district in several different environments. Selecting multiple cases provided data in different contexts and opportunities to identify common themes among teachers working in schools within the district. Differing practices of teachers working in teams were identified by looking at multiple cases. Selecting multiple cases creates a greater impact and ability to influence multiple settings (Yin, 2009). Similarities may be identified among different cases, though the similarities do not represent the full context of any case (Bennett, 2015). Case study research requires an understanding of context and the whole picture to understand the different elements (Mills et al., 2010).

Findings from the study provided data to inform future research. A case study can identify new variables (Bennett, 2015). Educational environments include complex systems, and a case study can build an understanding of individuals and systems within educational institutions and the surrounding community (Thomas & Myers, 2015). Findings shared with school leaders could inform administrative decisions and school policies. Examples of

phenomena in education are explored in a case study, which can result in improved educational practices (Mills et al., 2010). A case study is an effective way to examine conditions and practices prior to research conducted and likely to continue after research is conducted (Miles, 2015). CCP is a practice likely to continue within the school district, and a case study provided data to improve the process.

The framework for the study was collective intelligence. Collective intelligence suggests the abilities of individual group members do not necessarily determine how well the group will perform as a whole (Woolley et al., 2015). A case study methodology allowed for comparisons among different groups and individuals within the groups. Tying case studies to a solid framework helps contribute to the field of literature (Yin, 2009). Data gathered provided insight into how teachers plan curriculum as a collective team as well as their views on group performance.

Role of the Researcher

Nonparticipant observations took place during planning periods assigned to teachers, and one-on-one interviews were conducted following observations. When conducting qualitative research, researcher predispositions can influence the collection and interpretation of data (Gog, 2015). Awareness and acknowledgement of existing predispositions allow researchers to minimize bias. A researcher should be open to unexpected findings (Bennett, 2015). An impartial approach was maintained when collecting data and the focus remained on answering research questions using a qualitative approach.

Reflexivity should be performed before engaging in a case study to self-reflect on personal bias and preconceived notions, and researcher beliefs should be reported to generate

transparency for more trustworthy research (Mills et al., 2010). For the researcher, reflection on experiences and articulating influences of experiences are important processes to understand and explain the possible impact on the study (Thomas & Myers, 2015). Reflecting on my personal perceptions and experiences involving CCP prior to beginning and throughout the research process helped to reduce bias.

My experiences as a teacher working as part of a team of teachers during CCP influenced my views of CCP. Working with CCP teacher teams as an instructional coach during CCP has generated my preconceived ideas about CPP. Researchers working in a familiar context can overlook elements of research and key details (Thomas & Myers, 2015). Completion of a thorough literature review helped identify elements to be addressed and considered. Working in the district where the study occurred as a curriculum specialist and instructional coach provided me with added perspective and meaning for the study. Reflection and studying existing literature provided the ability to bracket existing knowledge to take a more nonbiased approach for data collection to increase validity and reliability and kept the study focused on collecting data from participants for desired variables. Researchers should avoid exercising a position of power and take the stance of the learner to ensure the participants' expertise is represented in qualitative studies (Mills et al., 2010).

Teachers participating in the study did not work in the content area of social studies to avoid any direct professional association between participants and myself, serving in a district role as a social studies instructional coach. Procedures were in place to ensure the confidentiality of participants and disguise distinguishable data or information. Information with the potential to

lead to the identification of any participant or impact the career of any employee was not shared with other district employees.

Research Procedures

The study was a qualitative case study. Clearly established procedures and guidelines directed the research and provided consistency for the collection of valid and reliable data. Case study data are influenced by the protocols set for the research methodology (Yazan, 2015). Teams of middle school teachers in the same subject level and content area working together on curriculum and instruction during collaborative planning periods were observed. Following observations, each participating teacher was individually interviewed. Once collected, data were analyzed to address the research questions. Measures were taken to establish validity and reliability. The research followed ethical guidelines and parameters set by the National Institutes of Health (2011).

Population and Sample Selection

The population for the study was 220 middle school teachers working in a South Carolina school district who received an assigned time for CCP during the school day. From the population, a sample of 17 teachers working in different collaborative teams was purposively selected so each district middle school would be represented by a CCP team. Entire planning teams from each school were selected for the study, which resulted in 17 participants. Studying multiple cases allows systematic comparison to provide richer analysis and generalizability (Mills et al., 2010). Teachers selected for the study were language arts, math, and science teachers, who shared a grade-level curriculum planning time with at least two other teachers in

the same subject and grade level. Purposeful sample selection is useful in case studies to select cases with abundant, relevant information (Mills et al., 2010).

Teachers who worked directly with the researcher were not selected for the study to minimize bias and remove possible career implications. Researchers should be aware of possible bias in case selection and avoid tendencies to select cases to favor a certain outcome (Bennett, 2015). The district had seven schools serving middle school students. Five schools were traditional public neighborhood middle schools serving attendance zones based on proximity to the school. One school served students gifted in the arts, and one school was an alternative placement school. The collaborative planning teams for the study were selected from the five traditional neighborhood middle schools to provide data from schools with similar populations.

During recruiting for the study, individuals selected as potential participants were informed of the purpose and procedures of the study by means of the Email Asking for Volunteers to Participate (Appendix A). Pseudonyms were assigned to individuals after interviews to keep identities confidential during reporting of data. Maintaining privacy protects participants involved in research (Mills et al., 2010). For readability when presenting qualitative data, assigning participants pseudonyms is generally better than assigning participants numbers (Thomas & Myers, 2015). National Institutes of Health (2011) guidelines for research involving human subjects were followed, and the researcher attained permission from the American College of Education Institutional Review Board (IRB) and school district IRB (Appendix B) before beginning research.

As described previously, selective sampling methods were used to select individual teachers working with teams to plan curriculum collaboratively from the five neighborhood

schools. Selective sampling occurs when predetermined criteria are used to decide on study participants (Mills et al., 2010). Each team meeting criteria for possible selection was assigned a number chosen at random. After being selected, the participants were informed of the purpose, methodology, and confidentiality measures taken during the study by means of the email asking for volunteers to participate (Appendix A) with the attached informed consent letter (Appendix C). Informed consent explained the study, process, and any possible risks, and prevented coercion during the participant recruiting process (Mills et al., 2010). Once individuals expressed interest in participation, letters of consent (Appendix C) in accordance with the American College of Education IRB guidelines were hand-delivered to be reviewed and signed. No participant was involved in the study until informed consent had been signed and received. Researchers are responsible for collecting voluntary informed consent (Thomas & Myers, 2015).

Instrumentation

To observe practices and gather perceptions of CCP, a combination of two instruments from the Middle Level Education Research Special Interest Group was used. The modified observation protocol (Appendix D) developed by Mertens et al. (2013) was used to observe teachers engaging in CCP. A modified interview protocol (Appendix E) developed by Mertens et al. was modified and used to conduct individual interviews following observations of CCP time. Observation and interview protocol designers provided written permission to modify and use the instrument for this study (Appendix F). The interview protocol was originally designed to gather data on teachers working with interdisciplinary planning teams and was altered to gather data on teachers working with colleagues in the same grade level and content area.

The original observation protocol and interview protocol were developed based on existing research literature as part of a national study to provide consistent comparable data (Mertens et al., 2013). The modified observation protocol contained questions for the observer to answer to describe the setting and conditions for the meeting. A chart to record observed practices was provided with activities sorted into the categories of curriculum and instruction, assessment, student, parent, business, professional development, and engaging in other behaviors. There was an area for additional general impressions at the end of the observation protocol. The modified interview protocol consisted of 22 open-ended questions. Questions in the interview protocol covered demographic information, teachers' understandings of CCP, and use of CCP. Open-ended questions provide data to explain participant experiences and perceptions (Flick, 2018).

Reliability was established by researchers conducting the Middle Education Special Interest Group's National Middle Grades Research Project. The instruments were created as part of the national study based on research on common planning time and demonstrated validity throughout multiple studies, which collected data from 29 schools in 13 states (Mertens et al., 2013). Both instruments were originally created to collect data on interdisciplinary teams of teachers during common planning times but were modified in this study to collect data on teams of same content-area teachers planning together. Questions pertaining to multidisciplinary teacher teams and questions related to professional preparation were removed to ensure data collected aligned to research questions. Modified instruments (Appendix D, Appendix E) were attached to an email sent to authors (Appendix F) and approved for use in the study by the authors.

The modified observation protocol was selected to explore how teachers use CCP time provided by schools. Using an existing instrument provided a consistent method to observe practices common during collaborative planning times. Creators of the instruments expressed no concerns about modifications to the original instruments impacting validity (see Appendix F). An observation instrument provides possibilities of both narrative and numerical analysis of data (Yin, 2009). Use of the existing interview protocol with modifications provided a thorough and consistent replicable process to conduct the interviews to explore the perceptions of teachers and compare perceptions to practices observed. Questions from the original interview protocol not aligned to the study's research questions were removed. The questions used were not altered from the original instrument, except changing the term common planning time to collaborative curriculum planning. Instrument modifications were reviewed by the creators and approved for use in the study (Appendix F). Interviews should be conducted with purpose and direction to seek knowledge (Mills et al., 2010).

Data Collection

Data were collected from each team of teachers. After observing a team working together during CCP time, team members were individually interviewed using Microsoft Teams. Active listening, established protocols (Appendices D and E), and field notes were used when conducting interviews and observing. Active listening requires full focus on verbal and nonverbal participant communication and fosters trust (Given, 2008). Data collection adhered to established procedures. In a case study, processes should be defined, and limitations set to ensure the study can be feasibly carried out without collecting an overabundance of data and straying off-topic (Thomas & Myers, 2015).

Each team of core teachers participating in collaborative planning was observed one time during a planning period within the school day when teachers were engaged in CCP, using a nonparticipant observation format. Teacher teams were observed in the normal classroom where CCP occurred. Observations were done in person, and none of the observations were conducted virtually. Nonparticipant observations are used to understand a phenomenon in a natural context (Mills et al., 2010). Each observation lasted the duration of one CCP session. Field notes were taken on behaviors, conversations, and practices using the modified observation protocol (Appendix D). The modified observation protocol provided descriptive questions, categories, and activities to look for to structure field notes. To provide consistency and replicability when taking notes for multiple teams of teachers, field notes adhered to categories within the modified observation protocol. Observations were overt and nonobtrusive to provide a factual representation of practices. During overt observations, participants are aware and informed of the observation taking place (Mills et al., 2010). The teacher team and researcher were the only individuals present during the observations.

Teachers were interviewed individually following collaborative planning time. All materials were prepared ahead of time, and the modified protocols included reminders of best practices for the interviewer to review. Interviewers should be prepared and be willing to adjust if necessary, while demonstrating respect for the participants, building trust, and listening to allow participants to share experiences and expertise (Flick, 2018). Interviews occurred virtually using Microsoft Teams. Processes and procedures for the interview were explained to the participant at the beginning of the interview process. Participants were reminded all information provided was confidential, to encourage open and honest feedback. Interviews were recorded

using Microsoft Teams to ensure the data collected were accurate. Pseudonyms randomly assigned to participants after interviews concluded were used to maintain participant confidentiality. A key was created to match pseudonyms to participants. This key is securely stored on an external hard drive.

All data collected were maintained on password-protected software or network only accessible by the researcher. Any physical data and notes were kept in a locked file cabinet. Field notes were taken on a password-protected laptop using Microsoft Word. Interviews were stored on a private, secure network, and transcripts of interviews were saved as Word Documents on a password-protected external hard drive. Field notes and interview transcripts were uploaded into Atlas.ti for analysis. The project containing information about the dissertation in Atlas.ti was locked and required a password for access. After being observed and interviewed, participants were asked to verify themes established as accurate representations of practices and perceptions of CCP before exiting the study. At the conclusion of the study, data were deleted from the laptop and stored on one external hard drive. The data stored on the password-protected external hard drive will be stored for five years and then deleted.

Data Preparation

Data should be purposefully and logically sorted and organized to address research questions. The Atlas.ti software was used to assist with data organization and categorization. Interviews were transcribed by using the transcript creation feature on Microsoft Stream.

Transcripts were downloaded to Microsoft Word. The Word document transcripts were verified for accuracy by the researcher by watching the interviews before coding occurred. Data were organized into observation data and interview data. Observation and interview data collected

from each CCP team of teachers were grouped together to analyze how teams compared to each other. A password-protected key was developed for pseudonyms used during the study to assist in data identification and organization. Looking at data attained from the different sources allowed for triangulation. In a case study, data analysis is a process of making meaning from a collection of what people said and what was observed (Merriam, 1998).

Data Analysis

Interview and observation data were analyzed using qualitative coding methods. The field notes collected during observation of each teacher team were coded using terms or short phrases such as pacing and importance of staying on task to determine common and differing practices of teacher teams engaging in CCP. Interview data were transcribed from recorded interviews to text using Microsoft Stream. Microsoft Stream is a program used to store, edit, and share videos.

The transcribed interview data were coded. Initial, open coding provided a means to gain a general understanding of the data collected. Open coding consists of conceptualizing data to attach labels (Given, 2008). Axial coding then occurred with the assistance of Atlas.ti software. During axial coding, relationships in data are identified to develop the properties for categories (Given, 2008). Atlas.ti software can support researchers in analyzing and interpreting data (Mills et al., 2010).

For observation and interview data, a combination of inductive and deductive coding was used to determine categories and themes. Coded observation and interview data were used to generate themes and categories. Patterns in data were used to create categories, and then data were coded to be placed into established categories (Thomas & Myers, 2015). Themes were described, and coded data sorted into categories were presented in tables for display. Categories

and themes were modified for observation and interview data as needed throughout analysis and reflection. Adjusting categories throughout the collection and analysis of data is often necessary during qualitative research (Walby, 2013; Waring & Wainwright, 2008). Relationships among observed behaviors and teachers' perceptions were identified and reported.

The purpose and research questions for a study should establish a framework and guide data analysis (Thomas & Myers, 2015). The goal of case studies involving multiple data sources is to have the evidence complement each other to answer research questions (Yin, 2009). Comparative analysis occurred for data collected from teams of teachers. The comparative case study is an iterative analysis of themes to discover contrasts, similarities, or patterns (Mills et al., 2010). Practices occurring during CCP common to multiple teams of teachers and practices occurring during CCP unique to teams of teachers were identified. Comparison in a case study involves comparing one piece of data to others to identify relationships among different entities (Given, 2008).

Reliability and Validity

Case studies provide detailed information on occurrences in natural settings. Significant construct validity is established in case studies by focusing on details of individual cases, yet external validity is limited due to an inability to generalize results (Bennett, 2015). The use of two different instruments to collect data added to reliability and validity. A case study provides trustworthiness by the use of multiple data sources (Miles, 2015). Triangulation of different data points increases the validity and reliability of a study (Fusch & Ness, 2015). The instruments selected for the study showed high levels of validity and reliability in multiple studies. Creators of the instruments expressed no concerns about modifications to the original instruments

impacting validity (see Appendix F). Using multiple cases added to the reliability and validity of the data collected. Having more than one case strengthens the case study (Yin, 2009). Findings from more than one source reduces the possibility for criticism and reduces bias compared to using only a single source (Yin, 2009).

Use of Atlas.ti increased reliability during the coding process. Computer-assisted qualitative data analysis software can help qualitative researchers organize and categorize data to make data more manageable and add reliability (Sinkovics & Alfoldi, 2012). Categories developed and used in previous studies for observations added reliability.

Frequent and regular peer and advisor reviews of the study occurred to strengthen credibility. Doctoral candidates enrolled in the same courses reviewed the methodology and literature review for inconsistencies in the data collection process and adherence to American Psychological Association format and style, and provided feedback using discussion forums. Peers did not review chapters associated with data collected or have access to secure data. Dissertation completion via the American College of Education required mandatory approval by coordinating instructors and dissertation committees. The dissertation chair and committee member reviewed each chapter. The compiled dissertation was submitted for internal review to the American College of Education Academic Leadership Team. Advisor and peer review throughout a study can help identify errors and lead to a better process and product (Thomas & Myers, 2015).

Participants were asked to verify established themes were accurate representations of experiences and perceptions of CCP. Asking participants to verify the accuracy of interpretations of data collected, can increase the validity of a study (Flick, 2018; Thomas & Myers, 2015).

Participant clarification of information communicated occurred during interviews, if needed.

Participants did not review transcripts so there was a possibility of misinterpretation or incorrect inferences. Confirmation by the researcher to ensure recording of proper messages occurred both during the interview and after data analysis.

Ethical Procedures

American College of Education IRB approval confirmed ethical guidelines were considered. The National Institutes of Health (2011) provided guidelines to prevent unethical treatment of participants during research. Research was conducted after successful completion of the National Institutes of Health training and in adherence to the requirements and ethical standards for studies involving human participants. Participants were informed of the reasons for the study and informed consent was acquired from each participant before research began.

Permission for the study was received from the school district executive directive of secondary schools (Appendix G), principals of middle schools where the study occurred, and the school district's IRB (Appendix B). Obtaining permission from organizational leaders before beginning research is imperative (Thomas & Myers, 2015).

To ensure confidentially, pseudonyms were used for participants when presenting data. Participants were not exposed to any excessive physical, social, legal, or psychological risks by being involved in the study. Researchers should consider possible psychological harm to participants (Mills et al., 2010). Research conducted occurred within the district of employment, but participants did not work directly with the district-level employee to eliminate the risk of impacting careers. Names of schools where participants work were not revealed in the dissertation.

Data were securely stored to protect the privacy of participants. Physical data collected were kept in a locked file cabinet. Digital data were maintained on a computer with password-restricted access in folders and programs requiring passwords for access. Work concerning research data occurred on private networks. At the conclusion of the study, physical data will be destroyed, and digital data will be stored for five years on a password-protected external hard drive. After five years, data will be deleted from the external hard drive.

Chapter Summary

Chapter 3 explained the methodology for the case study of teachers' perceptions and practices related to CCP. Case study was used to collect data within a natural setting. Research design and rationale, the role of the researcher, research procedures, data analysis process, reliability and validity considerations, and ethical procedures were addressed.

Chapter 4 provides the data analysis. The final chapter, Chapter 5, presents a discussion of how findings relate to existing understandings and literature. Connections to the theoretical framework of collective intelligence are addressed and implications for findings and concluding remarks are presented in the final chapter as well.

Chapter 4: Research Findings and Data Analysis Results

Educators are being held accountable for how well students perform academically. Aligning curriculum to standards, delivering meaningful instruction, and assessing student learning requires planning. Middle school educators teaching the same grade-level content within schools may be provided time during the school day to plan curriculum. Working together efficiently during the time provided for CCP may benefit teachers. Structure and support provided by leaders can influence the implementation of CCP and productivity of teachers. Considering the collective intelligence of teacher groups is important to understand how well individuals function as teams.

The problem was a lack of understanding about how teachers use and perceive collaborative curriculum planning time provided within the scheduled school day. To address the problem, the purpose of this qualitative case study was to investigate practices and perceptions of teams of middle school teachers participating in CCP time at schools. Data were collected to help inform the decision-making process for leaders in education and to provide data for further research in the area of CCP. Three research questions guided the data collection process.

Research Question 1. What common and differing practices do Grade 6–8 middle school teachers exhibit during CCP?

Research Question 2. How do grade 6–8 middle school teachers perceive the effectiveness of CCP?

Research Question 3. How do Grade 6–8 middle school teachers' perceived uses of CCP compare to practices observed during CCP?

In Chapter 4, the process used for data collection is described, and results and findings

for the study, organized into themes, are presented. Themes aligned to each of the three research questions are explained and examples provided. An explanation is shared of how validity and reliability were maintained throughout the data collection and analysis process.

Data Collection

Seventeen participants were asked to partake in the study. Candidates initially received an email explaining the study with informed consent attached. After receiving the email, participants were provided a physical copy of the informed consent letter to sign and date and provided a chance to ask questions face to face. Every teacher of each CCP team agreed to participate before observations or interviews occurred.

Data were collected from 17 teachers across five schools within the same school district working in grade 6–8 language arts, science, or math. Teachers worked on collaborative planning teams in the same grade level and content area. Teams were designated two 40-minute periods per week for CCP by school leaders. Two CCP teams consisted of four members, and three CCP teams consisted of three members. Experience for participants ranged from teachers in their first year to teachers in their 30th year of instruction. The mean years of experience for the 17 participants was 12.6 years.

The study was conducted in the fall of 2020, and data were collected over 32 days. Observations occurred during a regularly planned 40-minute CCP period, and three of the five observations continued into the following period designated for independent planning time for teachers. Table 1 shows the durations for both observations and interviews. The mean interview time was nearly 13 minutes (M=12.71) and mean observation time was about 51 minutes (M=51.2).

Table 1Observation and Interview Durations

Observation or interview	Minutes		
Observation	1,111GCS		
A	37		
E	39		
В	45		
D	55		
С	80		
Interview			
1	6		
2	8		
3	9		
4	10		
5	10		
6	10		
7	10		
8	10		
9	11		
10	11		
11	13		
12	14		
13	17		
14	17		
15	18		
16	18		
17	24		

Note. Teachers were observed meeting as a team in a classroom and individually interviewed online using Microsoft Teams. Interviews and observations are arranged by duration from least to greatest and not by chronological order of when they occurred.

Seventeen participants were observed during a regularly planned CCP period in classrooms where planning normally occurred. Observation data were recorded using the modified Middle Level Education Research (MLER) observation protocol (Mertens et al., 2013;

see Appendix D). Observation group A was a sixth-grade language arts team, observation group E was a seventh-grade science team, observation group B was a seventh-grade math team, observation group D was a sixth-grade math team, and observation group C was an eighth-grade science team. After observation of each team during CCP, all participants were interviewed individually using Microsoft Teams. Questions for the interview came from a modified version of the MLER interview protocol originally established by Mertens et al. in 2013. Refer to Appendix E.

Observation data were analyzed initially to determine the amount of time each CCP spent engaged in the categories of the modified MLER protocol. A list of common practices and surprising occurrences was formulated throughout the observation process. Reoccurring ideas and concepts emphasized by participants were noted and recorded immediately after each interview. Interviews were recorded and transcribed using Microsoft Stream. Each interview transcript was read by the researcher while listening to the audio recording to ensure the accuracy of the transcription. Pseudonyms were assigned for each participant after observations and interviews were completed to ensure confidentiality and report data.

Observation data and interview transcripts were uploaded into Atlas.ti from a password-protected file. Data were grouped into two categories, observations, and interviews. Initial codes based on the three research questions utilizing concepts from open coding were created. As observation field notes and interview transcripts were analyzed, significant, reoccurring, and surprising quotations were marked. Marked quotations were added to existing codes or used to create new codes. Quotations associated with each code were analyzed to establish a connection to the research questions and generate themes. Themes established during data analysis were

emailed to participants to be verified as accurate representations of perceptions and practices. Member responses indicated no disagreement with the themes established as practices and perceptions. Having participants verify the accuracy of themes identified by a researcher during data analysis helps develop validity (Flick, 2018; Thomas & Myers, 2015).

Minimal deviation from the data collection plan was required. Observations often continued past the one designated CCP period into independent planning time. Interviews were transcribed using Microsoft Stream as interviews were conducted using Microsoft Teams.

Teachers were operating on modified schedules due to COVID-19.

Data Analysis and Results

This study focused on practices occurring during CCP and teachers' perceptions of CCP. Codes created during data analysis were used to generate themes aligned to each of the three research questions. A data table is included for each of the three research questions along with a narrative describing the results. Direct quotes and observed behaviors are included to support themes.

Research Question 1

Research Question 1 asked about common and differing practices grade 6–8 middle school teachers exhibited during CCP. Observation and interview data revealed teachers in the study spent time working on assessments, lesson planning, discussing pacing, discussing student concerns, and utilizing technology. Table 2 displays the amount of time CCP teams spent engaged in activities based on categories within the modified MLER observation protocol. Only one team spent time discussing business or deviated to other topics. During CCP, teachers remained on task. Two CCP meetings experienced short, minor disruptions, and two CCP

meetings had members arrive late due to other engagements.

 Table 2

 Observed Minutes Engaged in Activities During Collaborative Curriculum Planning

Activity	School A	School B	School C	School D	School E
Curriculum and instruction	29	19	11	40	27
Assessment		15	53	12	3
Students	8	11	10	3	9
Business	3				
Other behaviors	3				

Note. A non-participant, overt format was used for observations.

Teachers spent CCP time working on assessments. During interviews, six teachers mentioned working on assessments as part of CCP. Vicky expressed, "I do like to make, usually, the assessments together." Time was allocated to planning, reviewing, and revising assessments during CCP time. Teacher teams looked over assessments used in previous years to ensure alignment to standards and to modify questions. Most participants used common assessments across the team. Jordan described this process "to make sure that we're assessing the same across the board, trying to use the same resources." One team discussed content to include on an assessment but did not embrace the idea of using a common assessment.

Lesson planning occurred in every CCP. During interviews, participants indicated dedicating time to discussing the activities for the next week. Susan remarked, "We talk about what we're going to do and how we're going to do our lessons for the following week." Findings showed teachers rarely spent time creating materials for instruction. Eight participants indicated time is more productive if teachers locate and create curriculum and instructional resources to share before CCP time. Terry indicated, "I think everyone else needs to bring things to the table

that they have used or they're looking at using." All five CCP teams spent time reviewing and modifying existing instructional resources.

All five teams discussed pacing during CCP time. Schedules to pace delivery of lessons and units were projected on displays during meetings, and the amount of time dedicated to covering content was discussed during CCP planning times. Thirteen teachers mentioned dedicating time to pacing and ensuring the pace for presenting the curriculum stays consistent for the team. When asked what activities consume time during CCP, Julia answered, "We talk about pacing, where we are."

Every CCP team spent time discussing student concerns. Teachers indicated in interviews the need to discuss student concerns during CCP time. Participants reported looking at data to determine student performance is a crucial part of the planning process. Susan said, "We're able to go back as a group and evaluate what might have gone well and what might not have gone well. And then we're able to regroup and see how we can correct that for the kids." Participating teachers valued conversations during CCP about lesson delivery and student responses. Pat stated, "I think the other purpose is if what I did in my classroom didn't work, and someone did something else different and it worked, then having that conversation about what's working." Sharing experiences about lesson delivery and students' responses to lessons was perceived as an important part of the CCP process.

Technology troubleshooting and discussion about utilizing technology for instructional purposes consumed time in every CCP meeting. Teachers spent time discussing instructional programs student technology to use to complete assignments. Participating teachers shared tips on technology use and new programs during CCP. Inconsistency in technology proficiency

among the team members resulted in the teams taking time to share or demonstrate technology usage.

Research Question 2

Research Question 2 addressed how middle school teachers perceived CCP. Teachers shared experiences regarding CCP and identified perceived purposes of CCP. Themes related to teachers' perceptions of CCP emerged from data collected during the observations and interviews. The five major themes from the data collected are displayed in Table 3.

 Table 3

 Themes Related to Teachers' Perceptions of Collaborative Curriculum Planning (CCP)

Theme	No. participants indicating theme $(N = 17)$
CCP is essential for curriculum pacing.	13
Staying on task/use of agenda is critical.	10
CCP time is necessary.	8
Drawing on strengths of others is a benefit of CCP.	13
Leadership assumes teachers understand purpose for CCP.	8

Note. Only the 5 themes indicated most frequently by participants were included.

Teachers reported CCP is essential for curriculum pacing. Jennifer responded, "So just making sure we're still staying the same pace, even though we do have to kind of plan some different activities in there every once in a while." Abiding by district expectations was important to participants, and CCP time was important to maintain pacing and address the required learning standards. Sandra stated, "Well, we have a pretty hefty pacing guide in ELA [English language arts], and I think really the purpose is to make sure that we try to cover all the standards." Staying on pace was important due to students moving in and out of the school, students moving to different teams within the school, leadership expectations to have similar

pacing, and the requirement to cover all the content for standardized testing.

A common concern for making CCP time meaningful among the participants was staying on task during the allocated time for CCP. Participants in the study referred to the importance of having and using agendas and staying on topic. Christie stated, "I would prefer an agenda… What would make it extremely effective is if we had an agenda and we knew what we were going to talk about." When asked about the factors influencing CCP effectiveness, Jordan answered, "If we can stay focused, it's great. If we can't, there's days we walk out where like we didn't really do much today, we talked, but we didn't really get much accomplished."

Participants indicated CCP time is an important and necessary part of the school day. Teachers in the study expressed a desire to meet even if time reserved for CCP was not included in the school day. Dianne expressed, "I guess I'd just do it outside of school because that's what is right, it's got to be done, so if there wasn't time, you do it somewhere, sometime." Seven participants indicated time constraints impact the effectiveness of CCP. Susan stated, "Often we can't get it done in the 45 minutes." Three participants felt losing CCP time would have no real impact on instruction or planning. When asked how the participant would react if CCP was lost during the school day, Christie answered, "I think it's not really a big deal."

An advantage of CCP indicated by teachers in the study was being able to draw on the strengths of each individual and having multiple individuals with differing perspectives contribute to conversations. Abigail emphasized, "I like to work with other people so that you can play off their ideas and strategies and strengths. I think that's very important." Teachers in the study explained CCP is more beneficial when all members of the team contribute.

Participants described how members of the team formally or informally take on certain roles

such as recorder, timekeeper, facilitator, and technology expert. Jackson suggested, "I'm like the tech guy."

When asked about the influence of leadership, teachers felt leaders had expectations for CCP teams. Discussions about leadership's expectations occurred in two observed CCP meetings. According to teachers in the study, leaders assume teachers know the purpose of CCP and tasks to accomplish during CCP time. Teachers felt leadership did not need to explain the purpose of CCP. In response to asking if school or district leadership explained the purpose for CCP, Jordan answered, "Not specifically, nobody's actually sat down and specifically said why we plan collaboratively."

Research Question 3

Research Question 3 asked how middle school teachers' perceived uses of CCP compared to the practices observed during CCP. The teachers identified uses of CCP aligned at varying extents to practices observed during CCP. Table 4 shows the number of teachers indicating during interviews how CCP is utilized compared to the number of CCP meetings in which the practices occurred. Teachers viewed pacing as a critical topic, and time was devoted to pacing during every CCP meeting. Discussion of student concerns occurred in every meeting and was suggested as a topic of focus by teachers during interviews. Participants expressed the importance of agendas and establishing goals but use of formal agendas and goals during CCP meetings was not observed. Teachers in the study suggested the significance of dividing the work and establishing roles. Only one CCP team had established roles. The topic of technology usage consumed time in every CCP meeting but did not arise during interviews as a purpose for CCP.

Table 4Teachers Perceived Uses of Collaborative Curriculum Planning (CCP) Compared to Practices Observed During CCP

Practice	No. participants indicating practice as use of CCP ($N = 17$)	No. of CCP meetings with observed practice $(N = 5)$
Pacing discussion	13	5
Student concerns discussion	6	5
Utilizing a written agenda	5	0
Established roles within the CCP team	10	1
Technology troubleshooting & discussion	0	5

Note. Practices selected showed considerable discrepancy or commonality between indicated CCP uses and observed practices during CCP.

During interviews, teachers expressed CCP is important to coordinate pacing and stay on the same pace. This perception aligned with findings during observations as every team of teachers spent time during the CCP period discussing pacing. Teachers stated district and school-based leadership expected members of the CCP team to have similar pacing. Staying at a similar pace supports students transitioning between schools within the district or between classes within the school. Susan stated,

The reason we have collaborative is so that in case, well, so we're pretty much on the same page across our grade level. So, if a student moves from class to class, then they are able to pick up pretty much where they left off with me.

Discussions about student concerns and issues occurred in every CCP time. Six of the 17 teachers (35%) interviewed mentioned spending time discussing student performance and possible topics to revisit based on student performance. Pat commented, "What did they get? What did they not get? And I think when you have those conversations where you're looking at

your own formative data to kind of guide that, that's what's huge." Discussions about inappropriate student behavior occurred in only one CCP meeting, and no teacher indicated addressing inappropriate student behaviors as a purpose for CCP during interviews.

Teachers in the study expressed the importance of having an agenda and targeted tasks to complete during a CCP period during interviews, but observation data demonstrated no use of formal agendas during CCP. Two CCP teams in the study mentioned desired topics to cover during the meeting, but no formal agenda existed to display or share. Teams appeared to have an informal routine for each meeting. Three CCP teams did record meeting minutes to send to leadership and for future reference for the CCP team members.

Participants indicated working as a team, dividing the work, and establishing roles for members are important for CCP to be productive. Every CCP team was working together for the first time during the school year. Six teachers responded the most significant accomplishment of the CCP team during the current school year was learning to work together as a team. Only one CCP team mentioned having assigned roles for members. Observation of the CCP with assigned roles revealed one member was taking minutes, one member was facilitating, and the third member of the team was providing time prompts for the team. During another CCP meeting, Jackson mentioned being the technology expert and his willingness to complete tasks related to technology for the team. Jackson suggested in the interview the CCP team members take on informal roles, and every member of the team finds a niche based on individual strengths.

Technology troubleshooting and discussion about how to utilize technology consumed time in every CCP meeting but were not topics mentioned during interviews. No participants

indicated technology discussion or troubleshooting as a purpose for CCP. Participants did not suggest integrating technology as a topic consuming time during CCP.

Reliability and Validity

Credibility of data collected was established by utilizing two forms of data collection, interviews and observations. Research questions were the focal point in determining themes. Confirmability of the themes was generated by analyzing data using initial open coding followed by a more in-depth level of axial coding using Atlas.ti and having members confirm the accuracy of the themes. Gathering data from a sample size of 17 participants working on five CCP teams in different subjects in five different schools established transferability. Procedures for data collection and analysis documented within the methodology were strictly adhered to, providing dependability for the study. Preexisting observation and interview protocols and scripted interview questions from the modified MLER (Mertens et al., 2013) research project were used. The MLER interview and observation protocols have been utilized in several studies and have shown high levels of reliability. Conducting a case study methodology across multiple cases to observe practices and gathering perceptions as well as alignment of the interview questions and observation protocols to the three research questions established validity.

Chapter Summary

Data were collected from 17 teachers working on five different CCP teams using observations and interviews. Themes related to each of the three research questions emerged from the collected data: CCP time was utilized for working on assessments, lesson planning, discussing pacing, discussing student concerns, and utilizing technology. Teachers reported CCP is essential for curriculum pacing, staying on task is critical, CCP time during the school day is

necessary, drawing on the strengths and differing ideas of other CCP members is advantageous, and leadership assumes teachers know the purpose and reason for CCP. Perceived uses of CCP aligned at varying extents to practices observed during CCP. Measures taken ensured reliable and valid data collection and analysis. The next chapter will include a discussion of the findings, interpretations of data related to previous literature and the theoretical framework, limitations for the study, and the implications of findings for leadership.

Chapter 5: Discussion and Conclusion

The problem was a lack of understanding about how teachers use and perceive CCP time provided within the scheduled school day. To address this problem, the purpose of this qualitative case study was to investigate practices and perceptions of teams of middle school teachers participating in CCP at middle schools. A better understanding of practices occurring during CCP and teachers' perceptions of CCP can lead to more informed decision-making for leaders when forming teams, creating policies, and supporting teachers. Collective intelligence was the theoretical framework for the study. The collective intelligence of groups of teachers can help leaders predict the future productivity of a CCP team.

Literature has shown teachers need time to plan curriculum and instruction (Merritt, 2016). Time during the school day is often limited, and teachers face a myriad of tasks requiring attention. Collaboration is crucial for middle school teachers and can lead to improved pedagogical knowledge, use of data for decision-making, increased alignment of lessons to learning standards, increased student achievement, and higher levels of job satisfaction. Support from leadership for CCP or a lack of support for CCP can influence the success of CCP teams throughout a school. Counterarguments against the importance of CCP include loss of teacher autonomy, fostering of negativity, failure of leadership to implement CCP with fidelity, and difficulties maintaining a similar pace for curriculum due to student needs.

Data analysis led to the development of themes related to each of the three research questions. Results from data analysis showed teachers spent time working on assessments, planning lessons, discussing pacing, discussing student concerns, and utilizing technology.

Teachers indicated CCP is essential for curriculum pacing, CCP time during the school day is

necessary, CCP allows teachers to draw on the strengths and differing ideas of other team members, and leadership assumes teachers know the purpose and reason for CCP. The teachers' perceived uses of CCP aligned at varying extents to practices observed during CCP.

Findings are shared and explained in relation to previous studies. Interpretations and conclusions based on results are expressed, and limitations for the study are explained. Based on findings, recommendations for future studies and policies are presented, and implications for leadership are suggested.

Findings, Interpretations, Conclusions

Existing literature suggested teachers spent a significant amount of time planning instruction, aligning learning to standards, and adjusting pacing for delivery of content. Teachers should align learning targets to mandated standards and consider the amount of time needed to focus on certain topics (Hofer & Harris, 2019). Planning instruction requires extensive amounts of time and teachers value time provided during the school day to collaborate and plan. The findings from this study supported the idea teachers need significant time to align content to standards and discuss pacing as a CCP team. Teachers debated which topics to cover and how much time should be allocated to each topic found within the curriculum. Participants in the study indicated if time for CCP was taken away during the school day, time would have to be carved out to meet outside of the school day. Bae (2017) indicated teachers faced an extensive workload and a variety of tasks requiring time to complete. With teachers spending most of the school day providing instruction to students, little time is allocated for planning and completing necessary tasks.

Teachers in the study found or created resources outside of the allotted CCP time and then shared and modified resources during CCP. Adapting or modifying materials is an effective function of collaborative planning (Voogt et al., 2015). Voogt et al. (2016) found teachers create materials to support the delivery of content. Collected data showed no mention or observation of the actual creation of instructional material. Participants in the study explained CCP time is more productive if team members located and reviewed preexisting materials to share before the meeting. Presentations, student assignments, assessments, and other instructional materials were shared digitally on large displays. CCP teams reflected on how materials or resources from previous years could be modified. The team or an assigned individual adjusted materials and shared revisions with the team through email or a collaborative computer program.

Data showed technology became a topic requiring time during CCP but was not perceived by teachers as a purpose for CCP time. During observations, technology discussion became intertwined with curriculum and instructional discussions and decisions. Hofer and Harris (2019) found teachers need to consider the integration of technology during planning. With the integration of new technology, deployment of personal devices for students, and adoption of new programs by the district regularly, teachers should anticipate spending time discussing, learning, and troubleshooting technology. A collaborative environment such as CCP can be an opportunity to draw on the strengths of teachers proficient in utilizing and integrating technology.

Participants perceived coming together as a team, learning to work together, and drawing on the strengths of others as major factors influencing the success of a CCP. Sharing experiences among team members can lead to professional growth (Barton & Stepanek, 2012). PLCs are

more powerful when individuals are provided opportunities to utilize expertise and all members contribute (Snyder & Bae, 2017; Carpenter, 2017). Having teams with diverse personalities can yield benefits for the planning of meaningful, engaging instruction and accurate, aligned assessments. Teams should be willing to compromise and accept the ideas of other team members. Relationship building within collaborative teams required for a productive environment can be difficult, especially if the team has multiple members with strong desires to be autonomous (Bae, 2017). If differing ideas encounter resistance or opposition, the CCP environment can become toxic.

The use of data to drive instructional decisions during PLC time or CCP time was a theme from existing literature. DuFour (2004) recommended teachers collectively utilize data to make decisions. Teachers utilized data to improve practices during collaborative planning (Jones-Goods, 2018). Participants in the study indicated analyzing student data and making adjustments based on data as essential parts of CCP time. Previous studies indicated the benefits of team reflection and sharing experiences. Team reflection allowed teachers to identify and address weaknesses and sharing experiences led to new ways to deliver the curriculum (Gaitas & Alves Martins, 2017; Huizinga et al., 2015). During observations, teachers in the study discussed student performance data, students' responses to lessons, and students' abilities to complete assigned tasks.

Collective intelligence can influence the productivity and effectiveness of a team.

Existing literature suggested even high-functioning individuals might not perform well as a group based on collective intelligence. The collective intelligence of a team can aid in predicting how well a team will accomplish tasks. Individual personalities may manifest differently when

working with different groups of peers. Studies suggested diversity within teams increased collective intelligence (Chikersal et al., 2017). The participants in the study felt differences among the team members led to more meaningful collaboration. Studies on collective intelligence have shown groups staying together over longer periods tend to be more committed to each other and can become more efficient (Chikersal et al., 2017). Several members of CCP teams in the study reported coming together as a team was a major accomplishment and led to more effective CCP time.

This study was designed to answer three research questions. Research Question 1 focused on common and differing practices of teachers during CCP. Time spent in CCP was focused on developing instructional plans and assessing student understanding. Teachers spent time sharing classroom experiences and student concerns. Occasionally CCP teams strayed off-topic to address other school-related business or discuss personal lives. Teams divided tasks during CCP and assigned tasks for individual members to accomplish before attending future meetings.

Research Question 2 focused on teachers' perceptions of CCP. Teachers in the study valued CCP time. The lack of provided time during the school day was viewed as a major factor limiting the productivity of CCP teams. Teachers in the study explained CCP time helped them better meet the needs of diverse learners by sharing ideas with colleagues.

Research Question 3 focused on how practices occurring in CCP compared to teachers' perceptions. Many teacher-identified purposes for CCP aligned with behaviors occurring during CCP time. Individuals perceived the time as essential to develop and align the curriculum, and the teams spent time engaged in activities to prepare for instruction and assessment. Teachers spent time reflecting on student performance and engagement, which were valuable elements of

the collaborative planning process. Practices or behaviors perceived to maximize CCP effectiveness, such as utilizing agendas and adhering to assigned roles for each member, were not consistently practiced by CCP teams.

Limitations

This case study focused on five groups of teachers within a specific context. Five similar cases were selected to increase the credibility of the study. Generalization of results is limited due to contextual restraints of the five cases for the study. The case study provides an example for readers. A researcher's narrative descriptions can allow a reader to learn from a particular case and reconstruct knowledge to make it personally useful (Stake, 2005). The results of this study could provide an example of CCP to guide future research. An understanding of the procedural and situational context of a particular study should be considered when applying results to similar situations (Maxwell & Chmiel, 2014). Case study does not lend itself to causation of observed behaviors.

Data collection occurred within 32 days during the first quarter of the school year.

Perceptions of teachers could change as the school year progresses, limiting dependability.

Systems in place and time allotted for CCP in schools and districts may vary. Behaviors and perceptions are likely to vary based on the amount of time provided to teachers and systems in place within a school or district. Teachers were aware the observations were taking place.

Researcher presence could have influenced the behaviors occurring during the CCP. Influence was minimized by selecting an observation location away from the team of teachers and not interjecting or contributing to any discussions. Case studies can be subject to bias. To establish dependability and avoid questioning bias, preexisting instruments with open-ended questions

were utilized. Participants did not review transcripts so there was a possibility of misinterpretation or incorrect inferences. Verbatim interview transcripts were used during the coding process to prevent the exclusion of ideas due to summarization. The use of Atlas.ti to identify recurrent ideas and generate themes provided confirmability.

Recommendations

Based on the findings of this qualitative study, additional studies could provide more insight into CCP. Quantitative studies should be conducted using the themes generated to survey a larger portion of the population. A more longitudinal qualitative study observing and interviewing teachers throughout a school year or multiple school years could provide additional information on how practices and perceptions of CCP change over time. Time and resources are being allocated to provide CCP time in middle schools. Researchers should study the impact of providing different amounts of time to teachers for CCP. Policymakers could benefit from studies examining leadership's procedures and systems related to CCP and the perceptions of leadership regarding CCP. Teachers should take time to self-reflect on perceptions of CCP and consider how CCP time is utilized. Practitioners should be willing to adjust and be flexible to reap the benefits of collaboration.

Implications for Leadership

CCP teams are more productive when task-oriented and focused on student learning. The focus should remain on improving student achievement during collaborative planning (Barton & Stepanek, 2012). Leaders should provide structure for CCP teams. Existing literature showed teachers did want assistance when planning (Mausethagen & Mølstad, 2015), and holding teachers accountable was encouraging (Kruse & Gates, 2016). Teachers in the study indicated a

desire for the time to be productive and meaningful, and teachers indicated having a set agenda and focused topics leads to more productivity during CCP. Leaders establishing norms and regularly monitoring CCP can lead to more effective use of CCP time during the school day. Setting expectations is critical (Bae, 2017; DuFour, 2004; Farley-Ripple & Buttram, 2014; McBrayer et al., 2018). Leadership should establish expectations for CCP time and clearly and consistently communicate those expectations to all teachers participating in CCP.

School leaders should schedule uninterrupted time for CCP. Participants indicated a major challenge of CCP time is not having enough time to complete the necessary tasks.

Providing as much time as possible within the school day for CCP can bolster support from teachers and lead to meaningful curriculum discussion and decisions. Instructional methods influenced by collaboration impacted students throughout a school (Ronfeldt et al., 2015).

Establishing continuity among teams and considering the strengths of the individuals on the CCP team are important considerations for leadership. Healthy relationships among team members are important for productive teacher collaboration (Bae, 2017). Every team in the study was working together for the first time during the current school year. As staff turnover and changes in class sizes lead to shifting of teaching assignments, leaders should take time to consider which CCP teams should be split up and which CCP teams are functioning at a high level and should be kept together. Leaders have to be willing to intervene to prevent conflict caused by diverse personalities and should remove barriers preventing creative collaboration (Bailey, 2014). Allowing a toxic CCP environment to persist can have negative effects.

Leaders should consider the level of diversity within teams and consider factors such as age, gender, and cultural differences. Extant literature demonstrated large age differences among

team members increased collective intelligence, whereas smaller age gaps were detrimental (Chikersal et al., 2017). CCP teams benefit when leaders consider how well the team functions as a whole and the collective intelligence of the team. An understanding of the collective intelligence of a team can help predict the capacity for the team to perform well together on tasks in the future.

School leadership should continue to provide teachers with time for CCP and impart policies to eliminate disruptions during assigned CCP times. Building-level leaders should hold teachers accountable, help teachers create agendas, and assist in establishing roles for CCP team members. Administrators should consider increasing the amount of time provided for CCP throughout the school day or week. District leaders should provide training for leaders on how to best support teachers and ways to keep teachers accountable during CCP.

Conclusion

Establishing time during the school day for CCP is a common practice in education. Maximizing productivity during school hours is critical for teachers to plan and implement the curriculum. Effective and efficient planning can yield benefits for teachers and students. This study was necessary to examine how middle school teachers within the school district used and perceived collaborative planning time.

For teachers working in isolation, accomplishing the myriad of tasks encountered throughout the school day and planning curriculum can be daunting and overwhelming.

Accountability for student learning places pressure on teachers to be able to deliver quality instruction and assess student learning. Teachers value CCP time and opportunities to gather curriculum input from a variety of individuals with differing perspectives and strengths. CCP

allows teachers to collaboratively review and modify educational resources, align pacing, overcome challenges such as implementing technology, analyze data, and consider student needs.

An increased understanding of how teachers perceive and utilize CCP can better inform leaders how to implement and support CCP. The collective intelligence of a group of individuals working as a team is important to consider. Leaders and policymakers should communicate expectations and consider the amount of time allotted for CCP, the personalities and teaching styles of CCP team members, and policies regarding CCP.

References

- Abrams, L., Varier, D., & Jackson, L. (2016). Unpacking instructional alignment: The influence of teachers' use of assessment data on instruction. *Perspectives in Education*, *34*(4), 15–28. https://doi.org/10.18820/2519593X/pie.v34i4.2
- Anrig, G. (2015). How we know collaboration works. *Educational Leadership*, 72(5), 30–35.
- Ansley, B. M., Houchins, D., & Varjas, K. (2019). Cultivating positive work contexts that promote teacher job satisfaction and retention in high-need schools. *Journal of Special Education Leadership*, 32(1), 3–16.
- Bae, S. (2017). It's about time: Organizing schools for teacher collaboration and learning.

 Stanford Center for Opportunity Policy in Education.

 https://edpolicy.stanford.edu/sites/default/files/Hillsdale%20Teacher%20Time%20Final.

 pdf
- Bailey, S. B. (2014). Scholar-practitioner leadership: A conceptual foundation. *International Journal of Progressive Education*, 10(3), 47–59.
- Banerjee, N., Stearns, E., Moller, S., & Mickelson, R. A. (2017). teacher job satisfaction and student achievement: The roles of teacher professional community and teacher collaboration in schools. *American Journal of Education*, 123(2), 203–241. https://doi.org/10.1086/689932
- Barton, J., & Stepanek, J. (2012). The impact of professional learning communities. *Principal's Research Review*, 7(4), 1-4.

- Bates, T. C., & Gupta, S. (2017). Smart groups of smart people: Evidence for IQ as the origin of collective intelligence in the performance of human groups. *Intelligence*, 60, 46–56. https://doi.org/10.1016/j.intell.2016.11.004
- Bennett, A. (2015). Case study: Methods and analysis. In J. D. Wright (Ed.), *International encyclopedia of the social & behavioral sciences* (2nd ed., pp. 208–213). Elsevier. https://doi.org/10.1016/B978-0-08-097086-8.44003-1
- Brown, B., Hartwell, A., & Thomas, C. (2018). Interdisciplinary design teams of pre-service and in-service teachers: Issues with collaboration. *Canadian Journal of Action Research*, 19(1), 3-21. https://doi.org/10.33524/cjar.v19i1.371
- Burke, P. F., Aubusson, P. J., Schuck, S. R., Buchanan, J. D., & Prescott, A. E. (2015). How do early career teachers value different types of support? A scale-adjusted latent class choice model. *Teaching and Teacher Education*, 47, 241–253. https://doi.org/10.1016/j.tate.2015.01.005
- Carpenter, D. (2017). Collaborative inquiry and the shared workspace of professional learning communities. *International Journal of Educational Management*, *31*(7), 1069–1091. https://doi.org/10.1108/IJEM-10-2015-0143
- Chikersal, P., Tomprou, M., Kim, Y. J., Woolley, A. W., & Dabbish, L. (2017, February). Deep structures of collaboration: Physiological correlates of collective intelligence and group satisfaction. *Proceedings of the 2017 ACM Conference on Computer Supported Cooperative Work and Social Computing* (pp. 873–888). https://doi.org/10.1145/2998181.2998250

- Colmer, K. (2017). Collaborative professional learning: Contributing to the growth of leadership, professional identity and professionalism. *European Early Childhood Education**Research Journal, 25(3), 436–449. https://doi.org/10.1080/1350293X.2017.1308167
- Credé, M., & Howardson, G. (2017). The structure of group task performance—A second look at "collective intelligence": Comment on Woolley et al. (2010). *Journal of Applied Psychology*, 102(10), 1483–1492. https://doi.org/10.1037/apl0000176.supp
- Devenyi, G. A., Emonet, R., Harris, R. M., Hertweck, K. L., Irving, D., Milligan, I., & Wilson, G. (2018). Ten simple rules for collaborative lesson development. *PLoS Computational Biology*, *14*(3), Article e1005963. https://doi.org/10.1371/journal.pcbi.1005963
- DuFour, R. (2004). What is a professional learning community? *Educational Leadership*, 61(8), 6–11.
- Easton, L. B. (2017). Strategic accountability is key to making PLCs effective. *Phi Delta Kappan*, 98(4), 43–48. https://doi.org/10.1177/0031721716681776
- Every Student Succeeds Act, Pub. L. No. 114-95 (2015).
- Farley-Ripple, E. N., & Buttram, J. L. (2014). Developing collaborative data use through professional learning communities: Early lessons from Delaware. *Studies in Educational Evaluation*, 42, 41–53. https://doi.org/10.1016/j.stueduc.2013.09.006
- Flick, U. (Ed.). (2018). *The SAGE handbook of qualitative data collection*. SAGE. https://doi.org/10.4135/9781526416070
- Fullan, M., & Hargreaves, A. (2016). *Bringing the profession back in: Call to action*. Learning Forward. https://learningforward.org/docs/default-source/pdf/BringingProfessionFullanHargreaves2016.pdf

- Fusch, P. I., & Ness, L. R. (2015). Are we there yet? Data saturation in qualitative research. *The Qualitative Report*, 20(9), 1408–1416.
- Gaitas, S., & Alves Martins, M. (2017). Teacher perceived difficulty in implementing differentiated instructional strategies in primary school. *International Journal of Inclusive Education*, 21(5), 544–556. https://doi.org/10.1080/13603116.2016.1223180
- Given, L. M. (Ed.). (2008). The SAGE encyclopedia of qualitative research methods. SAGE. https://doi: 10.4135/9781412963909
- Glover, S., & Wissing, D. R. (2017). So now you are a teacher—Now what? *Respiratory Care Education Annual*, 26, 39–43.
- Goddard, R., Goddard, Y., Kim, E. S., & Miller, R. (2015). A theoretical and empirical analysis of the roles of instructional leadership, teacher collaboration, and collective efficacy beliefs in support of student learning. *American Journal of Education*, 121(4), 501–530. https://doi.org/10.1086/681925
- Goddard, Y. L., Goddard, R. D., & Tschannen-Moran, M. (2007). A theoretical and empirical investigation of teacher collaboration for school improvement and student achievement in public elementary schools. *Teachers College Record*, 109(4), 877–896.
- Gog, M. (2015). Case study research. *International Journal of Sales, Retailing & Marketing*, 4(9), 33–41.
- Graue, C. (2015). Qualitative data analysis. *International Journal of Sales, Retailing & Marketing*, 4(9), 5–14.
- Gutierez, S. B. (2015). Teachers' reflective practice in lesson study: A tool for improving instructional practice. *Alberta Journal of Educational Research*, 61(3), 314–328.

- Hallam, P. R., Smith, H. R., Hite, J. M., Hite, S. J., & Wilcox, B. R. (2015). Trust and collaboration in PLC teams: Teacher relationships, principal support, and collaborative benefits. NASSP Bulletin, 99(3), 193–216. https://doi.org/10.1177/0192636515602330
- Harris, L. M., Shreiner, T. L., & Hoelting, M. (2017). Examining an ambitious world history teacher's knowledge for planning. *Journal of Social Studies Research*, 41(2), 117–130. https://doi.org/10.1016/j.jssr.2016.08.003
- Hofer, M., & Harris, J. (2019, March 18–22). Topics and sequences in experienced teachers' instructional planning: Addressing a ~30-year literature gap. In SITE 2019: Society for Information Technology & Teacher Education International Conference (pp. 2189-2198).

 Association for the Advancement of Computing in Education.
- Howell, J. B., & Saye, J. W. (2016). Using lesson study to develop a shared professional teaching knowledge culture among 4th grade social studies teachers. *Journal of Social Studies Research*, 40, 25–37. https://doi.org/10.1016/j.jssr.2015.03.001
- Huizinga, T., Handelzalts, A., Nieveen, N., & Voogt, J. (2015). Fostering teachers' design expertise in teacher design teams: Conducive design and support activities. *Curriculum Journal*, 26(1), 137–163. https://doi.org/10.1080/09585176.2014.990395
- Jones-Goods, K. M. (2018). A phenomenological study of teacher collaboration using a professional learning community model. *Journal of Research Initiatives*, 3(3), Article 10.
- Kelly, J., & Cherkowski, S. (2015). Collaboration, collegiality, and collective reflection: A case study of professional development for teachers. *Canadian Journal of Educational Administration and Policy*, 169.

- Kim, Y. J., Engel, D., Woolley, A. W., Lin, J. Y. T., McArthur, N., & Malone, T. W. (2017, February). What makes a strong team? Using collective intelligence to predict team performance in League of Legends. In CSCW '17: Proceedings of the 2017 ACM Conference on Computer Supported Cooperative Work and Social Computing (pp. 2316–2329). ACM Press. https://doi.org/10.1145/2998181.2998185
- Kruse, S. D., & Gates, G. S. (2016, August 56). Leading professional learning communities:
 Applying a high reliability organization perspective. In J. Vopava, V. Douda, R.
 Kratochvil, & M. Konecki (Eds.), *Proceedings of the MAC-ETel 2016 International Conference* (pp. 38–45). MAC Prague Consulting.
- Lampi, J. P., Dimino, R. K., & Taylor, J. S. (2015). Connecting practice & research: A shared growth professional development model. *Journal of Developmental Education*, *39*(1), 32–33.
- Lawrence, S. A., & Jefferson, T. (2015). Common planning process of middle school English language arts teachers: Eighth grade teachers' intentional use of common planning time to create learning experiences that foster students' literacy development demonstrates the importance of collaboration and professional development. *Middle School Journal*, 46(4), 17–23. https://doi.org/10.1080/00940771.2015.11461916
- Lomascolo, D. J., & Angelle, P. S. (2017). A national study of common planning time activities: Examination of differences by state. *Middle Grades Research Journal*, 11(2), 21–31.
- Mann, R. P., & Helbing, D. (2017). Optimal incentives for collective intelligence. *Proceedings* of the National Academy of Sciences, 114(20), 5077–5082. https://doi.org/10.1073/pnas.1618722114

- Mausethagen, S., & Mølstad, C. E. (2015). Shifts in curriculum control: Contesting ideas of teacher autonomy. *Nordic Journal of Studies in Educational Policy*, 2015(2), 30–41. https://doi.org/10.3402/nstep.v1.28520
- Maxwell, J., & Chmiel, M. (2014). Generalization in and from qualitative analysis. In U. Flick (Ed.), *The SAGE handbook of qualitative data analysis* (pp. 540–553). SAGE. https://www.doi.org/10.4135/9781446282243
- McBrayer, J. S., Chance, J., Pannell, S., & Wells, P. (2018). A system-wide, collaborative, purposeful, and sustainable distributed leadership plan utilizing teacher leaders to facilitate professional learning communities. *Educational Planning*, 25(4), 27–46.
- Merriam, S. B. (1998). Qualitative research and case study applications in education. Jossey-Bass.
- Merritt, E. G. (2016). Time for teacher learning, planning critical for school reform. *Phi Delta Kappan*, 98(4), 31–36. https://doi.org/10.1177/0031721716681774
- Mertens, S. B., Anfara, V. A., Jr., Caskey, M. M., & Flowers, N. (2013). Common planning time in middle level schools: Research studies from the MLER SIG's national project.Information Age Publishing.
- Miles, R. (2015). Complexity, representation and practice: Case study as method and methodology. *Issues in Educational Research*, 25(3), 309–318.
- Mills, A. J., Durepos, G., & Wiebe, E. (2010). Encyclopedia of case study research. SAGE. https://doi: 10.4135/9781412957397
- National Institutes of Health. (2011). *Protecting human research participants*. http://phrp.nihtraining.com

- Organisation for Economic and Co-operative Development. (2002). Frascati manual: Proposed standard practice for surveys on research and experimental development. OECD Publication Service.
- Ostovar-Nameghi, S. A., & Sheikhahmadi, M. (2016). From teacher isolation to teacher collaboration: Theoretical perspectives and empirical findings. *English Language Teaching*, *9*(5), 197–205. https://doi.org/10.5539/elt.v9n5p197
- Owen, S. (2014). Teacher professional learning communities: Going beyond contrived collegiality toward challenging debate and collegial learning and professional growth.

 *Australian Journal of Adult Learning, 54(2), 54–77.
- Özberk, K., Dagli, G., Altinay, F., & Altinay, Z. (2017). Job burnout among teachers in secondary education. *International Journal of Economic Perspectives*, 11(1), 720–729.
- Powell, W., & Kusuma-Powell, O. (2015). Make the most of every day: Examine your practice to sift out time wasters. *Journal of Staff Development*, 36(5), 40–46.
- Pylman, S. (2018). In co-planning, scheduling is just the tip of the icebergs: The best mentoring meetings focus on the underlying reasons for teachers' instructional decisions. *Phi Delta Kappan*, 100(4), 44–48.
- Riveros, A. R. (2012). Beyond collaboration: Embodied teacher learning and the discourse of collaboration in education reform. *Studies in Philosophy & Education*, *31*(6), 603–612. https://doi.org/10.1007/s11217-012-9323-6
- Ronfeldt, M., Farmer, S. O., McQueen, K., & Grissom, J. A. (2015). Teacher collaboration in instructional teams and student achievement. *American Educational Research Journal*, 52(3), 475–514. https://doi.org/10.3102/0002831215585562

- Salazar Noguera, J., & McCluskey, K. (2017). A case study of early career secondary teachers' perceptions of their preparedness for teaching: Lessons from Australia and Spain.

 Teacher Development, 21(1), 101–117. https://doi.org/10.1080/13664530.2016.1204353
- Schleifer, D., Rinehart, C., & Yanisch, T. (2017). *Teacher collaboration in perspective: A guide to research*. Public Agenda. https://www.publicagenda.org/reports/teacher-collaboration-in-perspective/
- Shahadan, A., & Oliver, R. (2016). Elementary school leaders' perceptions of their roles in managing school curriculum: A case study. *Educational Research and Reviews*, 11(18), 1785–1789. https://doi.org/10.5897/ERR2015.2490
- Sinkovics, R. R., & Alfoldi, E. A. (2012). Progressive focusing and trustworthiness in qualitative research: The enabling role of computer-assisted qualitative data analysis software (CAQDAS). *Management International Review*, *52*, 827–845. https://doi.org/10.1007/s11575-012-0140-5
- Snyder, J. D., & Bae, S. (2017). *Teachers' time: Collaborating for learning, teaching, and leading.* Stanford Center for Opportunity Policy in Education.

 https://edpolicy.stanford.edu/sites/default/files/Cross%20Case%20Brief%20Final.pdf
- Sohmen, V. S. (2015). Reflections on creative leadership. *International Journal of Global Business*, 8(1), 1–14. https://doi.org/10.13140/RG.2.1.1620.3366
- Stake, R. E. (2005). *Qualitative case studies*. In N. K. Denzin & Y. S. Lincoln (Eds.), *The Sage handbook of qualitative research* (3rd ed., pp. 443–466). Sage.
- Stein, L. (2016). Schools need leaders—Not managers: It's time for a paradigm shift. *Journal of Leadership Education*, 15(2), 21–30. https://doi.org/10.12806/V15/I2/I3

- Steiner, D. (2017, March). *Curriculum research: What we know and where we need to go.*Standards Work. https://standardswork.org/wp-content/uploads/2017/03/sw-curriculum-research-report-fnl.pdf
- Sterret, W. L., Parker, M. A., & Mitzner, K. (2018). Maximizing teacher time: The collaborative leadership role of the principal. *Journal of Organizational and Educational Leadership*, 3(2), Article 2.
- Teacher.org. (2021). Learn how to become a teacher. https://www.teacher.org/how-to-become/
- Thessin, R. A. (2015). Learning from one urban school district: Planning to provide essential supports for teachers' work in professional learning communities. *Educational Planning*, 22(1), 15–27.
- Thomas, G., & Myers, K. (2015). *The anatomy of the case study*. SAGE. https://doi.org/10.4135/9781473920156
- Voogt, J., Laferrière, T., Breuleux, A., Itow, R., Hickey, D., & McKenney, S. (2015).

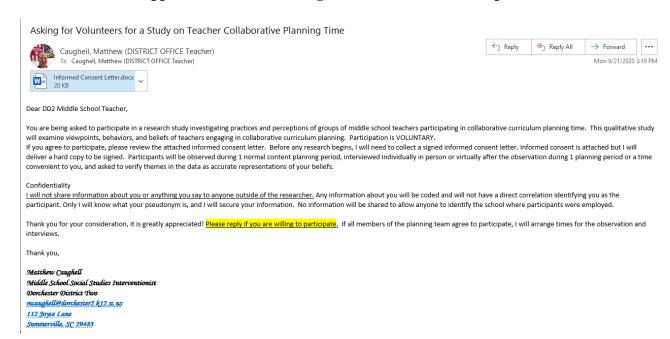
 Collaborative design as a form of professional development. *Instructional Science*, 43(2), 259–282. https://doi.org/10.1007/s11251-014-9340-7
- Voogt, J. M., Pieters, J. M., & Handelzalts, A. (2016). Teacher collaboration in curriculum design teams: Effects, mechanisms, and conditions. *Educational Research & Evaluation*, 22(3/4), 121–140. https://doi.org/10.1080/13803611.2016.1247725
- Walby, K. (2013). Institutional ethnography and data analysis: Making sense of data dialogues.

 *International Journal of Social Research Methodology, 16(2), 141–154.

 https://doi.org/10.1080/13645579.2012.661207

- Waring, T., & Wainwright, D. (2008). Issues and challenges in the use of template analysis: Two comparative case studies from the field. *Electronic Journal of Business Research*Methods, 6(1), 85–93.
- Woolley, A. W., Aggarwal, I., & Malone, T. W. (2015). Collective intelligence and group performance. *Current Directions in Psychological Science*, 24(6), 420–424. https://doi.org/10.1177/0963721415599543
- Woolley, A. W., Chabris, C. F., Pentland, A., Hashmi, N., & Malone, T. W. (2010). Evidence for a collective intelligence factor in the performance of human groups. *Science*, *330*(6004), 686–688. https://doi.org/10.1126/science.1193147
- Yazan, B. (2015). Three approaches to case study methods in education: Yin, Merriam, and Stake. *The Qualitative Report*, 20(2), 134–152.
- Yin, R. K. (2009). How to do better case studies (with illustrations from 20 exemplary case studies). In L. Bickman & D. J. Rog, *The SAGE handbook of applied social research methods* (pp. 254–282). SAGE. https://doi.org/10.4135/978148334885

Appendix A: Email Asking for Volunteers to Participate



Appendix B: School District IRB Approval to Conduct Study



February 28, 2020

Mr. Matthew Caughell 102 Southernwood Dr. Ladson, SC 29456

Electronically mcaughell@dorchester2.k12.sc.us

Dear Mr. Caughell,

I am happy to report the Research Review Committee reviewed the research proposal you <u>submitted</u> and you are granted approval to conduct your research as delineated.

Since your research is being conducted in an anticipate receipt of a report of your findings when your research concludes.

If you have any further questions for the committee, please feel free to contact me.

We wish you success in your research and in completing your dissertation.

Sincerely,

Assistant Superintendent

Appendix C: Informed Consent Letter

Informed Consent

Prospective Research Participant: Read this consent form carefully and ask as many questions as you like before you decide whether you want to participate in this research study. You are free to ask questions at any time before, during, or after your participation in this research.

Project Information

Project Title: Case Study of Teachers' Perceptions and Practices Related to Collaborative

Curriculum Planning

Researcher: Matthew Caughell

Organization: American College of Education

Email: caughellmw@hotmail.com **Telephone:** 317-460-6095

Researcher's Faculty Member: Dr. Sandra Quiatkowski

Organization and Position: American College of Education, ACE Library Director

Email: Sandra.Quiatkowski@ace.edu

Introduction

I am Matthew Caughell, and I am a doctoral candidate student at American College of Education. I am doing research under the guidance and supervision of my Chair, Dr. Sandra Quiatkowski. I will give you some information about the project and invite you to be part of this research. Before you decide, you can talk to anyone you feel comfortable with about the research. If there is any part of this consent form you do not understand please ask for clarification or an explanation. If you have questions later, you can ask them then.

Purpose of the Research

You are being asked to participate in a research study which will investigate practices and perceptions of groups of middle school teachers participating in collaborative curriculum planning time at schools. This qualitative study will examine viewpoints, behaviors, and beliefs of teachers engaging in collaborative curriculum planning. Through the investigation of teacher practices and perceptions district and school leaders can make more informed decisions regarding collaborative curriculum planning and provide support.

Research Design and Procedures

The study will use a qualitative methodology and case study research design. The study will comprise of 15-21 participants in teams of at least three, randomly selected, who will be observed during one collaborative curriculum planning time and participate in one individual interview. The study will involve observations conducted at the site most convenient for participants or virtually using Microsoft Teams. After being observed, each participant will be interviewed individually and all interviews will be recorded to ensure accuracy of data collected.

Participant selection

You are being invited to take part in this research because of your experience as a teacher who can contribute much to the field of collaborative planning, which meets the criteria for this study. Participant selection criteria:

- Teach middle school language arts, math, or science
- Share a collaborative curriculum planning time during the school day with at least two other teachers teaching the same grade level and content area
- Teach in one of the five traditional neighborhood schools within the district
- Have read and signed the informed consent

Voluntary Participation

Your participation in this research is entirely voluntary. It is your choice whether to participate. If you choose not to participate, there will be no punitive repercussions and you do not have to participate. If you select to participate in this study, you may change your mind later and stop participating even if you agreed earlier.

Procedures

I am inviting you to participate in this research study. If you agree, you will be part an observed planning period and participate in an individual recorded interview. The type of questions asked will range from a demographical perspective to direct inquiries about the topic of collaborative curriculum planning. You will also be asked to verify information collected and themes identified for accuracy.

Duration

The observation portion of the research study will require approximately 50 minutes to complete and the interview will require approximately 50 minutes. If you are chosen to be a part of the study, the time allotted for observation and interview will be at a location convenient for the participant or completed using Microsoft Teams. A follow-up debriefing session to review collected data will take approximately 15 minutes.

Risks

The researcher will ask you to share personal and confidential information, and you may feel uncomfortable talking about some of the topics. You do not have to answer any question or take part in the discussion if you don't wish to do so. You do not have to give any reason for not responding to any question.

Benefits

While there will be no direct financial benefit to you, your participation is likely to help find out more about collaborative curriculum planning. The potential benefits of this study will aid the support for teachers during allocated time for collaborative curriculum planning.

Confidentiality

I will not share information about you or anything you say to anyone outside of the researcher. During the defense of the doctoral dissertation, data collected will be presented to the dissertation committee. The data collected will be kept in a locked file cabinet or encrypted computer file. Any information about you will be coded and will not have a direct correlation directly identifying you as the participant. Only I will know what your pseudonym is, and I will secure your information. No information will be shared to allow anyone to identify the school where participants were employed.

Sharing the Results

At the end of the research study, the results will be available for each participant. It is anticipated to publish the results so other interested people may learn from the research.

Right to Refuse or Withdraw

Participation is voluntary. At any time, you wish to end your participation in the research study, you may do so without repercussions.

Ouestions About the Study

If you have any questions, you can ask them now or later. If you wish to ask questions later, you may contact Matthew Caughell. This research plan has been reviewed and approved by the Institutional Review Board of American College of Education. This is a committee whose role is to make sure research participants are protected from harm. If you wish to ask questions of this group, email IRB@ace.edu.

Certificate of Consent

I have read the information about this study, or it has been read to me. I acknowledge why I have been asked to be a participant in the research study. I have been provided the opportunity to ask questions about the study, and any questions have been answered to my satisfaction. I certify I am at least 18 years of age. I consent voluntarily to be a participant in this study.

Print or Type Name of Participant:
Signature of Participant:
Date:
I confirm that the participant was given an opportunity to ask questions about the study, and all the questions asked by the participant have been answered to the best of my ability. I confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily. A copy of this Consent Form has been provided to the participant.
Print or type name of lead researcher:

Signature o	of lead researcher:	
Signature o	n iead researcher.	

PLEASE KEEP THIS INFORMED CONSENT FORM FOR YOUR RECORDS.

Appendix D: Modified Collaborative Curriculum Planning Observation Protocol



Middle Level Education Research SIG National Middle Grades Research Project Common Planning Time (CPT) Observation Protocol

School Name:	Date:
School Address:	
Observer:	_Team Name:
Meeting location:	Grade Level:
Time allotted for meeting:	Meeting start time:
Meeting end time:	
Nonteam members present: (title/position)	
Topics to be discussed (if known):	

Descriptive questions to answer while observing CCP meeting

- 1. What is the physical arrangement of teachers in the team meeting?
- 2. Is there an agenda for the CCP meeting?
- 3. Did a team member record minutes of the CCP meeting?
- 4. Were there any interruptions during the CCP meeting (e.g., announcements, fire drill, students needing to see teachers)? Please note the frequency of interruptions.

Description of Teachers in CCP Meeting

Name	Gender	Subject Taught
	☐ Female☐ Male	☐ Mathematics☐ Science☐ Language arts
	☐ Female☐ Male	☐ Mathematics☐ Science☐ Language arts
	☐ Female☐ Male	☐ Mathematics☐ Science☐ Language arts
	☐ Female☐ Male	☐ Mathematics☐ Science☐ Language arts

Observations of CCP Meeting

Please indicate the amount of time (in minutes) spent on each activity and record all observations made for each activity/behavior. Include specific, rich descriptions of all activities/behaviors you observe.

Code	Description of Activities/Behaviors	Comments and Observations	Time Spent (Mins)
CI	Planning special team activities		
CI	Developing curriculum		
CI	Coordinating and integrating		
	curriculum across subject areas		
CI	Integrating technology into		
	curriculum		
CI	Coordinating and/or developing		
	student assignments		
A	Coordinating and/or developing		
	student assessments		
A	Coordinating test preparation and		
	state testing		
S	Discussing student learning		
	problems/issues		
S	Discussing student behavior		
	problems/issues		
P	Discussing activities related to		
D	parent involvement		
В	Reporting/discussing budget or fiscal issues		
В			
Ь	Preparing student progress reports, report cards, attendance/behavior		
	reports, etc.		
В	Reporting on schoolwide		
"	committee meetings, team leader		
	meetings, etc.		
В	Dealing with schoolwide issues		
PD	Engaging in professional		
	development activity		
OB	Engaging in other behaviors		

Summary table of Observed CCP Behaviors

Please refer to table on page 3 to calculate the total time spent on each category. For example, for the "Curriculum & instruction" category, sum up the six "CI" activities/behaviors on page 3 and place the sum within the CI category in the table below.

Code	Summary Categories	Total Time Spent (Mins)
CI	Curriculum and instruction	
A	Assessment	
S	Student	
P	Parent	
В	Business	
PD	Professional Development	
OB	Engaging in other behaviors	

Researcher Summary

Describe your general impressions of what occurred during this CCP meeting.

Appendix E: Modified CCP Time Interview Protocol



Middle Level Education Research SIG National Middle Grades Research Project Common Planning Time (CPT) Observation Protocol

School Name:	Date:
Interviewer:	
Interviewee Name & Number:	
Team name:	
Interview location:	Grade level:
Duration of interview:hrs min	

Reminders:

The purpose of this interview is to engage in a purposeful conversation with the participants regarding their experiences of collaborative curriculum planning time. **Before you start** make sure you have:

- Received a copy of the signed informed consent and given a copy to the participant;
- Checked the recorder settings for proper recording;
- Extra batteries and tapes if you are using an analog recorder;
- An extension cord for recorders that need a power source;
- Tried to ensure the interview is taking place in a quiet location

Introduction

Thank you for allowing me to interview you regarding your experiences with collaborative curriculum planning time. You indicated in the informed consent letter your willingness to participate and the session will be recorded to ensure an accurate account of what you are saying. I do want to remind you everything you say is confidential and that your name will never appear on any of the documents or reports related to this research project. Additionally, the name of your school will not be used in any reports.

In this interview, I am interested in understanding what you think about collaborative curriculum planning time- what your experiences are.

Let's start with some basic demographic information about you.

Demographic Information

- 1. How long have you worked as a teacher?
- 2. How long have you worked in a middle-grade level?
- 3. How long have you worked in this school?
- 4. How long have you worked with/on this team?
- 5. How many other teachers work with you on this team?
- 6. Approximately how many students are on your team?
- 7. Do you have a regularly planned CCP?
- 8. How many times each week does your team typically meet for CCP?

9. Typically, how long (# minutes) are your CCP meetings?

I would like to switch our conversation to exploring what you understand about the purpose of CCP time and the relationship of CCP to your teaching and classroom management. Please remember there are no right or wrong answers. I really want your honest opinions about these issues and examples of your experiences.

Teacher's Understandings of CCP (e.g., purpose, goals, value)

- 10. Has anyone from the school or the district explained to you why you have CCP time? If yes, please explain.
- 11. What do you consider to be the purpose of CCP?
- 12. Has CCP changed the way you teach? If so, please provide an example.
- 13. How do you think your CCP influences student learning and achievement?
- 14. What do you find to be a difficult part of having a CCP time? (Prompts: lack of time, personalities, control)
- 15. What factors influence CCP effectiveness? (Prompts: personalities, certification/licensure type, teacher experience)
- 16. How would you react if you lost your CCP?

Let's move to looking at how you use your CCP time.

Teacher Use of CCP

17. What does your team spend time working on or discussing during CCP time?

Note to Researcher: If the interviewee needs a prompt for question "20" the list below is taken from the observation protocol and can be used to help generate conversation.

Prompts:

- Planning special team projects or activities
- Developing and using consistent curriculum
- Coordinating curriculum across subject areas
- Integrating curriculum across subject areas
- Developing interdisciplinary units
- Monitoring and coordinating student assignments and tests
- Developing common assessments
- Discussing student learning and behavior problems/issues
- Integrating technology into the curriculum
- Developing or coordinating communication with parents
- Plan or implement strategies to increase parent involvement
- Budget or fiscal issues
- Preparation of student progress reports, report cards, attendance/behavior reports, and so on.
- Updates/reports on schoolwide committee meetings, team leader meetings, and so on.

- 18. What activities or topics consume most of your time during CCP? Please explain why these activities and topics take so much of your CCP time.
- 19. What do you view as the major accomplishments of your team during this current school year?
- 20. In what ways does the school principal or other district administrator (e.g., curriculum specialists, superintendent, middle grade supervisor, and so on) influence your CCP work?
- 21. Describe the most effective use of CCP (what teachers would be doing and so on) in an ideal school setting.

Final Question (Wrap-up)

22. Is there anything you would like to share with me that I did not ask?

I want to thank you for spending this time with me and sharing your thoughts and understandings about CCP. You have made a significant contribution to research on CCP. Again, thanks for sharing your perspective and experiences.

← Reply ← Reply All → Forward ・・・・

Appendix F: Permission to Modify and Use Research Instruments

Matthew,
Thanks for your email.

We are fine with the modifications your propose to the MLER SIG CPT data collection instruments for your dissertation study.

We would ask that you include some type of attribution statement in your dissertation acknowledging that the CPT data collection protocol was developed by the MLER SIG.

Good luck with your dissertation research and data collection. We would be interested in seeing the final version of your dissertation.

Best wishes,

Steve

Steven

Steven B. Mertens, Ph.D.

Professor, Middle Level PDS Program School of Teaching & Learning Illinois State University
Normal, IL 61790

(309) 438-8182

smertens@ilstu.edu

Request to Use Research Instruments for Qualitative Dissertation



Dr. Mertens

Thank you for permission to use your instruments in my qualitative study! In order to address the research questions associated with my study some modifications to the instrument were needed. The protocols were modified to adapt it from interdisciplinary teams of teachers to teams of teachers planning in common grade levels and content areas. The interview protocol was also shortened to focus the study on my research questions. May I please have written approval to use the modifications of instruments attached in this email? Do you have any concerns over the modifications made to the instruments or see any concerns with validity based on modifications?

If you are okay with the modified form, I will explain in the instrumentation section of my dissertation that the original instruments were modified.

Research Question 1. What common and differing practices do grade 6-8 middle school teachers exhibit during CCP?

Research Question 2. How do grade 6-8 middle school teachers perceive the effectiveness of CCP?

 $Research\ Question\ 3.\ How\ do\ Grade\ 6-8\ middle\ school\ teachers\ perceived\ uses\ of\ CCP\ compare\ to\ practices\ observed\ during\ CCP?$

If you would like to discuss anything please feel free to call me at

Thank you again for your time and supporting research,

Matthew Caughell
Addille School Social Studies Interventionist
Dorchester District Two
mcaughell@dorchester2.k12.sc.us
112 Joyce Lane
Summerville, SC 29483

Attachment to Email: Modified Instruments for Study Sent to Authors for Approval

Modified Collaborative Curriculum Planning Observation Protocol



Middle Level Education Research SIG

National Middle Grades Research Project

Common Planning Time (CPT) Observation Protocol

School Name:	Date:
School Address:	
Observer:	_Team Name:
Meeting location:	Grade Level:
Time allotted for meeting:	Meeting start time:
Meeting end time:	
Nonteam members present: (title/position)	
Topics to be discussed (if known):	

Descriptive questions to answer while observing CCP meeting

- 5. What is the physical arrangement of teachers in the team meeting?
- 6. Is there an agenda for the CCP meeting?
- 7. Did a team member record minutes of the CCP meeting?
- 8. Were there any interruptions during the CCP meeting (e.g., announcements, fire drill, students needing to see teachers)? Please note the frequency of interruptions.

Description of Teachers in CCP Meeting

Name	Gender	Subject Taught
	☐ Female ☐ Male	☐ Mathematics☐ Science☐ Language arts
	☐ Female☐ Male	☐ Mathematics☐ Science☐ Language arts
	☐ Female☐ Male	☐ Mathematics☐ Science☐ Language arts
	☐ Female☐ Male	☐ Mathematics☐ Science☐ Language arts

Observations of CCP Meeting

Please indicate the amount of time (in minutes) spent on each activity and record all observations made for each activity/behavior. Include specific, rich descriptions of all activities/behaviors you observe.

Code	Description of Activities/Behaviors	Comments and Observations	Time Spent
			(Mins)
CI	Planning special team activities		
CI	Developing curriculum		
CI	Coordinating and integrating		
	curriculum across subject areas		
CI	Integrating technology into		
	curriculum		

CI	Coordinating and/or developing	
	student assignments	
A	Coordinating and/or developing	
	student assessments	
A	Coordinating test preparation and	
	state testing	
S	Discussing student learning	
	problems/issues	
S	Discussing student behavior	
	problems/issues	
P	Discussing activities related to	
	parent involvement	
В	Reporting/discussing budget or	
	fiscal issues	
В	Preparing student progress reports,	
	report cards, attendance/behavior	
	reports, etc.	
В	Reporting on schoolwide	
	committee meetings, team leader	
	meetings, etc.	
В	Dealing with schoolwide issues	
PD	Engaging in professional	
	development activity	
OB	Engaging in other behaviors	

Summary table of Observed CCP Behaviors

Please refer to table on page 3 to calculate the total time spent on each category. For example, for the "Curriculum & instruction" category, sum up the six "CI" activities/behaviors on page 3 and place the sum within the CI category in the table below.

Code	Summary Categories	Total Time Spent (Mins)
CI	Curriculum and instruction	
A	Assessment	
S	Student	
P	Parent	
В	Business	
PD	Professional Development	
OB	Engaging in other behaviors	

Researcher Summary

Describe your general impressions of what occurred during this CCP meeting.

Modified CCP Time Interview Protocol



Middle Level Education Research SIG National Middle Grades Research Project Common Planning Time (CPT) Observation Protocol

School Name:	Date:
Interviewer:	
Interviewee Name & Number:	
Team name:	_
Interview location:	_ Grade level:
Duration of interview:hrs min	

Reminders:

The purpose of this interview is to engage in a purposeful conversation with the participants regarding their experiences of collaborative curriculum planning time. **Before you start** make sure you have:

- Received a copy of the signed informed consent and given a copy to the participant;
- Checked the recorder settings for proper recording;
- Extra batteries and tapes if you are using an analog recorder;
- An extension cord for recorders that need a power source;

• Tried to ensure the interview is taking place in a quiet location

Introduction

Thank you for allowing me to interview you regarding your experiences with collaborative curriculum planning time. You indicated in the informed consent letter your willingness to participate and the session will be recorded to ensure an accurate account of what you are saying. I do want to remind you everything you say is confidential and that your name will never appear on any of the documents or reports related to this research project. Additionally, the name of your school will not be used in any reports.

In this interview, I am interested in understanding what you think about collaborative curriculum planning time- what your experiences are.

Let's start with some basic demographic information about you.

Demographic Information

- 23. How long have you worked as a teacher?
- 24. How long have you worked in a middle-grade level?
- 25. How long have you worked in this school?
- 26. How long have you worked with/on this team?
- 27. How many other teachers work with you on this team?
- 28. Approximately how many students are on your team?
- 29. Do you have a regularly planned CCP?

- 30. How many times each week does your team typically meet for CCP?
- 31. Typically, how long (# minutes) are your CCP meetings?

I would like to switch our conversation to exploring what you understand about the purpose of CCP time and the relationship of CCP to your teaching and classroom management. Please remember there are no right or wrong answers. I really want your honest opinions about these issues and examples of your experiences.

Teacher's Understandings of CCP (e.g., purpose, goals, value)

- 32. Has anyone from the school or the district explained to you why you have CCP time? If yes, please explain.
- 33. What do you consider to be the purpose of CCP?
- 34. Has CCP changed the way you teach? If so, please provide an example.
- 35. How do you think your CCP influences student learning and achievement?
- 36. What do you find to be a difficult part of having a CCP time? (Prompts: lack of time, personalities, control)
- 37. What factors influence CCP effectiveness? (Prompts: personalities, certification/licensure type, teacher experience)
- 38. How would you react if you lost your CCP?

Let's move to looking at how you use your CCP time.

Teacher Use of CCP

39. What does your team spend time working on or discussing during CCP time?

Note to Researcher: If the interviewee needs a prompt for question "20" the list below is taken from the observation protocol and can be used to help generate conversation.

Prompts:

- Planning special team projects or activities
- Developing and using consistent curriculum
- Coordinating curriculum across subject areas
- Integrating curriculum across subject areas
- Developing interdisciplinary units
- Monitoring and coordinating student assignments and tests
- Developing common assessments
- Discussing student learning and behavior problems/issues
- Integrating technology into the curriculum
- Developing or coordinating communication with parents
- Plan or implement strategies to increase parent involvement
- Budget or fiscal issues
- Preparation of student progress reports, report cards, attendance/behavior reports, and so on.
- Updates/reports on schoolwide committee meetings, team leader meetings, and so on.

- 40. What activities or topics consume most of your time during CCP? Please explain why these activities and topics take so much of your CCP time.
- 41. What do you view as the major accomplishments of your team during this current school year?
- 42. In what ways does the school principal or other district administrator (e.g., curriculum specialists, superintendent, middle grade supervisor, and so on) influence your CCP work?
- 43. Describe the most effective use of CCP (what teachers would be doing and so on) in an ideal school setting.

Final Question (Wrap-up)

44. Is there anything you would like to share with me that I did not ask?

I want to thank you for spending this time with me and sharing your thoughts and understandings about CCP. You have made a significant contribution to research on CCP. Again, thanks for sharing your perspective and experiences.

Caughell, Matthew (DISTRICT OFFICE Teacher)

 From:
 Mertens, Steven <smerten@ilstu.edu>

 Sent:
 Thursday, May 2, 2019 10:33 AM

 To:
 Caughell, Matthew (DISTRICT OFFICE Teacher)

 Cc:
 caskeym@pdx.edu; nflowers@illinois.edu

Subject: RE: Request to Use Research Instruments for Qualitative Dissertation

Matthew,

Thank you for your email.

You are more than welcome to use the data collection protocols presented in the Common Planning Time volume. Our intent in publishing the protocols was to make them available to future researchers interested in exploring the topic of common planning time in middle level schools.

We wish you the best of luck in your doctoral studies. Should you have any questions about the protocols, please feel free to contact us.

Best wishes,

Steve Mertens

Steven B. Mertens, Ph.D.
Professor, Middle Level Education
School of Teaching & Learning
Illinois State University
Normal, IL 61790
(309) 438-8182

(309) 438-8182 smertens@ilstu.edu



From: Caughell, Matthew (DISTRICT OFFICE Teacher) [mailto:mcaughell@dorchester2.k12.sc.us]
Sent: Thursday, May 02, 2019 8:10 AM

To: Mertens, Steven; vanfara@utk.edu; caskeym@pdx.edu; nflowers@illinois.edu Subject: Request to Use Research Instruments for Qualitative Dissertation

[This message came from an external source. If suspicious, report to abuse@ilstu.edu]

Steven Mertens, Vincent Anfara Jr., Micki Caskey, and Nancy Flowers,

I enjoyed reading the book Common Planning Time in Middle Level Schools. I am currently enrolled in the doctoral program at the American College of Education. For my dissertation, I am conducting a qualitative case study exploring practices and perceptions of team of teachers working collaboratively to plan curriculum. The study will focus on teams of teachers within the same grade level and content area collaboratively planning. Middle school teachers in each district school are provided two periods per week to plan collaboratively.

I would like to request permission to please use instruments located in the appendix of the book Common Planning Time in Middle Level Schools to conduct my dissertation study. The Common Planning Time Observation Protocol (Appendix A), Description of Observed Behavior (Appendix B), and Common Planning Time Interview Protocol (Appendix C) would all be excellent instruments to conduct my study. Only slight modification to the instruments will be made to adapt it from interdisciplinary teams of teachers to teams of teachers planning in common grade levels and content areas.

Thank you,

Matthew (aughell Middle School Social Studies Interventionist Dorchester District Two mcaughell@dorchester2.k12.sc.us 112 Joyce Lane Summerville, SC 29483

Appendix G: Site Approval from School District

From:	
Sent: Friday, November 8, 201	
To: Caughell, Matthew (DISTR Subject: RE: Dissertation	ICT OFFICE Teacher) <mcaughell@dorchester2.k12.sc.us></mcaughell@dorchester2.k12.sc.us>
Subject: RE: Dissertation	
Hey Matt,	
Sorry this has been a hard pro	cess, but our board policy really ties our hands. I can assure your university of the following:
	s to fully consider/review the proposal after receiving formal approval by the ACE IRB, and our high-level review of the clude any significant concerns at this time.
Please let me know if you have	e additional needs and good luck!
Ed.D	
Executive Director of Seconda	ry Schools