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FOSTERING A SENSE OF COMMUNITY AMONG TEACHERS

VIA A COMMUNITY OF PRACTICE:
A MIXED-METHODS ACTION RESEARCH STUDY

DISSERTATION

A dissertation submitted in partial fulfillment of the
requirements for the degree of Doctor of Education in the
College of Education
at the University of Kentucky

By

Apryl Clark Moore

Lexington, Kentucky

Director: Dr. John Nash, Professor of Education

Lexington, Kentucky

2021

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ABSTRACT OF DISSERTATION

FOSTERING A SENSE OF COMMUNITY AMONG TEACHERS VIA A COMMUNITY OF PRACTICE: A MIXED-METHODS ACTION RESEARCH STUDY

Communities of Practice (CoPs) are learning communities that can improve the skills and knowledge of teachers and improve a sense of community. CoPs are designed to cultivate relationships among teachers and develop professional practices that increase a sense of community and knowledge attainment. This study examined the use of an online CoP to increase teachers' sense of community during the COVID-19 global pandemic. Teachers joined a private online community and shared resources about classroom management strategies.

A mixed-methods action research approach was adopted for this research study. Quantitative data was captured from pre- and post-intervention surveys that collected information about teachers' sense of community. The information was triangulated with qualitative data from pre- and post-intervention interviews. The mixed-methods research design provided more in-depth information than could be captured by utilizing only quantitative or qualitative data. The online community of practice was partly designed by participating teachers.

The study's results showed that teachers' improved their overall sense of community after participating in the CoP, particularly in three subscales related to community sense (e.g., reinforcement of needs, membership, and influence). The study results imply that online CoPs are an effective strategy to improve teachers' sense of community.

KEYWORDS: Sense of community, a community of practice, teacher-based community, teacher community, virtual sense of community, virtual community of practice

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7/05/2021

FOSTERING A SENSE OF COMMUNITY AMONG TEACHERS VIA
A COMMUNITY OF PRACTICE:
A MIXED-METHODS ACTION RESEARCH STUDY

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July 5, 2021

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DEDICATION

I dedicate this dissertation to my family that has helped me realize my dream of obtaining a doctorate.

First, without my parents' love, support, and encouragement, I will undoubtedly have not completed this journey. To my mother, May Clark, thank you for always telling me "nothing is as bad as it seems." This sentiment had helped me through dark times when I was unsure of my abilities and wanted to move on from the doctorate journey. Your wisdom has carried me through, and I will forever be appreciative of your love and support. To daddy, my only regret is that you are not around to see me complete this journey, but I know that your spirit carried me to the finish line. Thank you for always instilling the value of education in me and motivating me to "go for it."

Angella, my twin sister, thank you for watching your niece every time I had to go to Lexington for class. I know you didn't sign up to be a weekend babysitter, but you supported my journey the entire way. This degree is for both of us.

When I started this journey, Kimberly, you were a child; now you are a young woman. I appreciate you encouraging me to keep going, even if it meant spending nights on the computer and being an exhausted mommy. I hope my journey inspired you to chase your dreams, no matter how impossible they may seem.

Jeff, thank you! Thank you for being you.

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CHAPTER 1: Diagnosing the Problem of Practice

Teachers are an integral part of the education system and play a significant role in students' academic, social, and emotional development (Lei, Cui, & Chiu, 2018; McCaughtry et al., 2006). One approach teachers use to maintain their professional edge, and share knowledge and skills with each other is through participation in learning communities. In teacher learning communities, groups of teachers collaborate to improve their teaching practices for the betterment of students (Kilpatrick, Barrett, and Jones, 2003). Teacher learning communities impact the school community by positively influencing a teachers' sense of community through mutual learning, sharing of information, and collaboration (Battistich, Solomon, Watson, & Schaps, 1997). A teacher's sense of community is important because it impacts job retention, job satisfaction, and student outcomes (Glenn-Jones & Davenport, 2018; Strike, 2010).

School leaders have often relied on learning communities to support teachers in their learning practice because they are designed to reduce isolation and promote collaborative learning. Yet some school districts do not implement them successfully (Dufour & Eaker, 1998; Senge, 2000). School leaders face challenges in designing teacher learning communities that support teachers' instructional needs and provide an experience that fosters community. These challenges manifest in different ways, including differences of opinion among leaders and teachers of the purpose, membership, and structure of the learning community (Blakenship & Ruona, 2007).

The purpose of this mixed-methods action research (MMAR) study is to examine the impact of a teacher learning community, conceptualized as a community of practice (CoP), to increase teachers' sense of community during the COVID-19 global pandemic. This chapter provides the setting for this study, an overview of my organization, and my role and responsibilities within the organization. A description of the Diagnosis Phase, including

stakeholder conversations, institutional review of data, and a literature review surrounding the pinpointed problem of practice and chosen intervention, is provided.

Study Context

Study Setting

In this section I will describe the study context, which is of particular importance to the study design. This time period in which this study took place was June 2020 to May 2021, a period during which the COVID-19 pandemic impacted the global, national, and regional lives of millions. This study began with Maplewood City Public Schools (MCPS, a pseudonym), the largest school district in the state. I am employed by MCPS as a central office district-level resource teacher. It is within MCPS that I intended to execute all phases of the MMAR sequence. However, due to shifts in MCPS policy regarding its use as a research site during the COVID-19 pandemic, accommodations were made to conduct the study in an online environment with teacher participants inside and outside MCPS. Below I describe the initial setting design, the subsequent redesign, and my role in the study.

Study Setting Background

Initial Setting Design. This study was originally designed to take place in the MCPS school district, the largest school district in the state. The plan was to recruit MCPS teachers to join an in-person CoP. Teacher recruitment would have occurred through several email communications using the district-wide email system and the CoP meetings would have been held in a MCPS building. However, during the pandemic MCPS' internal research review policies became more restrictive and the setting for this study was moved online. Also, the restrictions led to the broadening of participants eligible for the study to include teachers outside of MCPS.

Present Setting Design. In lieu of an in-person intervention within MCPS, an online intervention was designed. The Diagnosis Phase of this study was conducted in MCPS. Participants for this study were classroom teachers who were recruited via teacher-focused Facebook groups and a student listserv of the flagship university's educational leadership program. A page on Facebook's platform was used during the Acting Phase (intervention) to convene the CoP, communicate with the study participants, and share resources such as links to podcasts and documents.

Stakeholders

Researcher's Role

I am a district-level resource teacher for the largest school district in the state in which the study took place. My district, MCPS, has over 6,000 certified teachers serving over 130 schools from K-12 grade levels. Since joining the district, I have been a classroom teacher, school-level resource teacher, and currently a district-level resource teacher. As a district-level resource teacher, my job duties include providing support to administrators and teacher leadership teams by designing, preparing, and delivering professional development and training.

During the COVID-19 pandemic of 2020-2021, my work shifted from face-to-face interactions with colleagues via video conferencing tools such as Zoom and Microsoft Teams and learning management systems such as Google Classroom. All training and meetings happened in an online space, and I became accustomed to working with educators using distance learning technology. My work in an online environment, and my experiences facilitating professional learning activities (e.g., training, professional development, consultations), helped me carry out the action research phases of this study.

My current role is both an advantage and a disadvantage for this research study. My experiences as a classroom teacher helped me relate to teachers through a common shared

experience. On the other hand, because my current position is a district-level leadership position, study participants, particularly those who may be teachers in my school district, could find it a challenge, to establish rapport with me. To mitigate any challenges, I informed the MCPS participants that I do not evaluate and have supervisory duties over them. Additionally, I ensured participants that their identities would not be revealed in the study.

Diagnosis Phase: Problem of Practice

In my review of MCPS teacher satisfaction data, I found that, over a five-year period, an increasing number of teachers did not feel they had a sense of community. From 2013-2018, the percentage of teachers lacking a sense of community increased from 3% to 10%. The steady increase highlighted for me a need to increase the number of teachers feeling a sense of community with others. A solution to the problem would benefit me as an employee, MCPS teachers, school staff and students. In this section I discuss the overall study design and describe the stakeholder groups that have an interest in the outcome of this study.

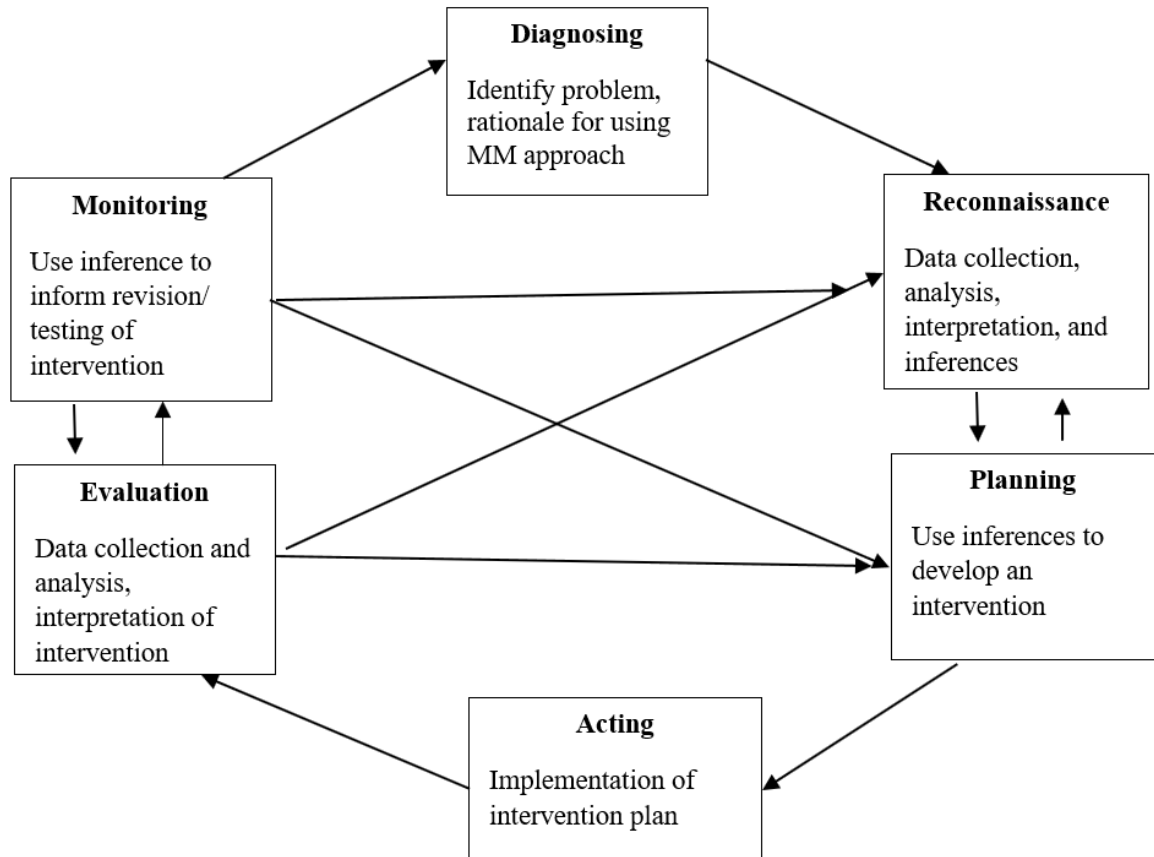
Overall Study Design

This study followed the phases of a mixed methods action research (MMAR) project. Mixed methods involves the intentional collection and integration of quantitative and qualitative data. The triangulation of multiple data types and sources is a central component of mixed methods research (Ivankova, 2015). The advantages of using mixed methods include providing “a comprehensive initial assessment of the problem, a solid plan of action, and...a rigorous evaluation” of a chosen intervention (Ivankova, 2015, p. 58). In an MMAR study, research questions are developed and examined from a quantitative and qualitative perspective, which provides more compelling evidence than if there was only one data source. A key feature of mixed methods action research is its aim to assist an insider within an organization to solve a problem of practice.

The action research cycle involves inquiry and self-reflection. In this dissertation I cycle through phases of Diagnosing, Reconnaissance, Planning, Acting, Evaluation, and Monitoring to complete an action research study. Figure 1.1 shows an illustration of the framework for mixed methods action research, followed by the description of each phase.

Figure 1. 1

Methodological Framework. This figure illustrates the framework for this action-research dissertation. Adapted from frameworks recommended by Ivankova (2015).



Diagnosis phase of action research

Mixed methods action research is an iterative process that begins with the diagnosing phase. During this phase, the action researcher identifies a problem within an organization. Preferably, the organization is one in which the action-researcher is employed or has a connection. Identifying a problem is generally a collaborative process with feedback or input from stakeholders of the organization. The researcher has to ensure the problem can be solved

and addressed within the confines of the researcher's job duties or scope of influence (Ivankova, 2015).

Reconnaissance phase of action research

As the second phase of action research, the Reconnaissance Phase aims to assess the problem identified during the Diagnosing Phase (Ivankova, 2015). Known as the "fact-finding" phase, the researcher takes time to gather information from different sources for the purpose of developing a plan of action/intervention. Sources include talking with people, looking through institutional documents, reviewing the literature, and observing meetings. Consulting these data help the researcher learn more about the need to develop a plan of action related to the problem of practice. An initial determination of the problem of practice is made, after which research questions are formed, and a mixed-methods design is selected. Data collection methods are determined and participants are recruited for the study. Decisions on how and when to analyze data and validate results are made. The respective results arising from the mixed methods, along with meta-inferences arising across methods inform the Planning and Acting phases.

Planning and acting phase of action research

Based on inferences from the Reconnaissance Phase, a plan of action is developed. The Planning Phase requires the researcher to create action objectives and design interventions. The intervention design depends on the information gathered during the Diagnosis and Reconnaissance Phases and other considerations such as the researcher's organizational and professional time constraints and scope of job duties. The Acting Phase consists of implementing an intervention that helps the researcher answer the research questions for the intervention.

Evaluation and monitoring phases of action research

After the intervention's conclusion, the Evaluation Phase involves a rigorous interpretation of the data collected based on the study design. Data gathered and analyzed during the Evaluation Phase advise the monitoring phase. Based on meta-inferences from the interpretation of data from the Evaluation Phase, the researcher presents findings to stakeholders about the effectiveness of the intervention. During a Monitoring Phase, the researcher reflects on the research process and recommends the intervention's fate moving forward.

Diagnosis Phase

Diagnosing the problem of practice for this study began by looking within my organization to identify a problem area that required a solution. In 2019, as I began the transition to my current role, I started looking at institutional data about culture and climate. I noticed the dwindling number of teachers who indicated they felt a sense of community within MCPS. This prompted me to look further at the data. Between 2013 and 2018 there was a steady increase in the number of teachers indicating they do not have a sense of community with their school. In 2013, the percentage of teachers with a sense of community was 97% and in 2018 it had declined to 90%. The data raised the following question: how can teachers foster a sense of community?

Because of the nature of my job, I was interested in working with groups of teachers or leadership teams to address the issue of teacher sense of community. After reviewing institutional data and speaking with stakeholders, the decision was made to find a way to foster teacher community.

District Data

The findings from a review of comprehensive district survey data revealed a decline in the number of teachers who indicated they feel a sense of community with their colleagues

(MCPS Data Management, 2018). Teachers are surveyed yearly and asked their opinion about the following construct areas: sense of community, curriculum and assessment, school resources, school governance and school safety. Over five years, the percentage of teachers indicating they do not feel a sense of community with their colleagues has grown from 3% to 10%. The overall trend from the district shows there is room for improving teachers' sense of community.

Conversations with Stakeholders

Stakeholders were involved in the Diagnosis Phase because they provide context to the problem of practice and would benefit from the study results. Stakeholders consulted for this study include district administrators who work with principals, principals who supervise teachers, and teachers. My conversations with stakeholders took place during an MCPS professional development workshop series entitled *Rebuilding Communities: The New Normal* held during June, July, and August of 2020. The workshop sessions included agenda items centered on the impact of the COVID-19 pandemic on local school communities, strategies to strengthen communities, and ways to create connections in a virtual environment. The workshop sessions were offered three separate times, with one time slot dedicated to district administrators, school principals, and classroom teachers respectively. This role-based design allowed participants to freely give within-group opinions and discuss broadly the aspects of school communities, including ways to improve teacher communities. Attendees included administrators, principals and teachers from across Kentucky, including MCPS. As part of my MCPS obligations, I was required to attend all three sessions and thus used the opportunity to converse with stakeholders. The format allowed for open discussion several times during the workshop. Through conversations with me, stakeholders discussed their perceived challenges, concerns, and optimism about building communities for the 2020-2021 school year.

Conversation Structure

The format of the professional development workshop comprised of a plenary presentation by a guest speaker to district administrators, school principals, and classroom teachers. The presentation was followed by time for an open discussion during which participants could ask questions of the presenter and each other. It was during the time for open discussion that I was able to ask questions about the stakeholders' perceived needs and types of support needs they desired to prepare for the new school year. What follows is a summary of my conversations with each stakeholder group.

District administrators. District-level administrators hold titles such as assistant superintendent, department executives, and program managers. They provide support to school-based principals. The administrators I talked to agreed that strengthening school communities is essential to ensure teachers and students are supported. The administrators admitted there should more focus on teacher communities because they perceive it has a cascading impact on students and their communities. An administrator stated that they are relying on 'strong teachers' to help students who may return to school with trauma. At the end of the sessions, administrators concurred that teacher communities should not be neglected and ought to be revised to fit the challenges that were arising with teaching during a pandemic. The group suggested that school structures should be put in place that foster teacher community whether it be face to face or via distance learning technologies.

School principals. Principals from across MCPS oversaw many teacher communities attended the workshop. Most agreed teachers might face barriers to connecting with other teachers during the pandemic. The principals suggested that teaching from home removed the ability to collaborate in person at school, and this impacts teacher-to-teacher relationships. The principals

felt that teachers need to feel connected and supported in their teacher communities. At the same time, the principals, were unsure how to do so.

School principals expressed frustration due to their uncertainty as to whether they would have the resources to support teacher community building. Most school principals were concerned about providing the adequate time needed to dedicate to teacher communities. They contended that teachers may have less time to focus on their teacher professional communities because of the new time demands emanating from online teaching and balancing home life. Principals said that synchronous teaching time would increase, from the previous semester, and this was perceived as an obstacle to strengthening teacher community efforts, especially if the teaching schedule brought on by the pandemic does not leave time for teachers to connect in a meaningful way.

Classroom teachers. Teachers who attended reported they were interested in connecting with other teachers, but they wanted the flexibility to choose their communities and provide input on the content and meeting times. Teachers expressed worry about connecting with colleagues and their ability to combat feelings of isolation while teaching from home. There was consensus among the teachers that teacher communities were important to them, but a perceived lack of input into the decision-making process regarding how teacher communities could be formed and sustained added to their feelings of stress. While there was no consensus on the strategies to address their concerns, they agreed that flexibility and interest-based communities would be beneficial.

District strategies

While interest in supporting teacher communities is expressed in its district strategic plan, most teacher community work is addressed at the school level. I did not find evidence of any

oversight at the district level, merely a requirement for schools to form professional communities as published in the district PLC framework manual for 2019. The formation, structure, and time within the communities are left up to individual schools and must comply with the teacher union's instructional time frames. My examination of district-led professional development sessions revealed eleven sessions related to school-community and community-building efforts were offered from July 2019 to March 2020. From July 2020 to December 2020, six sessions were offered. Every session was focused on building student communities. There was no session geared specifically for creating, sustaining, or fostering community among teachers.

Teacher Sense of Community Supporting Literature

Search Terms

An initial online search into community-building strategies for teachers resulted in team-building research articles. However, through further review, I discovered that team-building and community-building are not the same, although they are often, incorrectly, used interchangeably (Nirenberg, 1994). After revising my search terms to include McMillan and Chavis' (1986) subscales of a sense of community, I found that CoPs are learning communities that provide benefits for participants (teachers) and organizations (school districts), including fostering a sense of community. My review into the sense of community resulted in reading published work about the term community, the psychological sense of community, and CoPs. An overview of the topics mentioned above and my rationale for choosing a teacher CoP as the intervention for this study are presented in the sections below.

Defining Community

The term community has different meanings depending on the context. In its most basic sense, a community is defined as a group of people living in a physical setting. The specific area

can be a neighborhood, corner, street, highway, zip code, city, county, or any other locale defined by a boundary (MacQueen et al., 2001). Geographical communities are usually determined by local governments or census data that regulate boundaries (Onyx, Jenny, & Bullen, 2000). In a broader sense, a community is an environment where people interact. In recent descriptions, social scientists have expanded their definitions of neighborhoods beyond the geographical location within a town or city. A community is inclusive and present in various environments such as agencies, local organizations, schools, and online groups. People within the community vary in their preferences and may find themselves obtaining their needs and desires differently. Therefore, the community must provide for differences in the needs and desires of the people within.

It is recognized that communities take many forms, not all tied to a location (Aronson et al., 2013). The broader description of community aligns with other narratives of community that focus on the characteristics of human relationships. For example, a community can consist of people who participate in shared decision-making and have interpersonal relationships (Bellah et al., 1985). A community can refer to human relationships without mentioning a specific location or describe a set of people who share the same beliefs and values (McMillan & Chavis, 1986; Obst & White, 2007). Community is where the people involved, often referred to as members, have empathy and understanding that allows other members to express themselves without fear of retaliation and mocking (McMillan, 1996). “Communities have strengths, such as individual members, social networks, social support, social capital, and their capacity to identify and solve their own problems” (Aronson et al., 2013, p. 1). Efforts to foster community may come in professional or social efforts, including strengthening work-related structures or communal activities.

Teacher Community

Teachers have often been placed in learning communities by school principals (Dooner, Mandzuk & Clifton, 2007; Hord, 1997; Morrissey, 2000; Vescio et al., 2007). The place is usually based on organizational factors such as grade level, subject areas, and experience level. The grouping is often called a community but doesn't always function as such nor possess the characteristics required for teachers to foster a sense of community (Grossman et al., 2000). The involuntary placement of teachers can support teachers' capacity, but it does not directly address the elements needed to foster a sense of community (Vescio et al., 2007). For example, the 'traditional' grouping of teachers does not consider how teachers forge bonds, deal with conflict, develop trust, or address participants' interests (Grossman et al., 2000).

Research shows that the social aspects are just as important as the learning aspects within a professional community (Achinstein, 2002; Bryk & Schneider, 1996; Manning & Saddlemire, 1996). The teacher community is unique to the context in which it is situated and should be defined based on participants' ideas and interests, not just physical location, subject area, or other broad categories. The extent to which teachers feel a sense of community depends on relationships with other community members and how the community is structured (Kruse & Louis, 1993).

The Psychological Sense of Community

The psychological sense of community is a concept in community psychology that centers on the inclusion of elements deemed necessary to establish and maintain a sense of community. There is no universal definition for a sense of community. However, descriptions of this term include overlapping elements. For example, Westheimer and Kahne (1993) described the sense of community as the result of people deliberating and interacting, brought together by

similar interests and common goals. Their inclusion of collaboration and commonality is consistent with Graves's (1992) description, including establishing an environment where people work cohesively to benefit the collective group. Also, Graves (1992) claimed that building a sense of community requires reflection and respecting the individual differences people bring to the collective group. The consensus is that building a sense of community is based on experiences rather than geographical location.

Because the ability to create community depends on a group of people associating with each other and developing a relationship, McMillan and Chavis (1986) described four elements needed to develop, strengthen, and affirm a sense of community. The elements are reinforcement of needs, membership, influence, and shared emotional connection. Reinforcement of needs refers to the fact that members are rewarded for their community participation. Individuals must bring something of value, and they expect something of value in return. Membership refers to individuals' desire to have a shared sense of belonging and investment in a group. Members believe they have a right to belong and have a shared sense of faith that the group is working in the interest of its common goals. Membership includes having satisfaction, trust, and commitment while making a personal investment in their community (Ki & Hon, 2012). Members with a personal investment are attracted to the community and become influencers. As influencers, they have some control over what the group does. Frooman (1999) describes influencers as people who know who they are, what they want and engage in strategies for achieving their goals. A shared emotional connection describes the community's commitment and belief that members continue to share history, engage in similar experiences, and spend time together.

Teachers Sense of Community

Schools benefit when teachers have a sense of community (Rovai, Wighting, & Liu, 2005). There is increased satisfaction, lower attrition, and increased student outcomes (Bryk & Driscoll, 1988; Newmann & Wehlage, 1995). “A strong sense of community in schools, reflected by shared expectations and supportive relations among staff members, may facilitate teachers’ instructional efforts and enhance their well-being” (Royal, DeAngelis & Rossi, 1997, para.1.). Students are the ultimate benefactors when teachers improve their instructional strategies (Guo, Kaderavek, Piasta, Justice & McGinty, 2011; Harfitt, 2018; Leonard & Leonard, 2005). A sense of community contributes to the school environment through psychological connections and identifying with others (Glenn-Jones & Davenport, 2011; Lewis, Schaps, & Watson, 1996; McMillan and Chavis, 1986). When there is a connection, relationships are formed that influence how teachers behave and their perceptions about work (McLaughlin, 1992). The connections lead to reduced feelings of isolation (Blanchet & Bakkegard, 2018; Freeman, 1993; Nelson, Caldarella, Adams, & Shatzer, 2013).

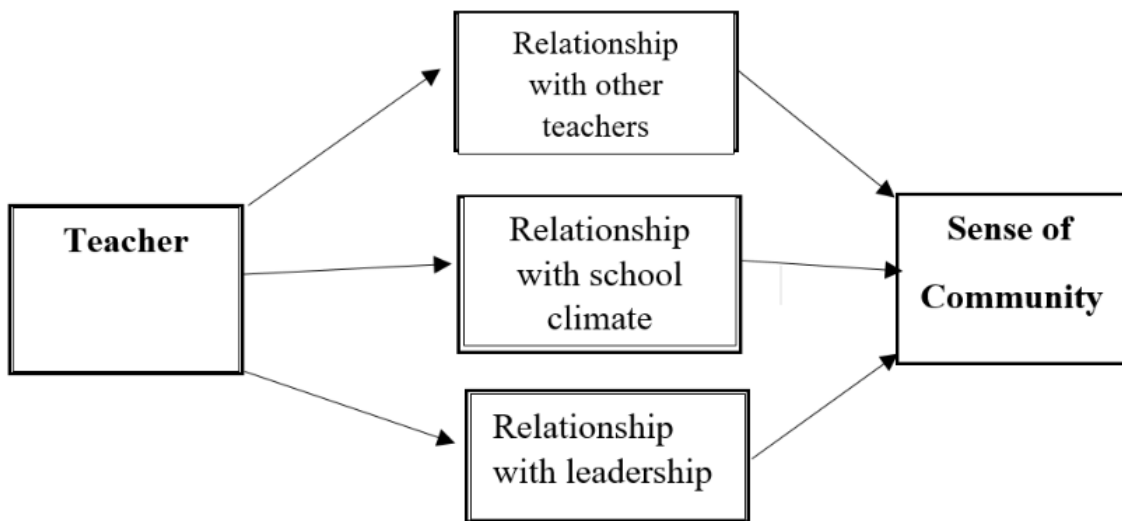
Sense of community refers to how an individual feels psychologically connected, supported, and included by other people in their community (Pesonen, Rytivaara, Palmu, & Wallin). In an educational setting, a sense of community refers to the “extent to which teachers feel respected and supported by their colleagues” (Pesonen, Rytivarra, Palmu & Wallin, 2016, p. 2). Having a sense of community is crucial because it addresses a basic human need (belonging) and helps with motivation (Ryan & Deci, 2000). The relationships teachers have with each other, administrators, and the school climate contribute to their sense of community (Ghamrawi, 2011; Skaalvik & Skaalvik, 2011). School climate refers to teachers feeling valued and a part of the

school. Figure 1.2 shows a model of teachers' sense of community and the relationships between colleagues, leadership, and school climate.

Figure 1. 2

Teachers' Sense of Community Relationships

A model of teachers' sense of community and relationships between colleagues, leadership, and school climate. Adopted from Juvonen (2006).



The study of the relationships teachers have to others is not new to the research world (Goodenow, 1993; Skaalvik & Skaalvik, 2011). Researchers have studied the relationships between teachers (Goodenow, 1993), teachers and administrators (Poole, 1995), and teachers with students (Hughes, 2011). The relationships people have contributed to their personal experiences and influence their feelings about their environment (Hagerty, Williams & Oe, 2002).

Fostering a sense of community takes intentionality and courage. Sergiovanni (1994) wrote, “there is no recipe for building community. No correlates exists to implement. There is no list available to follow, and there is no package for trainers to deliver” (p. 218). Fostering a sense of community can look differently for different circumstances, but there is uniformity to the actions. Manning and Saddlemire (1996) shared that educators interested in building a sense of community consider the following questions: (a) who are we? (b) what can we do together? (c) how can we do our best? and (d) how can we help others? Administrators tend to foster teachers’ sense of community within the larger school environment (e.g., school-wide initiatives) instead of more minor, collaborative relationships (Gizer, 2018; Juvonen, 2006).

Social Connectedness. In 1987-1988 and 1993-94, two large-scale surveys conducted by the National Center for Education Statistics found teachers’ relationships with colleagues influence a sense of community (Royal, DeAngelis, & Rossi, 1996). Fifty-five percent of teachers surveyed reported that their colleagues' relationships were directly related to their sense of community. Hoy & Sweetland (2001) found similar results with a study of teachers across the United States, describing an increase in teachers’ sense of community when structures enabling teacher relationships were present. The relationships teachers have with other teachers can differ depending on the structure of school learning communities. Research on teachers in learning communities suggests that attention should be given to improving instruction and relationship building (Bieler, 2012; Wang, Haertel & Wahlberg, 1994).

A Virtual Sense of Community

A community can go beyond the physical manifestations of face-to-face interactions. Researchers have explored the notion that people can feel a sense of community in a virtual environment (Tonteri et al., 2011; Roberts et al, 2002). During the beginning stages of the online

era in the 1980s, critics feared that virtual interactions would lead to isolation rather than building a community (Rheingold, 1993). However, as people connect more with others through virtual communities, they are more likely to feel a sense of connection with others and benefit from online relationships (Wellman & Guilia, 1999).

Virtual communities are becoming more critical because of their ability to connect people beyond their place-based communities (Forster, 2004). A person's feeling or sense of community within an online social group taps the same emotional elements of face-to-face communal experiences. To experience a virtual sense of community is the online equivalent to a sense of community that happens in-person, in both definition and theory (McMillan and Chavis, 1986). Blanchard (2004) states that the same terms and conditions apply when defining communities in the virtual environment for face-to-face communities. Virtual communities that foster a sense of community include the same characteristics as physical communities, including reinforcement of needs, membership, influence, and a shared emotional connection (Blanchard, 2004). Facilitators of virtual communities influence the participant's sense of community by guiding discussions, setting up activities, and recognizing member participation (Hewagamage et al., 2011). The shift over time about virtual communities' benefits has set the stage for professional organizations' use.

A Community of Practice

The term "community" within a CoP refers to "a collection of individuals working together for a common purpose within an organization" (Blakenship & Ruona, 2007, p. 4). CoPs differ from other professional communities, such as professional learning communities (PLCs), because participation is voluntary. Participation in a professional community through employment can lead to less engagement and participants not seeing a meaningful connection

between their work in the community and the impact on students (Mulford, 2003; Vance, 2006).

On the other hand, teachers participate in CoPs for personalized learning and, in the process, develop a sense of connectedness with other members (Pyrko, Dorfler, & Eden, 2016).

Additionally, CoPs are different than communities of interest (CoI). A CoI is an interest based community that is not aligned to a workplace (Henri & Pudelko, 2003). Members of a CoI have a shared interest but may not have any other similarities and there is no expectation of expanding or sharing knowledge (Henri & Pudelko, 2003).

A CoP has been utilized in educational settings as a plan of action to support teachers (Jimenez-Silva, & Olson, 2012; Lee, Jung, Shin, Otterbreit-Leftwich & Glazewski, 2020; Tsai, 2012). Wenger, McDermott & Snyder (2002) describe short and long-term benefits for the organization and individual. With the implementation of CoPs, organizations and individual teachers benefit from the increased sense of community between participants, increased knowledge, and improved skillsets (Azorin, 2019). In the short term, teachers get immediate feedback, answers to time-sensitive questions, and input from other teachers with similar interests. In the long-term, schools and teachers benefit from knowledge-rich, reflective, and professionally developed teachers.

A CoP is defined as a group of people bound by their work and the knowledge they gain from doing it (Wenger, 2008). Riel (1996) described a CoP as people who share ideas, activities, or tasks. People seek a community with others who share the same passions. Riel states, “still, the value of community is more than affirmation, it involves a search for different ideas, new strategies or practices that might help members re-think their ways” (p. 6). Membership in a CoP differs from a community of interest or geographical community based on the shared knowledge

of practice and learning that happens. Through collaborative learning, individuals are engaged with others.

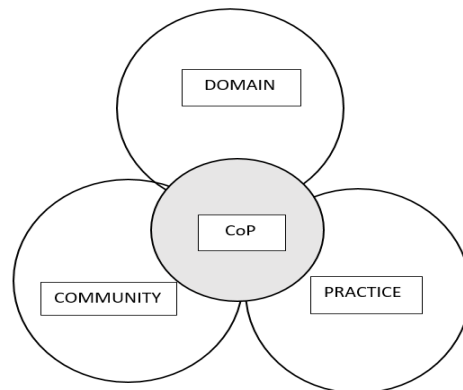
There are three components of a CoP (Wenger, 1998). Domain, practice, and community bring a unique aspect to a CoP and helps distinguish it from other collaborative groupings. The three components are essential to the successful implementation and maintaining of a CoP.

Figure 1.3 shows the relationship of each component to the overall CoP.

Figure 1. 3

Elements of a CoP

Adapted from “The Three Inter-related Key Elements of a Community of Practice.” Adapted from Wenger, 1998.



The domain is the shared interest a group of participants has in common. More than a group of friends or networks of individuals, participants (referred to as members) of a domain maintain a universally agreed identity based on individuals' interests. CoPs are comprised of voluntary members who are committed, share resources, and learn. Practice is the act of sharing experiences and expertise. Members are practitioners, and collective learning results in

community members advancing in their specific domain. Members develop a shared repertoire of resources such as experiences, stories, tools, and strategies for addressing problems. In pursuit of the interest specified in the domain, community members come together as a collective—activities where members engage in sharing and learning help to build relationships within the community.

In pursuit of their shared interest, members of the community come together through collaboration. People involved in the community engage in intentional, ongoing, and collaborative practices. Participation in a CoP may be fluid or informal, depending on the organization and the level of involvement from members. It is not usual for members to move from level to level as their time within the community extends. At any point in time, members can be labeled as core, active, occasional, peripheral, or transactional. Moving between the groups and varying levels of participation is key to the natural development of a CoP. The most dedicated members of the team are considered core members. These individuals are primarily responsible for chartering, operating, and marketing the community. They take on the additional responsibility of nurturing the community to keep it operational and beneficial for all members. Although the community may be derived from diverse people, the core team is the members that ensure the community fits all its members' needs based on the desired domain. The core members make up the smallest group of the community. Active members work closely with the core team and help create the mission, vision, roles, and strategies. They are supportive and help shape the direction of the CoP. They actively participate in meetings, designated projects, and other desired events. The largest group of the community, occasional members, participates when a specific topic they are interested in or when they have something to contribute. They are invested in the community but only participate when a specific meeting, event, or project is

directly related to a specific interest. Unlike occasional members, peripheral members do not participate regularly but still feel they have something to contribute. New members and those with a primary interest are generally placed in this category. They are supportive of the group but remain mostly observers and engage in activities on an occasional basis. The most negligible participation comes from people who feel they are the least connected to the community, referred to as transactional members. Still considered community members, they acknowledge the group and utilize the community to obtain resources or provide a specific service.

CoPs are social structures that require continuous work so they can emerge and grow. Schools can create CoPs, but members foster the community, plan activities, create the environment, and sustain the community. Members sustain the community and define it over time (Cambridge, Kaplan & Suter, 2005). Once a purpose has been identified, the ‘recruitment of potential members begins. Members join if the community and its members share the same interest. An important aspect for a CoP is to develop relationships of trust, respect, and commitment. Relationships are developed through interactions that encourage sharing ideas, asking questions and supporting one another. Virtual CoPs rely on synchronous and asynchronous interaction to promote engagement between members. Teachers learn in a CoP by reviewing, sharing, or exchanging information with others. The information could be exchanged verbally, via documents, videos, or written communication (blogs, tweets, posts, etc.).

Virtual Setting: A Community of Practice

Globalization has changed the landscape for how teachers increase their knowledge, connect with colleagues, and obtain resources in the 21st century. In an era of online communication and connection, teachers are increasingly involved in more and more virtual communities. Virtual communities of practice are the online version of a CoP with all the same

components and expectations for knowledge and goal sharing. Kietzmann et al. (2013) explain that the relationship formed in communities of practice is reciprocal, establishes mutual engagement, and builds on shared norms.

Research shows that virtual communities of practice are beneficial to teachers for professional development (Duncan-Howell, 2007), building social community, advancing pedagogical knowledge (Gairin-Sallan et al., 2010) and teaching skills (Tseng & Kuo, 2014). Guldberg and Pilkington (2006) found virtual communities of practice effectively foster a sense of community among participants. Tseng & Kuo (2014) surveyed 400 teachers participating in a virtual community and found teachers not only indicated a sense of community but an increase in the willingness to share resources and help other participants with their problems. Research on teachers and virtual communities of practice shows they are beneficial and can be used as a strategy to foster a community (El-hani & Greca, 2012; Schlager et al., 2002).

Interest has been generated in the fact that virtual communities of practice are based in the real world. The connections and interactions are carried back to local communities. In-personal relationships are often moved to virtual communities and can be leveraged for continued, long-term benefits (Cooper et al., 2014). Virtual communities of practice allow for the transfer of information, support, and availability of resources at the convenience of the participants. As such, virtual communities can readily be used to connect local communities to global communities.

Much of the literature on CoPs have been on their contributions to achieving outcomes, such as knowledge management and a sense of community. These studies have considered the structure of the CoP and experiences within the community as important factors. The structure of CoPs is examined through a list of attributes usually related to the creation and maintenance of a

CoP (Lee, Jung, Shin, Ottembreit-Leftwich & Glazewski, 2020). Attributes of an effective CoP generally consist of the following: creation and adherence of norms (Hur & Bush, 2009), goal-setting (Hur & Bush, 2009), postings/communication (Ardichvill, Page & Wentling, 2003; Lee, Jung, Shin, Ottembreit-Leftwich & Glazewski, 2020), and resource sharing/teacher expertise (Karam, Straus, Byers, Kase & Cefalu, 2017; Lee, Jung, Shin, Ottembreit-Leftwich & Glazewski, 2020). The experiences within a CoP have been examined through teacher interviews (Hur & Brush, 2009) and online postings (Hur & Brush 2009; Karam, Straus, Byers, Kase & Cefalu, 2018). One study attempted to expand beyond the listed attributes to include technology acceptance (Tsai, 2012).

The Rationale for Choosing a CoP for Intervention

The decision was made to use a CoP as the intervention for this study because it lends itself to the organizational and social aspects needed to foster community. Fostering a sense of community is an intentional effort that requires input, support, and buy-in from members. A teachers' sense of community is a psychological concept that focuses on participant experiences and not just the structure of the community itself. CoPs are designed to connect, support, and cultivate the knowledge of members through participation. Reinforcement of needs, membership, influence and a shared emotional connection can be achieved when the CoP is created and maintained with the members' needs in mind. Through participation in the form of social learning that is a CoP, members form relationships through interactions. Members engage in activities with others to create a context for learning that supports their needs. The creation of activities and other supporting measures help to create a connection with others that can foster a sense of community (Bates & O'Brien, 2015; Wilson, 2018).

CoPs are grounded in the theory that learning occurs through social interactions. Therefore, teachers participating in a CoP are likely to create connections with other participants and feel a sense of community (Tallman, 2019). The connections and community building can happen in a virtual setting (Tonteri et al., 2011; Roberts et al., 2002) which lends itself to the current work situation of many teachers due to the pandemic.

Research Problem Statement

This study addresses the dilemma of how to foster teachers' sense of community. A review of district data showed that 10% of teachers had indicated they do not have a sense of community, increasing from 3% over five years. The increasing number of teachers caught my attention, primarily since I work in the culture and climate department, and a lot of the work we do involves the school community. Stakeholders indicated an interest in improving teachers' sense of community, especially since the pandemic had altered many of the customary community-building efforts within schools. Also, the change to online teaching and learning provided an opportunity to explore fostering a sense of community in an online setting. The online setting made accessing teachers and resources more accessible.

A CoP was chosen as the intervention for this study because of its supportive, flexible, voluntary, and engaging nature. CoPs provide an opportunity for teachers to share knowledge and support each other while connecting over having the same interests. As mentioned in the literature section above, teachers have relationships with each other, the school culture, and administrators. This study attempts to influence teachers' sense of community through teacher-teacher interactions. Teachers are familiar with professional learning communities, but this study sought to use a CoP as the learning community. The CoP can be easily facilitated by teachers

who volunteer to participate in in-person or through a virtual setting. The CoP is designed to meet the needs of the study's participants and provide valuable information to stakeholders.

Definitions and Terms

A review of the literature resulted in a list of terms that are directly related to this study. The following definitions provide context on how the terms are used in my research.

Community of practice: a group of people who share a common interest who fulfill an individual and group goal(s). It is stylized as CoP in this paper.

Community score: the sense of community score from the SCI-2 survey.

Fostering community: the act(s) of encouraging or promoting a sense of community among people. In this paper, terms such as building community, community-building, and strengthening community are used interchangeably to represent the fostering community

Intervention: the intervention used in this study is a community of practice structured in a private Facebook group. The intervention is referenced in the following ways throughout the paper: *the intervention, community of practice, the CoP, Facebook group*. The terms are used interchangeably.

Relationships: the connectedness of two people

Sense of community: a psychological concept describing the feeling of belonging and that one matters to their community. The focus is on the experiences within the community rather than the structure itself.

Sense of community index (SCI-2): a quantitative survey that gauges a person's sense of community. The survey is based on the theory presented by McMillan and Chavis (1986). It

measures the overall sense of community and the following constructs: reinforcement of needs, membership, influence, and a shared emotional connection.

Sharing of resources: the exchange of information via posts, video clips, or podcasts

General Study Plan

The purpose of this MMAR study is to foster a sense of community among teachers using a CoP. The Reconnaissance Phase aims to determine teachers' current sense of community score and determine teachers' needs when participating in a CoP. The quantitative strand provides the overall sense of community score and scores for subscales (e.g., reinforcement of needs, membership, influence, and a shared emotional connection) that make up the overall sense of community. The Reconnaissance Phases' quantitative data serves as baseline data and is collected before participation in this study's intervention, a CoP. The qualitative strand consists of interviews to gather information about participants' needs and wants. The interview informed the structure of the CoP. The integration of the two strands provided meta-inferences on participants' needs and the structure of the CoP.

The Evaluation Phase assessed the effectiveness of the CoP on teachers' sense of community. A sequential mixed methods design is utilized with priority given to the qualitative data. The Reconnaissance and Evaluation Phases used the same survey for the quantitative strands. Survey results were compared to see if there was a change in community score and sense of community subscales. The Evaluation Phase qualitative strand included a post-intervention interview used to evaluate the CoP. Mixed methods were utilized because it strengthens the results of the study.

Ethical Considerations

I completed CITI training and obtained IRB approval before the study began. Individuals were not identified beyond their school-related characteristics. No one has access to study data, and all my documents are stored and password protected.

Summary

Chapter one detailed the problem of practice for this study. The organizational structure, my role within MCPS, and overview of the MMAR design were presented. An overview of institutional data, stakeholder conversations, and a targeted literature review helped to provide context to the identified problem of practice and choose an intervention. The next chapter outlines the research questions and details the study design for this study's MMAR Reconnaissance Phase.

Chapter 2: Reconnaissance

Introduction

Teachers are an important part of the educational system. They have an important role in students' academic, social, and emotional development (Lei et al., 2018; McCaughtry et al., 2006). The nurturing of students' well-being is generally part of a school's culture and climate plan. Through meaningful interactions, teachers can form relationships that lead to positive outcomes for students and themselves. A teachers' sense of community is important to the overall school community. Based on finding from the Diagnosing Phase, this study focused on fostering a sense of community among teachers within a learning group, specifically a community of practice (CoP).

This chapter describes the overall study design, including an in-depth description of the Reconnaissance Phase for this mixed methods action research (MMAR). Special attention is provided to the Reconnaissance and Planning Phases of the framework. A description of the research questions and study strands is provided. Also, an overview and rationale for the chosen setting of the intervention are provided.

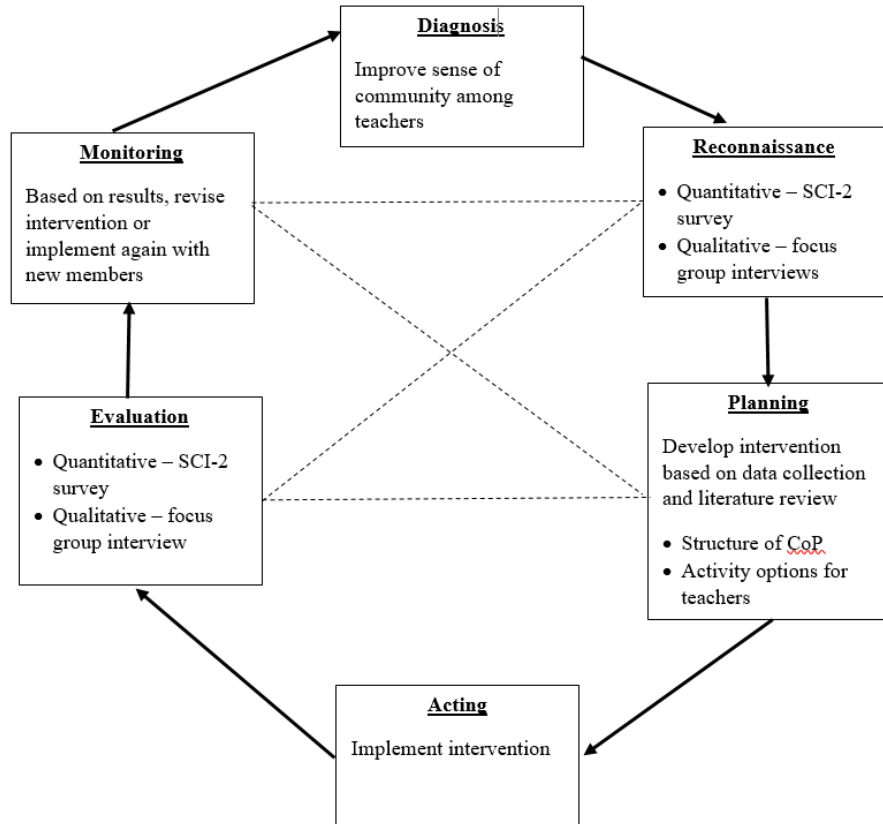
Overall Study Design

This study utilized a sequential explanatory quantitative + qualitative MMAR design (Ivankova, 2015) to create, facilitate, and evaluate a virtual community of practice (CoP) for teachers. The study aimed to explore the use of a CoP in fostering a sense of community among teachers. After receiving approval from the institutional review board, the teacher-based CoP took place during the spring semester of 2021. The MMAR framework is a six-stage cyclic process used to diagnose a problem, gather information through data collection, create a plan of action, facilitate an intervention, evaluate the intervention, and monitor. An explanation of each phase of the action research for this study is presented below in Figure 2.1.

Figure 2. 1

MMAR Methodological Framework.

This figure illustrates the framework for this action-research dissertation. Adapted from “Steps in Action Research Process” presented by Ivankova (2015).



Phases of MMAR

During the Diagnosis Phase, conversations with stakeholders, a review of literature, and reviewing school district data contributed to my decision to study teachers’ sense of community. Once the problem of practice was identified, fact-finding began during the Reconnaissance Phase. Pre-intervention data was collected using the SCI-2 survey (see Appendix A) and interviews. Data was collected sequentially, and survey data were used to tailor the interview

questions (see Appendix B). In a sequential explanatory design, the priority throughout data collection and analysis can be given to either the quantitative or qualitative approach (Creswell & Plano Clark, 2018). In this study, where the primary purpose was to understand how a CoP could be designed to improve teachers' sense of community, the priority was given to the qualitative data collection and analysis. The quantitative data that preceded the qualitative phase allowed me to understand how teachers perceive community and gain insight on questions that should be explored in the qualitative strand. The quantitative and qualitative Reconnaissance Phase data drove design decisions on the structure of the online CoP, such as the platform used, frequency of facilitator posts, topics of discussion, and length of time spent within the CoP.

Research Setting

Before the COVID-19 global pandemic, the research setting for this study was designed to occur inside MCPS, with sampling to occur in conjunction with internal MCPS research permissions and protocols. In the wake of the pandemic, MCPS indefinitely suspended all research data collection in MCPS schools and disallowed recruitment in environments exclusive to MCPS teachers, including recruitment via email and through intact teacher groups. The district also restricted most research and data sharing activities for the 2020-21 school year, including:

- faculty and graduate student research projects, including MCPS staff pursuing degrees
- new program implementation
- evaluation of existing programs
- virtual research and data collection on students (e.g., programs; surveys; interviews)

Thus, the study could not occur in a brick-in-mortar setting. I redesigned the study setting so that it could take place in a virtual setting via the popular online social media platform, Facebook. In doing so, the development, maintenance, and facilitation of the intervention, a CoP, was shifted from an in-person setting to an online setting.

Reconnaissance Phase

The Reconnaissance Phase is known as the fact-finding phase of the MMAR framework. It is the second phase of the MMAR framework, where an assessment of the identified problem is conducted to determine an intervention (Ivankova, 2015). During this period, teachers were recruited and qualified for the study, with qualified participants completed a quantitative survey before participating in an interview. The specific design, research questions, and data analysis used for the Reconnaissance Phase of this study are outlined below.

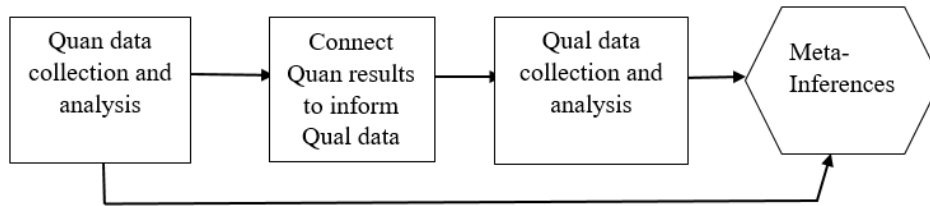
Phase Design and Research Questions

This study utilized a sequential quantitative + qualitative MMAR approach (Ivankova, 2015). There are pros and cons to using this design. In terms of pros, the sequential quantitative + qualitative MMAR design allowed me to explore the initial quantitative results in a way that drives the customization of questions posed in the qualitative strand. On the other hand, the wait time between the collection and analysis of quantitative and qualitative data extended the time of the study. The rationale for using this design was to use the quantitative survey data to tailor interview questions for participants to guide me in developing the CoP. A conceptual model of the sequential quantitative + qualitative mixed-methods study design is presented in Figure 2.2.

Figure 2. 2

Conceptual Model of Study Design

Conceptual Model of the Present Study's Sequential Quan + Qual MMAR Design (Adapted from Ivankova, 2015).

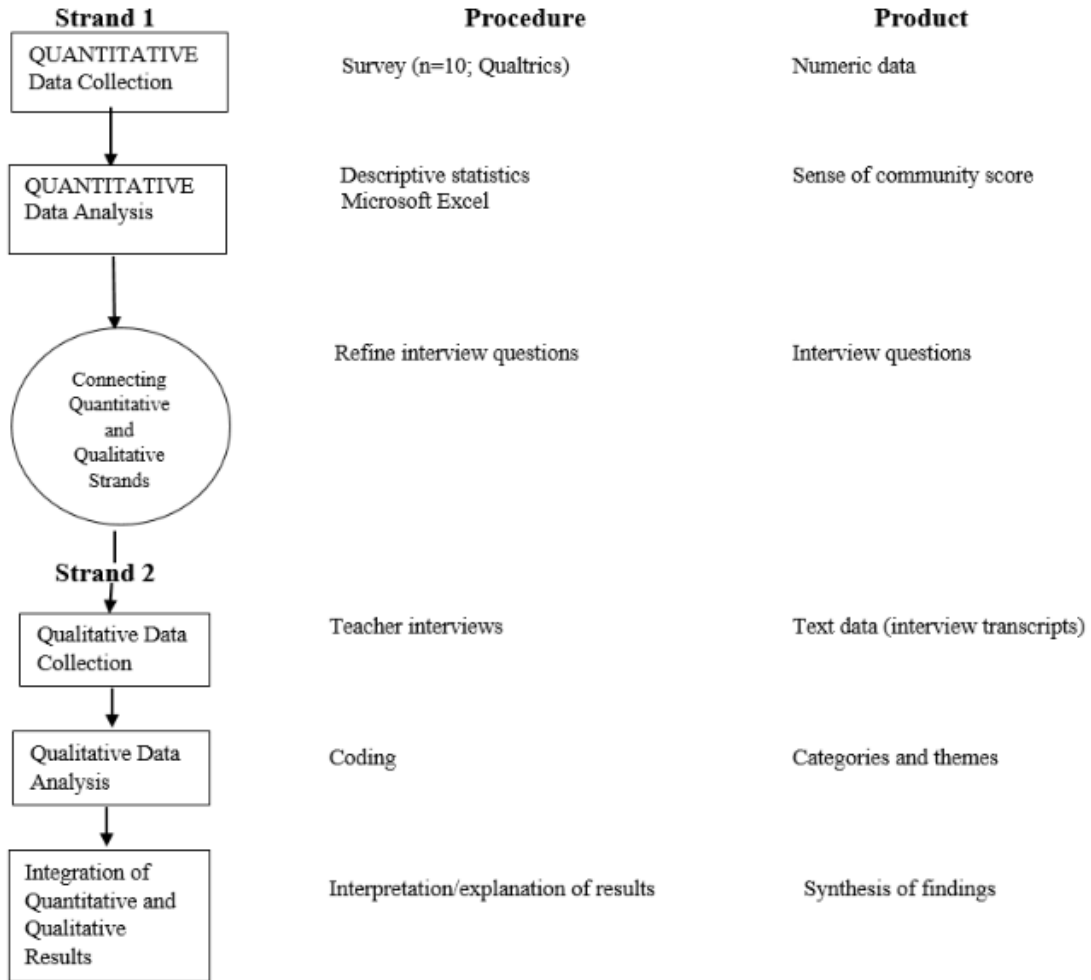


Two strands are used in this sequential quantitative + qualitative mixed-methods design. The first one consists of collecting quantitative data from the Sense of Community Index (SCI-2) survey (McMillan & Chavis, 1986). I chose to use SCI-2 survey data because it is a frequently used measurement of sense of community. The SCI-2 survey is not the same survey used by MCPS in their annual comprehensive district survey. The second strand consisted of the collection and analysis of qualitative data from teacher interviews. Priority was given to the qualitative data because it helped to inform the intervention for this study. Figure 2.3 present the overall design for my study.

Figure 2. 3

Visual Diagram of Study Design

Visual Diagram of the Present Study's Sequential Quan + Qual MMAR Study Design (Adapted from Ivankova, 2015).



After receiving IRB approval, the Reconnaissance Phase took place over three months in spring 2021 (see Table 2.1).

Table 2. 1

Reconnaissance Phase Timeline

Event	Activities	Period
Recruiting	Posted in teacher-based Facebook groups	February/March
Pre-intervention survey	Used the SCI-2 survey Sent survey electronically to interested participants who met the eligibility criteria Each participant had a personal link to complete the survey	March
Pre-intervention interviews	Conducted two interviews with 3 participants each session and four individual interviews	March

Reconnaissance Phase Research Questions

Information gathered from conversations with stakeholders and a literature review around the teacher community developed an integrated research question for this MMAR study. The integrated research question that addressed this study's overall intent is: *How does the implementation of a CoP foster a sense of community among teachers measured by the SCI-2 and interviews with teachers?*

The quantitative strand utilized the SCI-2 survey (McMillan & Chavis, 1986) to answer the following research question: *What is the teacher's current sense of community score?* The question allowed me to determine the baseline community score and determine which community elements are important to study participants.

The qualitative research question was answered during the interviews. The question that guided the discussion is: *What goals and needs do teachers have for the creation and implementation of a CoP?* Teacher interview responses were used to shape the CoP.

Data Collection Chronology and Integration

The sequential nature of data collection allowed time and flexibility to assess results gathered from the initial quantitative data before following up with qualitative data collection. A between-strategies mixed methods data collection was utilized for this study. The between-strategies approach reflects a chronological sequence of the study design strands for a Quan + Qual MMAR design (Ivankova, 2015). Two data collection methods were used: quantitative data from the SCI-2 survey (McMillan & Chavis, 1986) and qualitative data from the teacher interviews. Both sets of data were collected from the same participants. Priority was given to qualitative data because the focus of Reconnaissance is to determine a CoP design. The quantitative data provides a structure from which I determined the qualitative interview questions and an important baseline in determining the effectiveness of the CoP to be designed. The interview data was used to gain perspective about the sense of community elements, provide input on the creation of CoP, and clarify any questions I had at the time.

The SCI-2 survey (McMillan & Chavis, 1986) measures teachers' sense of community at the time of administration. The interview provided in-depth information about the perceived community needs of teachers and the organizational features of a CoP they deemed important. Table 2.2 shows the data sources and corresponding Reconnaissance Phase guiding questions. Table 2.3 shows the data schedule and data source for the Reconnaissance Phase.

Table 2. 2

Reconnaissance Phase Questions and Data Source

Data Source	Guiding Questions
SCI-2 Survey	What is the current sense of community score for teachers before participation in the CoP?
Interviews	What goals and needs do teachers have for the creation and implementation of a CoP?

Table 2. 3

Data sources and collection dates

Data Source	Data Type	Purpose	Collection Date
SCI-2 survey	Qualitative	Sense of community	March 2021
Interviews	Qualitative	Teacher insight	March 2021

Reconnaissance Quantitative Strand

The first, quantitative strand was used to determine teachers' current sense of community using the SCI-2 survey (McMillan & Chavis, 1986). The survey took a maximum of 10 minutes for each participant to complete. Consistent with MMAR, the following question was developed for this strand: What is the current sense of community score for teachers before participation in the CoP? This question was answered using the SCI-2 survey (McMillan & Chavis, 1986), and the results were used to guide me in finalizing the interview questions for the qualitative strand.

Sample

A convenience, non-probability sample of teachers was used for this Reconnaissance Phase. Participants in this study included ten certified, actively employed public school teachers. Two participants identified as male, and 8 self-identified as female. Due to restrictions on research within MCPS, recruitment was extended to public school teachers outside of MCPS. I sought public school teachers who were interested in learning about a specific area of interest. Relationship building within a CoP stems from gathering people together who have similar interests. The area of interest was the support and sharing of resources to assist with teaching during the COVID-19 pandemic. Teachers were recruited from two teacher-based Facebook groups and via the University of Kentucky's (UK) department of educational leadership student listserv. The two teacher-based Facebook groups from which participants were recruited were pre-existing private groups that included teachers with varying certification levels, subject areas, and years of teaching experience (see Table 2.4). As such, the participants would create a community that lends itself to an enhanced learning experience and potential for positive engagement (Wenger, 1998). Recruitment announcements consisted of two Facebook posts in the private teacher groups asking for study participants along with an accompanying flyer. In addition, an email was sent to the UK department of educational leadership student listserv by my major advisor with recruitment request and flyer. Demographic information for teachers who participated in the Reconnaissance Phase of this study is detailed in Table 2.4.

Table 2.4*Participant Demographic Information*

Participant	Gender	Grade level certification(s)	Subject area	Years of teaching experience
1	Female	Elementary	Science	10+
2	Female	Elementary	Art	5-9
3	Male	High School	Special Education	5-9
4	Female	Middle/High	English	5-9
5	Female	Middle/High	Art	5-9
6	Male	Secondary	Science	10+
7	Female	Secondary	Math	5-9
8	Female	Elementary/Middle/Secondary	Social Studies	10+
9	Female	Middle/Secondary	Special Education	10+
10	Female	Middle/Secondary	Music	5-9

Sense of Community Index Survey

The quantitative survey chosen for this study was the SCI-2 (McMillan & Chavis, 1986). Frequently used in social science research across schools, workplaces, and online communities (Obst & white, 2004, Townly & Kloos, 20019), this 24-item questionnaire measures an

individual's overall sense of community and subscores on a sense of community in the following subscales: reinforcement of needs, membership, influence, and a shared emotional connection. The SCI-2 is based on a theory first presented by McMillan and Chavis in 1986. The reliability of the SCI-2 is high, with a coefficient alpha of .94 (Chavis, Lee & Acosta, 2008).

I obtained written permission to use the SCI-2 from Community Science, a research-based organization, for this study. As part of the agreement to use the instrument, the survey was not altered. A copy of the survey is found in Appendix A. All of the SCI-2 questions are measured using a four-point Likert scale. Survey respondent's choices included (a) *not at all*, (b) *somewhat*, (c) *mostly*, and (d) *completely*. Table 2.5 illustrates the survey subscales and related survey questions.

Table 2. 5

Sense of Community Survey (SCI-2)

Subscales	Survey Questions
Reinforcement of Needs	1, 2, 3, 4, 5, 6
Membership	7, 8, 9, 10, 11, 12
Influence	13, 14, 15, 16, 17, 18
Shared Emotional Connection	19, 20, 21, 22, 23, 24

Procedures. After a potential participant expressed an interest in the study, I determined their eligibility by asking (through email or Facebook messenger) if they are currently employed as a classroom teacher and are they willing to join a group with other teachers to communicate and share resources. Sharing resources was explained to participants as the exchange of information (both written and electronically) including, but not limited to, posts, video links, and podcasts. Eligible participants were emailed a copy of the informed consent document. Along

with the consent document, teachers were provided an electronic link to complete the survey via the online survey management system, Qualtrics. Teachers had up to 14 days to complete the survey, but all participants completed it within five days. The first part of the survey asked participants for the following demographic information: gender, grade level certification(s), current teaching subject, and years of teaching experience. The second part of the survey contained the 24-Likert scale questions that make up the SCI-2 survey (McMillan & Chavis, 1986). Once I received all the surveys, the data was imported into Excel for analysis. The results informed the interview questions during the second strand of the Reconnaissance Phase.

Data Analysis

The SCI-2 uses a four-point Likert-rating scale for each of its 24 questions. The choices were *not at all*, *somewhat*, *mostly*, and *completely*. The scores for each response are 0, 1, 2, and 3, respectively, as instructed from the authors of the Sci-2. The overall community score was calculated by determining the score for each participant and then averaging across all participants. The mean overall community score for participants before the intervention was 33.2. The maximum community score is 72. An itemization of each question is presented in Table 2.6, along with the calculated mean and standard deviation.

Table 2. 6*Itemization Descriptive Statistics (Pre-intervention)*

Item	Mean	Standard Deviation
Item 1	1.6	0.843
Item 2	1.7	0.674
Item 3	1.3	0.483
Item 4	1.8	1.032
Item 5	1.5	0.849
Item 6	1.6	0.699
Item 7	1.7	0.823
Item 8	2.1	0.994
Item 9	1.7	0.948
Item 10	0.6	0.843
Item 11	1.5	0.527
Item 12	0.8	0.788
Item 13	1.3	0.674
Item 14	1.3	0.823
Item 15	1	0.816
Item 16	0.9	0.316
Item 17	1.6	0.699
Item 18	1.3	0.948
Item 19	1.6	0.843
Item 20	1	0.666
Item 21	1.5	0.707
Item 22	0.7	0.823
Item 23	1.3	0.823
Item 24	1.8	0.632

Reconnaissance Qualitative Strand

The second strand of this study is the qualitative strand, during which interview data was collected and analyzed. In this strand, guiding questions for the interviews were guided by an overarching question and by results from Strand 1. By design, the qualitative strand took place after the quantitative strand so I could ask participants to elaborate on the survey results. The overarching was: what goals and needs teachers have for creating and implementing a CoP.

Sample

The teachers who completed the SCI-2 survey were invited to participate in an interview. Ten teachers who completed the survey were sent an invitation to participate in an interview. All ten teachers agreed to participate.

Interviews

After analyzing quantitative data collected via the SCI-2 survey (McMillan & Chavis, 1986), teachers participated in a semi-structured interview. Qualitative interviews allow for mutual discovery and exploration of feelings on the part of the participants (Tracy, 2013; Kvale, 2006).

The question protocol of 11 open-ended items (see Appendix B) was used to obtain perceptions about the role and importance of a sense of community from the respondents. The interviews were also used to gain information about how to structure a CoP which addressed the needs of the participating teachers. The interviews yielded in-depth responses about the participants' sense of community and informed the structure of the activities of the CoP.

Procedures

The online scheduling software service, Sign-Up Genius.com, was used to schedule the participant interviews as follows:

- A link to a SignUpGenius.com scheduling page was sent to all participants who completed the survey
- On the scheduling page participants could select among several time slot choices within a one-week period to schedule an interview. Time slots included weekday evenings and weekend afternoons.

A total of six interview slots were selected for group and single interviews. Two interviews had 3 participants in each session and four participants interviewed in four separately. Due to scheduling conflicts based on participant's availability, four participants chose to be interviewed one-on-one.

All interviews took place via the web-based conferencing application, Zoom. Each meeting was recorded with permission from the participating teachers and transcribed using Zoom's internal transcription feature. The recorded interviews were stored on Zoom's cloud with the Cloud Recording option on the Zoom application until it was transcribed and coded. Cloud Recordings are processed and stored in Zoom's cloud after the meeting has ended, and the recording was passcode protected.

The interviews consisted of open-ended questions I developed after consulting scholarly research about qualitative interview design. The research suggested that I ask all participants the same questions, write all questions to be open-ended, pose one question at a time, and word each question clearly. The interview questions adhered to acceptable standards for interview question development and practices (Turner, 2010) including choosing the appropriate interview design, constructing questions that are clear, and preparing participants for the interview. Teachers were provided the following information before they were asked the interview questions: (1) explained the purpose of the interview, (2) addressed terms of confidentiality, (3) provided a time estimate of the length of the interview, (4) and allowed time to ask questions before beginning the interview. A copy of the interview questions can be found in Appendix B.

Data analysis

I used thematic content analysis (Braun & Clarke, 2012) to analyze the qualitative interview data. Thematic analysis is a common approach to analyzing interview data (Braun &

Clarke, 2012). A systematic approach to identifying and analyzing frequently occurring words or themes was useful in answering the research question for the qualitative strand.

I read over the transcribed interviews multiple times, highlighting and coding phrases and words. Open-ended response questions collected during interviews were (a) recorded using the Zoom application, (b) transcribed using the Zoom transcription feature, and (c) organized, sorted, and coded (Campbell et al., 2013). I read over the transcripts and wrote down any first impressions in a notebook (secured in a locked cabinet when not in use). A second, more careful review of transcripts identified any pertinent phrases or words (DeCuir-Gunby, et al., 2011). The second review included reading the transcripts slower, using a different highlighting color and writing down additional notes as I read. Pertinent words or phrases were coded and used to create themes based on the connections between the codes. Pertinence was determined using the following criteria (DeCuir-Gunby, et al., 2011): (a) words or phrases repeated in several places, (b) the interviewee explicitly states that it is important, (c) words or phrases that are similar or the same as something previously published, (d) words or phrases that are reminiscent of a theory or concepts, or (e) words or phrases that are surprising.

Data Integration and Quality

In a mixed-methods action research study, quality assurances are used to evaluate the methodological and interpretative rigor of the study design and its conclusions. Ivankova (2015) claim researchers in mixed methods studies have to (a) evaluate the methodological rigor of each strand, (b) observe specific quality considerations, and (c) consider the legitimacy and quality of the study's meta-inferences.

Quality assurance for the quantitative strand of this study included ensuring the reliability and validity of the survey tool. Quality assurance of qualitative data is based on determining if

the findings are accurate based on the researchers' viewpoints (Creswell, 2014). The survey used for this study is the pre-existing SCI-2 survey (McMillan & Chavis, 1986). The SCI-2 survey (McMillan & Chavis, 1986) is a valid measurement instrument and the most frequently used quantitative measure of a sense of community. It has reliability with a coefficient alpha of .94 (Chavis, Lee & Acosta, 2008). In qualitative research, trustworthiness is an essential element to "capture the interpretative nature" of the qualitative data (Ivankova, 2015, p. 265). Rigorous indicators of a study's trustworthiness are credibility, transferability, dependability, and confirmability. This study established transferability by making explicit connections to the contexts of the study. Descriptions of teacher interviews and the collection of survey data provided a comprehensive understanding of the study process. Dependability was established by following the guidelines of mixed-methods action research. Lastly, confirmability was established by keeping a notebook to record thoughts and rationale during collecting, analyzing, and interpreting data. Specific strategies to assess the qualitative rigor for this study included member checking and research bias clarification. Member checking for this study included sharing the study's findings with participants. I provided a summary of the results to two teachers who requested the information. Sharing the results allowed me to share the intentions of the study, identify and correct study errors, and provide additional information if necessary (Carlson, 2010).

The quantitative survey and qualitative interviews were compared for meta-analysis (Lipsey & Wilson, 1993) and helped me answer the research questions for the Reconnaissance Phase. A research journal was kept where personal philosophies, observations, and biases were written down. Journaling assisted with identifying biases and perceptions that could have interfered with the trustworthiness of the study. Biases included wanting to help MCPS teachers

more than other teachers in the CoP because of my interest in helping MCPS succeed that will benefit the district overall. To mediate the biases, I made sure to read posts and engage with all participants on a weekly basis. My other bias was my nervousness and anxiety about making sure participants stayed engaged during the intervention. I wrote in my journal on a weekly basis and posted weekly to encourage conversation. The findings from each strand, and the integrated findings from both strands, are presented below.

Findings

The findings from the Reconnaissance Phase indicate that teachers want to have a sense of community with other teachers in their learning community. After reviewing the collected data and reflecting on my past and current experiences as a teacher, I made meta-inferences about structuring and facilitating the CoP to foster a sense of community. The CoP was designed with the needs of the participants in mind.

Due to the sequential quantitative-qualitative study design, the collection and analysis of the SCI-2 data occurred first. The quantitative data analysis allowed me to know the teacher's overall perceptions of community and provided insight on the subdomains that comprise their sense of community. Participating teachers were asked to participate in a semi-structured interview as a follow-up to the survey. During the interview, the questions posed to teachers were based on the information gleaned from the survey and basic information about elements creating a sense of community. The lowest mean average from the survey was subscale influence.

Questions were designed to get more information about the importance of certain activities, such as posting topics, sharing resources, and teacher involvement. The semi-structured interview questions were designed to ensure the researcher asked questions, get feedback or suggestions about potential ideas for the structure and facilitation of the CoP. The

interviewer probed teachers when asking about the importance of influence and community. The teacher-researcher took notes to document the teacher’s perspective and experiences. The interviews were recorded and transcribed for data analysis.

Reconnaissance Quantitative Strand Results

The results showed that surveyed teachers do not have a strong sense of influence or feel like a learning community member. With a participant average score of 7.4, influence was the lowest scoring subscale. Reinforcement of needs was the highest average score for teachers at 9.5. Table 2.7 displays the mean for the four subscales of the SCI-2 survey (McMillan & Chavis, 1986).

Table 2. 7

SCI-2 Subscales Mean

Subscale	Mean
Reinforcement of Needs	9.5
Membership	8.4
Influence	7.4
Shared Emotional Connection	7.9

Reconnaissance Qualitative Strand Results

The second part of this sequential quantitative + qualitative mixed methods design include qualitative questions asked during interviews. The following themes emerged during the coding process: (a) safe space, (b) supportive environment, (c) teacher input, and (d) worthiness of time. Each theme is described below with sample responses from the participants.

Safe Space

During the coding process, I documented many responses that I placed into the theme *safe space*. Safe space refers to teachers working in an environment where they can talk freely without fear of retribution or judgement. Participants used phrases such as “teachers only” and “sometimes you’re in a meeting and you want to say something but you don’t”. Several teachers said they have a ‘wait and see approach’ before opening themselves up in school meetings.

Supportive Environment

A supportive environment means teachers receiving emotional and academic support. Teachers indicated they want to participate in a community where they receive information that support them instructionally and emotionally. Participant phrases “...give other people in the group [a] platform for what things that they need to talk about that they feel are important” and “sometimes I need to talk...it’s been overwhelming, especially with a new [teaching] schedule” demonstrate teachers needed to be supported beyond academics.

Teacher Input

Teachers want to be included in the decision-making process within their learning community. I perceived teachers as wanting to have input in activities that they are involved in based on the following “I’d like to have some input on what we do” and “they don’t really hear what we have to say”. Teacher input as a theme was reinforced with the following statement “things would be better if they just asked”. This theme outlines the ways teachers want to participate in the decision-making process.

Worthiness of Time

A few teachers told short stories about being required to participate in professional development sessions that did not benefit them “at all”. One teacher said “I[d] like more

flexibility and more options". Another teacher said "At least once a week, I think if you're not participating at least once a week, then you're not going get better". Teachers used terms like "waste of time", "not again", and "It needs to be useful". This theme focuses on identifying activities that teachers in the group felt worthy of their time. Teachers identified activities they did not want to be involved in and described learning environments that would benefit them.

Thematic Analysis

Braun and Clarke (2012) describe thematic analysis as a method for identifying, organizing, and offering insight into patterns across a data set. Thematic analysis allowed me to make sense of the interview data I collected. I approached the data using an inductive approach, allowing the data to dictate the themes that I created. However, as suggested by Braun and Clark (2012), it is rare to completely ignore concepts and ideas that I have learned as I prepared for the interview. The four themes that I identified told me about the needs and goals that teachers have about learning communities. The themes helped to address my qualitative research question because I have information that I can use to create and facilitate the intervention.

Reconnaissance Meta Inferences

The meta-inferences were derived during data collection, with the results from the quantitative strand informing the qualitative strand (referred to as *connecting*), and during the interpretation of the results, when the results of the quantitative and qualitative strands are combined (referred to as *combining*) (Ivankova, 2015). Integrating the findings in this way helped me to understand the needs of teachers participating in the study. Based on the survey and interview findings, I discovered the following: (a) teachers wanted to have input in the activities that involved them, and (b) teachers wanted to exchange resources.

Teachers Want Input

The quantitative reconnaissance data showed that the lowest mean for the SCI-2 subscales was influence. The qualitative data showed that teachers want to be involved in the creation of the CoP and have input in the activities that happen within their community. I recognized the importance of teachers having influence in the CoP, so I used teacher input to develop characteristics of the community that will benefit the group and individual teachers.

Teachers Want to Exchange Resources

The quantitative reconnaissance data showed that there was room to improve teachers' membership, shared emotional connection, and fulfilment of needs. The qualitative data showed that teachers needed the freedom and ability to exchange resources with each other. Resources could help with their instructional capabilities or provide emotional support. As the facilitator, I knew the CoP design had to include norms for supporting teachers' instructional needs and their emotional needs.

Conclusions from Reconnaissance

Thanks to the Reconnaissance Phase I decided the CoP was going to be an online Facebook group that supports teachers through the instructional challenges of teaching during a pandemic. Additionally, the CoP would have norms to support teachers in an emotionally safe environment. Facebook was the preferred platform for teachers and it was chosen as the online venue for the CoP. The CoP is a teacher-only community where teachers can safely, and respectfully, share their stories, frustrations, and resources with other teachers.

Summary

This chapter presented the overall study design with specific information about this study's Reconnaissance Phase. The rationale and details for the use of a sequential qualitative +

quantitative MMAR study design were described. Chapter 3 presented detailed information about the Planning, Acting, Evaluation, and Monitoring Phases of this study.

Chapter 3

Introduction

Based on findings from the Reconnaissance Phase, the decision was made to move forward with a community of practice (CoP) that was flexible and teacher-focused. Based on what I learned from the data, the CoP was designed to be flexible with teacher engagement such as posting frequency and topics of interest. Also, norms helped to create an environment for teachers to expressed themselves freely and promote a supportive environment for all teachers. The intervention took place in spring 2021 via a private Facebook group for teacher participants. This chapter details the chosen intervention, reviews the evaluation questions and describes the specific design for the Evaluation Phase of the MMAR framework. A discussion of the overall leadership impact is presented at the conclusion of the chapter.

Acting Phase

In the Acting Phase of an MMAR study an intervention is implemented to address the overall research question and address the problem of practice (Ivankova, 2014). The Acting Phase, or intervention, for this study took place over five weeks between March and April 2021. During this time, study participants were invited to join a private Facebook group I created. The private Facebook group created for the study was only available to the study participants and could not be found on the platform by anyone who did not have a link to the group. The purpose of the intervention was to foster a sense of community with teachers through information sharing and support. Information sharing included sharing information or resources through posts, links to podcasts and webpages.

Participants Joined the Facebook Group

Once the private Facebook group was created, teachers were sent a private link to join the group. Links were sent to email or through Facebook messenger. To successfully use Facebook

to run the CoP, I had to *friend* all teachers participating in the Facebook group. Emails were sent to teachers with a link to the private group. If participants' personal Facebook settings did not allow me to *friend* them, I sent those participants an email and a separate Facebook message explaining my inability to *friend* them. Both these messages included a link to join the group.

Participant Input into the CoP Design

Before and during the CoP, teachers were allowed to provide input in several aspects of the study. Some information was gathered during the Reconnaissance Phase interviews (based on their responses to the questions *How often would you want to participate in a CoP? What collaborative activities (PD sessions, blogs, resource sharing, etc.) would you support during a CoP? and What online platforms (Facebook, Twitter, Google Classroom, etc.) are you willing to use for this CoP?*

Teachers agreed on the number of weeks to participate in the CoP and how frequently they should be required to engage with the Facebook group. Although I posted the initial weekly questions, all participants had the flexibility and capability to post about any topic or pose any questions as long as they were within the group's norms.

Participant input was crucial in a decision to shorten the timeline of the intervention. Initially scheduled to last six weeks, the decision was made to shorten the intervention by one week. Participants began talking about the end of year school activities that were "stressful," including the beginning of student testing. Based on the increased conversation about this topic, the teacher-researcher became empathetic. After speaking with my dissertation advisor, I decided shortening the intervention was beneficial for participants and the study.

Action Phase Steps

The purpose of the Action Phase in an MMAR study is to implement the intervention to address the problem of practice identified in the Diagnosis Phase. The Action Phase was carried out over five weeks and included weekly posts and sharing of resources via a private Facebook group. The private teacher-only Facebook group was a CoP for teachers participating in this study. The purpose of the intervention was to influence teachers' sense of community. Over the five-week period, teachers engaged with each other through weekly posts and sharing of resources. Weekly posting was based on feedback from teachers during the Reconnaissance Phase and reviewing other online-based teacher CoPs (Green & DeBruler, 2020). The initial six week time frame for the CoP was also based on information I gathered from the Reconnaissance Phase and reading about CoPs that last a few weeks (Rock, 2020). The time-bound CoPs refer to the shorter periods of learning that can be as short as 3 weeks (Radzicki, 2019).

Organization of the Intervention

The Facebook group was organized in three steps. Step 1 included informing participants about the expectations of the group. To foster group engagement and resource from the start, participants were sent an email with information on CoP expectations, details on how to book their interview, and a link to the Facebook group. Step 2 was comprised of the activities within the online CoP. Step 2 lasted for 5 weeks and was the time during which participants shared links to resources they deemed relevant to the CoP. The final step, step 3, was the closure of the Facebook group. One week prior to the end of the intervention, I posted information to inform participants about the final week and thanking them for their participation. The Facebook group ended on the Saturday afternoon of the last week when I removed each participant from the group.

CoP Kickoff Process

Either before or after the official interview questions, I chatted with participants. I let them know that when we do begin the CoP, I was hoping for teachers to really interact with each other. I told them that the Facebook group is private and only teachers who agreed to participate in the study are joining.

Letting the teachers know what was going to happen or how it was going to go

When I sent the link invite to teachers for the private Facebook group, I encouraged members to accept the request and to freely start posting or communicating with other members of the group.

The posting of the norms

The following norms (also found in Appendix F) were posted on the announcement section of the Facebook page:

- Be kind and courteous (healthy debates are natural, but kindness is required)
- No hate speech or bullying (we want everyone to feel safe)
- Respect everyone's privacy (what happens in the group, stays within the group)
- Feel free to ask questions (we are here to help!)
- Feel free to share resources (you never know how it can help others!)

Weekly Posts

Based on IRB requirements, a set of initial posting questions were created for the CoP. My postings for weeks 1 and 2 were pre-determined and approved by IRB, but the subsequent posts were based on conversations or insights gleaned from other teacher posts. I posted at least once a week to engage participants and encourage group participation. The posts were based on initial topics of interest found during the Reconnaissance Phase and subsequent areas of interest

brought up during the intervention. Based on feedback learned during the meta-analysis process, weekly posts were the most convenient time frame for teachers to review and respond to Facebook group activities. Weekly contacts with teachers added to the learning experiences and helped to foster connections.

Sharing Resources

The Facebook platform allowed participants to communicate with each other through written communication (e.g. weekly posts), video sharing (e.g. uploading videos), and file sharing (e.g. attaching links to websites with files or articles to review). Over the five weeks, an array of topics related to pandemic teaching were discussed. The following is a list of participant-led discussion and resources shared by participants.

- Link to a podcast (thisamericanlife.org) about changes to college admissions and the impact on equity and minority students
- Strategies to increase student participation and engagement (edutopia.org)
- Trauma-informed care strategies related to news events
- End of the year exhaustion
- Incorporating computer-based work/platforms into lessons

Screenshots of some of the activities that took place within the group are found in Appendix G. The intervention timeline and activities for the Facebook group are presented in Table 3.1.

Table 3. 1

Facilitator Initiated Weekly Posts

Week	Posts
1	This is a community of teachers, for teachers, created by teachers. Let’s talk about the ups and downs of teaching during a pandemic and share teaching resources and strategies.
2	Happy Spring! I don’t know about you guys, but this is the time of the year where I start to feel worn out. I am ready for the end of the year, but I have to keep mustering enough energy to make it through the next two months. I found this choice board that I will refer to address the kids’ emotional health – and mine too! Let me know how this week is treating you! Is there anything on the board that you can use?
3	Thank you (participant name) for your post. I shared your information with a few of my colleagues who work with our diversity and equity programs. We discussed changes that we’d like to see stay after the pandemic ends. What changes would you like to see continued?
4	Today, we were informed our superintendent would ask our Board to extend our school year beginning with 2021-2022 to deal with learning loss/inequities that were exacerbated by the pandemic. I am not sure how I feel about this. Any talk about extending the school day/year in your district?
5	State testing is a ‘go’ in my district! What about your district? How do you feel about it?

Implementation Data

As part of the CoP protocol, teachers were expected to post at least once a week. Some teachers were more active and posted several times a week and others posted once. Table 3.2 shows the posting statics for each week of the CoP.

Table 3.2*Weekly Post Statistics*

Week	Number of Posts	Number of unique resources shared
1	48	4
2	31	6
3	37	11
4	29	2
5	27	3

Following the conclusion of the Acting Phase, participants were asked to complete a quantitative survey and schedule to participate in an interview.

Evaluation Phase

According to Ivankova (2015), the Evaluation Phase assesses whether an intervention effectively achieved the study's goals. The evaluation of the intervention began in April 2021 after the end of the five-week Facebook group. Participants completed a quantitative post-intervention survey and qualitative interview. The post-intervention survey data and interviews were comparatively analyzed with pre-intervention survey data to determine the effectiveness of the CoP on teachers' overall sense of community and the individual elements of the community. The post-intervention interview provided qualitative data by collecting in-depth information about the intervention's usefulness.

Phase Design and Research Questions

The Evaluation Phase of this study was guided by the following quantitative and qualitative research questions. The research questions developed for this phase of the study guided me in determining the effectiveness of the CoP in fostering community among teachers.

Evaluation Phase Quantitative Research Questions

- Have the SCI-2 scores changed after teacher participation in the CoP?

Evaluation Phase Qualitative Research Questions

- What are the teachers' perceptions of the CoP as a strategy to foster community?

Evaluation Phase Quantitative Strand

Sample

Ten teachers participated in the Facebook group, and all teachers were sent an electronic, individual link to complete the post-intervention SCI-2 survey (McMillan & Chavis, 1986).

Instruments

The 24-item survey has a Likert scale where participants rated their answers to each question using the following choices: *not at all*, *somewhat*, *mostly*, and *completely*. Individual measurements of a sense of community (i.e., reinforcement of needs, membership, influence, and a shared emotional connection) were measured, including their overall sense of community.

Procedures

On the last day of the group, teachers were emailed a link to complete the SCI-2 survey (McMillan & Chavis, 1986) via the online survey administration tool, Qualtrics. Teachers had seven days to complete the survey; all participants completed the survey in four days.

Data analysis

The survey data was exported from Qualtrics into a Microsoft Excel spreadsheet for analysis. Descriptive statistics were calculated for each SCI-2 (McMillan & Chavis, 1986) subscale and corresponding statements (see Table 3.3).

Table 3. 3*Itemization Descriptive Statistics (Post-intervention)*

<i>Subscale Statement</i>	Pre-intervention mean	Post-intervention mean	<i>t</i>	df	p
<i>Total Sense of Community</i>	33.2	44.9	-2.3	8	.04
<i>Reinforcement of Needs (6 statements)</i>	9.5	15	-6.34	8	.01
I get important needs of mine met because I am part of this community	1.6	2.9	-	-	-
Community members and I value the same things	1.7	2.6	-	-	-
This community has been successful in getting the needs of its members met	1.3	2.5	-	-	-
Being a member of this community makes me feel good	1.8	2.1	-	-	-

Table 3.3 (continued)

When I have a problem, I can talk about it with members of this community	1.5	2.1	-	-	-
People in this community have similar needs, priorities, and goals	1.6	2.8	-	-	-
<i>Membership (6 statements)</i>	8.4	10.9	-1.96	9	.04
I can trust people in this community	1.7	2.3	-	-	-
I can recognize most of the members of this community	2.1	2.3	-	-	-
Most community members know me	1.7	2.5	-	-	-

Table 3.3 (continued)

This community has symbols and expressions of membership such as clothes, signs, art, architecture, logos, landmarks, and flags that people can recognize	0.6	1.2	-	-	-
I put a lot of time and effort into being part of this community	1.5	1.2	-	-	-
Being a member of this community is part of my identity	0.8	1.4	-	-	-
<i>Influence (6 statements)</i>	7.4	13.2	-3.91	9	.003
Fitting into this community is important to me	1.3	1.8	-	-	-
This community can influence other communities	1.3	1.7	-	-	-

Table 3.3 (continued)

I care about what other community members think of me	1	1.6	-	-	-
I have influence over what this community is like	0.9	2.6	-	-	-
If there is a problem in this community, members can get it solved	1.6	2.9	-	-	-
This community has good leaders	1.3	2.6	-	-	-
<i>Shared Emotional Connection (6 statements)</i>	7.9	5.8	2.6	9	.06
It is very important to me to be a part of this community	1.6	1.7	-	-	-
I am with other community members a lot and enjoy being with them	1	0.6	-	-	-
I expect to be a part of this community for a long time	1.5	0.6	-	-	-

Table 3.3 (continued)

Members of this community have shared important events together, such as holidays, celebrations, or disasters	0.7	0.5	-	-	-
I feel hopeful about the future of this community	1.3	1.2	-	-	-
Members of this community care about each other	1.8	1.2	-	-	-

An analysis of the pre-intervention and post-intervention survey data suggests teacher perception of community increased after participation in the CoP. Table 3.4 shows the changes in SCI-2 scores. The results from the pre-test (M = 33.2) and post-test SCI-2 (M = 44.9) indicate a statistically significant increase in the sense of community of teachers between the start and end of the CoP, $t(8) = -2.3$, $p < .04$. There was also an increase in three of the four SCI-2 subscales (*shared emotional connection* was the lone subscale with a non-significant difference) (see Table 3.5 for comparison of pre- and post-intervention SCI2 scores). The largest increase for participants was in the areas of *influence and reinforcement of needs*. *Membership* had the lowest increase, and, as noted, participants decreased in *shared emotional connection*.

Table 3. 4

Pre and Post-Survey Results for the SCI-2

Item	Pre-survey (mean)	Post-survey (mean)	Change
Overall Sense of Community Score	33.2	44.9	+11.7
Reinforcement of need	9.5	15	+5.5
Membership	8.4	10.9	+2.5
Influence	7.4	13.2	+5.8
Shared Emotional Connection	7.9	5.8	-2.1

Table 3.5*Statistical Differences between SCI-2 Pre-intervention and SCI-2 Post-intervention*

Variable	SCI-2 Pre		SCI-2 Post		<i>t</i>	df	p
	M	SD	M	SD			
Total sense of community	33.2	.75	44.9	.65	-2.3	8	.04
Reinforcement of needs	9.5	.76	15	.57	-6.34	8	.01
Membership	8.4	.82	10.9	.64	-1.96	9	.04
Influence	7.4	0.71	13.2	.64	-3.91	9	.003
Shared emotional connection	7.9	.74	5.8	.74	2.16	9	.06

Evaluation Phase Qualitative Strand

Sample

Of the ten teachers who participated in the Facebook group and completed the post-intervention survey, seven teachers participated in an interview. After completing the survey, teachers were sent a link to schedule a time/day to complete an interview. Two people did not show up for their chosen interview day/time. One person never scheduled an interview.

Instruments

I used the post-intervention interview script (see Appendix C) during the interview.

Procedures

Teachers were provided a link to schedule the interview. Interviews were scheduled using the online scheduling service SignUpGenius.com to include more than one individual unless the individual requested a one-on-one interview. The interview was semi-structured, and I prompted

participants to clarify responses or provide further details as needed. The interviews occurred after the post-survey data was collected and analyzed. Participants were asked questions to provide clarity surrounding the survey results and inform the effectiveness of the intervention. The post-intervention interview took place using the Zoom videoconferencing platform and was recorded, transcribed, and downloaded for analysis.

Data Integration and Quality

The SCI-2 survey (McMillan & Chavis, 1986) is a reliable measurement (coefficient alpha = .94) and was used to gather participants' sense of community after the conclusion of the intervention. The data obtained from the survey was used along with the post-intervention interviews to get participant's perspectives on the intervention. The SCI-2 was not altered, which kept the integrity of the data collected. The interviews adhered to the practices described by Gill, Stewart, Treasure, and Chadwick (2008), including group sizing, scheduling, and moderating.

The interviews were audio-recorded, and the recordings were used to ensure I had an accurate record when it came time for analysis. Participants were verbally told about the recording before starting the interview, and each person gave consent before proceeding. The interviews were transcribed using Zoom's transcription service before being downloaded, coded, and sorted into themes. Themes were created based on information gained during the literature review and reminiscent of community concepts. The adherence to interview best-practices allowed me to trust and use the results from the interviews. The data was reviewed and used for meta-analysis by comparing post-intervention survey results and interviews with pre-intervention survey results and interviews.

Data results from the pre-and post-survey analysis were used to shape the questions for the post-interview. Participants answered questions about their experience in the CoP shared

thoughts about the creation and structure of the CoP. Teachers were asked to provide information about what is important to them regarding elements related to a sense of community. The results from the survey and interviews with participants resulted in important findings that are valuable to the study.

Findings

Throughout the study process, I had opportunities to speak with teachers that participated in the study. I was actively involved in the CoP acting as the facilitator and posting weekly. Data analysis from reviewing surveys and interviewing participants resulted in major findings for this study. The integrated research question for this study is ‘how does the implementation of a CoP foster a sense of community among teachers as measured by the SCI-2 survey (McMillan & Chavis, 1986) and interviews with teachers?’ Based on the study’s results, the CoP did increase teachers’ sense of community. The specific findings are explained below.

Evaluation Quantitative Strand Results

The quantitative data collected in the Evaluation Phase of the study included the administration of the SCI-2 survey to participating teachers. In this study, the survey provided insight into participants’ sense of community after participating in CoP. The findings showed the overall sense of community score for participants after participating in the private Facebook group was 44.9. The score is higher than it was for participants before they participated in the online Facebook group.

Overall sense of community

The total sense of community score for participants following the CoP was 44.9, higher than it was before teachers participated in the CoP. The increase indicates that the CoP may have been influential in fostering a sense of community. Of note, one item on the SCI-2, *How important is it to you to feel a sense of community with other community members?* is referred to

as a validating question (Chavis et al, 2008), that is used to help interpret the results. This item tends to be correlated to the total sense of community, though this may not be the case for every community (Chavis et al, 2008). Table 3.6 shows the average results for the pre-survey and post-survey results.

Table 3. 6

Results for validating Question on SCI-2 Survey

Question	Pre-survey (mean)	Post-survey (mean)	Change
How important is it to you to feel a sense of community with other community members?	5.1	5.5	+.3

The results show there was a slight increase of 0.3 points in participants’ responses to the question. A paired t-test showed the increased was not significant, $t(9) = -0.93$, $p = .073$.

Reinforcement of needs

The mean value for each item statement related to reinforcement of needs increased. The subscale data increased 5.5 points from pre-intervention (M = 9.5) to post-intervention (M = 15). The increase is significant, $t(8) = -6.34$, $p = .01$. The highest mean value increase corresponded to item 1, which stated *I get important needs of mine met because I am part of this community*. The results of all item questions related to this subscale are displayed in Table 3.7.

Table 3. 7*Pre- and Post-Intervention Survey Results for Reinforcement of Needs*

	Subscale (mean)	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6
Pre- intervention	9.5	1.6	1.7	1.3	1.8	1.5	1.6
Post Intervention	15	2.9	2.6	2.5	2.1	2.1	2.8
Change	+5.5	+1.3	+0.9	+1.2	+0.3	+0.6	+1.2

Membership

The mean value for questions 7, 8, 9, 10, and 12 increased. Item number 11 states, ‘*being a member of this community is a part of my identity*’ decreased from the pre-survey to the post-survey. The greatest increase came from item 9, which states the following: *most community members know me*. The results from the pre-test (M = 8.4) and post-test (M = 10.9) indicate a statistically significant increase in membership between the start and end of the CoP, $t(9) = -1.96$, $p = .04$. Table 3.8 displays a comparison of pre- and post- intervention SCI-2 scores for membership.

Table 3.8*Pre- and Post-Intervention Survey Results for Membership*

	Subscale (mean)	Item 7	Item 8	Item 9	Item 10	Item 11	Item 12
Pre-intervention	8.4	1.7	2.1	1.7	0.6	1.5	0.8
Post Intervention	10.9	2.3	2.3	2.5	1.2	1.2	1.4
Change	+2.5	+0.6	+0.2	+0.8	+0.6	-0.3	+0.6

Influence

The mean value for most items on the survey increased for participants from before the intervention to after. The increase in influence from pre-intervention (M = 7.4) to post-intervention (M = 5.8) is statistically significant, $t(9) = -3.91$, $p = .003$. Item 14 decreased and asks the respondents to rate the following statement: *'This community can influence other communities.'* The largest increase was for item 16, *'I have influence over what this community is like.'* See Table 3.9 for a comparison of pre- and post-intervention data about SCI-2 subscale influence.

Table 3.9*Pre- and Post-Intervention Survey Results for Influence*

	Subscale (mean)	Item 13	Item 14	Item 15	Item 16	Item 17	Item 18
Pre-intervention	7.4	1.3	1.3	1	0.9	1.6	1.3
Post Intervention	13.2	1.8	1.7	1.6	2.6	2.9	2.6
Change	+5.8	+0.5	-0.4	+0.6	+1.7	+1.3	+1.3

Shared Emotional Connection

The mean value for shared emotional connection decreased after participation in the intervention. The only subscale that did not see an overall increase from the pre-intervention (M = 7.9) survey to the post-intervention survey (M = 5.8). A paired t-test found that the decrease was not statistically significant, $t(9) = 2.16$, $p = .06$. Table 3.9 displays the results for each item related to the shared emotional connection for the pre-and post-survey. The biggest decrease happened with item 21 that states, *'I expect to be a part of this community for a long time.'* Items 19 and 23 had no change in results for both surveys. Items 19 and 23 had the smallest increase and decrease, respectfully. Items 19 and 23 read as follows: *It is very important to me to be a part of this community*, and *I feel hopeful about the future of this community*. See Table 3.10 for survey results related to shared emotional connection.

Table 3.10*Pre- and Post-Intervention Survey Results for Shared Emotional Connection*

	Subscale (mean)	Item 19	Item 20	Item 21	Item 22	Item 23	Item 24
Pre-intervention	7.9	1.6	1	1.5	0.7	1.3	1.8
Post Intervention	5.8	1.7	0.6	0.6	0.5	1.2	1.2
Change	-2.1	+0.1	-0.4	-0.9	-0.2	-0.1	-0.6

Evaluation Qualitative Strand Results

During the interview, participants were asked to reflect on their experiences in the Facebook group. The post-intervention questions were similar to the pre-intervention questions except teachers had to reflect on the events over the past five week (see Appendix C). The following themes emerged through the coding process of the evaluation qualitative data: (a) teacher-based communities matter, (b) teacher input, and (c) using engagement to build a community.

Teacher-based communities matter

Findings for the Evaluation Phase interviews showed teachers appreciated participating in a teacher-only community with no administrator oversight. Based on teacher responses, prohibiting administrators added to their sense of comfortability to communicate freely. Teacher responses “*This doesn’t happen too often. I don’t work with other teachers at my school – I just kind of go through the motions, you know?*” and “*We can solve pretty much any problem we have*” represent sentiments about the benefits of participating in a teacher-only CoP.

Teacher input

Many teachers gave positive feedback about being allowed to provide input into the structure of the community. One teacher responded to a question about her influence on the CoP by saying, “*It was nice to be asked how I wanted to participate in [the] group. It’s hard to find something that works for me and is not a waste of my time.*” Teacher participants spoke positively about having input in the activities and structure of the CoP.

Using engagement to build a community

Activities that teachers felt were meaningful was important for many of the teacher participants. One teacher said “*interacting with a small group of people is nice because you get to know them.*” When asked if there was anything else they liked to share, several teachers shared their appreciation joining the community and glad they got “involved” but they “really liked” some of the other teacher participants.

Meta Inferences

In this section, I interpret the findings and discuss inferences from quantitative and qualitative data analysis. There was an overall increase in teachers' sense of community. The improvement in teachers' sense of community from pre- to post-intervention has been established. The qualitative data collected from teacher interviews provided insight into the effectiveness of the structure and implementation of the CoP on teachers' sense of community.

The private Facebook group sought to create an atmosphere for teachers to foster a sense of community. Teachers with differing years of teaching experience, subject expertise, and work environment came together based on their shared interest in the virtual setting. Through participation in the CoP, teachers could ask questions, share and receive information related to teaching during the pandemic. Group norms allowed for teachers to communicate freely and

create a safe space for participants. Teachers were able to support their learning through participation. Support for reinforcing the needs of teachers was present in the design of the CoP. Initial weekly posts helped to guide the topics discussed, but it was limited to the interest of teachers. If teachers wanted to discuss other topics that differed from the initial posts, a teacher had the flexibility to direct the conversation to whatever interests they needed. The group was created to focus on addressing the needs of teachers through their journey of teaching during the pandemic. The CoP was designed to allow teachers the freedom to address topics as they needed to without constraints of a pre-determined agenda.

Summary of Findings

Based on the results, a CoP can be used to foster a sense of community among teachers. The process of constructing a CoP was influenced by the needs and interest areas of teachers. The deliberate act of listening to teachers and getting their input on how the CoP should be implemented was effective in helping to form a supportive community. Teachers were allowed to engage with each other, support each other, share resources through the Facebook group. Although I provided weekly posts to provide structure, encourage engagement, and introduce topics, teachers responded to other members frequently and asked questions they needed to be answered. The expectation was that I would post once a week, and members are encouraged to engage (post) once a week, but the reality is that many teachers engaged more often. Ultimately, the community members determined the weekly topics by posting about what was important to them. Teachers forged relationships with others with whom they might not otherwise have the opportunity to interact. Personal experiences were shared that connected people through insight and understanding.

Over the five weeks of the CoP, teachers engaged in activities with other teachers that shared the same interest. In doing so, there was a positive change in their total sense of community. Teachers improved in the following community areas except for a shared emotional connection: membership, influence, and reinforcement of needs. Due to the five weeks of the CoP, it is not unexpected that there was not an increase in the mean value for the following statements related to a shared emotional connection: *I am with other community members a lot and enjoy being with them; I expect to be a part of this community for a long time; members of this community have shared important events together, such as holidays, celebrations, or disasters; and I feel hopeful about the future of this community.* The length of time and time of year for the CoP did not lend itself to the best practices for creating a shared emotional connection. The CoP was cut short one week due to the end-of-year scheduling priorities for teacher participants. Overall, the CoP was beneficial and did foster a sense of community with the teachers involved.

Monitoring Phase

Due to restrictions put in place due to the COVID-19 pandemic, the participants and intervention were changed from the original study context. I understand that the study should be duplicated with participants within my school district. However, the current study provides valuable information about teachers in CoPs and the impact on a sense of community. I shared the study results and conclusions with a few building principals. Potential next steps include assessing district needs and considering the following variables before facilitating a CoP: time of year, teacher groups, area of interest, and level (building or district-wide).

Limitations

Several limitations exist for this study. First, the small number of teachers participating in this study makes it less reliable than a larger sample size (Faber & Fonseca, 2014). Larger

sample size should be a priority when recreating this study. Second, all the teachers participating in the study are not teachers within MCPS. Although CoPs can be advantageous for teachers despite them not working for the same school district, it would be favorable for MCPS to have the study done with only its employees. Lastly, this study did not focus on assisting a specific school during the CoP. The review of data happened at the district level, and no review of school-specific data was conducted.

Implications

In this section, I conclude by discussing some of the study's implications for practice and some of the directions for future research that stem from the project. A teachers' sense of community is impacted by relationships with leadership, the school environment, and other teachers. A sense of community is important for teachers because it impacts their work decisions, student outcomes, and school environment. The role of the teacher is too important not to focus on the experiences of teachers in their communities. Often, administrators are in charge of fostering community and relationship-building for teachers and others in the building. This study focused on teachers helping teachers in a manner that supports their pedagogical interests and meets their basic human need to belong.

This study reaffirms the importance of creating a sense of community and cultivating a teacher community that addresses teachers' personal and professional needs. The cultivation does not have to begin or end with administrators – teachers can create their CoPs. The CoP can complement PLCs if there is a desire to foster a teachers' sense of community within the boundaries of a learning community.

Implications for Practice

The main aim of this study was to address the declining number of teachers who feel a sense of community within MCPS. I did so by creating and facilitating a teacher-based CoP with teachers, many of whom are teachers working for MCPS. The study used a CoP as a learning community to work together and support their instructional and personal needs.

Accordingly, this study's first major practical contribution is that it provides much-needed data on using a CoP as an optional learning community for teachers. CoPs can be an effective alternative or addition to a school or district's plan for implementing learning communities. Another practice implication of this study is that it provides evidence that a sense of community can be fostered in a virtual setting. The COVID-19 pandemic caused MCPS, and other schools districts, to move to online learning for the better part of a year. As a result, teachers had to adapt their teaching and learning capabilities to meet the needs required of online learning. With the adaptations came new opportunities to improve teaching practices, collaboration, and community-building efforts. COVID-19 allowed teachers an opportunity to explore new ways to communicate, learn, and support each other. A third implication of this study is the importance placed on obtaining teacher input into learning communities. Teachers appreciated when decisions were made with their input instead of creating and facilitating the CoP without their input. Lastly, learning communities can be constructed with teachers with different certifications, teaching different grade levels, and have varying years of experience as long as they have the same area of interest. COVID-19 restrictions forced the study to shift in a direction that ultimately proved beneficial for parties involved. The shift allowed me to see that CoPs can be used within MCPS with different groupings of teachers within a school and across schools.

In a district like MCPS, I could envision an online CoP being implemented to meet learning community expectations set by the district. The MCPS policy about learning communities requires all teachers to participate in a collaborative team. CoPs can be successful with any number of teachers participating, as long as teachers join because they share the same area of interest. Online CoPs are a great way to keep teachers connected who may not share the same planning period, teach the same subject, but have the same instructional interests of continuity due to disruptions in in-person learning. In doing so, we may see results such as an increase in the sense of community, improved instructional practice, and less isolation.

The structured MMAR framework can be used in the future within MCPS to increase school engagement with restorative practices (RP). Individual schools that struggle with implementing RP may benefit from using action research to improve outcomes related to RP. Action research can help me connect with schools that may be reluctant to receive support because the framework requires stakeholder input and evaluation to ensure progress.

Implications for Research

This study, being of a sequential exploratory nature, raises some opportunities for future action research. More research will be necessary to refine and further elaborate my findings. For instance, new research questions which arise from this study include:

- What implications does an online CoP have on teachers' sense of community once in-person learning resumes?
- What impact will a return to in-person learning have on participation levels for teachers participating in an online CoP?

Furthermore, future iterations of this action research cycle could be extended in longitudinal and comparative ways. Future versions of an online CoP over the course of an entire school year

could have the following characteristics based on the needs of schools and the interests of teachers:

- The online CoP could be a combination of in-person and online meetings. There could be pre-established meetings scheduled throughout the year (e.g., Introductory meetings, celebratory meetings, end-of-year meetings).
- The online CoP could use different online formats such as the district-approved Google Classroom or Microsoft Teams to better access and share resources within schools or across the district.

Also, I could do a version of the study that compares different groups of participants (e.g., new teachers to a school vs. teachers who are not new to the school) and the effect the CoP intervention has on their sense of community. Other ideas include comparing teachers participating in the online version of a CoP vs. face-to-face or within school CoP vs. across district CoP.

APPENDICES

Appendix A: SENSE OF COMMUNITY INDEX II

The following questions about community refer to: _____

How important is it to you to feel a sense of community with other community members?

1	2	3	4	5	6
Prefer Not to be Part of This Community	Not Important at All	Not Very Important	Somewhat Important	Important	Very Important

How well do each of the following statements represent how you *feel* about this community?

	Not at All Completely	Somewhat	Mostly	
1. I get important needs of mine met because I am part of this community.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Community members and I value the same things.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. This community has been successful in getting the needs of its members met.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Being a member of this community makes me feel good.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. When I have a problem, I can talk about it with members of this community.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

		Not at All Completely	Somewhat	Mostly	
6.	People in this community have similar needs, priorities, and goals.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	I can trust people in this community.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.	I can recognize most of the members of this community.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.	Most community members know me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.	This community has symbols and expressions of membership such as clothes, signs, art, architecture, logos, landmarks, and flags that people can recognize.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.	I put a lot of time and effort into being part of this community.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12.	Being a member of this community is a part of my identity.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.	Fitting into this community is important to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14.	This community can influence other communities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15.	I care about what other community members think of me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16.	I have influence over what this community is like.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17.	If there is a problem in this community, members can get it solved.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18.	This community has good leaders.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19.	It is very important to me to be a part of this community.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20.	I am with other community members a lot and enjoy being with them.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Not at All Completely	Somewhat	Mostly	
21. I expect to be a part of this community for a long time.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. Members of this community have shared important events together, such as holidays, celebrations, or disasters.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. I feel hopeful about the future of this community.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. Members of this community care about each other.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Appendix B: Guiding Interview Questions (Pre-Intervention)

Thank you so much for taking the time to meet with me today. I have an hour set aside for us, though we may not use the full time. The purpose of this interview is to gain more information about the use of a community of practice (CoP) to foster a teacher's sense of community. I have a list of questions that I will ask you. Feel free to elaborate on any questions. You are free to share or withhold any information from me during our conversation. You can ask me any questions about our interview or the research process at any time. This interview will be recorded, and I will take notes. Do I have permission to record the interview? [*Wait for a verbal response from each participant*]. At any time, you can tell me to stop recording.

For this interview, a community refers to a group of teachers who interact and have at least one characteristic in common (grade level, certification, teach at the same school, etc.). Also, for this interview, a CoP refers to voluntary participation with a group of teachers who share the same passion for something they do or learn (mental health, learning outcomes, teaching methods, etc.).

Membership:

1. What support or encouragement do you expect as a member of a community?
2. How important, if any, is trust to you when it comes to your community?

Influence:

3. What, if any, input do you have in the activities of your community?
4. How important, if any, is it to have problems solved within your community?

Needs:

5. What are the educational areas of interest you'd like to know more about as part of this study?
6. Are there benefits to being a part of a community with other teachers with similar needs, priorities, and goals? Please explain your answer.

Shared emotional connection:

7. Describe activities (within a community) that show other people you care about them?
8. What qualities do you perceive good leaders to have?

Structure of CoP:

9. How often would you want to participate in a CoP?
10. What collaborative activities (PD sessions, blogs, resource sharing, etc.) would you support during a CoP?
11. What online platforms (Facebook, Twitter, Google Classroom, etc.) are you willing to use for this CoP? Please explain.

*Is there anything else you'd like to share?

Appendix C: Guiding Interview Questions (Post-Intervention)

Thank you so much for taking the time to meet with me today. I have an hour set aside for us, though we may not use the full time. The purpose of this interview is to get your perspective about the community of practice (CoP). I have a list of questions that I will ask you. Feel free to elaborate on any questions. You are free to share or withhold any information from me during our conversation. You can ask me any questions about our interview or the research process at any time. This interview will be recorded, and I will take notes. Do I have permission to record the interview? [*Wait for a verbal response from each participant*]. At any time, you can tell me to stop recording.

For this interview, a community refers to the group of teachers who participated in the CoP.

Also, for this interview, the CoP I am referring to is the virtual community you were a member of for the past few weeks.

Membership:

12. What support or encouragement, if any, did you receive as a member of this community?

13. How important, if any, was trust to you when it came to this community?

Influence:

14. What, if any, input did you have in the activities that took place in this community?

15. Did you have problems that were addressed by this community? Were they addressed?

Explain. Is it important to have problems addressed within a community?

Needs:

16. Are there benefits to being a part of this community with other teachers with similar needs, priorities, and goals? Please explain your answer.

Shared emotional connection:

17. Describe activities (within this community) that showed other people you cared about them?

18. What qualities do you perceive others to have that made them a good leader throughout this CoP?

Structure of CoP:

19. How often did you participate in a CoP? Daily, Weekly, Monthly, Only when you needed a resource? Explain why.

20. What collaborative activities (PD sessions, blogs, resource sharing, etc.) did you support during a CoP?

*Is there anything else you'd like to share?

Appendix D: IRB letter



XP Initial Review

Nonmedical Institutional Review Board (IRB)

Approval Ends:

2/18/2022

IRB Number:

63953

TO: Apryl Moore, Master's Educational Leadership Studies

PI phone #: 9372484619 PI email: alcm1920@gmail.com

FROM: Chairperson/Vice Chairperson Nonmedical Institutional Review Board (IRB)

SUBJECT: Approval of Protocol DATE: 2/19/2021

On 2/19/2021, the Nonmedical Institutional Review Board approved your protocol entitled:

Fostering a sense of community among teachers via a community of practice: A mixed-methods action research study

Approval is effective from 2/19/2021 until 2/18/2022 and extends to any consent/assent form, cover letter, and/or phone script. In addition to IRB approval, you must also meet the requirements of the VPR Resumption of Research Phased Plan (i.e., waiver for Phase 1, training & individualized plan submission for Phases 2- 4) before resuming/beginning your human subjects research. If applicable, the IRB approved consent/assent document(s) to be used when enrolling subjects can be found on the approved application's landing page in E-IRB. [Note, subjects can only be enrolled using consent/assent forms which have a valid "IRB Approval" stamp unless special waiver has been obtained from the IRB.] Prior to the end of this period, you will be sent a Continuation Review (CR)/Annual Administrative Review (AAR) request which must be completed and submitted to the Office of Research Integrity so that the protocol can be reviewed and approved for the next period.

In implementing the research activities, you are responsible for complying with IRB decisions, conditions and requirements. The research procedures should be implemented as approved in the IRB protocol. It is the principal investigator's responsibility to ensure any changes planned for the research are submitted for review and approval by the IRB prior to implementation. Protocol changes made without prior IRB approval to eliminate apparent hazards to the subject(s) should be reported in writing immediately to the IRB. Furthermore, discontinuing a study or completion of a study is considered a change in the protocol's status and therefore the IRB should be promptly notified in writing.

For information describing investigator responsibilities after obtaining IRB approval, download and read the document "PI Guidance to Responsibilities, Qualifications, Records and Documentation of Human Subjects Research" available in the online Office of Research Integrity's IRB Survival Handbook. Additional information regarding IRB review, federal regulations, and institutional policies may be found through ORI's web site. If you have questions, need additional information, or would like a paper copy of the above mentioned document, contact the Office of Research Integrity at 859-257-9428.

see blue.

405 Kinkad Hall | Lexington, KY 40506-0057 | P: 859-257-9428 | F: 859-257-8995 | www.research.uky.edu/ori/

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Appendix E: Informed Consent

Consent to Participate in a Research Study

FOSTERING A SENSE OF COMMUNITY AMONG TEACHERS VIA A COMMUNITY OF PRACTICE: A MIXED-METHODS ACTION RESEARCH STUDY

You are being invited to participate (volunteer) in a research study about using a teacher-based community of practice to influence a teachers' sense of community. We are asking you because you are a current teacher in a public school system. The sense of community among teachers is lower for public school teachers than private school teachers. It is important to understand how programs and structures (such as a community of practice) may influence teachers' sense of community.

The information on this page provides key information to help you decide whether to participate. I have included detailed information after this page. Feel free to ask questions now, or you can reach out later. The contact information for the research investigator in charge of the study is below.

what is the STUDY ABOUT AND HOW LONG WILL IT LAST?

The purpose of the study is to determine if participation in a teacher-based community of practice fosters a sense of community. Your participation in this research will last about eight weeks.

WHAT ARE KEY REASONS YOU MIGHT CHOOSE TO VOLUNTEER FOR THIS STUDY?

The most important reason to participate in this study is to interact with other teachers who share a similar passion as you do and learn from other teachers in a teacher-led group.

What are Key reasons you might choose NOT to volunteer for this study?

Participating in this study will require a time commitment of seven and half hours over eight weeks, and all activities will happen after work hours.

To the best of my knowledge, the things you will be doing in this study will cause you no harm or pose any risk that is greater than what you would experience in everyday life.

DO YOU HAVE TO TAKE PART IN THE STUDY?

If you decide to take part in the study, it should be because you really want to volunteer. You will not lose any services, benefits, or rights you would normally have if you choose not to volunteer.

WHAT IF YOU HAVE QUESTIONS, SUGGESTIONS OR CONCERNS?

The person in charge of this study is Apryl Moore, a doctoral candidate at the University of Kentucky. If you have questions, suggestions, or concerns or want to withdraw from the study, her contact information

is: (937) 248-4619 or apryl.moore@uky.edu. The faculty advisor for the study is Dr. John Nash, who can be contacted at john.nash@uky.edu.

If you have any concerns or questions about your rights as a volunteer in this research, contact staff in the University of Kentucky (UK) Office of Research Integrity (ORI) between the business hours of 8am and 5pm EST, Monday-Friday at 859-257-9428 or toll free at 1-866-400-9428.

detailed consent:

ARE THERE REASONS WHY YOU WOULD NOT QUALIFY FOR THIS STUDY?

If you are not currently employed as a public school teacher or have no online access to Facebook, Google, or Zoom, you do not qualify for this study.

WHERE WILL THE STUDY TAKE PLACE AND WHAT IS THE TOTAL AMOUNT OF TIME INVOLVED?

The research procedures will be conducted virtually. You will need to join a private Facebook group where you will respond to prompts once a week. Before and after participation in the Facebook group, you will complete a survey via Google Forms and participate in a group interview via Zoom (a web conferencing software). The total time involved in the study is eight weeks.

The total amount of time you will be asked to volunteer for this study is seven and half hours over eight weeks. You will spend a total of two hours for the group interviews, 30 minutes total to complete the surveys, and five hours total for the weekly group discussions.

WHAT WILL YOU BE ASKED TO DO?

In this research study, you will be asked to participate in group discussions, complete two surveys, and participate in two focus group interviews. At any time during the study, you may skip any questions you choose on the survey and during the interview.

A description of your participation in the study is outlined below:

Before you participate in the private Facebook community:

Complete a 15-minute survey (24 multiple choice questions via a Qualtrics)

Participate in a focus group interview with other teachers (maximum of 10 per focus group) who volunteered for the study. The recorded focus group interviews will happen virtually using Zoom (a web conferencing platform) and are scheduled to last 1 hour. The questions will be about your perceptions and needs related to working with other teachers in learning communities. The interviews will be recorded (audio and visual) using Zoom's built-in recording feature. You will be randomly assigned to a focus group. You and other members of your focus group will decide on the best day/time to participate in the interview based on the principal investigators' pre-determined timeframe.

Participation in the teacher-based community of practice will happen via a private Facebook group. You will be asked to respond to prompts (prompts will be determined after the principal investigator analyzed survey and focus group responses), share resources related to prompts, and engage (respond to other teachers) with other study participants once a week. The teacher-based community of practice Facebook group will last six weeks.

After the private Facebook community activities have concluded, you will do the following:

Complete a 15-minute survey answering (24 multiple choice questions via Google Qualtrics)

Participate in a focus group interview with other teachers (maximum of 10 per focus group) who volunteered for the study. The recorded focus group interviews will happen virtually using Zoom (a web conferencing platform) and are scheduled to last 1 hour. The questions will be about your perceptions and needs related to working with other teachers in learning communities. The interviews will be recorded (audio and visual) using Zoom's built-in recording feature. You will be randomly assigned to a focus group. You and other members of your focus group will decide on the best day/time to participate in the interview based on the principal investigators' pre-determined timeframe.

WHAT ARE THE POSSIBLE RISKS AND DISCOMFORTS?

Possible risks associated with this study is the breach of confidentiality. Precautions will be taken to protect your information (name, school assignment, teaching assignment, and other identifying information). Still, there are risks due to the use of virtual platforms (Google, Facebook, and Zoom).

The nature of a focus group is such that confidentiality cannot be guaranteed.

The nature of participating in a Facebook group is such that confidentiality cannot be guaranteed.

The risk of a stressful situation to participants during the focus group interviews or Facebook group will not be greater for this research than in daily life.

In addition to the risk described in this consent, you may experience an unknown risk.

WILL YOU BENEFIT FROM TAKING PART IN THIS STUDY?

Personal benefits for participating in this study include:

Having a support network for people who share a common interest as you

Engage in opportunities for learning, building capacity, and sharing knowledge with other active teachers

IF YOU DON'T WANT TO TAKE PART IN THE STUDY, ARE THERE OTHER CHOICES?

If you do not want to be in the study, there are no other choices except not to take part in the study.

WHAT WILL IT COST YOU TO PARTICIPATE?

There are no costs associated with taking part in this study.

WHO WILL SEE THE INFORMATION THAT YOU GIVE?

Participation in the Zoom focus groups and joining the private Facebook group may result in identifying information (name, school assignment, or teaching assignment) being seen by other participants if it is part of your Facebook and/or Zoom profile or if you share the information during the study.

Once all data is collected, identifying information will be replaced with numerical IDs to protect your identity. Numerical IDs will be randomly assigned. When we write about or share the results from the study, we will write about the combined information. We will keep your name and other identifying information private. We will make every effort to prevent anyone who is not on the research team from knowing that you gave us information or what that information is.

All data collected will be kept confidential. Online data from the survey will be securely downloaded and stored on the researcher's password-protected computer in a password-protected file.

Data from the focus group interviews will be securely stored on a web-based conferencing cloud service before transcribed, downloaded, and stored on the researcher's password-protected computer in a password-protected file. However, there are confidentiality limits of focus group interviews, and please be advised of the following:

Although the researchers will take every precaution to maintain the confidentiality of the data, the nature of focus groups prevents the researchers from guaranteeing confidentiality. The researchers will remind participants to respect fellow participants' privacy and not repeat what is said in the focus group to others outside of the focus group.

You should know that some circumstances may have to show your information to other people if discussions within the Facebook group or Zoom group interviews break any laws. For example, the law may require us to share your information with:

Authorities, if you report information about a child being abused, if you pose a danger to yourself or someone else.

We will be using Qualtrics, a web-based data collection software. It is important to note that any data collection process undertaken through third-party software comes with potential risks. Included among these risks is a potential breach of confidentiality. The principal investigator will take all available precautions to prevent this from occurring, although I cannot guarantee that your identity will never become known.

We will make every effort to safeguard your data, but as with anything online, we cannot guarantee the security of data obtained via the internet. Third party applications used in this study may have Terms of Service and Privacy policies outside of the control of the University of Kentucky.

Officials from the University of Kentucky may look at portions of records and other data collected as part of this study.

CAN YOU CHOOSE TO WITHDRAW FROM THE STUDY EARLY?

You can choose to leave the study at any time. You will not be treated differently if you decide to stop taking part in the study.

If you choose to leave the study early, data collected until that point will remain in the study database and may not be removed.

The investigators conducting the study may need to remove you from the study. This may occur for a number of reasons. You may be removed from the study if:

you are not able to follow the directions,

they find that your participation in the study is more risk than benefit to you

WILL YOU RECEIVE ANY REWARDS FOR TAKING PART IN THIS STUDY?

You will not receive any rewards or payment for taking part in the study.

WHAT ELSE DO YOU NEED TO KNOW?

If you volunteer to take part in this study, you will be one of about 15 people to do so.

The principal investigator, Apryl Moore, is a student and is being guided in this research by Dr. John Nash. You can contact John Nash by email via John.Nash@uky.edu.

WILL YOUR INFORMATION BE USED FOR FUTURE RESEARCH?

Your information collected for this study will not be used or shared for future research.

APPENDIX F: FACEBOOK GROUP NORMS

- Be kind and courteous (healthy debates are natural, but kindness is required)
- No hate speech or bullying (we want everyone to feel safe)
- Respect everyone's privacy (what happens in the group, stays within the group)
- Feel free to ask questions (we are here to help!)
- Feel free to share resources (you never know it can help others!)

APPENDIX G FACEBOOK SCREENSHOTS

Apr 9 · 🌐



I am finishing up my masters and I need to write about how educators feel about KPREP this year, for or against it and why. Any comments will be helpful. Thank you in advance.

👍 Like 💬 Comment 📧 Send


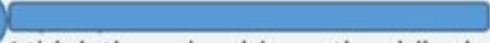
👍 8





All Comments ▾

[View previous comments...](#)

 
It's always been a waste of time for students and teachers...giving it this year just adds to the absurdity.

15w Like Reply 2 👍

 
I think they should use the ridiculous amount of money spent on testing and instead start offering free counseling and other much needed mental health services for children

 Write a comment...   

[Redacted] shared a link. ...
March 22 · 🌐

This week's episode of This American Life is fascinating from an education perspective - they discuss college admissions and the SAT. While the interviews focus mainly on the college experience I highly suggest listening if you are interested in helping high school students prepare for college or are interested in equity and access in education. It was fantastic!



< [Redacted] ...

Apr 16 · 🌐

What are the best *quiet* fidgets that teachers or parents get for students? I'm looking into purchasing some for my kiddos.

👍 Like 💬 Comment 📧 Send

👍 4

All Comments ▾

View previous comments...

[Redacted] BRIGHT MOON 4PCS Fidget Toy , Push Pop Bubble Sensory Fidget Toy Autism Special Needs Stress Reliever Squeeze Sensory Toys to Alleviate The Bad Mood of People - Rainbow (Crab+Love+Octagon+Animal)
https://www.amazon.com/dp/B08SW515WD/ref=cm_sw_r_cp_api_glt_fabc_G12ARK1CKTK259RPATRJ

🌈 BRIGHT MOON 4PCS Fidget

📷 Write a comment... 🗨️ 🎬 😊

🏠 News Feed 📺 Watch 2 👥 Groups 📰 News 🔔 Notifications ☰ Menu

you can use?

Social Emotional Learning Methods - Back to School			
Listening Circles Here are a few questions: <ul style="list-style-type: none">Where would you travel if you could go anywhere in the world?What makes you feel happiest?Who do you look up to the most and why?When you grow up, what do you want to be? Work on listening intently, and sharing with one another.	Name the emotion you're bringing to class Have each student call out the emotion they're feeling. This helps each student know how they and other students are feeling, what different emotions look like, and how to better interact with their peers based on how they're feeling.	Write down, rip up, and throw away your stress Have your students write down their expectations and insecurities, rip them up, and throw them away. This emotional check-in takes about three minutes. By acknowledging how your students are feeling at the start of each class, you'll acknowledge their barriers to learning and create a safe space for your students to overcome them.	Fill Another's Cup Have students grab a piece of paper, use a Jam Board or post-it notes and take time to fill each other's up. Spend time praising each other and sharing the love. Give students the option to share about.
Write a poem from another's perspective To create empathy, have the students write a quick poem from another's perspective. They can conduct short interviews and then write it out. This will encourage empathy and relationship building.	Appreciation, Apology & Ahas Have your students get in a circle and share an appreciation, apology, or realization with the group.	Set an intention Take time to set an intention for yourself for the day ahead. Something great to do for yourself or those around you. Write it down or be powerful about saying it through, but check throughout the day.	Quote of the Day Start each day with a quote. Something that gets students thinking, reacting, reflecting. After reading the quote get them talking and reflecting on the emotions they feel, the memories it evokes, or whatever they're thinking.
Be Grateful! Go around the room and find things to be grateful for. Simple things that make us ridiculously happy. Share out, smile, laugh and enjoy! Feel go around the room and do the same for what brings them joy!	Interest Presentation Give students a chance to tell the world about what they love. Let them brag on their strengths, what brings them joy, etc.	Caption a Photograph Show students a photograph and have them caption what emotions they see, propose new feeling words and offer solutions for handling those emotions, or ways in which.	Be quiet & still Turn on soft music or nature sounds and still your body for a few minutes. Focusing on deciphering the mind while paying close attention to the movement of the body and the breath.

2

5 Comments

Like

Comment

View 1 more comment

All Comments

Thanks so much for this resource!!

Like · Reply · 17w

I start class every day with "good things" kids share something good. Can be big or small. My good thing in one class was I got a full 8 hours of sleep. No need to be complicated just a celebration. We do snaps to celebrate.

Like · Reply · 17w

1 Reply

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Professional Positions

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