

VIRTUAL COMMUNITIES OF PRACTICE: A STUDY OF CAPACITY-BUILDING
PROFESSIONAL LEARNING FOR TEACHERS

By

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Abstract

Barriers of time, money, and geographic isolation have caused educators and educational leaders to seek alternatives to face-to-face, in-person professional learning. Professional Learning Communities are one means of addressing these issues. This convergent parallel mixed methods case study examined one professional learning model – Virtual Communities of Practice. Qualitative and quantitative analyses of interviews and surveys captured the perceptions of four secondary English teachers and four professional learning facilitators. Further, analyses of lesson plans and guided reflections about the lesson plans added to the lesser-developed and more objective data sets having to do with the impact of teacher professional learning experiences on student learning. Findings indicated that collective efficacy, participant and facilitator vulnerability, and working to solve common problems and issues resulted in a greater sense of community among participants in the Virtual Community of Practice. Additional findings indicated that a focus of inquiry, a recognition of teachers' diverse needs, and attention to the interstitial space could lead to better and more engaged learning in a virtual community of practice.

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and encouraged me through this journey.

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When soldiers part ways at war's end, the breakup of the platoon triggers the same emotion as the death of a person – it is the final bloodless death of the war.

This same mood haunts actors on the drop of the final curtain: after months of working together, something greater than themselves has just died. After a store closes its doors on its final evening, or congress wraps its final session, the participants amble away, feeling that they were part of something larger than themselves, something they intuit had a life even though they can't quite put a finger on it.

Thank you for being a part of my experience – something greater than myself that will live on even when we part ways.

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Chapter 1: Introduction

Background

Roughly \$18 billion is spent on teacher professional learning (PL) each year in the United States (U.S.), a figure that is spread out over more than 89 hours per teacher per year, including online and self-paced professional learning (Phillips, 2014). Some may argue that more than two weeks is a great deal of time to devote to teacher professional learning in a single school year, but considering the monumental task set before our teachers in the U.S., this is an astonishingly small amount of time.

That professional learning for teachers warrants at least some attention in most school districts' budgets is comforting. Funding cuts in recent years have caused budgets for teacher professional learning to be cut or to disappear entirely in some districts, but clearly many administrators in other districts remain committed to investing in their teachers. They are wise to do so; decades of research has shown that high quality professional learning can lead to gains in student achievement and improved implementation of policies and new practices (Garet, Porter, Desimone, Birman, & Yoon, 2001; Guskey, 2003; King & Newmann, 2001; Little, 1993; Penuel, Fishman, Yamaguchi, & Gallagher, 2007; Wei, Darling-Hammond, Andree, Richardson, & Orphanos, 2009). It has also been touted as a key factor in the improvement of schools in the U.S. (Desimone, 2009).

That said, providing and finding high quality professional learning continues to be a significant challenge, according to educators and representatives of educational institutions, as indicated in a 2015 report from The New Teacher Project (TNTP) which suggests, "getting better at teaching is a lot like getting into better physical shape: a task that is difficult, highly individualized and resistant to shortcuts" (p. 34). The report adds that it is "all but certain that

there is no single development experience or activity that will get results for every teacher” (p. 34). Districts often provide a few professional days over the course of a school year, and typically must divide that time between state-mandated trainings, and building or district initiatives (Dunsmore & Nelson, 2014), inarguably important learning for the day-to-day management and operation of the school, but typically impersonal and disconnected from the teacher’s daily experience. Learning experiences that are relevant, meaningful, and valued equally by both the district and the individual educator seem to be the exception rather than the norm.

Studies confirm the challenge districts face in their attempt to provide personalized learning to teachers, while also fulfilling the needs of the building, district, and state (Ginn, 2012; Wei, Darling-Hammond, Andree, Richardson, and Orphanos, 2009; Cameron, Mulholland, and Branson, 2013). This confirmation comes in part through reports from teachers, who largely find their professional learning experiences to be disconnected, ineffective, and irrelevant (Phillips, 2014). This belief suggests that the prominent focus of current educator professional learning in the U.S. has been around goals not created and determined by individual educators themselves. Rather, professional learning developers and those responsible for administering professional learning for educators have historically privileged system-wide initiatives that may only be theoretically, anecdotally, or peripherally related to the daily lived experiences of educators and students within the system.

Personalized content, however, is not the only quality that falls short when examining teacher professional learning. One-day or half-day sessions, sometimes cleverly and aptly referred to as “one-and-done” workshops, still largely populate the professional learning landscape for educators (The New Teacher Project, 2015). This occurs despite the growing body

of research showing that lengthier, more coherent, and in-depth approaches to professional learning are decidedly more effective in changing teachers' instructional practice. Penuel, Fishman, Yamaguchi, and Gallagher (2007) found that "longer durations of professional development [are] needed to create 'investigative cultures' [...], as opposed to small-scale changes in practice" (p. 929). Likewise, they suggest that collaborative approaches provide a focus for teacher interactions that serve to "motivate working through problems of practice together," and that the following features also contribute to enhanced knowledge and changes in teaching practice: focus on content knowledge, a high level of coherence, and inquiry-oriented learning approaches (p. 930). Vescio, Ross, and Adams (2008) add that the most impactful quality of teacher learning is "an intense focus on student learning and achievement" (p. 88).

The findings of Penuel et al. (2007) indicate that there has indeed been a slow shift in teacher professional learning over the past decade toward more reform-oriented professional learning, which research suggests could include *either* "one-and-done" sessions *or* more in-depth and cohesive sessions. Ironically, reforming professional learning practices themselves does not automatically precede goals of reforming practice as a result of that professional learning.

Dunsmore and Nelson (2014) believe reform-oriented models generally take two theoretical approaches: incentive-based or capacity-based. Incentive-based professional learning, they suggest, is marked by its lack of teacher involvement, and its theoretical position that argues teachers need only the right incentives (or disincentives) in order to learn and effectively implement changes intended to improve student learning. Conversely, capacity-based professional learning leverages teachers' collective professional expertise and knowledge in order to build teachers' competence and support them in their efforts to effectively implement instructional strategies and build a greater depth of knowledge in content and pedagogy. The

authors favor the latter approach, and their research supports their notion that such models lead to more sustainable improvements in teaching and learning, and will be supported by educators who assume a personal stake in the success or failure of a given initiative.

The TNTP report (2015) supports the approach advocated by Dunsmore and Nelson, arguing that “school systems need to make a more fundamental shift in mindset and define ‘helping teachers improve’ not only in terms of providing them with a package of discrete experiences and treatments, but with information, conditions and a culture that facilitate growth and normalize continuous improvement” (p. 35). This suggestion fuses the idea of sustained, enculturated professional learning with the idea of capacity-building in educators, and rejects the idea that an incentive-based system could fuel an organic, self-sustaining culture of continuous improvement within and throughout a community of educators.

The recommendation for an overhaul in teacher professional learning methodologies is not new. Garet, Porter, Desimone, Birman and Yoon (2001) called for this more than a decade ago. They argued, “if we are serious about using professional development as a mechanism to improve teaching, we need to invest in activities that have the characteristics that research shows foster improvements in teaching.” Attempts to tackle the ever-present need to improve teaching – and subsequently, improve schools – are well-documented. Performance management models, a focus on evidence-based practices, and implementation of professional learning communities have each appeared in relatively recent history as potential answers to the constantly-looming question of how to improve teaching and learning (Bryk, 2015).

Perhaps surprisingly, the notion of source or origin of a learning goal – specifically, the notion that better quality professional learning would be borne of internally-driven goals or needs rather than top-down or externally-motivated goals – is one that Lave and Wenger (1991)

actually rejected in their seminal work and in their theories around situated learning. Their discussion of the origin(s) of goals resembles their ideas about the factors that fuel learning, and which of those factors typically are afforded greater value in terms of how they influence a learning experience. Their contention is that formal schooling is privileged in conversations about what contributes to students' intellectual development, and it would stand to reason that educational institutions are privileged similarly in conversations about teacher learning as well.

Rather than issuing critiques or establishing hierarchies detailing their preferences with respect to origin and privilege in learning situations, Lave and Wenger (1991) consider both internally and externally-motivated goals and sources of information to be parts of a complex and dynamic set of relational transactions and interactions in which learners are engaged in a constant negotiation for identity within a community of learners. This theory – situated learning – does not characterize external or internal forces as more or less important than one another, but rather considers all forces as potentially influential and equally important within any learner's context. This view becomes increasingly pertinent when considering the varied contexts within which educators teach, learn, and live.

Those varied contexts have become even more important in the professional learning world in recent years. Providers and facilitators of professional learning for teachers have had to become more creative in their modes and methodologies, as “a major challenge to providing [...] high-quality professional development is cost” (Garet, et al., p. 937). Figuring costs of professional learning is a complex matter, partly because there is no single definition of professional learning by which to calculate spending (Sawchuk, 2010). Do districts only figure in time spent in organized learning sessions, or does the time a teacher spends researching a new strategy or reading a pedagogical text count as well? Does spending on professional learning

include the cost of travel, lodging, and meals? How are teachers whose districts have cut professional learning budgets to zero maintaining their pedagogical and content knowledge?

Online platforms have certainly allowed many professionals the freedom and opportunity to learn remotely without the often burdensome costs associated with travel, and teachers are no exception. If the cost of the professional learning experience itself is not prohibitive, the travel, hotel expenses, substitute teacher costs, and in some cases substitute teacher availability prohibit teachers from becoming involved in valuable learning experiences. Although the migration of more informal teacher learning communities to online environments has largely happened organically, as Internet access has become more ubiquitous and teachers have sought out new strategies and methods for engaging learners (Hough, Smithey, & Evertson, 2004), the cost challenges of providing high-quality in-person professional learning for teachers in particular may accelerate a more widespread and centrally-organized use of online learning experiences in schools and districts. Although the use of a variety of classroom technologies has been a focus for teachers when designing their student learning experiences for more than thirty years now, it has only garnered attention in the field of teacher professional learning within the past ten to fifteen years. Consequently, virtual teacher learning is a rapidly-growing, diverse, and dynamic phenomenon worthy of careful study and consideration.

Context and Questions

Undeniably, recent cuts to education in some states have affected public school districts (Carpenter, 2015). Many district and building administrators have been faced with difficult choices related to funding, and while most avoid cuts that adversely affect student programming, some are finding they have reached the point where they must reconsider budget allocations for some student activities and services, as well as for “non-instructional staff,” such as school

librarians, counselors, and paraprofessionals. Not surprisingly, professional learning and growth for teachers has been put on hold in many districts, with some professional learning budgets being cut entirely (Ginn, 2012).

State education agencies (SEAs) are often seen as compliance agencies responsible for holding districts, schools, and teachers accountable for services to students, but SEAs also have an obligation to provide technical assistance to districts, schools, and teachers, particularly around instructional best practices for state-adopted standards. Not surprisingly, the recent budget cuts in one state have also gravely impacted the SEA itself, and its capacity to provide requested technical assistance to teachers. Specifically, shortages in personnel and funding, which in turn result in challenges of time (allocating one staff member's time) and geography (one staff member reaching an entire state's teachers), have resulted in many teachers not receiving the assistance they request, and turning instead to vendors or regional educational service centers, for which they sometimes must pay a lofty fee (Sawchuk & Keller, 2010).

The SEA's English Language Arts (ELA) Virtual Communities of Practice (VCOPs) which were the focus of this study, were created for an SEA in the Midwestern United States, and were implemented from September 2016-February 2017. Logistically, they were an attempt to mitigate geographical, financial, and temporal barriers for both the SEA and Local Education Agencies (LEAs). They were also created to establish conditions that would promote sustained change and growth in teachers' instructional practices – goals which current research suggests teacher professional learning falls short of achieving (Wei, Darling-Hammond, Andree, Richardson, & Orphanos, 2009).

In order to determine whether the VCOP model was viable for creating conditions to initiate sustainable change and support teachers' professional growth, this case study was designed to address the following research questions:

- 1) In what ways do teachers build community within a virtual community of practice?
- 2) What practices do teachers and facilitators consider most beneficial to their professional practice within a virtual community of practice?
- 3) In what ways do virtual communities of practice increase the use of targeted instructional practices for an SEA's K-12 teachers of English Language Arts?

At the time of this study, I served as a member of the Career, Standards, and Assessment Services team at a small SEA in the Midwestern United States. Part of my professional duties included providing professional learning experiences that aligned with our state-adopted professional learning standards, as well as our content standards for K-12 English Language Arts. Our team and I researched the kinds of professional learning experiences that most impact professional practice for teachers. Unfortunately, time constraints due to being the only Language Arts consultant in the agency, funding cuts to our team, and logistical challenges related to travel often kept me from being able to provide adequate and appropriate professional learning for educators in all 286 districts throughout our state. I was interested in working on solutions to this problem, and thus created a plan for Virtual Communities of Practice (VCOPs) for our state's K-12 teachers of English Language Arts.

Challenges having to do with time, money, and geography are not new to educators. At the time of this study, the SEA itself, in an attempt to provide requested assistance to schools, often resorted to short informational sessions, webinars, or conference presentations, where educators mostly played passive roles, where there was little or no follow-up, little attention to

educators' application of their learning, and little encouragement of reflective practice. These sessions were often termed "updates" and purported to offer the latest news on a number of initiatives which school and district officials would ultimately be responsible for implementing.

Similarly, schools and districts were often at a loss for how to provide what they knew to be high-quality professional learning, due in part to personnel and funding cuts, as well as contract limitations. The VCOPs were designed to take place in a hybrid in-person/virtual setting, and to provide teachers the opportunity to engage in sustained collaborative inquiry and personal reflection around a set of cohesive, context-specific topics. Studying the VCOP structure and programming and its effect on teachers' instructional practices provided insight into the design of future professional learning opportunities for teachers that could work within the limitations and parameters set – whether by choice or necessity – by schools and districts.

Overview of Theory and Method

This mixed methods case study (Yin, 2014; Creswell, 2014) was designed to determine the ways in which one VCOP model was able to effect change in ELA instruction for a group of teacher-participants. It also sought to describe practices employed by both facilitators and participants that were conducive to professional growth in the teacher-participants. Additionally, it sought to define the ways in which participants built a sense of community with their cross-state colleagues within a virtual community of practice, both during synchronous discussions and asynchronous contact and communication with other participants using closed Google Communities.

Questions about what elements comprise the most effective online teacher professional learning are still being studied. Dede (2009), in a review of roughly 400 studies of purely online teacher professional development, concluded that "research in this field often relies on anecdotal

evidence and could profit from more rigorous methodologies” (p. 41). Most studies of teacher professional learning and its effectiveness rely on data from teacher surveys or interviews, and do not include objective measures such as student assessment data aligned with professional learning objectives, or pre/post-experience observation data collected to note instructional shifts, though this is changing (Penuel et al., 2007). The shortage of research on teacher professional learning informed by quantitative measures compared to research informed by qualitative measures greatly influenced the decision to use a convergent parallel mixed methods research design to study the VCOPs.

The teachers – who participated in the study voluntarily – first registered to participate in a VCOP based on one of three central topics – (1) Authentic student learning, creativity, and innovation in the English Language Arts, (2) Increasing instructional rigor in the English Language Arts, or (3) Formative assessment for improved student learning in the English Language Arts. Teachers were also placed in either an elementary or secondary VCOP, in accordance with their self-reported teaching assignments. The study only focused on two secondary sections, for reasons thoroughly explained in Chapter Three.

Qualitative and open-ended data from interviews, lesson plans, and teacher reflections were gathered and analyzed; quantitative data from surveys were also gathered and analyzed in order to provide more complete answers to the research questions and inform the findings in this study. Lesson plans and reflections were collected in three phases – early in the experience, about halfway through the experience, and after the final virtual meeting. Lesson plan and teacher reflection data informed conclusions about the likelihood of the VCOP model to impact teachers’ instructional practices. Post-experience interviews focused on teacher-participants’ and facilitators’ experiences within the VCOPs, while surveys focused on teachers’ perceptions of the

VCOP experience and specific strategies that either promoted or interfered with collaboration and learning within the community. Analyses of participant lesson plans and their reflections on their teaching of those lessons were designed to capture participants' changes in thinking about specific elements of English Language Arts instruction over the course of the six-month experience. Four participants, all of whom registered for the two secondary groups, agreed to take part in the study. Those four participants all submitted three sets of lesson plans and reflections, participated in post-experience interviews, and completed the post-experience surveys.

The study drew on Lave and Wenger's (1991) notion of situated learning, and also explored the benefits of approaching professional learning from a capacity-based theoretical framework as opposed to an incentive-based theoretical framework (Dunsmore & Nelson, 2014). These two theoretical frameworks provided a foundation for the research questions, the study design, and the analyses.

Propositions

The complementary theoretical frameworks, as well as the design and boundaries of this case study were propagated by the proposition that professional learning facilitated in a virtual space is indeed effective when approached with the goal of leveraging the teacher community – and the relationships that comprise that community – in order to build the capacity, competence, and confidence of individual teachers and motivate their growth as learners.

Findings that speak to the strengths and weaknesses of the model are intended to provide insight into possible enhancements for future virtual professional learning models that could solve some of the financial, geographical, and time barriers currently facing professional learning providers.

Further, Lave and Wenger's (1991) notion of situated learning would suggest that any professional learning experiences which in any way prevent the inclusion of all potentially influential internal and external factors risk losing at least some degree of effectiveness. The model that is the focus of this study is one that is intentionally inclusive of as many internal and external factors as possible. The data provided by the teacher-participants and the subsequent analysis of those data serve to advocate for less isolated and more inclusive models of teacher professional learning, virtual or otherwise.

Key Terms and Definitions

In order to provide readers a clear and complete understanding of this work, the following definitions and acronym clarifications are offered:

SEA: State Education Agency. For the purposes of this study, the SEA was the agency responsible for hosting the professional learning experience in which study participants were engaged.

LEA: Local Education Agency. LEAs are generally defined as either schools or school districts, depending on the context in which the term is being used.

VCOP: Virtual Community of Practice (or VCOPs) Virtual Communities of Practice. This is the name of the professional learning experience that was the focus of this study. Participants engaged in a community of practice whose work was conducted virtually, both synchronously and asynchronously.

Teacher-Participant: For the purposes of this work, this term describes the teachers who were engaged in the Virtual Communities of Practice experience. Sometimes the term is used generically to describe the group as a whole ("teacher-participants"), and sometimes it is used to describe only those who agreed to be part of the research study.

Zoom: This is the name of the virtual conferencing tool that was used to conduct the asynchronous portions of the virtual communities of practice experience. The tool allowed participants to see one another, speak and listen to one another in real-time, type messages privately or to the group using a chat tool, use a white board to share thoughts through drawings and illustrations, and share their screen with the group.

ELA: English Language Arts. The communities of practice included in this study were all comprised of English Language Arts teachers, and focused on instructional practices suitable in the English Language Arts classroom.

NCLB: No Child Left Behind, a 2001 Federal Education Law, which required annual testing in all grades from 3-8 and once in high school, as well as adequate yearly progress on statewide federally-mandated assessments.

Listserv: This is a large email group comprised of role-alike recipients. For the purposes of this study, a listserv was used to advertise the professional learning experience, and recruit participants to join a community of practice.

PLC: Professional Learning Community is a generic term that is widely used to describe any group of learners engaged in focused, professional conversation and study. The level of focus, quality of conversation, and depth of conversation involved in their study varies widely depending on the participants and the context in which the PLCs have been implemented.

ESSA: Every Student Succeeds Act was a 2015 Federal Education Law passed under the Obama administration.

Organization of the Dissertation

Following this introduction, Chapter Two provides a review of current literature, which informed and situated this study within the following areas of research and scholarship: teacher professional learning; learning communities, communities of practice, and communities of inquiry; virtual professional learning. Exploration of current research provided a depth of knowledge and insight into the complexities of a virtual community of practice for teacher-participants, and situated this study as a contributor to research on virtual communities of practice, teacher professional learning, and situated, capacity-based professional learning models.

Chapter Three includes an explanation of the methodology and philosophical frameworks that guided the study, as well as methods used for gathering, coding, and analyzing data. This discussion necessitates an introduction of study participants, their separate professional contexts, and a more in-depth explanation of the context in which they entered the study, including information about how the SEA came to implement the model, and data that informed the creation of the model itself.

Chapter Four focuses on study findings and discusses emerging trends and themes revealed in data collected from teacher-participants. I discuss the ways in which teachers were able to build community within their virtual communities of practice, instructional changes that were evident based on lesson plans and participants' reflective writings, strategies that teacher-participants perceived were both helpful and harmful to their learning in the virtual space, and changes in teachers' perceptions of their own instructional practices.

Chapter Five includes a discussion of findings related to the VCOP model and the components of it that seemed most useful for aligning teacher instruction to standards-based best

practices. I also discuss implications for current professional learning provided by SEAs, as well as future research on alternative models for professional learning.

The VCOP model is but one potential answer to addressing recent findings regarding what constitutes effective teacher professional learning while also addressing the realities of what schools and districts can reasonably provide for their teachers. This study sought to describe the lived experiences of participants within a VCOP, determine the impact their participation in the VCOPs on their professional practice, and add to the growing body of research on alternative professional learning models for teachers.

Chapter 2: Review of Literature

Teacher professional learning: Warring philosophies

Changes in teacher professional learning over the past 10-15 years reflect a greater focus on reforming instructional practices than previous years' efforts, which seemed more focused on adding strategies to teachers' toolboxes in a much less educator-focused manner (Penuel et al., 2007). Perhaps some of this shift is a result of push-back related to the No Child Left Behind (NCLB) policies of the 1990s and early 2000s, which some argue forced education leaders to abandon more in-depth learning for teachers and equip them instead with quick fixes. These simple and universally-applicable strategies that they hoped would result in quick gains on criterion-referenced high stakes tests could consequently relieve them of the pressure that resulted from public scrutiny of standardized test scores. Kesson and Henderson (2010) suggest that teacher professional development in the U.S. currently exists somewhere on a continuum between two warring reform-oriented paradigms: a "standardized management" paradigm and a "constructivist best practices" paradigm.

The standardized management paradigm centers professional learning around local, state, and federal initiatives, and Kesson and Henderson argue that it could be the most widely adopted paradigm in schools across the U.S. today, thanks to the assessment-centric policies of No Child Left Behind (NCLB). This is the paradigm of scripted curricula, textbook-specific trainings, common assessments, pacing guides, and collaborative work focused almost entirely on common instruction and quantitative data-informed discussions. While some may argue this model works well, others describe it as, "mediocre, scattershot training" that does little to help students and "is a burden for teachers" (Sawchuk & Keller, 2010, p. 2).

In contrast, Kesson and Henderson's "constructivist best practices" paradigm includes professional learning experiences which assume that improving individual teachers' instructional

practices will ultimately yield improvements in student learning and thus, test scores. This paradigm is most aligned with Dunsmore and Nelson's (2014) conception of capacity-based professional learning, though Dunsmore and Nelson describe a more in-depth teacher experience reliant on a greater level of teacher engagement and agency than the models Kesson and Henderson discuss. According to Dunsmore and Nelson, capacity-based approaches "assume that change happens when people work together to define both the problems and the solutions relevant to the systems they work in and then build the skills to put solutions in place collaboratively" (p. 15).

Kesson and Henderson, like Dunsmore and Nelson, center their discussion around models they have seen implemented rather than on theoretical models and frameworks. Their research shows that the models they have seen implemented – even those that local educators would define as capacity-based, constructivist professional development models, such as professional learning communities or communities of practice – are "accommodative and ameliorative" but not transformative for teachers. They suggest that such models, as they have been widely implemented thus far, assist teachers with navigating their instructional landscapes as successfully as possible within the bureaucratic limitations they are bounded by, but fall short of empowering teachers to challenge those limitations and advocate for reasonable and creative solutions to real problems they face. For Kesson and Henderson, the most transformative professional development assists teachers with answering the "why" rather than the "how" questions, and works to transform structures that may limit teacher autonomy and educators' abilities to act swiftly and diligently in the best interest of their students.

Perhaps the problem Kesson and Henderson identify hints at the larger problem identified by other researchers concerned with the effectiveness of professional learning. Teachers are

linchpins operating at the axis of layers of curricula – the recommended, the written, the hidden, the taught, the supported, and the tested (Schugurensky, 2002; Glatthorn, Boschee, Whitehead & Boschee, 2012). They do not instruct in a vacuum. While Kesson and Henderson raise a viable point about bureaucratic limitations and their effect on teacher learning and growth, other researchers offer additional possibilities for how professional learning can transform instructional practice without forcing bureaucratic upheaval.

Cameron, Mulholland, and Branson (2013) could be a bridge between other researchers and the findings of Kesson and Henderson. They consider teacher practice within a larger paradigm shift – one that characterizes schools as being “in the business of learning” (p. 377), and responsible for developing and maintaining environments of teaching and learning that best support that single goal. They envision effective professional learning as a synthesis of an educator’s personal, environmental, and professional needs. This includes a consideration of not only pedagogical and content learning needs, but also needs associated with an educator’s experience in the field, as well as his/her personal needs, such as interpersonal skills development and self-care.

The past decade has shown a surge of efforts to for building and maintaining structures that some argue are the answer to supporting the kind of environment Cameron et al. (2013) espouse. One term for what is perhaps the most popular of these structures is the Professional Learning Community or PLC.

Learning Communities and Communities of Practice

The history of formalized teacher learning communities can be traced back to the 1960’s, when researchers first explored the concept as an alternative to the more ubiquitous isolationist practices among teaching faculties across the U.S. It wasn’t until the 1980’s and 90’s; however,

that research into Professional Learning Communities (PLCs) became more focused (Solution Tree, Inc., 2017). As originally conceptualized, PLCs were built on the theoretical assumptions that “knowledge is situated in the day-to-day lived experiences of teachers and best understood through critical reflection with others who share the same experience” and that “actively engaging teachers in PLCs will increase their professional knowledge and enhance student learning” (Vescio, Ross, & Adams, 2008, p. 81). Additionally, teacher collaboration is widely thought to be “a critical component of effective professional learning” (Roy, 2013, p. vi), and a tool for building the capacity of instructional staff, which research has demonstrated is key in improving student learning (Dunsmore & Nelson, 2014; Foltos, 2014; Fullan, 2011).

A foundation of research around effective teacher professional learning in general made clear a number of factors present in the most successful teacher learning experiences. They included:

- Meaningful engagement with materials and ideas, as well as with colleagues both within and outside of a department and even outside of a single faculty pool;
- Attention to context;
- Inquiry-oriented experiences that provide opportunities for productive, respectful conflict between participants;
- Acknowledgement of “the big picture” of education as a whole, districts as a whole, schools as a whole, and childrens’ contexts both in and outside of school as a whole;
- Encouragement of reflective practice, critique of current thinking, and knowledge-generation;
- A balance between the needs of the individual and the needs of the district (Little, 1993).

That PLCs would be touted as a widely-viable means for implementing these features in an integrated fashion seems reasonable enough; two of the six rely on the existence of a group of teachers working together. But not long after the realization that collaborative groups could be necessary for the implementation of meaningful change, researchers began to realize that the term was being attached to anything from a faculty meeting to a hallway conversation conducted during a passing period (Dufour & Reeves, 2016; Sawchuk & Keller, 2010). This lack of consistency in the implementation of teacher PLCs gave rise to a new line of research that married Little's (1993) and other researchers' findings about effective components of professional learning in general with the findings of researchers studying PLCs specifically.

Richmond and Manokore (2010) identified five “critical elements” of teacher PLCs, which included:

1. Teacher learning and collaboration
2. Community-building among teacher members
3. Confidence-building among teacher members
4. Consideration of how policy influences practice
5. Sustainability

More recently, Dufour (2012) suggested that in the most successful PLC implementations, systems do the following:

1. Explore the PLC as a process for continuous learning and improvement.
2. Share leadership responsibilities within PLC groups.
3. Clarify individual and collective expectations for teacher-members.
4. Focus on developing the capacity of principals to successfully implement PLCs.
5. Maintain focus on PLC process.

One interesting difference between these two lists of qualities associated with successful PLC implementation is the degree of attention to teacher-members and the more interpersonal aspects of PLC functioning, such as community-building and confidence-building. Dufour's conception of success factors seems more focused on administrative interests, such as ensuring teachers know what is expected of them and ensuring they are clear about the reasons why they are being asked to engage in PLCs.

Even more recently, Dufour and Reeves (2016) contended that effective PLCs actually:

1. Assume “collective responsibility for student learning” (p. 69).
2. Establish a “guaranteed and viable curriculum” (p. 69).
3. Implement curriculum-based common formative assessments.
4. Identify which students understand and which do not; identify which teachers were effective in their instruction and learn from them; identify which concepts were difficult for students to grasp.
5. Create a “system of interventions” (p. 70) through which students who were identified as not understanding might receive additional instruction.

This more recent conception of PLCs popularized by Dufour adopts a more utilitarian approach to PLCs, in which the sole purpose is to catch students who are not performing at an established level of proficiency and take measures to catch them up. Although this is a remarkably simplified version of the PLCs originally envisioned by researchers in the 1960's – which were more aimed at breaking down walls between teachers in order to assist them with the sharing of best practices, build their confidence as instructors, and encourage collaborative thinking around how to effectively solve problems – it is the model that seems most widely accepted among K-12 educational institutions today (Sawchuk & Keller, 2010).

It is worthy of noting that many PLC models align well with Kesson and Henderson's (2010) standardized management paradigm, and are intentionally fueled almost entirely by discussions around standardized assessment data, progress monitoring data, and data from common assessments administered following a common lesson or unit of instruction. These two sets of ideas have become so inextricably associated in recent years that many educators might argue that PLCs exist solely as a standardized management tool, and Dufour and Reeves' (2016) most recent defining factors of PLCs seem to support that thinking.

This thinking is clearly less about teacher growth and capacity building, and instead more focused on advancing school and district initiatives and monitoring teachers' progress toward implementation of those initiatives. However, researchers find that there is an "ongoing interplay between the notion of community and its demand for a shared perspective, and the community's focus on professional growth and the inherent need to consider individual needs" (Dooner, Mandzuk & Clifton, 2008, p. 564). Therefore, advancing school and district initiatives cannot be the lone goal for PLCs, or they risk becoming ineffective in fulfilling their ultimate purpose to improve student learning. The most effective PLCs thrive when there is a balance between shared goals and perspectives, and the needs of the individual educators comprising the group (Little, 1993).

PLC implementation in recent years, however, is not necessarily automatically limited to goals in keeping with the standardized management paradigm. There are still some examples of PLC models that are more aligned with Little's definition. In one study, Dooner et al. (2008) concluded that "sameness" was not a goal for teacher PLCs at all. Rather, the goal for educators was "combining collegial support with the critical dialogue necessary for meaningful professional growth" (p. 574). The authors also looked closely at the evolution of the

collaborative model, and highlighted Weick's (1979) model of means convergence in their study of the "life cycle" of teacher PLCs. The model suggests that teachers pass through four phases during a collaborative experience – diverse ends, common means, common ends, diverse means – in which both individual and group goals are necessary and honored. Dooner et al. (2008) call for greater attention to this area of research, particularly for educators interested in promoting inquiry-based professional learning for teachers. Other researchers, who have come to question the effectiveness of PLCs as a means for supporting effective professional development, support this call (Matzat, 2013; Bausmith & Barry, 2011).

With such a range of PLC models being implemented in schools currently, it is not surprising that Dufour (2004) himself has stated that the term "PLC" is at risk of losing all meaning. This also could explain why researchers have questioned the effectiveness of PLCs; there is little consistency between the models being implemented from school to school.

Online professional learning for teachers

As more teachers began to seek professional learning experiences online, researchers questioned whether online professional learning could offer educators as rich an experience as face-to-face professional learning could. By and large, researchers determined that the social aspects of professional learning could translate quite seamlessly to an online community, but that "cognitive presence" may be trickier to achieve when educators lack physical cues and "pressures" to attend to tasks and engage in higher-order thinking (Akyol & Garrison, 2011).

The movement to online learning cannot be viewed solely as a preference for a novel experience motivated by a desire to do something different or differently. Rather, in the most successful experiences, the core of the desire for professional learning is not altered in the move from the physical to the virtual space. Crowley (2016) suggests that successful online

communities of learners have a purpose for engaging in virtual experiences that is drawn from a deeper and more purposeful place than the desire to innovate for the sake of innovation. She argues that common goals and beliefs are key to the building of successful virtual learning communities, just as they are key to the building of successful non-virtual learning communities. In other words, “People aren’t convinced by *what* you do in a virtual space (i.e., moderate Twitter chats, participate in online discussion threads, write blogs); they are convinced by *why* you do it.”

In a study of online teacher communities of practice, Hough et al. (2004) found that more successful online communities: “(a) have a more focused versus less focused purpose or problem base for discussions, (b) frame the directions for discussions and suggest to participants what kinds of discussions are expected, and (c) tend to support trust among the members through efforts to build community and encourage feelings of ownership” (p. 383). These qualities are similar to those identified by Richmond and Manakore (2010) as well as Dufour (2012), the first two being more relevant to focus and administrative concerns and the last more relevant to teachers’ affective needs. However, Hough et. al. (2004) experienced challenges in studying the effectiveness of virtual communities, particularly in terms of their ability to motivate reflective practice. They conclude that, “as more and more teachers move online, it is important that [Computer Mediated Communication] be more than a simple communications tool. It needs to become a viable tool for reflective professional development” (p. 384). The authors call for additional research to address ways in which more meaningful reflective practice in online teacher communities can occur.

Clearly, the success of any community of learners is dependent upon participants’ abilities to openly share ideas and experiences with one another, and the same is true for online

learning communities. Chen, Chen, and Kinshuk (2009) focused their attention on a specific practice researchers find essential to online professional learning: knowledge sharing. They attempted to measure personal qualities of online learners and determine how readily those qualities could contribute to participants' comfort and success in sharing knowledge with other community members. They found that learners' attitudes, prior experiences with social networks, and generally positive online experiences were highly correlated with "knowledge-sharing behavior".

Though these findings may be well within the realm of expectation, those interested in building successful online learning communities for teachers may be advised to consider participants' prior learning experiences and to attend to these more affective goals in order to encourage greater sharing among participants in new online communities. Broady-Ortmann (2002) suggests that creators of online professional learning include positive online experiences and social network skill-building in their programming, and that "Expecting participants to be technologically prepared is not reasonable and might sabotage the learning outcome intended for the course" (p. 114).

But programmatic concerns in online learning communities should not solely occupy the attention of organizers. Hou (2015) finds it is worthwhile for those in facilitator roles to explore ways in which they might foster an "affectively cohesive" and risk-free environment for online cohorts of learners. He finds that this type of environment is a difference between learners being passive and learners becoming more "proactive, expressive, and self-regulated" (p. 14). According to Hou, voluntary teacher participation, as well as empowering participants through establishing a reciprocal and equitable relationship between them and the facilitator, is key in the success of online communities of practice.

The idea of equitable relationships is also the focus of research by Rehm, Mulder, Gijselaers, and Segers (2016). They suggest that the professional positions of participants outside of the learning community can affect participation and subsequent learning and implementation of key ideas shared within the community. Those who are in leadership positions may feel more confident sharing resources and ideas, while less experienced classroom teachers tend to listen more and take notes. Rehm et al.'s findings support those of Hwang, Singh, and Argote (2015), who discovered that similar expertise among participants leads to greater interaction between them. Their study focused on a number of factors thought to potentially impact a group's ability to freely share knowledge and resources, and while initially participants may have connected to those who were closest to them geographically, or with those who shared a job title, sustained experiences led participants to interact more with those who had expertise similar to their own.

How teachers make the transition from more traditional models of professional learning to online models, and comparisons measuring effectiveness of traditional models versus online models are common themes in the research of online learning communities. Ho, Nakamori, Ho, and Lim (2016), in a study of a blended learning model compared to a face-to-face model of professional learning for teachers in Vietnam, found that the blended learning model yielded greater gains in knowledge of concepts taught, as well as greater overall satisfaction among teachers, mainly due to the greater flexibility inherent in the blended model. McConnell, Parker, Eberhardt, Koehler, and Lundeberg (2013) found that the qualities teachers find most valuable in a professional learning experience do not generally differ between face-to-face and online professional learning groups. One study of informal, entirely voluntary online communities of teachers showed that teachers mostly sought "participatory learning" in which they could gain insight into practical ways to improve teaching and learning (Duncan-Howell, 2010). The

flexibility of online communities seems key to their success, as well as a method for sharing resources and ideas (Ostashevski, Reid, & Moisey, 2011).

Overwhelmingly, studies in the area of online professional learning communities or communities of practice have considered either online courses – in which participants enroll and engage in, and which are managed by an instructor responsible for fitting the course within a formalized program of study – or they have considered informal and entirely voluntary online communities (e.g., Tseng, & Kuo, 2014; Ziegler, Paulus & Woodside, 2014), which are self-monitored and do not require sustained participation or proof of implementation, and do not solicit reflective feedback on the effectiveness of shared ideas. Additionally, most studies of organized, online professional learning communities have thus far been conducted on virtual or online communities implemented in the private sector (e.g., Lee-Kelley, Turner, & Ward, 2014), higher education coursework (e.g., Makri, Papanikolaou, Tsakiri & Karkanis, 2014), or for purposes of teacher professional learning outside of the U.S., in countries such as China, Vietnam, Australia, New Zealand, the United Kingdom, and Greece.

Conclusions and Convergences

The idea of learning communities being inherently capacity-building comes to us from researchers like King and Newmann (2001), who link those two ideas in the following way:

This conception of capacity stresses three main dimensions: the knowledge, skills and dispositions of individual teachers; professional community among the staff as a whole; and program coherence within schools. We contend that to be effective in boosting the quality of instruction, professional development must address all three aspects of school capacity (p. 91).

However, researchers are still calling for more careful study of what features of professional learning are most effective in achieving desired goals (Gynther, 2016). Incidentally, what those desired goals are exactly bears important implications as to what will be deemed an “effective” implementation of PLCs. Researchers must carefully consider divergent perspectives and intended goals of those ultimately responsible for implementing PLCs at the local level, and determine whether those goals align more with a standardized management paradigm or a constructivist best practices paradigm. Likewise, are teachers being given an external incentive (or disincentive) to participate, or is there a more universal, capacity-building goal throughout the system? (Kesson & Henderson, 2010; Dunsmore and Nelson, 2014).

In the current educational climate of ever-decreasing funding and growing skepticism of public education spending, coupled with the growing challenges of time, money, and geography (Salazar, Aguirre-Munoz, Fox & Nuanez-Lucas, 2010), we have certainly reached a moment in time when online teacher professional learning is worthy of more attention within the greater education research community. While some truths about teacher professional learning translate seamlessly from in-person to online spaces, a greater degree of attention to specific structures, practices, platforms, programming, etc. would greatly assist educators in determining the best options for teachers that would also eliminate some risk in overspending on travel and sit-and-get non-collaborative trainings.

The most popular PLC model, most notably promoted by DuFour (2012, 2014, 2016) forces systems too small to form viable teacher communities to construct less-effective workarounds to adhere to the rules of his system. The model is also hyper-focused on assessment, proficiency, and interventions. In order to be more inclusive of the majority of

schools, especially in rural settings, researchers would be wise to explore alternative options for implementing PLCs, and online options should certainly be counted among those options.

Little (1993) remained optimistic that “innovations on the margin” would be able to achieve the goals of teacher professional learning that seem currently to be divergent and conflicting – the more administratively-focused goals of implementing initiatives and raising test scores, and the more teacher-focused goals of increasing the confidence, capacity, and knowledge base of teacher-participants. Hough (2004) argues that online teacher learning could be a “viable tool” for achieving these goals. This study of virtual communities of practice intends to explore the potential of one model’s viability among teachers of English Language Arts.

Chapter 3: Research Context and Methods

Purpose

In addition to being the researcher, I am also an employee of a State Education Agency (SEA). My responsibilities include the effective implementation of our state's English Language Arts curricular standards, and I am charged with assisting educators across the state with implementing effective, research-based instructional practices that are aligned with our Board-adopted standards.

Our SEA recently underwent a change in leadership with the hiring of a new Commissioner of Education. During his first year as Commissioner, he set out on a tour of the state – a listening tour, he called it – to gather input from educators, community members, parents, business leaders and whomever else happened to be in attendance, about what they would like to see public education in the state become. The Commissioner brought back to the agency the qualitative data gathered during these meetings around the state, and the agency's data analysts worked to understand what the stakeholders in attendance had to say about the state's schools.

The Commissioner's qualitative study revealed a number of key findings, which helped to inform the following vision statement: Kansas leads the world in the success of each student. Because the term "success" required some definition, the Board formally adopted the following definition of a successful high school graduate in our state: "A successful high school graduate has the academic preparation, cognitive preparation, technical skills, employability skills and civic engagement to be successful in postsecondary education, in the attainment of an industry recognized certification or in the workforce, without the need for remediation" (Kansas State Department of Education, 2016).

Even that definition becomes problematic when faced with the task of measuring whether districts are achieving the goals set forth by the State Board, and whether the state really is leading the world in the success of each student. How would the state know? In response to this question, the State Board approved five outcomes by which it would ask districts to measure progress. They include:

- Kindergarten readiness
- Individual Plan of Study focused on career interest
- High school graduation rates
- Postsecondary completion/attendance
- Social/emotional growth measured locally

(Kansas State Department of Education, 2016)

The qualitative analysis of results from the listening tour resulted in some additional recommendations, which were shared via conference and workshop presentations by employees of the Department of Education, including the Commissioner himself. Among them were recommendations for rethinking the role of school counselors to include more intentional postsecondary planning with students and families, and the coordination of more partnerships with businesses and community organizations that could provide experiential learning opportunities for students. A third recommendation held strong implications for curriculum and classroom instruction. It suggested re-designing the curriculum around individualized goals, planning instruction around incorporating real-life problems and projects into the curriculum, and it strongly supported experiential learning.

This third recommendation was particularly compelling, given my work with ELA curriculum and instruction within the agency. It was also compelling because most of the other goals, outcomes, and recommendations provided by the Board following the Commissioner's listening tour did not explicitly mention the development of literacy skills, and it was important to me that literacy educators not feel ostracized or excluded from the direction the Board was choosing to take with their new leader. Some professional learning efforts were launched to address social-emotional development and civic engagement within the ELA classroom, but the communities of practice were specifically developed to more broadly address the State Board's vision, outcomes, and recommendations as they apply to ELA teachers and standards-based ELA instruction.

The virtual communities of practice (VCOPs) were implemented during a pilot study a year prior to this research study. They were designed to mitigate the geographical, fiscal and time challenges faced by districts in our state, while still maintaining key factors necessary for impactful professional learning. Prior to the VCOP implementation, the professional learning efforts of the Department of Education mostly consisted of in-person updates, workshops, or conference sessions. Virtual professional learning through the state consisted of updates via webinars in which participants could log in and listen, and ask questions through a chat box, but there was no attempt to draw a consistent audience or single group that would meet multiple times throughout the school year, nor to organize sessions around a single cohesive topic or set of topics. The department was interested in developing more organized, cohesive, and sustained professional learning for the field, but in the past this had proven to be a challenge for both the department and the field. This issue was well known by one team in the agency especially, whose job is to provide professional learning for the field around standards-based instructional practices.

That team's leadership was supportive of the creation of the VCOPs as a trial measure to accomplish the team's goals while dealing with the challenges of time, funding shortages, and the geographic isolation of some schools.

This study was designed to determine whether or not the model could successfully remove the barriers that prevented many teachers from gaining access to high quality professional learning, while still providing a learning experience that would engage teachers, build teacher capacity, and inspire positive changes in the instructional practices of teacher-participants. Some factors believed worthy of study due to their research-indicated influence on teacher professional learning were the ways in which teachers built and fostered a sense of community within their respective groups, and the particular strategies employed by both the facilitators and participants that teachers found most useful for their professional growth and practice. Likewise, the study focused on the degree to which teachers internalized and implemented ideas or strategies shared within the VCOPs, as evidenced by lesson plans and their reflective comments about those plans over the course of the VCOP experience.

Qualitative Methods

This mixed methods case study (Yin, 2014; Creswell, 2014) was designed to answer the following research questions:

- 1) In what ways do teachers build community within a virtual community of practice?
- 2) What practices do teachers and facilitators consider most beneficial to their professional practice within a virtual community of practice?
- 3) In what ways do virtual communities of practice increase the use of targeted instructional practices for an SEA's K-12 teachers of English Language Arts?

Case study as a methodology was especially fitting for this study, as Yin (2014) suggests it is helpful when researchers wish to conduct an in-depth investigation of a “contemporary phenomenon” within its real-world context. Likewise, it is particularly helpful when the line between the phenomenon and its context may not be entirely clear. The SEA’s VCOPs served as an appropriate contemporary phenomenon worthy of an in-depth case study because by design, the VCOPs blur the line between context and phenomenon. Contextual factors of the phenomenon included not only those within the VCOP itself – the virtual context, its programming, participants’ contributions, and relevant technological factors – but also contexts of teachers’ classrooms that shaped their thinking, their contributions, and their specific challenges.

Case study research is defined by its scope as well as its features, and as described by Yin (2014) includes researcher inquiry, a triangulation of evidence, and more variables of interest than data points, all centered on a well-defined “case”. The case, in this instance, includes two virtual communities of practice, which were implemented during the 2016-2017 school year and were professional learning opportunities offered through a state education agency (SEA) in Kansas. The SEA, in collaboration with teacher leaders from the education field within the state, planned the programming, implementation, and facilitation guidelines for the VCOPs. This is a study of the participants, their interactions within the community, and their growth and learning as professional educators.

For the purposes of this study, the case is bounded by the 2016-2017 school year, by the individual teachers and facilitators participating in the experience, pertinent factors related to participants’ schools and curricular contexts, the SEA responsible for implementing the experience, and the technology tools available within the Zoom platform as well as those available to individual participants (computers, speakers, web access, etc.)

Research on teacher professional learning largely concludes that a focus on contextual factors, such as a teacher's content area knowledge and instructional practices, is most effective in improving teaching and learning. Sustained and/or embedded professional learning makes it possible for teachers to implement new practices and reflect on their work, and attention to how a professional learning experience informs and is informed by experiences that precede and follow it also are thought to contribute to overall effectiveness of professional learning.

It must be noted that "effectiveness" is a problematic term when it comes to professional learning, and even though noteworthy researchers have measured and hypothesized about the qualities most likely to contribute to worthwhile experiences for teachers, most also agree that research in this area is still relatively new and in need of further examination (Guskey, 2003). While this study contemplates the effectiveness of factors specific to the professional learning experience – as evidenced by changes in instructional practices, reflective thoughts indicating a greater presence of thoughtfulness around the matters of instructional rigor, instructional relevance, authenticity, innovative instructional practices, and teacher perceptions of the experience as a whole – speculation, commentary, and claims around effectiveness as it pertains to improvements in student learning is outside the boundaries of this study. Discussions of student work, achievement, or success will be limited to teachers' reported observations as they were shared during the synchronous and asynchronous collaborative work, in interviews, and in their lesson plan reflections.

Analysis and discussion of data addresses the first four levels of Guskey's model, including the degree and success of teachers' participation, learning, perceived level of contextual support, and changes in practice. This study does not include a formal analysis or discussion of any objective measures of student achievement, though discussion could address student

achievement as perceived by teacher-participants, for those whose written reflections or interview responses address it.

These data add to a lesser-developed data set within this area of research, as previous researchers' findings indicate that most studies on professional learning practices tend to focus on participant perceptions of an experience rather than on more objective data (Dede, 2009; Hough, Smithey, & Everston, 2004). Lesson plan and teacher reflection analysis has been selected – as opposed to classroom observation or student data from large-scale or local assessments – due to the potential specificity of the VCOP content and the need to focus only on relevant instructional practices rather than accounting for a multitude of additional variables, as well as travel and local scheduling logistics.

The study also describes practices employed by both facilitators and participants during the virtual meetings in order to better inform and supplement survey data collected from all VCOP participants, and seeks to outline the practices participants considered most conducive to professional growth in a virtual environment. Additionally, the study garners feedback from participants during interviews regarding the ways in which facilitators and participants built community within their VCOP cohorts. This information includes work and discussions both prompted and unprompted by a facilitator, as well as collaborative work occurring both within and outside of the Zoom virtual meetings.

Collectively, the tools provided insight into four of five levels of impact, as defined by Guskey (2016). Together, they determined the impact of the VCOPs based on participants' perceptions of them, their learning as evidenced by submitted lesson plans and reflective commentary, positive organizational changes within participants' schools consistent with the goals of the VCOPs, and participants' perceptions of the usefulness of their new knowledge,

skills, and connections with fellow VCOP participants and facilitators. As mentioned previously, this study did not include data collection related to Guskey's fifth level of impact, measurement of student learning outcomes; it focused solely on teacher learning and teacher practice rather than student learning and student outcomes.

Theoretical framework

This study blended two complementary theoretical approaches in order to fully capture the complexity of the programming as well as the participant-focused aspects of the experience. A capacity-based theoretical framework for professional learning (Dunsmore & Nelson, 2014; Jaquith, 2013; Foltos, 2014) aided the analysis and discussion of the more "programmatic" elements of the VCOPs. Commentary and analysis regarding discussion prompts and formatting, materials used by the facilitators, and other programmatic elements of the VCOPs are discussed using a capacity-based theoretical framework. Complementary to this, but more focused on the participants' contributions to the VCOP experience, is Lave and Wenger's (1991) notion of situated learning, which served as an additional theoretical framework upon which analysis of participants' experiences within the VCOPs were based. It is worthwhile to note that both of the theoretical frameworks this study draws upon to inform analysis, discussions, and conclusions center on the experiences of the participants as members of the VCOPs. This is one reason why the study is not negatively impacted by the absence of student data to verify "effectiveness" with respect to the VCOP experience.

Lave and Wenger's (1991) work and thinking around the interstitial space is especially complementary to the capacity-building theoretical framework as well as case study methodologies. In this instance, it illuminates the space between the VCOP experience and the many contextual factors at play in each teacher-participant's classroom, and adds value to the oft-

neglected moments in which decisions are made that either cause changes to occur in a teacher's instruction, or do not. The interstitial is frequently the space in which ideas borne from a teacher's attempts to synthesize theory and practice are either strengthened or smothered by coworkers, superiors, parents, or the perceived realities of a teacher's context.

Focus on this interstitial space is present mostly in interview data, but also is a factor in teacher reflections, particularly in teachers' discussions of contextual factors that they perceive limit or impede their ability to successfully implement a lesson or strategy. Even when the teacher-participants did not specifically reflect upon their perceived limitations, the interstitial space may be called upon to explain reasons for some hesitance to change a practice or try a new strategy with students. One recurring example of this unexpressed limitation is the use of classic novels in grade levels which the novels have commonly been used.

To the extent possible given the voluntary nature of the VCOPs, the model adhered to the best practices for professional learning as defined by Garet, Porter, Desimone, Birman, and Yoon (2001). The authors identify the following key features of professional learning most likely to change teacher practice:

- Focus on content knowledge
- Opportunities for active learning
- Coherence with other learning activities.

Separate from the model itself, the research questions focus in part on the community-building aspects of learning communities highlighted by some of the earlier researchers of PLCs.

Facilitators

While I was responsible for the design of the VCOP model, including the basic structure of the sessions and the overarching theme(s) each group would address, the programming

throughout the virtual meetings was largely the responsibility of the facilitators. For the secondary cohorts (the focus of this study), the SEA paid an honorarium to four facilitators (two for each cohort) for their work on the VCOPs. The facilitators worked in pairs to find readings and resources, plan sessions, communicate with cohort members, and lead both synchronous and asynchronous discussions. Because the success of the VCOP groups was largely dependent on the culture the facilitators built, it is important to know some information about the individual facilitators. Table 1 includes details about the facilitators' professional backgrounds that may provide a more complete understanding of what informed the programming choices within individual VCOP groups.

Table 1

	Secondary-Rigor		Secondary-Authentic Instruction and Creativity	
Pseudonym	Lucy	Beth	Anna	Lynn
Years in Education	10	10	35	37
Degrees & Certifications	<ul style="list-style-type: none"> ▪ B.A. English ▪ M.A. Sec. Language Arts ▪ In Progress: M.A. in Administration with an emphasis in curriculum development 	<ul style="list-style-type: none"> ▪ B.A. English ▪ M.A. Curr. & Instruction 	<ul style="list-style-type: none"> ▪ B.S. Interior Design ▪ B.S. Education ▪ M.A. Curr. & Instruction ▪ Certified Home Economics grades 6-12 ▪ Certified ELA grades 7-12. ▪ Teacher leader certification 	<ul style="list-style-type: none"> ▪ B.A. Family and Child Development ▪ B.A. Elementary Education ▪ M.S. Educational Administration-Building and District level
Current Title	<ul style="list-style-type: none"> ▪ 9th grade Language Arts teacher ▪ PreK-12 ESOL 	<ul style="list-style-type: none"> ▪ Literacy Coach 	<ul style="list-style-type: none"> ▪ Instructional coach, part-time ▪ [SEA]presenter ▪ Grants and education resources coordinator for local recreation commission 	<ul style="list-style-type: none"> ▪ District Curriculum and Testing Consultant

The facilitators played a key role in the participants' experiences, and interview data exposes their thinking during the VCOP experience, including their motivations, their goals, and the ways in which they measured their success as facilitators. Although for the most part, the focus of data collection and analyses was on the experiences of teacher-participants, and the role

of the facilitators in the study itself was less prominent, their contributions are certainly worthy of some attention as they provide valuable insights into the ways in which teachers build community in a community of practice. They also give voice to challenges present in the VCOPs that may not have been as apparent to teacher-participants.

Participants

The participants were four secondary English Language Arts teachers. They each taught in different schools and districts, and did not know one another prior to the VCOP experience. Two of the teachers – Rachel and Maggie – participated in the pilot study of the VCOPs, and chose to participate again the following year and also volunteered to be research subjects. Table 2 includes pertinent information about each of the participants.

Table 2

	Secondary-Rigor	Secondary-Authentic Instruction and Creativity		
Pseudonym	Rachel	Diane	Maggie	Tara
Years in Education	4	28	16	25
Certifications	▪ English 6-12	▪ English 7-12	▪ National Board Certified K-9 ▪ Reading Spec. PreK-12 ▪ Mathematics 5-8	▪ Elementary K-9 ▪ English 5-9 ▪ ESOL K-12
Current Title	8 th , 10 th and 12 th grade English teacher	7 th and 8 th grade English teacher	6 th grade English teacher	7 th and 8 th grade English teacher
Building Size	158 Students (Grades 7-12)	862 Students (Grades 6-8)	263 Students (Grades 5-8)	195 Students (Grades 7-8)

Clearly, the participants represent a range of experience levels within the field. For example, Rachel is new to the role of teaching, and is working in a small district where she is one of two English teachers; whereas, Diane has nearly three decades of experience and works in a large district where she teaches at one of several middle schools and operates as part of a larger English department. Although Rachel and Diane were members of two separate communities, it is

worth noting – for the sake of discussion regarding the interstitial space later on – that community members brought with them very different contexts bearing strong implications for the successful implementation of new ideas, and interacted with other community members who may have perceived the viability of individual ideas very differently depending upon their particular contexts.

The Researcher's Role

As the researcher, I too had a context from which my ideas, chosen methods, and theoretical frameworks were selected. As the SEA employee responsible for implementation of the state's adopted ELA standards and state-endorsed professional learning around those standards, I was tasked with creating a solution for implementing high quality learning for teachers that would not unreasonably burden district or state budgets. The VCOPs were a model borne from an experience I had as a participant in a community of practice through Learning Forward's Executive Leadership program. While rewarding and packed with useful information for my work, our meetings were held either in person or via phone call, the latter of which I found awkward and difficult to fully engage in.

The VCOP models I developed – first for the pilot research study and then for this study – were based in part on practices and protocols highlighted in articles and documents published by Learning Forward, partly on research highlighted in Chapter Two, and – for the broader programming aspects of the model – partly from the qualitative findings revealed by the Commissioner's listening tour, as well as a survey administered to the field in 2015 to capture teachers' professional learning requests and needs.

I hold a personal bias that most teachers are hard-working, thoughtful, and caring professionals who wish to think deeply about and plan instruction that will engage and challenge

their students. I subscribe to a belief that teacher professional learning should build teacher capacity rather than incentivize desired practice. These beliefs certainly informed the selection of my theoretical frameworks, and were beliefs that I had to continually be mindful of as I reflected on findings indicated by data analysis.

Being the creator and organizer of the VCOP groups at the state level also created in me a sense of responsibility for the experiences of the teacher-participants. I wanted the groups to succeed in their purpose, and I wanted teacher-participants to end the experience feeling as though they grew professionally as a result of their involvement. However, my role as researcher for the purposes of this study was to be a conscientious and unobtrusive observer and interviewer, a neutral and non-judgmental party responsible for reviewing and describing the experience, the ways in which teachers engaged in it, and how it affected their practice. I made a conscious effort throughout the processes of data collection, analysis, and interpretation to be mindful of my biases, and remain as neutral as possible in my handling of data. I also asked critical friends to critically review my data and interpretations to ensure my bias was not skewing results.

Data Generation

Because Yin (2014) recommends the triangulation of qualitative data in case studies, I selected several data sources that would help answer my research questions. The convergent parallel mixed methods research design (Creswell, 2014) was necessary, due to the more quantitative quality of the survey data, as well as the lesson plan analysis tool. Although lesson plan and reflection data were generated and collected at three separate times throughout the six-month experience (beginning, middle, and end of the experience), sequencing of the various data sets was not necessary, nor a focus in the research design. Likewise, data collected throughout the

experience was held for analysis once all data were gathered. Figure 1 illustrates the basic design of the study.

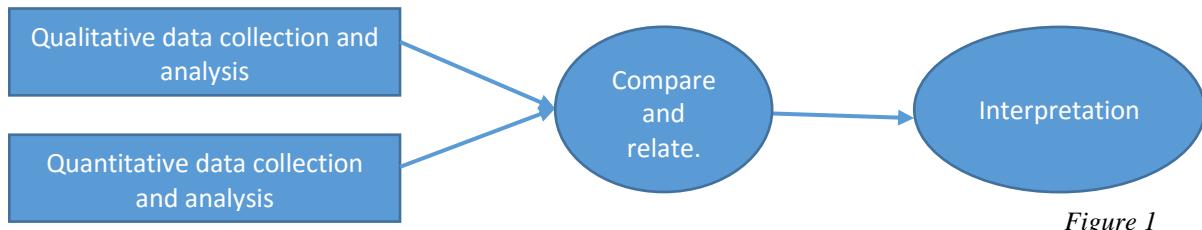


Figure 1

Two of the research questions focused on determining the impact of the VCOPs as a professional learning model on four teacher-participants' ELA instruction, and one focused on qualities of the experience that contributed to a sense of community for the participants. I used instrument-based analysis for the lesson plans and reflections, as well as the survey data. I used both pre-determined and emerging questions in my interviews and engaged first in inductive coding of each interview, and then deductive coding to identify and categorize trends across participant responses.

Lesson Plans and Reflections. Lesson plans and teachers' written reflections were collected for the purpose of answering whether or not VCOP programming was able to increase the usage of targeted instructional practices for participating teachers, namely those practices associated with the focus of the particular VCOP group in which each participant was engaged. There were two groups, both comprised of secondary (grades 7-12) teachers, from which participant data were collected. One group's programming was focused on rigor in the ELA classroom, and the other was focused on authentic instruction and formative assessment practices.

Four teachers – one from the secondary VCOP focused on rigor in ELA instruction and three from the secondary VCOP focused on authentic learning and innovation in the ELA classroom – submitted one lesson plan and reflection in late November 2016/early December

2016, one in late December 2016/early January 2017, and one in February 2017 at the end of their VCOP experience.

Along with their lesson plans, teacher-participants also submitted reflective comments about the ways in which those lesson plans addressed their current thinking and learning. Teachers were provided a list of guiding questions (Appendix B) to assist their thinking and provide a focus for their thoughts. These guiding questions were not intended to limit or influence teachers' reflective responses, but rather to focus their reflections around topics most pertinent to the intended learning goals associated with the VCOP groups.

Google Community. Participants in both VCOP groups were encouraged by their facilitators to access a Google Community and engage in collaboration with their VCOP group members and facilitators. This asynchronous collaboration was used as a method for organizing and focusing upcoming synchronous discussions on the Zoom platform, for following up on Zoom discussions, and for providing additional resources and information for participants. Relevant data from the Google Community groups were captured for the purpose of informing interview questions, enriching analyses of participants' growth and change in thinking around instructional practices, and informing conclusions regarding programmatic influences that may have impacted participants' experiences.

Zoom meetings. Data were generated during the synchronous Zoom meetings in the form of researcher notes, images of the screen renderings within the Zoom platform, and samples of chat data from participants. These data were supplementary and were used in ways similar to the Google Community data.

Surveys. Teacher-participants completed surveys following their VCOP experience. Survey responses provided insights into participants' perceived usefulness of various tools and strategies used during the VCOP experience.

Interviews. Finally, study participants and facilitators completed interviews with the researcher at the conclusion of the experience. When possible, the interviews were conducted via Zoom and recorded for the purpose of recording and verifying the accuracy of the data. Two participants and two facilitators were unable to complete the interviews via Zoom, and instead submitted answers to interview questions via email, and agreed to follow-up questions via email as well. Questions were drafted ahead of time, and although all interviewees answered a core set of questions, follow-up questions pertaining to each participant's specific contributions and experiences were also asked. Interview questions primarily addressed the community-building aspects of the VCOPs, and sought to have participants and facilitators describe the ways in which they experienced or worked to build a sense of community within both synchronous and asynchronous communication and collaboration. The extent to which they felt or were able to build a sense of community and the extent to which their sense of community contributed (or not) to their learning was also a focus of the interviews.

Data Analysis

Lesson Plans and Reflections. An analysis tool (Appendix A), informed by two documents – a report from The Education Trust (2016) about standards-aligned instructional practices, and the Rigor and Relevance Framework (Daggett, 2014) – was developed to assist in the evaluation of qualities of and changes in teacher-participants' thinking and practice over the course of the six-month experience. Each of the four participants' three lesson plans were evaluated using the lesson plan analysis tool. Although the participants were in two separate

groups, the topics of rigor and relevance were directly addressed in both groups by nature of their respective topics.

Each teacher's lesson plans and reflections were first coded by highlighting the verbs indicating what students would do as part of the lesson. This was done in order to more objectively evaluate the placement of the lesson's Depth of Knowledge (DOK) level, which was included in the analysis tool. It also helped to define the quadrant on the Rigor and Relevance Framework (Daggett, 2014) in which the lesson best fit.

A second read of the lesson and corresponding reflection allowed me to gain a better sense of what the teacher and students were doing throughout the course of the lesson. Likewise, the reflective comments helped to fill in any "blanks" or questions about the intended learning goals that may have been left out of the lesson. It also helped to create a knowledge base about the organization of the individual lessons so that I could cite examples to justify each lesson's placement on the analysis tool.

Following the second read, I used the analysis tool to begin "scoring" the lesson and reflection. I made notes using electronic comments to cite examples from the lesson plan that would justify its placement in each category. Options included Yes, Mostly Yes, Mostly No, No, and Unclear. I excluded a center, neutral option on the analysis tool, in order to avoid an abundance of answers in that column. While balance itself is not broadly considered a fault in curriculum and instruction, balance in this case would indicate a balance in the presence and absence of key, positive features within each lesson plan. The absence of a neutral column forced me to justify – using evidence from the teachers' plans and reflections – whether the presence of a particular key feature would seem significant from a *student's* perspective. My conception of significance in this case included key features that were clearly and intentionally woven into the

lesson plan as a focus in order to enhance the student learning experience. Key features found in a lesson plan or reflection that were only partially addressed, or that were addressed in an uncommitted, unclear, cursory, or even obligatory manner were placed in the “Mostly No” column. The “unclear” column was reserved for situations in which there was no mention of a key feature either in the lesson plan or the reflection. This definition meant that the “unclear” designation also applied in situations where there could be a reasonable assumption that the key feature existed either prior to or after the lesson, but there was no explicit mentioning of the key feature in either the lesson or the reflection.

Following the analysis of each participant’s three lesson plans, the analysis tools for each of them were reviewed and compared across each participant’s three submissions. Changes within and across the tool’s categories were noted. Changes to the lesson’s placement on the Rigor/Relevance Framework (included on the lesson plan and reflection analysis tool) were also noted.

Google Community. Like the VCOP experience itself, participants’ contributions to their Google Community were entirely voluntary. Analysis of the Google Communities was focused on the degree to which study participants engaged in the Google Community, the nature of their engagement if it was present, and how that engagement changed over the course of the VCOP experience. Participants’ postings in this space were also used to inform additional questions and follow-up questions during their one-on-one interviews, as well as interpretations and findings during analyses of interview and survey data.

The postings and interactions of all study participants were extracted from their Google Communities and placed into a Word document. Where an interaction occurred, the comments of the participant(s) and facilitator(s) with whom the participant interacted were also placed into a

Word document, within the context of the Google Community interaction. Although the Google Community data were not analyzed in depth as a separate data set, they served an important role, as they provided evidence to support participants' comments and reflections about community-building and VCOP content.

Zoom meetings. This data set consisted of researcher notes, screenshots, and participant chat contributions. It was used only to provide context for the interpretation of data from lesson plans, reflections, surveys, and interviews.

Surveys. Data collected from surveys indicated the perceived effectiveness of specific elements included in the VCOP experience. Some of these elements included the use of the screen-sharing tool by facilitators and fellow participants, Zoom as a video conferencing tool, unstructured discussion time, structured discussion time, the facilitator sharing relevant book titles, and others. Participants selected their perceived effectiveness of each element based on a four-point scale with an “N/A” option if the participant did not experience the particular element in her VCOP. Options included: (1) Not engaging or disengaging; ineffective, (2) Somewhat engaging; more ineffective than effective, (3) Mostly engaging; more effective than not, (4) Highly engaging; extremely effective. The survey that participants completed did not show a numerical rating on the options, but following the completion of surveys, each option received points for each rating they were given. For example, if “Use of screen sharing by facilitator” received three 4’s and one 3, that element would yield 15 points. The scores of each element were tallied in order to determine which were most effective at achieving the goals of the VCOPs in the eyes of participants. This data set as a whole was then used to draw larger conclusions about best practices in a virtual professional learning setting.

Interviews. Analyses of individual interviews focused on identifying trends in participants' and facilitators' experiences of community-building practices within their respective VCOPs. Interviews were first transcribed, then read thoroughly to ensure accuracy of the transcriptions. I first used inductive coding to highlight major themes and ideas in the responses. Each interview was coded individually using this method. Following the inductive coding process, interviews were analyzed as a whole and themes and ideas were grouped and categorized to form a set of overarching themes. When appropriate, interview data from teacher-participants were grouped and analyzed separately from facilitators' interview data so that analysis could include differences in perspectives among the two groups of interviewees. The resulting themes are described and discussed in Chapter Four.

A summary of the data collection tools and analytical methods are included in Table 3.

The table also details which data sources were intended to inform each research question.

Table 3

Question	Tool	Data	Analytical Method
In what ways do teachers build community within a virtual community of practice?	<ul style="list-style-type: none"> ▪ Participant & facilitator interviews ▪ Google community postings 	<ul style="list-style-type: none"> ▪ Interview notes, transcriptions, recordings 	<ul style="list-style-type: none"> ▪ Coding to indicate community-building efforts, both synchronous and asynchronous, both facilitated and not facilitated
What practices do teachers and facilitators consider most beneficial in virtual communities of practice?	<ul style="list-style-type: none"> ▪ Post-Surveys from participants ▪ Virtual meeting researcher observations 	<ul style="list-style-type: none"> ▪ Likert scale ratings (surveys) ▪ Observational notes detailing practices employed by both participants and facilitators (observations) 	<ul style="list-style-type: none"> ▪ Ranking of practices based on addition of points awarded from responses ▪ Synthesis of frequency-ranked practices with observational notes
In what ways do virtual communities of practice increase the use of targeted instructional practices for an SEA's K-12 teachers of English Language Arts?	<ul style="list-style-type: none"> ▪ Analysis of lesson plans and teacher-participant reflections 	<ul style="list-style-type: none"> ▪ Pre-experience lesson plans and accompanying reflections ▪ Interim lesson plans and reflections ▪ Post-experience lesson plans and reflections 	<ul style="list-style-type: none"> ▪ Lesson plan analysis tool, created from Education Trust and Daggett's Rigor/Relevance Framework. ▪ Identification of trends within and between participants.

Validation of Data and Analysis

In order to ensure accuracy of data and analyses of it, Yin (2014) suggests four tests: construct validity, internal validity, external validity, and reliability. Because the ultimate goals of this study are descriptive in nature and specific to the participants, the state in which the study occurred, the facilitators, and the content influenced by the whole of VCOP participants, which include educators other than study participants, replication was determined to not be a valid method for checking validity of data.

Instead, validation of data was completed through an outside researcher's review of the data, analyses, and conclusions. I verified the use of multiple sources of evidence, coding accuracies, attribution of labels to sets of data, and the accuracy of labels themselves. While the study seeks to describe the experiences of a small group of participants in a single extended professional learning event, there is an implied causal relationship that begs validation. Therefore, the outside researcher also attended to the accuracy of my inferences. I provide rival explanations, and these were also reviewed and validated by the outside researcher.

Implementation of Model as Research Study

The VCOP model would have been implemented during the 2016-17 school year, whether or not this research study was approved to move forward. It was part of a long-term plan for professional learning in the SEA. For that reason, it is helpful to understand how the model was implemented for all participants, so that the timing and methods employed for the study make sense in a broader context. Likewise, now that all the component parts of the study have been explained briefly – the facilitators, participants, researcher, data collection, and data analysis – it is helpful to gain an overall picture of how the parts worked together.

Beginning in August 2016, an email offering a professional learning opportunity – The English Language Arts Virtual Communities of Practice for K-12 teachers of English Language Arts – was distributed via one Midwestern SEA’s educator email listservs. (Appendix F)

Educators voluntarily registered to participate in a VCOP focused around one of three central topics – (1) Authentic student learning, creativity, and innovation in the English Language Arts, (2) Increasing Instructional Rigor in the English Language Arts, or (3) Formative assessment for improved student learning in the English Language Arts. Teachers were placed in either an elementary or secondary community of practice, in accordance with their self-reported teaching assignments.

Each registered participant paid \$175, which collectively covered the cost of meals and facilities at the first in-person meeting, as well as six facilitators’ travel and lodging for the in-person meeting, as well as their honoraria, which was paid to them at the conclusion of the six-month experience. Participants wishing to earn one hour of continuing education credit for their participation also could elect to pay an additional \$65 and complete one assignment.

Due to low enrollment, all three elementary sections were combined into a single group of eight teacher-participants. The secondary “formative assessment” and “authentic student learning” groups were combined into a single group of eleven teachers, and the secondary “rigor” group had a significant enough enrollment to comprise a single group of thirteen participants. Two experienced educators with expertise in English Language Arts instruction, and with experience and certification in the same grade levels as the participants with whom they were working, facilitated each group.

The four facilitators worked in teams of two to gather, discuss, and facilitate the sessions based on a framework established by the researcher and SEA employee. Lucy and Beth facilitated

the VCOP focused on rigor in secondary ELA, and Lynn and Anna facilitated the VCOP focused on authentic learning and innovation in secondary ELA. These facilitators collaborated primarily over email, but also shared ideas by adding one another to their groups' Google Communities so that they could view one another's ideas, successes, and challenges in engaging participants in the asynchronous aspects of the VCOP experience.

As mentioned previously, topics for the individual VCOP groups were selected based on goals established by the State Board of Education and State Education Commissioner, as well as ELA instructional best practices, as indicated by current literature. Because academic achievement and more specifically, achievement in English Language Arts as a content area is not explicitly mentioned in the State Board's outcomes, the VCOPs and other professional learning efforts for ELA teachers in the period of time following the release of the Board's outcomes focused on how high quality literacy instruction was crucial in order to meet the stated outcomes. Professional learning experiences also connected the Board's outcomes in more explicit ways as well. The inclusion of authentic learning was intended to address the Board's request for more experiential and project-based learning for students, and the focus on rigor was intended to address the Board's statement that students should have academic, cognitive, technical and employability skills upon graduating from high school, without need for remediation.

A loose programming plan was developed during a three-day collaboration between facilitators and SEA representatives, and more solid programming was developed over the course of the six-month experience, when facilitators had the opportunity to interact with participants and tailor content to their individual needs.

The first in-person meetings for participants occurred in September in two separate locations: one location intended to serve those who live and work in the eastern half of the state,

and one intended to serve those who live and work in the western half of the state. During these initial “kick off” meetings, all participants were informed of the opportunity to participate in a study focused on the VCOPs. A convenience sample of four educators, which all happened to be participants in one of two secondary VCOP groups, volunteered to participate in the study. They signed and submitted consent forms, indicating their agreement to the terms of the study, which included the submission of three lesson plans, submission of original reflective comments about those lesson plans, completion of a post-experience survey, and participation in a one-on-one interview following their experience.

The initial meetings were led by the researcher, and included introductions to other participants, introductions to facilitators, discussions of current ELA-related articles, development of a focus issue, and orientation to various structures, norms, and tools we would be using throughout the experience.

This included orientation to Zoom, the online web conferencing tool that was used to conduct the virtual meetings. This tool was selected because it allowed participants to log in to a virtual meeting room by simply clicking a link, see and hear one another via web cameras and microphones, share documents easily with one another, share screens with one another, and provide visual cues to both the facilitators and other participants. Because participants were expected to be at varying levels of comfort with technology, it was important that the tool be relatively intuitive and easy to use.

Once the virtual meetings were underway, collection of lesson plans and reflections ensued, as did observations of virtual meetings and monitoring of the Google Community sites. Completion of the surveys, interviews, and the complete analysis of lesson plans did not occur

until after the final virtual meeting was conducted in February. A full timeline of the study is included in Table 4 to clarify timing of the relevant components.

Table 4

	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar
Facilitator Training/Complete VCOP programming	x	x	x					
Advertising of VCOPs and registration	x	x	x					
Initial in-person meeting, selection of study participants			x					
First lesson plan and reflection submission			x					
Virtual meeting observations			x	x	x	x	x	x
Second lesson plan and reflection submission				x				
Third lesson plan and reflection submission							x	
Conduct interviews							x	
Survey completion (at final meeting)							x	
Analysis of lesson plan/reflection, observation, interview, and survey data							x	x
Complete written analysis, discussion, findings, and conclusion							x	x

Assumptions

During the course of this study, I assumed the following:

- Teacher-participants were not under any obligation to participate in the VCOPs by their local schools or districts, and had signed up by their own free will because they wished to enhance their own professional practice.
- Participants were practicing K-12 educators.
- Participants did not see the researcher as an authority figure beyond her responsibility to carry out professional learning experiences and communicate information, and they shared their experiences and perceptions honestly and without reservation.

Limitations

Limitations of this study may prevent the generalization of findings to a wider population. Study participants were selected from a pool of volunteer participants whose registration fees were paid by their districts, schools, or themselves. Thus, the sample was drawn from a population limited by their ability to pay the registration fee.

The geographic locations of participants influenced data collection in the sense that it was not simultaneous for all participants. Submissions of lesson plans and reflections occurred electronically and independently from each participant, and the submissions were at least in part dependent upon local scheduling within the teacher-participants' schools, local curricula that may have included required pacing, commonality and collaboration between other teachers not participating in the study, local initiatives that may have impacted a teacher-participant's perceived or real ability to implement desired plans or strategies, and of course the population of individual students with whom the participants were working.

The researcher is an employee of the SEA, who is simultaneously responsible for the successful implementation of professional learning experiences for teachers of English Language Arts. While objectivity was a focus during data collection, analysis, and discussion, the dual roles are worth noting as a potential limitation, as it was certainly in the best interest of the researcher as an employee of the SEA for teachers participating in the VCoPs to have a positive experience. It should also be noted that the facilitators, while being current educators who were also dedicated to the success of the VCoPs and to the learning of their respective teacher-participant groups, they were paid a nominal honorarium for their facilitation services. This could be an important distinction in the comparison of learning communities which are either not

facilitated, or which rely on facilitation to occur more organically from among the group of engaged participants.

Finally, the study was limited by participants' abilities to implement strategies and knowledge gained, due to local initiatives, schedules, and policies that may have superseded or interfered with the implementation of key learnings from the VCOP sessions. Some of these limitations were highlighted during participant interviews, survey analysis, and in the teacher-participants' lesson plans and reflections.

Concluding Comments

This convergent parallel mixed methods case study (Yin, 2014) was informed by capacity-building theoretical frameworks for professional learning (Dunsmore & Nelson, 2014; Lave & Wenger, 1991). Interviews with participants, facilitators, observations of virtual sessions, pre-, interim, and post-lesson plans/reflections, and survey data will provide insight into the viability and effectiveness of VCOPs as an SEA-sponsored professional learning model (Guskey, 2016). The remaining chapters reveal details that emerged during data analysis, and discuss themes and findings relevant to the research questions.

Chapter 4: Analyses and Descriptions of Teacher-Participants' Change, Growth, and Learning Experiences

Chapter Organization

This chapter is organized primarily by data sets, beginning with discussion and analysis of lesson plans and reflections. The chapter begins with descriptions of each teacher-participant, followed by their respective lesson plans, and descriptions and pertinent quotations from their lesson plans and reflections. Following the lesson plan and reflection descriptions is an analysis section that includes a chart summarizing each submission's placement on the analysis tool, and a written synthesis of the submissions, changes in the submissions over the course of the VCOP experience, and comments about content and learning from the VCOP that may have influenced each participant's submissions over time.

Following the lesson plan and reflections is a section describing and analyzing contributions to the Google Communities that were used as supplemental collaborative and information-sharing spaces during the VCOPs. The data used to inform this portion of the chapter came largely from interviews.

The chapter concludes with a focus on the survey data, intended to provide useful quantitative analysis and discussion on practices employed by the facilitators to build a sense of community in their respective cohorts, build capacity among participants, and improve the knowledge base and efficacy of teachers for improving instructional practice in their various contexts.

Lesson Plans and Reflections

Rachel

Rachel is in her fourth year of teaching, and 2016-17 was her second year in her current district. Her district is located in a rural community, with a total student population of just under 160 students in grades 7-12. She is one of two English teachers serving both the Junior High and High School, and she teaches all students in grades 8, 10, and 12. Rachel participated in the pilot study of the VCOPs during the 2015-16 school year, and decided to participate again after what she described as “a great experience.” Being new to the teaching profession and working in such a small school district, Rachel reported feeling isolated, overwhelmed, and unsupported at times. She said the VCOP provided her some relief from her isolation, and support from like-minded professionals who wanted to help her and see her succeed professionally.

November

Rachel submitted a lesson plan and reflection for a unit with the centerpiece text, *Fahrenheit 451* as her initial lesson plan/reflection entry. Rachel wrote in her reflection that this novel was exceptionally challenging for her students, which she described as “a VERY mixed-abilities English class.” However, she said the themes in the novel are relevant to her students, particularly given some of the recent 2016 election controversies. The lesson began with students journaling about their most recent reading assignment from *Fahrenheit 451*, in which they reached the climax of the novel. Rachel then facilitated a discussion and share-out of the students’ writing, and she recorded some of their insights about the main character and how he had changed over the course of the novel. Students contributed to this discussion and to the creation of what Rachel referred to as a “map” of the character and his actions, beliefs, and feelings throughout the novel.

Rachel then had students complete a chart of five characters from the novel. She provided page numbers indicating where those characters appeared and interacted with the main character, Montag. Students were to chart how those characters' interactions with Montag may have contributed to a change in his actions, beliefs, and feelings from the beginning to the end of the novel. Students worked independently to find quotations that would show each character's interactions with Montag, and then draw conclusions about how each interaction may have changed him.

Once students completed their charts of the five characters Rachel selected, they completed a chart for Montag, and were to respond to the prompt, "Which of the 5 supporting characters has had the greatest impact on Montag?" Rachel said this assignment served as a foundation for a persuasive essay students would write in the coming weeks that would require students to make a claim and defend it using evidence from their *Fahrenheit 451* text.

December

For her December submission, Rachel selected a lesson she taught to her 12th graders using Chaucer's text, *The Canterbury Tales*. She said she selected this text due to its availability in their course textbooks and online, and because she believes it is "a vital piece of Senior English courses."

The lesson lasted multiple days, and engaged students in developing their own "tales" in the style of Chaucer. This lesson built on earlier learning that required students to engage in a close study of Chaucer's use of rhyme, irony, allusion, and satire. For this lesson, students were to use his work as a model text for the creation of their own tales about a figure from popular culture, which they were able to choose themselves. Rachel said the assignment was a departure from assessments students were used to completing, and it challenged them to "get intimate with

word choice and sentence structure.” They had to “dig deeper than the surface level to add layers of meaning to their writing,” she said.

The lesson culminated in a class trip to a local coffee shop, where the students performed their poems and voted for a champion. The champion received breakfast paid for by the other “pilgrims,” as was the case in *The Canterbury Tales*.

February

Rachel’s final lesson plan submission drew from the personal family of instructional models (Joyce & Weil, 2014). She wanted her 10th grade students to “relate more closely to Scout Finch, who is quite a bit younger than them.” This lesson occurred prior to the students reading *To Kill a Mockingbird*, and was intended to help them identify with the different challenges Scout’s character faces in the novel. Rachel said she selected this novel because it “plays well into our year-long thematic focus on empathy, compassion, and what it takes to make our world a better place.” It was Rachel’s perception that “as members of a predominately white, lower-to-middle-class community, the novel’s themes of discrimination and equality [wouldn’t] be enough for them to form [a] connection” between their own lives and Scout’s life.

Rachel first had students engage in a collaborative discussion in which they attempted to define the word “identity.” She said the conversation was student-centered, and that she entered the discussion only when she felt she needed to “help push kids in productive directions.” Once her students had what they believed to be a solid working definition of identity, Rachel gave them a poem written by a high school student who is Latino, African, and Native American. She instructed the students to read the poem and make note of all the key terms and phrases the student writer used that contributed to his identity. Students then worked to combine their individual lists to form an “identity map” to fit the writer of the poem. She said she selected the

teenager's poem because she wanted her students "to recognize that not all poetry has to be humdrum and boring (and that kids their own age *can* and *do* write good poetry)."

Students then read and discussed a narrative about an individual (Rachel herself), and completed the same process of individually identifying key terms and phrases that contributed to the writer's identity, and then together created an identity map of the writer. Rachel said she used a narrative she had written herself because she said her students "seem to find more purpose/value in writing when they see their teacher doing it as well."

Following their readings and discussions, Rachel had students draw their own identity maps – first on a piece of scratch paper, and then on a clean sheet of paper with colors and illustrations that would help to define their identities. Once the maps were complete, Rachel had students select a single identifier from their maps and use it as a prompt to create a piece of writing. The students could choose to write a poem, song, narrative or other genre that would describe an event or experience that helped them to realize the part of their identity they selected. Students would eventually publish these pieces of writing on their blogs they had started earlier in the school year.

During their reading of *To Kill a Mockingbird*, Rachel said her students would "keep a continually-evolving identity map for Scout Finch" which she hoped would help her students to "analyze how [Scout's] identity is shaped by the events that occur throughout the novel, by her own perceptions, and by the ways that others view her character." After completing the novel, Rachel planned for her students to create a visual, poem, essay or movie to demonstrate their understanding of how Scout's identity evolved over the course of the novel.

Lesson Plan and Reflection Analysis-Rachel

Analyses of Rachel's three lesson plans and reflections revealed an interesting shift in her work over the course of the VCOP experience. In her first submission, her lesson was closely aligned with grade-level standards, but scored low (averaging either "Mostly No" or "No" according to the scoring tool criteria) in the student motivation and engagement category. Her December submission showed almost a complete reversal, rating low on grade-level standards alignment, but high (averaging either "Mostly Yes" or "Yes" according to the scoring tool criteria) on student motivation and engagement. Her final lesson scored high (averaging "Mostly Yes" or "Yes" according to the scoring tool criteria) in both alignment and student motivation and engagement. Figure 2 illustrates the shifts in Rachel's lessons in the scoring tool categories across the three months of lesson plan and reflection submissions.

Rachel															
Submission	Alignment				Centrality of Text				Cognitive Challenge			Motivation and Engagement			
	Yes	Mostly Yes	Mostly No	No	Unclear	Yes	Mostly Yes	Mostly No	No	Unclear	Yes	Mostly Yes	Mostly No	No	Unclear
November	Yes					Yes			No					Yes	
December			Yes						Yes			Yes			
February		Yes				Yes					Yes			No	Unclear

Figure 2

Interestingly, Rachel participated in the VCOP focused on increasing rigor, and while her first submission garnered ratings in the "Yes" or "Mostly Yes" columns in the "Cognitive Challenge" category, her final submission garnered ratings in the "No" or Mostly No" columns of the same category.

It may be relevant that the first and third lessons were completed with the same group of 10th grade students, whereas the December lesson submission was implemented with 12th graders. Because it is not the intent of this study to measure student learning or the effects of implementation of a particular lesson or set of lessons on *students*, it was not important that Rachel implement her three lessons with the same population of students. The study was more concerned with her general changes in lesson planning and instruction, taking note of the ways in which her lessons changed with respect to alignment, text centrality, cognitive challenge, and motivation/engagement.

Although we could deduce that over the course of the experience, Rachel's practice was largely unaffected by the VCOPs, the solid "No" in the category of motivation and student engagement is worth a closer look. Rachel struggled with creating lessons that would challenge her students and also engage them. These seemed at first to be two inverse concepts for her – as though if she had standards-aligned, text-centric, challenging content, her students would not be motivated to engage in tasks. Her November submission reveals that she was strong in all categories except student engagement and motivation, and interestingly, her December submission corrected the engagement piece but slipped in the other categories. By the end of the experience, she seems to have figured out how to achieve a rigorous, standards-aligned, and text-centric lesson that will also engage and motivate her students.

Of course, this interpretation could be confirmed or refuted with a broader collection of data, but the findings in accordance with the analysis tool are certainly worthy of note.

Diane

Diane teaches 7th and 8th grade English Language Arts at a large suburban middle school located in the central region of our state. At the time of this study, Diane was in her 28th year of

teaching, and was clearly a valuable asset to her school community, as evidenced by her involvement in many efforts and initiatives in her school. Among others, she was involved in leadership groups concerned with curriculum and assessment within her school, and she was the head coach of the 8th grade volleyball team, whose season overlapped with the VCOP experience for approximately six weeks. Diane said she wanted to take part in the VCOP experience because she had hoped to learn more about project-based learning, something her school was exploring in-depth, and which they hoped would help their teachers improve in their use of technology, since they had recently implemented a 1:1 iPad initiative with their middle school students.

November

Diane's first submission was a vocabulary lesson, in which students were required to view a video and choose the appropriate vocabulary words to place into sentences provided in the video. The words were from a list her students had been studying, and were part of the school's Read 180 curriculum.

Diane said the objective of the lesson was for students to "Use vocabulary words appropriately in a different context." She did not specify "different context" in her lesson plan, but her reflection indicates that her intent was for students to use a context slightly different from the context in which they initially learned the word. Diane's lesson plan format suggested that she used the gradual release model during this lesson. There was a note along the left margin of the lesson plan template that said "Me, We, Two, You," and alongside that were simple notes serving as reminders about what was to occur during each phase. Diane used this template and filled in each portion of the lesson plan with what she was asking students to do. However, her lesson mixed up the "two do" and "we do" steps, and pushed students to independent practice immediately following the modeling portion of the lesson. She ended the lesson with students

checking their work, which was a “we do” activity, but she used it less as a means for building independence and rather as a tool for quick assessment of students’ success or lack of success on the task.

This submission showed that Diane lacked an understanding about the meaning of student choice. This misunderstanding was made clear in her reflection when she suggested that her lesson provided students with choice because “The students chose which word to use [in the sentences she provided]”. While her inclusion of choice improved in subsequent lessons, it is not clear that she gained an understanding of how to engage and motivate students by allowing more choice in her classroom. That confusion about choice, however, was most apparent in her first submission.

December

In all four criteria appearing on the lesson plan analysis tool, Diane’s December lesson submission was an improvement compared to her November submission. Her December lesson required students to read a story about life on Mars, and use evidence from the text to create a persuasive presentation about why people should or should not live on Mars. Following their presentations, students would engage in peer evaluations to identify and discuss the persuasive modes each group used in trying to convince the audience that their position was valid.

Diane does not include a great amount of detail in either her lesson plans or her reflections, but the inclusion of a central text that students will read and respond to in their own words caused upward movement on the analysis tool. Her December submission also reflects a better understanding of the concept of student choice, as both her lesson plan and her reflection differentiate between what students actually had a choice about and what the whole class was

expected to do. She states in her reflection, “All students read the same text, but the groups chose their project/how they would present the information.”

February

Diane’s final submission included two texts – Ken Burns’ documentary on the history of baseball, and a story from the district’s adopted anthology about Jackie Robinson. Diane said that this lesson was inspired in part by the timing of Black History Month, but also included a story that is required, according to their district curriculum map. She included in this lesson instruction on primary and secondary sources, though it is unclear from her lesson plan and reflection how she structured that instruction and which documents she was using as exemplars to show the students differences between primary and secondary source material.

During this lesson, Diane’s students took notes on portions of the Ken Burns documentary, researched the National Negro League, and created a presentation with partners to show their learning. Their presentations were required to include information they had learned from both sources, and Diane provided choice in how the students presented their information to their class. They also added their information to a class timeline following their presentation.

It is clear in this submission that Diane was still focused on correctness of content her students provided. On her lesson plan, in a section titled “Identify Student Success,” she wrote, “Students will present pertinent and correct information and place their events on our class timeline.” This statement of student success aligned well with her learning objective, which was “Students will be able to demonstrate understanding of key events regarding baseball and civil rights.”

Lesson Plan and Reflection Analysis-Diane

The analysis tool asks teachers to comment about their learning goals, reasons for their selections of texts they used, the depth of knowledge of learning tasks, and consideration of their students as individuals, among other factors. Diane mentioned in all three of her lesson plan reflections that the reason she engaged students with a certain text or activity was because it appeared on a curriculum map, indicating little choice on her part. This quandary suggests that Diane may have had little control over the level of alignment, the role of the text in a lesson, the level of cognitive challenge, or the engagement of students, all of which were factors considered on the analysis tool.

That said, none of Diane's reflections suggested a lack of autonomy, and she said in her interview that she joined the community hoping to gather ideas for implementing project-based learning in her classroom, indicating that she does have at least some autonomy and ability to implement ideas, strategies, or approaches as she sees fit.

A focus on correctness and accuracy was a noticeable trait within all three of Diane's lesson plans and reflections. Even her final submission, while incorporating two rich texts and providing room for student choice, still focused on students accurately reporting back information they had read, heard, or seen in the film and text. Although students were creating something new (presentation and related presentation documents), the lesson plan and reflection indicate that Diane's goals were limited more to knowledge acquisition and – at most – application of learned knowledge to a different (but maybe not entirely new) context.

Diane reported that she generally did not have a good experience as a VCOP participant. "I am an observer," she said. "Being called out in front of the group often filled me with trepidation. I sat there feeling like what I had said was the most godawful thing yet." Diane's

self-reported feelings about wanting the experience to be something in which she could be an observer rather than an active participant may offer insights into Anna and Lynn's decisions to not push participants too hard to contribute in the Google Community space.

The Figure 3 illustrates the general "movement" of Diane's three lessons over the course of the VCOP experience within the four broad categories covered by the analysis tool.

Diane																				
Submission	Alignment				Centrality of Text				Cognitive Challenge				Motivation and Engagement							
	Yes	Mostly Yes	Mostly No	No	Unclear	Yes	Mostly Yes	Mostly No	No	Unclear	Yes	Mostly Yes	Mostly No	No	Unclear	Yes	Mostly Yes	Mostly No	No	Unclear
November																				
December																				
February																				

Figure 3

Maggie

Maggie teaches 6th grade students in a small town that would be described in our state as a rural community. She started teaching later than many traditionally begin their teaching careers, but with 16 years of experience, she has achieved National Board Certification, National Board Certification renewal, a Reading Specialist Certification, a National Writing Project Fellowship, and although she is a Language Arts teacher currently, she is also certified to teach middle school Mathematics. Maggie participated in the pilot study of the Virtual Communities of

Practice during the 2015-16 school year, and decided to participate in the VCOP experience again because she found the experience valuable and professionally worthwhile.

November

For her first lesson plan and reflection submission, Maggie chose a lesson about the 2016 election. She listed six different “SWBAT” – Students Will Be Able To – objectives related to this lesson, but said in her reflection that her “main objective was to help students understand the importance of voting and how their participation in the voting process does affect [sic] change.” Maggie found an article in one of the state’s major newspapers about voter apathy, and copied it for her 6th graders. Together as a class, they read the text. Maggie instructed the students to highlight any points that stood out to them as they read, and also to write down any questions that came to them during the reading.

Following the read-aloud, Maggie led students in a discussion of the points they highlighted and questions they wrote down. She specified in her lesson plan that during this discussion time, she prompted students with “why” questions “to help them fine tune their thoughts.” This discussion was intended to prompt students to develop their own inquiry-based questions related to voter apathy. Each student was to have his or her own question. Maggie then facilitated student research using computers and iPads, in which students searched for and located at least one article that addressed their individual questions. Students were to read the articles they found, and again highlight important details within their selected articles, as they had practiced together as a class with the newspaper article.

A composition assignment followed the reading and research portions of the lesson. Students were to write a letter to the editor about the importance of voting. Her lesson plan and reflection indicated that students were to use the article they read together as a class, as well as

the article(s) or text(s) they located and read on their own, to support their position. The lesson plan indicates their position is to be that voting is important.

December

Maggie's December submission followed the same general structure as her November submission. The lesson focused on the Great Depression, and included two texts that students read together as a class. It is unclear whether the texts were read aloud together as a class, or assigned for independent reading and discussed together as a class. Maggie said that the reading titled "President Cleveland, Where Are You?" is in their class anthology, and that she has been using it in her classroom for a long time because "it shows altruism, empathy, and allows [her and her students] to start talking about the Great Depression." She refers to the first time she "read *Moon Over Manifest* to [her] students," which could indicate that she did the same in this lesson as well. Regardless, both texts she used in this lesson were whole class texts, or those which were assigned reading for every student in the class.

Following the assigned whole-class readings, Maggie had a list of links for students to access that provided them more reading content intended to build their knowledge about the Great Depression. Even though this reading was done independently, Maggie said in her reflection that she "created guiding questions and found web sites to help guide them in the right direction." She also had them create an inquiry question, intended to drive and focus their collection of information to use in their presentation. Their inquiry questions were written independently and were different for each student, depending on their particular area of interest within the broader topic of The Great Depression.

Upon completion of the whole class and independent readings, Maggie's students created presentations for their class about the Great Depression. They could create a poster or another

kind of display, but in the spirit of the Great Depression mindset of “nothing goes to waste,” she asked them to not use costly materials and instead to be creative with what they had around their homes or in their classroom. According to Maggie’s reflection, students were graded on information, oral presentation, and creativity.

February

Maggie’s final submission was a poetry lesson. She shared in her reflection that her “students always seem to cringe when [they] discuss poetry, even though they listen to it all the time.” In this lesson, Maggie connected her students to poetry by bringing in lyrics to a popular song they were all familiar with and engaging them in a discussion of those lyrics as if they were poetry. In time, some of her students figured out that it was a song they knew, and after listening to it, they discussed the differences they experienced in reading the lyrics as a poem versus listening to them in music. Maggie referred to this activity as “building a bridge” between an unfamiliar and sometimes intimidating topic for her students – poetry – and a familiar and comfortable topic for her students – music.

Following their class discussion about their reading versus listening experiences, Maggie handed out the Langston Hughes poem, “A Negro Speaks Rivers” and had her students read it and write down their ideas about the meaning of each stanza. She then played an audio clip of Langston Hughes reading the poem, and lead her students in a discussion about “how hearing a poem read or sang often helps [people] interpret better because [they] can hear the rhythm and the nuance of the sounds, which adds to the poetry.”

This lesson targeted the following sixth grade reading standard: “Compare and contrast the experience of reading a story, drama, or poem to listening to or viewing an audio, video, or live version of the text, including contrasting what they ‘see’ and ‘hear’ when reading the text to

what they perceive when they listen or watch. Prior to this lesson, Maggie taught her students the vocabulary they would need in order to successfully discuss elements of poetry, such as alliteration, assonance, stanza, line, rhythm, and others.

Lesson Plan and Reflection Analysis-Maggie

Though it is not the goal of this study to evaluate or rate teachers, all data collected for the purposes of this study indicate that Maggie is an exceptionally strong teacher. She has twice earned her National Board Certification, won a Fellowship to participate in a summer institute with the National Writing Project, and – less remarkable, but still noteworthy – her first lesson plan submission garnered a nearly perfect rating on the lesson plan analysis tool used in this study. It is challenging to analyze lesson and reflection submissions with an eye for movement, growth, and learning, when the initial lesson plan submission is already extraordinarily strong. Perhaps the strength of her lessons in this study is instead a testament to Maggie’s mindset as a teacher; she is always focused on improving her skills as an educator.

Figure 4 summarizes Maggie’s ratings on the lesson plan analysis tool. Though it is not a significant change, Maggie’s final submission landed solidly in the “Yes” column in the “Cognitive Challenge” category rather than in the “Mostly Yes” column like her previous two submissions. Perhaps ironically, Maggie selected the VCOP focused on Authentic Learning and Formative Assessment rather than the group focused on Rigor, which would have been more focused on moving the needle in the Cognitive Challenge category. The work of the VCOP groups, however, indicated that improvement and growth in one category is highly likely to result in improvement and growth in the others, because it was difficult for them to entirely isolate authentic learning and formative assessment from concepts and ideas that might more strongly relate to the other categories.

This was likely due to the fact that one of the facilitators for the Authentic Learning and Formative Assessment VCOP, Anna, had been the facilitator for the group Maggie had participated in during the 2015-16 school year. Maggie did indicate during her interview that her relationship with Anna had been so positive during her previous VCOP experience that she was excited to continue learning with her.

Maggie																				
Submission	Alignment				Centrality of Text				Cognitive Challenge				Motivation and Engagement							
	Yes	Mostly Yes	Mostly No	No	Unclear	Yes	Mostly Yes	Mostly No	No	Unclear	Yes	Mostly Yes	Mostly No	No	Unclear	Yes	Mostly Yes	Mostly No	No	Unclear
November	Yes					Yes										Yes				
December																				
February						Yes														

Figure 4

Tara

Tara is a 25-year veteran English teacher, certified specifically to teach middle level English. She currently teaches all 7th and 8th grade English classes in a small, rural community in the far Western part of our state. The community is small, but draws students from a large city located approximately 20 minutes away, which contribute to its larger (relatively speaking) student population for a rural community in our state, 195 students in grades 7-8. Tara is also certified to teach English Speakers of Other Languages (ESOL), which is an asset to her school

community especially, because it serves a large population of students for whom English is not their first language.

Tara's lesson plan and reflection submissions were not as detailed as other teacher-participants', and she expressed confusion from the beginning about what a lesson plan should look like. She expressed to me via email that she does not do lesson plans anymore. Likewise, her reflection submissions lacked detail compared to those submitted by other participants, and her response to the first guiding question – "What factors played into the creation of this lesson?" – was "I am not sure exactly what this question is asking." It became clear to me through the analysis process that Tara had little choice in her selection of texts and activities, and some of her responses caused me to question whether she was aware that many teachers across the state do have choices about texts and activities in their classrooms. When prompted to reflect on reasons for text selections, activities, and lesson objectives, she said things such as "This is part of my curriculum," and "This is required in my curriculum," responses indicating that she is either not encouraged to think about text selections and activities because there is a curriculum map that leaves little to no room for teacher autonomy, or that she is unaware of her ability to select materials and activities for her students. Whether perceived or real, Tara's lack of autonomy resulted in very little reflection on choices in her instructional decision-making processes, and very little detail in her lesson plans.

Interview data support the notion that Tara lacks autonomy, but also suggest that she is not entirely aware of her lack of autonomy. Like her lessons and reflections, her interview responses were extremely brief. While she was positive about the facilitators, her fellow VCOP participants, and the Google Community, which she called "an awesome resource," data from

her submissions and the interview show that she did little to connect her learning from the VCOP with her own classroom practice.

November

Tara’s November lesson plan submission was centered on Poe’s text, “The Tell Tale Heart.” She said the objective of the lesson was for students to “identify and evaluate the techniques used by Poe to create suspense.” This lesson took place following instruction in which students learned various techniques that authors use to create suspense, and then created a chart listing them. During this lesson, students worked in pairs to review the short story and identify examples of the techniques used to create suspense. They added the examples they found to the previously-created chart beneath the appropriate technique.

Following their placement of techniques on their class chart, students worked individually to write a paragraph in which they argued which technique Poe used most effectively. Tara’s reflection did not indicate whether students were required to quote from the text in their persuasive paragraphs, but they were expected to offer reasoning for their selection.

Tara stated that this lesson did not allow for student choice at all, and it appeared from her plan and reflection that there was also little room for teacher choice. She was not sure how to answer the guiding question about what factors she considered when creating the lesson, and she referred to it as “part of a suspense unit in [her] curriculum.”

December

Tara’s second submission was very similar to her first. Her stated objective was for students to “identify and analyze how the author created mood in writing.” This lesson, however, occurred somewhat earlier in the unit on mood than her previous lesson occurred in the unit on suspense. Students viewed a PowerPoint presentation on author’s craft and mood, and took

notes. Tara then had students work in pairs to review their notes and check them against another student's, and add or delete content as needed to improve accuracy or level of detail. In pairs, the students then wrote summaries of the techniques authors use to create mood.

Following their writing of summaries, Tara had students read short passages and use their notes and summaries to determine which techniques authors were using. After identifying the techniques in short passages, students worked in pairs to read "The Monkey's Paw" and mark the text. Tara had created sticky notes labelled with the techniques the students had learned about, and asked students to place the labels next to examples they found in "The Monkey's Paw," also making note of the particular mood that was created in each part of the text they labelled.

Following their work in pairs, Tara engaged students in a whole class review of their findings. In her review, students took turns reading aloud the sections they marked, the techniques they identified, and the moods that the author communicated.

February

Tara's final submission followed a pattern nearly identical to that of her first two. She presented students with a lesson on source credibility. Following the presentation of that information, Tara provided her students a blog, an advertisement, a biography, and a newspaper article all on the same topic. Students worked in pairs to evaluate the credibility of each source based on the information presented in the lesson.

Lesson Plan and Reflection Analysis-Tara

Tara's submissions suggest that her classroom materials and instruction are largely dependent upon district curriculum documents that indicate texts she is to use, units she is to teach, and lessons and lesson objectives she is to meet. Perhaps because of this, Tara's submissions were the most difficult of all the participants' submissions to rate on the lesson plan

and reflection analysis tool. For example, in the Cognitive Challenge category, each of Tara’s submissions earned “Yes” ratings in “Unit and lessons consistently require students to perform tasks within level four of Webb’s Depth of Knowledge chart” and “Reflection includes consideration of the depth of knowledge that learning tasks require.” However, they all earned solid “No” ratings in “Unit and lessons require the creation of both short and extended writings.” This resulted in a lack of certainty when creating the summary chart (Figure 5), as there was no apparent “average” to indicate in the summary chart.

A similar situation occurred in the Centrality of Text category, and the phenomenon was present in all submissions. In each month, Tara’s submission earned a solid “Yes” rating in “Unit and lessons solicit text-based responses. Student use of the text is a vital component of unit and lessons,” and either a “No” or a “Mostly No” in “Reflection considers the text(s) used, reasons for text choices that include quantitative complexity, qualitative complexity, students’ orientations toward the selected text(s), and appropriateness of texts to learning goals and planned tasks.” Because of the large range of divergence, it was difficult to attach an “average” in the summary chart that would appropriately capture the lesson’s performance in accordance with the analysis tool.

One category that was firmly “Yes” across all three months in Tara’s submissions was alignment. While the term “alignment” can be used broadly to describe the degree to which one thing reflects another, in education it most frequently refers to the degree to which instruction is aligned with standards or curriculum. The term “alignment” in the analysis tool refers to the alignment of the lessons and reflections to grade-level state standards. In Tara’s

Tara																				
Submission	Alignment				Centrality of Text				Cognitive Challenge				Motivation and Engagement							
	Yes	Mostly Yes	Mostly No	No	Unclear	Yes	Mostly Yes	Mostly No	No	Unclear	Yes	Mostly Yes	Mostly No	No	Unclear	Yes	Mostly Yes	Mostly No	No	Unclear
November	Yes					Yes	Mostly Yes	Mostly No	No	Unclear	Yes	Mostly Yes	Mostly No	No	Unclear	Yes	Mostly Yes	Mostly No	No	Unclear
December																				
February	Yes					Yes	Mostly Yes	Mostly No	No	Unclear	Yes	Mostly Yes	Mostly No	No	Unclear	Yes	Mostly Yes	Mostly No	No	Unclear

Figure 5

case, her lessons were all aligned to grade-level standards, her tasks were clear, and her lesson plans indicated learning goals and how students would meet those goals. This phenomenon may be related to Tara’s fidelity to the district curriculum maps, which likely were developed in order to align grade level content and instruction to the state’s adopted standards.

Ironically, that sort of “mechanical” alignment could be a contributor to Tara’s lessons’ consistent “No” ratings in the category of motivation and engagement. Because district-level curriculum documents would, by their very nature, not consider the particulars of Tara’s students – their individual needs, their interests, current realities they face inside or outside of school, etc. – following them closely might have resulted in Tara not allowing her students some choice in task, product, content, or text. It likely would have also resulted in Tara’s focus on skills outlined

in the standards more than on designing instruction and finding materials that her students would be able to more readily connect with.

Tara was a member of the Authentic Learning and Formative Assessment VCOP, and she indicated during her interview that she joined in order to gain new ideas for her classroom. However, her lesson plans and reflections indicate that she did little to change her practice over the course of the experience. It was unclear, even following her interview how much of her lack of change was due to her own choice not to make changes and how much was due to school or district expectations that she maintain fidelity to their curriculum documents. Regardless, both internal and external reasons have to do with the interstitial space (Lave and Wenger, 1991), in which something is interfering with Tara's movement toward change in her classroom instructional practices. It is likely that further exploration of those factors impeding change in that interstitial space is needed if a model is going to ensure teachers are able to act on their learning to improve their practice.

Google Communities

Closed Google Communities (GCs) were initiated by both teams of facilitators to encourage participant learning between Zoom meetings. Data from the GC groups were captured primarily for the purpose of informing interview questions, enriching analyses of participants' growth and change in thinking around instructional practices, and informing conclusions regarding programmatic influences that may have impacted participants' experiences.

However, the data captured in the interviews and GC spaces stretched the usefulness of the GC data beyond its initial purposes. In fact, by looking closely at the ways in which the two teams of facilitators introduced and used their respective GC spaces, we can gain valuable

insights into practices that initiate functional VCOPs. Additionally, facilitator interview data revealed powerful commentary on how facilitators' goals, views, and philosophies may impact implementation of virtual learning, and that learning could be valuable for the planning and implementation of future virtual learning opportunities.

Anna and Lynn's VCOP mostly viewed the space as a repository for resources shared by the facilitators. Over the course of the VCOP experience, Anna and Lynn made 65 separate posts, consisting of articles, book recommendations, web resources, and guiding questions or thoughts intended to help participants prepare for the upcoming Zoom meeting. This usage was perhaps due to Anna's introductory statement, posted to the group's GC space the week prior to their initial Zoom meeting. Her message read:

Welcome to our VCoP community! [Lynn] and I are so excited to work with you during this year's VCoP sessions. We have combined our two groups into one larger community of practice, which means we have also combined our content -- authentic learning and innovative practice with formative assessment, and the result is the complete picture of EXCEPTIONAL best practice! That means there is something in every session for EVERYONE! Personally, I am discovering new connections between authentic learning, innovative practice, and formative assessment that I KNOW will lead to better instruction! Over the next day or two, we will be posting here and emailing, too, resources to prepare you for our first meeting on Wednesday!

Posts to follow included resources, videos, and guiding questions, and they were presented with an expectation that participants view, read, or think about relevant content prior to

the synchronous Zoom meetings. Anna and Lynn did not ask participants to make an initial post, respond in the Google Community space to the posted resources, or interact with one another prior to their initial Zoom meeting. Anna said in her interview that participants preferred to interact in the Zoom meeting space rather than in the GC space throughout their VCOP experience. “Our participants could have asked questions of each other or us in the Google Community,” Anna said, “but they always waited until a Zoom meeting to ask questions of each other – they needed to see each other to get that personal interaction.”

It is not surprising, therefore, that in this VCOP, participants did not use the GC space to interact with each other and build their community of practice asynchronously. Anna said, “We did ask participants twice to post within the Google Community, and no one did, either time.” Anna stated that although the GC served “as a place where [participants] could post resources they wanted to share or for lesson plans or other teaching ideas, [...] none of [their] participants chose to use the site in that way. They preferred (and often stated such) to have it be the repository of new information.”

This more limited use of the GC space is not to say that participants in Lynn and Anna’s group did not find the space useful. Lynn stated that she herself has been back to retrieve resources for sharing with colleagues and other teachers in her district, and Anna said that participants asked if she and Lynn could leave the site active so that they could return to it when the VCOP experience was over to find resources they discussed in their sessions. Anna even started a “spin-off” GC site intended to further learning for her participants around one topic that kept surfacing in their Zoom sessions. “Even though our topics were classroom formative assessment and innovative practice, part of every session would take a turn into discussing how

to teach writing,” she said. “That’s when I created a second Google Community for ‘Write a Little or a Lot’ to offer up resources for teachers to use in teaching and assessing writing.”

It is clear from the interview data of the three study participants who were part of this VCOP that Anna and Lynn are correct in their assessment of the usefulness of the GC space as a valuable resource for participants. Tara stated in her interview, “The Google Communities pages were an awesome source of information.” Maggie agreed, but also added, “there was sooooo much on the Google Community that I was getting lost.” She added that she felt a bit overwhelmed at times from all the postings, and even posited that some participants may have become less engaged over time because, “Maybe they just felt overwhelmed.”

Figure 6 shows a few of Anna’s posts, all from a single week. During this particular week, Anna posted 10 times, all with videos, texts, and resources relevant to authentic learning and formative assessment practice. Anna is an avid reader and an exceptionally passionate educator, and her enthusiasm for improving her own practice is rarely matched by others. Maggie said that she appreciated Anna’s posts and knew they were worthwhile reads, but added that while she felt comfortable doing what she could and then logging in for the Zoom meetings regardless of whether she had read or viewed all the resources, her fellow participants may not have felt comfortable doing the same. “I did what I could do and showed up for the meetings whether I was able to read everything or not,” she said. “But I wonder if some others felt like since they didn’t get everything read, they shouldn’t show up. That may have been a reason why people dropped off toward the middle [of the VCOP experience].”

The collage consists of several GC posts:

- Post 1:** A discussion thread about Membean, a vocabulary website, with a link to "Word Root Of The Day | Membean".
- Post 2:** A discussion thread titled "November 9: Book worth a look!" featuring a book cover for "blended: Using DISRUPTIVE INNOVATION to Improve Schools" by Clayton M. Christensen and Michael B. Horn & Heather Staker.
- Post 3:** A discussion thread titled "Topic B" showing a graphic of students at desks.
- Post 4:** A discussion thread titled "FORMATIVE ASSESSMENT Is it or isn't it.docx" with a link to "Formative Assessment: Is it or isn't it?"
- Post 5:** A discussion thread titled "November 9, 2016: Watch this quick 2 minute video describing classroom formative assessment with Twitter-style exit tickets (in the Comments section below the video is a link to a neat Twitter-style website, too!)" featuring a video thumbnail of a student holding up a worksheet.
- Post 6:** A discussion thread titled "Assessing Students with Twitter-Style Exit Slips" with a link to "Assessing Students with Twitter-Style Exit Slips".
- Post 7:** A discussion thread titled "Blended Learning | Knewton" with a link to "Blended Learning | Knewton".

Figure 6

It is important to note that although participants' use of the GC space may not be visible, Anna and Lynn have reason to believe it did have an impact on participants' learning in the VCOP. Along with teachers' requests to keep the GC site active after the VCOP officially ended, Anna and Lynn said that it was evident from the sharing in their Zoom meetings that many of the teachers had taken resources from the GC and shared them with other teachers in their buildings. This theme emerged in all the interviews about the use of the GC space...an idea that Beth termed "planting the seed."

Contrary to Anna and Lynn's VCOP group, there was a great deal of participant interaction in Beth and Lucy's VCOP group. This seems primarily due to the fact that the latter

pair's approach from the beginning was quite different. They sent an email to participants directing them to the Google Community page and asking them to make an initial post in which they shared their focus of inquiry. The focus of inquiry had been explained to participants during the in-person orientation meeting, and they had worked on a draft focus of inquiry statement during that in-person meeting. The focus of inquiry was intended to provide a personal focus for each participant, as well as a sense of cohesion throughout the six-month experience as participants returned consistently to their focus of inquiry for reflection both during and outside of the synchronous Zoom meeting times. It also served as a programmatic element addressing the capacity-building theoretical framework upon which the VCOP experience was built. The focus of inquiry was intended to be a bridge for participants between theory and practice and to validate each participant's specific context, functions that are both important to capacity-building and situated learning (Dunsmore & Nelson, 2014; Lave & Wenger, 1991). These statements also helped to provide guidance to facilitators as they worked to select appropriate materials for their groups. Figure 7 is a screen shot showing some of the postings, with personally-identifiable information and participants' profile images blacked out.

The image shows a Google+ community feed with four visible posts:

- Post 1:** "My focus of inquiry : As I increase rigor in the classroom, how do I get students (and parents in some instances) to become persistent learners, accepting the challenges that I set forth? How do I relay the message that it's more about the learning and not about the grade?" (15w ago)
- Post 2:** "this is what I am looking into too. The parental piece is going to be tough for us, but I feel that shift is going to be" (15w ago)
- Post 3:** "Good afternoon! My focus of inquiry for rigor is: How to engage students of a wide range of reading and writing skills with the literature to be taught in the 9th and 10th grades. I am talking about students reading at the 3-5 grade level in the same classroom as the students that are college bound." (15w ago)
- Post 4:** "Originally shared by [REDACTED]
My focus of inquiry for rigor is: How to increase the rigor of student's reading complex texts independently without stifling their love of reading." (15w ago)

Figure 7

These participants' selected foci bear a striking resemblance in their attention to student motivation and agency and its role in the rigor conversation. Their responses to one another about their various focus of inquiry statements show connection ("[...] this is what I am looking into too. The parental piece is going to be tough for us [...]") and support ("I love this focus of inquiry! Such a great question..."), both of which researchers suggest are important hallmarks in the first phases of community-building (Tseng & Kuo, 2014; Weick, 1979; Ziegler, Paulus, & Woodside, 2014; Dooner, Mandzuk, & Clifton, 2008).

Lucy reflected in her interview on the way she and Beth coached their VCOP members to respond to one another, and suggested that it played an important role in the group's ability to form a functioning community of learners. "In the Google Community, I think one thing we did

that helped was have people do that positive-critique-positive thing,” she said. “I think that helps with esteem and in what people were willing to share. It also made people be specific.”

Another notable difference between the two VCOP’s uses of the GC space is that Beth and Lucy were not the first to post to their VCOP’s GC page. Beth’s first post was a thank you to participants for sharing their focus of inquiry statements, along with an additional request:

Good morning! It was great to meet you all yesterday afternoon. If you will, please post an introduction of yourself on this page. You may choose to type it up and post it, or you can upload a video using screencast-o-matic or Screencastify (compatible with Chromebooks). Look forward to hearing from you all! I posted already, so you don’t have to be the first one to feel silly recording yourself. :)

Immediately following this post and her own recorded introduction, Beth also posted a tutorial for how to use screencast-o-matic and Screencastify, for those unfamiliar with how to use those tools.

Table 3 shows the differences in Google Community usage between the two secondary VCOP groups. While it was not the entire focus of this study to analyze interactions within the Google Community space, further research could help to better explain the varying levels and quality of interaction among VCOP participants.

Table 3

Participant Name	Total Postings (Study Participant)	% of Posts Belonging to Study Participant	Ratio of Participants’ Posts to Facilitators’ Posts
Rachel	8	7 %	1:6
Diane	0	0	---
Maggie	0	0	---
Tara	0	0	---

Beth and Lucy made 47 posts to the Google Community, and of those, 23 were “origin” posts, or posts that began a conversation thread, shared a resource, or started a line of questioning. By a small margin, the majority of their posts – 24 of them – were responses to teacher-participant posts, either offering feedback, additional information, or encouragement. Clearly, this VCOP had a much more interactive Google Community space, and while it would be difficult to argue that their level of *learning* – due to interaction rather than passive consumption – was greater than Anna and Lynn’s group, certainly the level of community they built asynchronously far outweighed the level of community built asynchronously in Anna and Lynn’s group. Asynchronous community building, research suggests, serves in part to strengthen synchronous online interactions (Barber, Taylor, & Buchanan, 2014).

The differences in participation seem directly related to the ways in which participants viewed the Google Community space, and the ways in which participants viewed the space seemed largely dependent upon how the space and expectations for its use were first communicated to them by facilitators. Additional comments about Table 3 and Google Community data are shared in Chapter Five.

Facilitators

During the pilot study of the VCOPs during the 2015-16 school year, each of the three VCOP groups was led by a single facilitator. Anna and Beth were two of those three facilitators. Lynn was a participant that year. Lucy was the only 2016-17 VCOP facilitator who had no prior VCOP experience, either as a facilitator or participant. Following the VCOP experience, each of the facilitators participated in an interview via Zoom or email, whichever their schedule would best accommodate. Planned questions are included in Appendix C. In addition to addressing research question related to how facilitators and participants built community in their VCOPs,

interview data also provided valuable insights into the philosophies and approaches that informed facilitators practices and strategies with their respective VCOP groups. Both groups of facilitators have voluntarily and without prompting chosen to continue their professional learning offerings beyond the KSDE-sponsored sessions. As mentioned, Anna created a spin-off GC group focused entirely on writing, and Beth and Lucy have begun a book study, with more than half of their VCOP members committing to continue with them. Because of their commitment to their groups, along with the fact that so much of participants' success in the VCOPs is dependent upon the leadership and approaches employed by the facilitators, it was important for me to look more closely at the facilitators, and thus examine closely data from their interviews to identify broad themes, research-supported practices, and also differences in their approaches that may explain or provide further insight into participants' experiences as well. Headings to follow are named for themes that emerged from facilitator interview data.

Everyone is a Learner

This theme emerged in both VCOP groups, largely in the form of facilitators' self-reflections. Not only did the facilitators view their participants as learners, but they also viewed themselves as learners. Anna said that for her, the VCOP experience was, "challenging and exhilarating in positive ways," and Lynn said that being a VCOP facilitator was "one of the most rewarding experiences in [her] career."

Lucy and Beth expressed a similar sentiment, and elaborated on this point a bit more during their interviews. Beth shared the following:

To say it was a learning experience is probably an understatement. We had our general big idea, and then each week they dug a little deeper into the different areas. But I feel like in other PD [that I lead], it seems like I come into with, "Oh,

I know something about this. I have this to offer. And then I do research to deepen that. But the bulk of my time is spent [answering the question of] how will I engage them, what different activities can I do? And with this virtual community, it was a much different experience. It was much more about, what learning can we engage in together? How can I kind of help steer the ship, but not take over?

Lucy's comments echoed the others. She referred to the VCOPs as "an empowering experience," and said that she "learned a lot about [herself] as a learner because every week, something new would come up and we would spend the next two weeks looking for a way to address it that would be meaningful for the participants.

While it might seem as though this "on the fly" learning and planning could have been stressful for the facilitators, they all framed it positively in their interviews, adding that the experience of having a partner facilitator was invaluable.

Collaborative Leadership

As mentioned previously, the pilot study included only three facilitators – one per VCOP. Due to facilitators' schedules (all currently have full time jobs or several part-time or volunteer obligations), we decided as a group that it would be best to pair up the facilitators, and have them split the facilitation duties for their VCOP groups. Even though this meant that they would have to split the honorarium, they all said they preferred to have a co-facilitator and didn't mind splitting the payment. This arrangement also provided the opportunity for two facilitators – Lynn and Lucy – to learn alongside an experienced VCOP facilitator, a decision which in turn could result in improved capacity for VCOPs in future years.

All facilitators cited this arrangement as being a positive experience. Lynn said that her co-facilitator, Anna, "was so encouraging and continually gave me the resources to help lead

discussions throughout the year.” Anna concurred. “Having a co-facilitator was great!” she said. “We worked so well together and our resource base was so much better with two of us bringing stuff to the table. And it was also great to have that other person to rely on. Sometimes she took the lead; other times I took the lead. It offered us a back-up and a support and an overall higher quality experience for our participants, I think.”

Beth, who had been on her own as a facilitator the year prior, had an equally positive experience co-facilitating with Lucy. “I’d say that it really helps to be able to collaborate. Having someone to bounce ideas off of is helpful because virtual facilitation is really different.”

Listening and Flexibility

While prior planning is typically an asset for facilitators of professional learning experiences, both teams agreed that too much prior planning could have a negative impact on the VCOPs. All four facilitators said that one of the most important things they did as facilitators was listen to participants and then collaborate with each other and work to find resources and adjust programming in a way that would address their participants’ needs. Anna referred to this practice as “listening carefully for unmet needs.”

Beth and Lucy reflected extensively on this practice of planning and adjusting. “So we had a rough idea, but we just had to know that we had to be willing to adjust to [participants’] needs,” Lucy shared. “I think I put myself in their shoes. We’ve all had PD days where we wonder why we had to experience that. I never wanted people to feel that way, so that was extra motivation for me.” Beth’s statements reinforce Lucy’s characterization of their planning strategy. She said, “You know, a lot of times we would take off and have a general idea of where we were headed, but based on the needs of the participants, we would sometimes change course.

It wasn't really our show ever. It was cool. But it required a whole different level of planning and expertise than I'm used to. Flexibility. Different mindset. I wasn't a presenter at all."

Relationships and Trust

The building of trust and relationships within the VCOPs was another common and frequent theme that emerged in the interviews of all four facilitators. "Trust is the most important factor in creating a functional community of learners," Lynn offered. "Throughout the sessions, [Anna] and I tried to create an environment so everyone felt safe in sharing and learning."

Anna reiterated the importance of relationships in the building of successful communities of practice. "Making participants feel cared for is important," she said. "The community of learners, done right, very quickly becomes a support network where teachers rely on each other and value each other's experience, expertise, insights, and opinions. [...] It's important to be professional while being sincere, genuine, and caring."

Neither team of facilitators stated that this building of trust and relationships was particularly difficult. In fact, some stated that it was relatively easy within the context of the VCOP. "[Participants] very quickly formed a support network for each other, raising questions and offering ideas to each other that benefitted everyone," said Anna. This result was likely due to the facilitators' goals for participants. Anna said that in addition to improving their instructional practice, she "wanted them to feel supported, encouraged, and inspired."

Beth and Lucy noticed that in their group, trust and relationships were sometimes built when participants strayed from their planned programming. "Someone would say something about working the concession stand, and everyone could relate to that. Someone else might have been joining us from a hotel room, and people relate to the busy lives and appreciate the dedication that someone has to their group," said Lucy.

Beth stated that the synchronous Zoom meetings were a crucial component to building a sense of community within their groups. She shared:

“Both [this year and last year] we have had a teacher who was catching it from someone. This year it was [one participant] struggling with his kids. He was frustrated, and he just...it wasn’t complaining. He was saying, ‘sometimes I just don’t know how to get to them,’” she said. “There is this connection that you have when you can look someone in the face and say, ‘you’re heard.’ Seeing someone smile. That’s a lot better than email or typing something out. Belonging to a community...belonging to a group of people and feeling cared for and connected...that’s important.”

Planting Seeds

Both teams of facilitators shared that they measured their success in part according to the instructional improvements and learning they inspired in their participants. Beth referred to this as “planting the seed” in their participants’ minds for future growth, reflection, and thinking. This was not an easy conclusion to come to for some of the facilitators. “To some degree we were measuring our success based on the fact that they weren’t all doing the work we had hoped they would do to prepare for our Zoom meeting,” said Beth. This is something that clearly bothered Beth and Lucy, as both mentioned it in their interviews as something they noticed and discussed several times in their reflections and planning. “But then we looked at the growth of each teacher overall, and when they reflected on their shifts in thinking, I felt like that was a much more accurate measurement of our effectiveness.”

As an example, Beth said that she and Lucy were debriefing after one Zoom meeting, and they had both noticed one of the participants had written on her chalkboard in the background

something that they had discussed in a previous meeting. “It was bleeding out beyond what we had expected,” said Beth.

Another sign of positive seed planting for both groups were requests from participants for collaboration beyond the scheduled term of the VCOPs. Maggie had already returned to Anna’s VCOP after having a positive experience during the pilot year, and stated she would return again if they are offered in the future, either as a participant or as a facilitator. Anna has also had some ongoing continuing participation in her writing-focused GC, which she started during the VCOP term in order to meet a need for more focus on effective writing instruction, something she sensed during the Zoom meetings.

Beth and Lucy have begun a book study in response to their participants’ desire to continue learning together. “We just offered a, ‘Hey, do we want to keep this going? Anyone interested in a book study?’ And right now about half of our participants have said they want to keep going and continue with the conversation.” This continued conversation was no small commitment either. “We told them, ‘It’s going to require a lot of reading, like sixty pages for the first one.’ But they wanted to do it.” The reading was in addition to purchasing their own copies of the book and also committing ahead of time to a structure of synchronous Zoom meetings and GC sharing, similar to what they did in the VCOPs.

Divergences

Although there were a great number of common themes expressed across the facilitators’ interviews regarding their experiences leading the VCOPs, it is clear that there were differences in the two groups. During her interview, Maggie said, “By the time we were done, there was just me, [Tara], and [Denise]. Other than the three of us, the last three or four sessions, it was pretty

dry. If we're going to do it again, I'd like to have ten to twelve." She also stated that, "[...] dumping too much on the participants was a frustrating experience."

There were actually nine participants registered for Maggie's VCOP group, so although Maggie and others remained positive about their experience in the group, there could be some lessons to be learned from the lack of participation from the six participants who regularly did not join the group in the Zoom meeting.

The other secondary cohort had twelve registered participants, and they averaged nine participants per meeting. Although even Rachel stated that sometimes it was necessary to miss meetings because of prior school commitments, 33% participation in one group compared to 75% participation in the other warrants a closer look as to what might have been different between the two groups. Analyses of the facilitator interviews and the teacher-participant interviews revealed at least two noteworthy differences.

Collective Efficacy vs. Facilitator Responsibility

Anna and Lynn focused a great deal more than Beth and Lucy on preparedness. This focus was revealed in multiple references in both Anna and Lynn's interviews to having a plan, preparing an agenda, following an agenda, posting an agenda, posting resources in a timely manner, and posting relevant resources enough in advance for participants to read and engage with them. These are clearly important factors in leading a professional learning effort, and Anna and Lynn wanted to make sure their participants felt informed about what they would be doing and how they needed to prepare for their Zoom meetings.

While Beth at one point in her interview also mentioned the importance of preparing and posting resources far enough in advance for participants to read them and prepare for the Zoom meetings, she and Lucy focused more on what Beth referred to as "collective efficacy." They

both used words like “responsibility” and “commitment” throughout their interviews in reference to both themselves and participants. “I think the fact that everyone who was part of that community was there voluntarily was important,” said Beth. “We read about the academic mindsets in the last couple of sessions and the first one is ‘I belong to this learning community.’ I think that was a big part of it. When someone was missing, their absence was felt and we were really glad when they were back.” Lucy’s interview confirmed this feeling. “People felt a responsibility to each other to show up,” she said.

While preparedness is certainly necessary when facilitating an experience such as this, perhaps one factor that increased the participation for Beth and Lucy’s group was their placing a good amount of responsibility on the participants. Relinquishing some of their responsibilities to participants may have been an important factor in their ability to maintain a higher attendance rate through the end of the VCOP experience. Rachel said that perhaps relinquishing even more responsibility to participants could result in a stronger sense of community and more meaningful experience. She compared the VCOP to her experience as a fellow in a National Writing Project Summer Institute. “I think probably the biggest difference [between the two experiences] was that we didn’t feel as much pressure to be responsible for certain elements of the meeting. The writing project was pretty informal, but there was a greater sense of responsibility among the participants.”

Healthy Peer Pressure vs. Little to No Pressure

The idea of the VCOP experience being voluntary, one that participants themselves or their school districts paid for, and also not being a course or something participants were doing for “credit” (unless they paid an additional fee) was something the facilitators and I certainly discussed as something to be mindful of during planning. The facilitators did not want

participants to feel as though they were students in a class, but rather as though they were part of a community of learners. That said, they walked a careful line when asking participants to read or prepare something for an upcoming Zoom meeting. They did not want it to feel like an assignment, but each of them admitted that when participants had not read or reviewed a resource prior to a Zoom meeting, their collaboration could be a bit difficult.

Anna and Lynn seemed to err on the “safe side” and put very little pressure on participants in terms of assignments or tasks that could be viewed as forms of accountability. Anna stated in her interview that she believed the most important factor in creating a functional community of learners was “to be respectful of [participants’] time.” She also reflected quite a bit on their VCOP’s use of the GC space:

“I know some VCOP facilitators asked participants to post lesson plans or responses to assignments in their VCOPs, and I wonder whether we should have been more insistent about that. We did ask participants twice to post within the Google Community, and no one did, either time, although the discussions during the Zoom meetings were productive and fruitful. I don’t know if that’s because they felt the posting would be redundant, or if they just simply didn’t want to take the time to do it, or if the questions we asked on the Google page were not good enough to elicit good responses, or if it was something else.”

However, even respectfully inviting participants to share – a practice that Maggie and Tara said worked well and never caused them to feel uncomfortable – did not sit well with Diane. She reported feeling “called out” and said that the experience “simply did not meet the needs of a borderline ADHD introvert.”

Beth and Lucy took a bit of a risk in their VCOP, stepping on the other side of that fine line by applying what Lucy referred to as, “a healthy dose of peer pressure.” Both Beth and Lucy discussed the idea of collective ownership of the group, and trying to create an environment in which their participants were engaged because they felt responsible to each other to be engaged, share, and participate.

Facilitation

Following the final VCOP Zoom meetings, study participants completed a survey addressing a variety of components that may have been included in their total VCOP experience. Participants were instructed to “Please mark the degree to which the following practices or strategies engaged [them] in learning during the 2016-17 VCOPs.” Some examples of practices and strategies they were asked to consider included “Use of screen-sharing by facilitator” and “Structured discussion time.”

Responses were given a numeric score in accordance with each response participants provided. Possible responses and their corresponding values included:

- 0: N/A – Did not experience
- 1: Not engaging or disengaging; ineffective
- 2: Somewhat engaging; more ineffective than effective
- 3: Mostly engaging; more effective than ineffective
- 4: Highly engaging; extremely effective

All participants’ surveys were tallied on a single form, and a mean score was calculated for each practice or strategy. This initially-calculated mean included the ‘N/A – Did not experience’ value of zero, and therefore pulled down the score for what could have been an effective practice and was part of a positive experience in one VCOP, but was not part of the other VCOP participants’ experience at all. Therefore, another calculation was made that excluded any “N/A” responses from the mean score.

Both values are included in Figure 8. One reason it was important to include both values is that although it may seem that the zero response should be excluded from the calculation so that it does not impact the perception of the effectiveness of the practice or strategy based on its score, there were several instances in which a participant from one VCOP rated a practice or strategy “N/A,” while another participant from the same VCOP rated the same practice or strategy “Mostly engaging” or “Highly engaging.” The lack of consistency could be explained either by participation habits (a participant’s absence or lack of attention on a particular day), or a lack of knowledge or understanding about what the practice or strategy referred to (e.g., “Presentation software such as PowerPoint or Prezi). The inclusion of that zero rating in the “With Zero” mean in Figure 8 may be important in determining the overall effectiveness of a strategy.

Additionally, it was important to make a “Without Zero” mean calculation so that the opinions of participants who were certain that they had experienced a practice or strategy could be reflected more accurately. This calculation could therefore be interpreted as a more accurate quantitative representation of participants’ perceived effectiveness of each practice or strategy. This calculation also makes it possible to attend to the practices and strategies in which the mean ratings for both calculations match, meaning that participants were both certain they had experienced them, and were able to provide a rating other than “N/A.” When the practices and strategies are placed into two categories – those which some rated “N/A” and those which no one rated “N/A,” the practices and strategies are grouped as shown in Table 4.

Table 4

Practices or strategies some rated N/A	Practices or strategies no one rated N/A
Participants sharing relevant book titles	Article reading and reflection on your own
Participants sharing articles outside of the virtual meetings	Use of Google Communities for posting resources and hosting discussions
Participants sharing articles during the virtual meetings	Facilitator sharing relevant book titles
Use of Padlet or other web tool during meeting	Facilitator sharing articles outside of virtual meetings
Presentation software such as PowerPoint or Prezi	Participants offering ideas to address your focus of inquiry
Use of screen-sharing by participants	Structured discussion time
Use of screen-sharing by facilitator	Unstructured discussion time
	Zoom as a video conferencing tool
	Use of a focus of inquiry to guide work

Of the seven practices and strategies listed on the left side of Table 4, at least five and possibly six are things the participants would have had to recall from their synchronous Zoom meetings. Of the nine practices and strategies listed on the right side of Table 4 (those which no one rated “N/A”), only one – Participants offering ideas to address your focus of inquiry – was something that participants could have only experienced within the synchronous Zoom meeting in Anna and Lynn’s VCOP. (Rachel could have actually experienced this – and did – in her GC group.) The others were practices and strategies they either experienced on their own through the GC, or things they were exposed to in the initial in-person meeting.

This could indicate that at least some of the study participants lacked confidence about whether or not they actually experienced something during the synchronous Zoom meeting because they either were not entirely engaged or they missed one or more of the Zoom meetings. Rachel and Tara both indicated in their interviews that they had to miss one or more Zoom meetings due to other school obligations, such as taking tickets at a game or sponsoring a school –related activity. Maggie and Diane did not miss a meeting, but there were times when each of them had to either join late or leave early, due to coaching responsibilities, and all participants

said that sometimes it was difficult for them to resist the urge to multi-task during the Zoom meetings. Some even were engaged in a simultaneous activity, such as supervising an after-school study hall, or helping students who had come in for extra assistance in completing work.

With “N/A” ratings *excluded*, the practices and strategies earning the *highest* mean scores (out of 4.0) were:

- 4.00: Use of screen sharing by participants
- 3.67: Use of screen sharing by facilitator
- 3.50: Use of Padlet or other web tool completed during virtual meeting
- 3.50: Zoom as a video conference tool

With “N/A” ratings *excluded*, the practices and strategies earning the *lowest* mean scores out of 4.0 were:

- 3.00: (Eight responses earned this score.)
- 2.75: Facilitator sharing articles outside of virtual meetings
- 2.75: Article reading and reflection on your own time

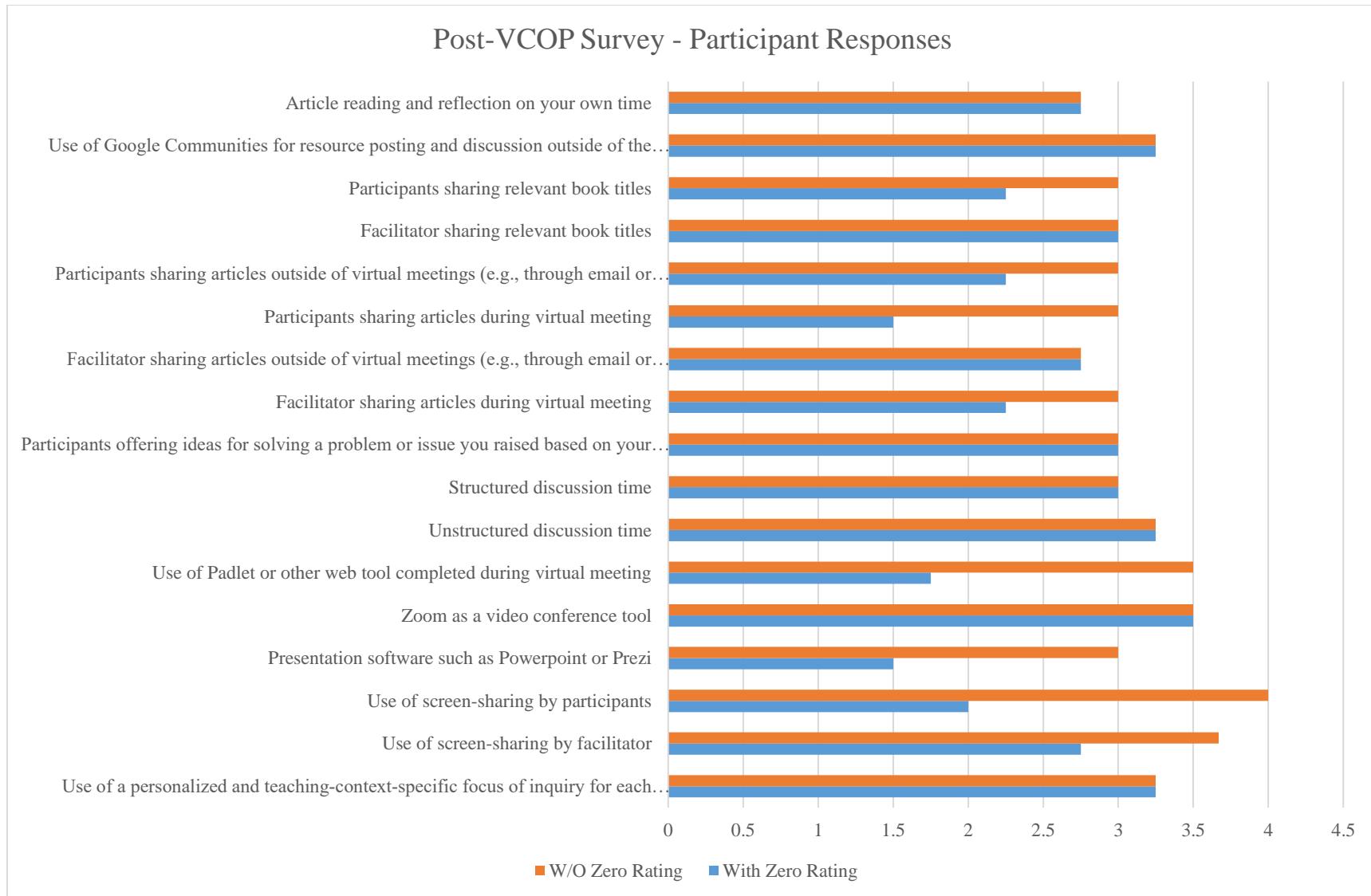
With “N/A” ratings *included*, the practices and strategies earning the *highest* mean scores out of 4.0 were:

- 3.50: Zoom as a video conference tool
- 3.25: Unstructured discussion time
- 3.25: Use of Google Communities for resource posting and discussion outside of virtual meetings
- 3.25: Use of a personalized and teaching-context-specific focus of inquiry for each participant

With “N/A” ratings *included*, the practices and strategies earning the *lowest* mean scores out of 4.0 were:

- 2.00: Use of screen sharing by participants
- 1.75: Use of Padlet or other web tool completed during virtual meeting
- 1.50: Participants sharing articles during the virtual meeting
- 1.50: Presentation software such as PowerPoint or Prezi

Implications for these findings are included in Chapter Five, along with proposed changes to the VCOP model based on survey results. A graphic representation of survey results is included in Figure 8.

*Figure 8*

Chapter 5: Findings

This study addressed the following research questions:

- 1) In what ways do teachers build community within a virtual community of practice?
- 2) What practices do teachers and facilitators consider most beneficial to their professional practice within a virtual community of practice?
- 3) In what ways do virtual communities of practice increase the use of targeted instructional practices for an SEA's K-12 teachers of English Language Arts?

Findings resulting from data collection and analyses shared in this chapter are organized in accordance with the research question(s) to which they align.

Question One: In what ways do teachers build community within a virtual community of practice?

In his bestselling novel, *Leaders Eat Last: Why some teams pull together and other don't*, Simon Sinek quite unequivocally remarks, "There is no such thing as virtual trust." However, according to seven of the eight study participants, trust – what all participants deemed an essential component of the VCOPs – was indeed built in both synchronous and asynchronous virtual spaces.

Making Time for Each Other in Zoom

Both participants and facilitators reported that the hybrid nature of the VCOP model was an important factor in their ability to build trust and a sense of community in their respective VCOPs, and that the synchronous Zoom meetings were an important component in those efforts. For Lucy, the hybrid nature of the meetings contributed to the sense of accountability participants in her VCOP felt for one another, thus improving their sense of community. "I think the Zoom time was important," she said. "I think that's what made people feel responsible to each other. We

could see whether people were engaged. Zoom provides some extra ownership.” Beth agreed that the Zoom meetings provided something that an asynchronous collaborative space cannot offer.

“The piece that I felt was always missing when I did any sort of online class was a human element...sort of the face with the name. And as much as you tried to use Blackboard or whatever it was, there was a human interaction that was missing, and I really think the Zoom meetings added that missing piece.”

The Zoom meetings could provide one answer to solving the problem with virtual teacher learning that Akyol and Garrison (2011) highlighted: a lack of “cognitive presence” arising from not having social cues that one would have otherwise in an in-person experience. Beth addressed some of the challenges associated with not having social cues facilitators would generally rely upon. “We just had to use [the social cues] we had. There were a few times when someone would start talking without the mic, or someone would interrupt, but after a couple of sessions, we figured it out.”

Maggie highlighted another important component needed for building trust in the VCOPs: “[Anna and Lynn] communicated in a non-judgmental, positive, and not in a ‘gotcha’ way.” Maggie also said that while she never felt intimidated in the Zoom meetings, “We were put in the hot seat every once in a while, and I felt like that was one of the best things about it.” Three of the four participants reported that they never felt afraid or as though they were not free to share their ideas and thoughts with the group. Only Diane said that she did not experience a sense of mutual trust in her VCOP group. While Maggie appreciated being “put in the hot seat,” Diane did not. In the end, she mostly blamed her personality for her less-than-positive experience. “I can see where others with a personality different from my own would find this beneficial. It simply did not meet the needs of a borderline ADHD introvert.”

“Sit-and-get” professional learning is widely criticized in literature on teacher professional learning, so it would not be generally recommended to create an interactive virtual learning model that would allow some participants to not interact with others. However, perhaps more attention could be paid in future iterations of the VCOPs to the ways in which they are promoted. Stating directly in promotional materials and emails that the experience is for individuals wishing to contribute to and engage with a community of learners, and not for those simply looking for information could serve to discourage participants from registering if their mindsets are not yet ready for such an intense collaborative experience.

Making Time for Each Other in Google Communities

Although only one of the study participants – Rachel – experienced collaboration in the Google Community space, it is worth noting that she found it a valuable community-building exercise. “There was more participation this year [than last year] in the Google Community and I thought that was nice,” she said. “I think sharing there helped to build a sense of community because we were able to give and receive feedback. I gave some feedback. I received some. It was good.”

The GC sharing and interaction made an impression on the facilitators as well. Lucy said, “If you look at what people were posting in the community...Their reflections as they posted...they got to kind of talk through a process, and that’s so important. I don’t feel like that’s very common in professional learning we usually do. I was really impressed with how people reflected personally in the community.”

The inclusion of a reflective component seems crucial to getting teacher-participants closer to answering the “why” questions of their professional practice, which Kesson and Henderson (2010) believe are necessary for transformational change to occur. As implemented in Beth and Lucy’s VCOP, the Google Communities provided participants the flexible time and

space to reflect more deeply than would have otherwise been possible in the one-hour Zoom meeting with eight to ten other teachers also vying for time to speak.

Recognizing Facilitator Vulnerability

It would be a mistake to exclude the role facilitators played in helping participants build community in their VCOPs. One way in which facilitators opened the door for more honest sharing, reflective thinking, and collaboration among participants was by opening themselves up to criticism. Lucy provided an example of how she did this in her group. “When I noticed people were not sharing, I realized maybe they didn’t know what to share, so I would share something related from my own classroom experience, and this typically opened the door for others to share as well,” she said. “Once they realized it was a safe place, they were more willing to share.”

Maggie had a similar experience with Anna and Lynn. “They were always willing to hear about a new book or a new idea,” she said. While simply being open to listening may not be on the same level of vulnerability as sharing a classroom example or a failed lesson plan, it makes an important statement to participants – that the facilitators do not have all the answers and that participant ideas and contributions are valued.

Facilitators serving as examples for participants, putting themselves in vulnerable positions, and sharing responsibility with participants for the group’s functioning and success is important, given research findings that suggest participants may be less likely to share – and build community with one another – if they feel intimidated or feel as though other participants have a superior role in or outside of the community (Rehm, Mulder, Gijselaers, & Segers, 2016; Hwang, Singh, & Argote, 2015).

Tackling Common Problems

That teacher-participants were mostly from different school districts might have been a problem for some researchers, such as Dufour and Reeves (2016), whose definition of professional learning communities relies largely on shared goals for learners. However, other researchers are less specific about the hallmarks necessary for effective learning communities, and their notion of what it looks like when teacher-learners tackle a common problem is not dependent on those teacher-learners having a common professional context. It is merely enough that they are professional educators (Garet, Porter, Desimone, Birman, & Yoon, 2001; Guskey, 2003; King & Newmann, 2001; Little, 1993; Penuel, Fishman, Yamaguchi, & Gallagher, 2007; Wei, Darling-Hammond, Andree, Richardson, & Orphanos, 2009)

The primary way participants tackled common problems in the VCOPs was through a focus of inquiry protocol, also known as a problem of practice protocol. “This protocol was so very important in facilitating 1) fair discussion, 2) examining the issue from those various perspectives, and 3) offering up a wide variety of possible ideas/suggestions/solutions,” said Anna.

As a participant in Anna and Lynn’s VCOP group, Maggie wholeheartedly agreed with Anna. “I would definitely say I felt a sense of community when we were sharing our problems of practice,” she said. “It was nice getting to hear teachers who had similar problems. [...] When we followed the protocol, I feel like that pulled us together as a community. You felt like you were being heard and that you were being listened to. It seemed like we were all in it together then.” It was also important to Maggie that the group view the focus issues or problems of practice as legitimate and worthy of study and conversation. “I never heard someone say, ‘Oh that’s an easy one to fix,’ and that was helpful.”

Maggie's and Anna's feelings confirm Little's (1993) findings that indicate professional learning communities are best when there is an inquiry-oriented experience that provides meaningful opportunities for participants to engage in productive, respectful conversation with one another. The focus of inquiry protocol Anna and Maggie discussed also provided participants a structure through which they could engage in context-specific reflective thinking and collective knowledge generation, things Little (1993) also argues are necessary components for building a successful learning community.

Question Two: What practices do teachers and facilitators consider most beneficial to their professional practice within a virtual community of practice?

My review of literature highlighted two current warring philosophies around teacher professional learning – a “standardized management” philosophy and a “constructivist best practices” philosophy (Kesson & Henderson, 2010). The constructivist best practices philosophy best aligned with one of the theoretical frameworks that guided the structure of the VCOP model, the capacity-building theoretical framework discussed by Dunsmore and Nelson (2014). Of course, part of this preference was by design; since participants were coming from a variety of schools and districts throughout the state, it would have been difficult to define a single goal or set of goals to push teachers toward by means of a standardized management-guided learning experience. However, the literature is clear that standardized management systems are “a burden for teachers” (Sawchuk & Keller, 2010) while capacity-building approaches, such as the VCOP model, “[assume] that change happens when people work together to define both the problems and the solutions relevant to the systems they work in and then build the skills to put the solutions in place collaboratively” (Dunsmore & Nelson, 2014, p. 15).

Focus of Inquiry

Both VCOP groups in this study aligned more closely with the capacity-building approach rather than the standardized management approach, though participant interview data reveal that even more “healthy peer pressure” or structures and practices focused on collaborative problem-defining and problem-solving could do more to build teacher efficacy around relevant, self-defined goals. The model did include a participant-selected focus of inquiry specific to each participant’s context, which participants developed themselves. The focus of inquiry served as a cohesive thread throughout the entire experience and was something to which participants were encouraged to connect each new piece of learning and information.

There was a protocol put in place for discussing each participant’s focus of inquiry and engaging fellow participants in knowledge-sharing and knowledge-building around each focus of inquiry with a goal to inform possible approaches to each participant’s defined area of need. However, the one-hour virtual setting, and in the case of one VCOP group, the limited participation toward the end of the experience may have made the protocol less effective. For example, Beth and Lucy reported that their participants “just wanted to talk,” rather than use the protocol, and Anna and Lynn appreciated the protocol and its guiding questions, but faced low participant turnouts in their meetings, particularly toward the end of the experience.

All participants and facilitators mentioned the focus of inquiry as a valuable piece of the VCOP experience, which is in keeping with the findings of Cameron, Mulholland, and Branson (2013), who define professional learning as the synthesis of personal, environmental, and professional needs. The focus of inquiry was intended to take into account each teacher’s environmental and professional needs, and in some cases it actually addressed personal needs as well. However, while the focus of inquiry and its associated protocol may serve relevant

purposes, perhaps the VCOPs would be best served by rethinking how they might be used differently within the VCOP model. For example, Beth and Lucy used the Google Community space to engage participants in reflective thinking around their focus of inquiry statements, and asked their VCOP community to provide critical feedback to one another about their statements. Their participation for this activity was high – all participants posted – and the feedback they received was recorded for them for future reference. The model currently asks participants to share their focus of inquiry during the Zoom meeting, and includes a protocol whereby participants ask clarifying questions and then engage in a kind of brainstorming session around the focus of inquiry while the participant who shared the focus of inquiry takes notes on questions and suggestions. Although the protocol ends with the sharing participant relaying back to the group whatever key ideas he or she captured from the session, it can be difficult and even stressful for that person to capture everything that was shared. Lucy said that using the Google Community space for these kinds of collaborative thinking exercises also yielded what she called “more thoughtful reflections that really showed their learning.”

Recognition of Personal, Environmental, and Professional Needs

Another piece of the Cameron, Mulholland, and Branson (2013) research that was reinforced in the VCOP sessions is the notion of self-care, or the idea that teachers are human beings working in a field that greatly depends upon their capacity to regularly practice kindness, sacrifice, patience, caring, and love, despite obstacles they may face. Beth shared that the VCOPs group’s ability to empathize and encourage its members was invaluable in both her first year and again this year as a VCOP facilitator. She described the participant as “struggling” and “frustrated,” and he reached out to the group with an exasperated “ ‘I just don’t know how to get to them.’ ” That was a powerful moment for Beth because she said she felt the group come

together more as they collectively encouraged their fellow participant. “There is this connection that you have when you can look someone in the face and say, ‘you’re heard.’ [...] Belonging to a community...belonging to a group of people and feeling cared for and connected...that’s important,” Beth said. The group’s acknowledgement of the participant’s personal, environmental, and professional needs is what Cameron, Mulholland, and Branson (2013) believe is the very definition of professional learning.

Survey data defined in a closed-question manner those practices that participants found to be most beneficial to them as learners in the VCOPs. As research would predict, the practices most reliant on collaboration between participants generally earned the highest ratings, whether N/A ratings were included or not, while practices such as article sharing and reading on one’s own time earned among the lowest ratings. Participants found Zoom as a conference tool, screen-sharing during the Zoom meetings, the use of the Google Communities for resource posting and discussion, and unstructured discussion time to be among the most useful practices employed in the VCOPs.

These findings indicate that collaboration, collective efficacy, and recognition of teachers as professionals operating in complex, interacting, and ever-changing spheres of personal, environmental, and professional responsibilities are key factors in operating a successful community of practice. Additionally, operating a community of practice in a virtual space cannot serve as reason to ignore or neglect these key factors. Data indicate that synchronous and video-enabled meetings are one key component to allowing participants to connect on a personal level, and making use of digital tools such as screen-sharing, chat features, and social networking such as Google Communities can provide a space for participants to connect to one another in a more in-depth, thoughtful manner.

Attending to the Interstitial Space

In the VCOPs, Richmond and Manokore's (2010) five "critical elements" of teacher PLCs were mostly in place. They are as follows:

1. Teacher learning and collaboration
2. Community-building among teacher members
3. Confidence-building among teacher members
4. Consideration of how policy influences practice
5. Sustainability

Perhaps the weakest of these in the current VCOP model is number four, considerations of the influences of policy. Part of this weakness is a result of the VCOPs including teachers from across the state who are beholden to different policies that influence their instructional practice differently. Policy considerations were mostly dependent upon participants themselves, either including local policies – both directly and indirectly – in their focus of inquiry statements, as well as in their reflections and Google Community postings. The VCOP participants certainly experienced the "ongoing interplay" between the needs of the community and the needs of self, as discussed by Dooner, Mandzuk, and Clifton (2008, p. 564) Again, while the focus of inquiry statements were an attempt to include some of that local influence, Little (1993) suggests a need for balance between shared goals and individual needs, and it seems more could have been done in the VCOPs to acknowledge challenges teachers face as a result of local policies.

Those challenges bring to light the importance of Lave and Wenger's (1991) interstitial space in the design of effective professional learning experiences for teachers. Interestingly, although none of the teacher participants used the term "scripted curriculum" or "guaranteed curriculum" or "guaranteed and viable curriculum," it was clear from lesson plan and reflection

data that at least two teacher-participants (Tara and Diane) lacked a great deal of autonomy in their instructional planning. Likewise, Rachel justified her text choices with statements such as “I think it’s a vital piece of Senior English courses,” and “it plays well into our year-long thematic focus on empathy, compassion, and what it takes to make our world a better place.” Interestingly, the texts Rachel was referring to are texts commonly used with the students in the grades she was teaching. The VCOPs largely fell short of answering the “why” and instead focused on the “how,” which Kesson and Henderson (2010) suggest is an important point.

Answering “why” gets to Lave and Wenger’s (1991) idea that the interstitial space – the space between participants’ learning within the VCOP and participants’ contexts – is the key to successfully implementing a new idea or strategy. It is worrisome that Rachel justifies her text choices – which very likely weren’t “choices” at all – in terms of her own goals rather than in terms of the goals or needs of her students. It is doubly worrisome that Tara and Diane often seemed at a loss when reflecting on their lesson plans, including statements such as “it’s part of my curriculum” as reasons for instructional “choices.” Tara was even confused by the guiding question, “What factors played into the creation of this lesson?” as though she had either not created it, or did not consider factors dependent upon her students, their needs, their current realities, etc. when planning her lessons.

In these latter cases, the interstitial space was greatly illuminated to reveal a context in which some of the participants lacked autonomy, and – even worse – may not have recognized it. It is interesting that participants working in such environments would be encouraged or allowed to register for a professional learning experience which is clearly advertised as a collaborative, idea-sharing venture. Operating in a standardized management system while trying to engage in capacity-building professional learning experiences is part of the “burden” Sawchuk and Keller

(2010) define; teachers working in systems that must have complete control over every aspect of instruction have little to do with new knowledge or ideas they gain from experiences outside of the systems in which they work.

The VCOPs attempted to address challenges teachers faced in implementation, but data suggest that a more intentional effort to bring potentially limiting local policies to the forefront could be effective in influencing teachers' instructional practices at a deeper level. Rather than looking for a couple of good ideas for managing the class, or a neat assignment to try, teachers could begin to change their overall approach to instruction on a broader level. By attending more intentionally to challenges teachers face in the interstitial space, the VCOP model could prove to be more effective in building teacher capacity.

Collective Efficacy

Lucy (facilitator) and Rachel (participant) both advocated for greater responsibility being placed on participants, suggesting that such a practice could create more buy-in for teachers and improve their learning and their sense of community as well. Anna explored this notion as well, but seemed to struggle with the conflict between the facilitator team's goal that the VCOPs not feel like a class, and her desire for participants to engage more regularly and reliably in the VCOP.

Based on the level of participation experienced in the VCOP that explored how to develop "healthy peer pressure" and establish a sense of collective efficacy in terms of greater responsibility placed on participants to shape the group, it would be wise to consider changes to the model that would improve the collective efficacy. Suggestions from participants included the idea of assigning teams of participants to the facilitator role on a rotating basis, pairing

participants up or having individual participants be responsible for a piece of the programming during the synchronous meetings, and giving participants specific responsibilities.

These suggestions align with the findings of researchers who have studied online professional learning. Specifically, Hough, Smithey, and Evertson (2004) say the most successful online learning communities “encourage feelings of ownership.” Likewise, this focus validates Hou’s (2015) findings that establishing a reciprocal and equitable relationship between participants and facilitators is key in the success of online communities of practice.

Question Three: In what ways do virtual communities of practice increase the use of targeted instructional practices for an SEA’s K-12 teachers of English Language Arts?

This question yielded both encouraging and discouraging findings. While some participants’ lesson plans and reflections showed movement and greater thinking around ideas, practices, and philosophies in alignment with those which were a focus in the VCOP groups, other participants’ lesson plans and reflections showed that they were influenced very little or not at all by the VCOP experience.

Through lesson plan and reflection analysis, I would have expected to see a gradual leftward movement across the analysis tool in all areas with each submission. Instead, in most cases participants’ lesson plans remained fairly stable, with only small changes leftward and in some cases, movement toward the right. The most reliable movement occurred in the category of “Motivation and Engagement,” with two of the four participants making noteworthy gains, one remaining stable on the high end, and one remaining stable on the low end. This was a promising finding because although the VCOPs had different overarching focus topics, both came to focus a great deal on student engagement as a result of specific challenges participants shared.

Without a comparative model in which participants were engaging in professional learning in only a face-to-face setting or in only an online setting, it is difficult to say whether the small amount of movement on the analysis tool was significant or not. Current research suggests the odds are good that participants gain more in hybrid models compared to face-to-face models (Ho, Nakamori, Ho, & Lim, 2016), and it is worth noting that participants made gains in their learning that were not reflected on the lesson plan and reflection analysis tool.

Some key practices and knowledge that were not included on the analysis tool include mindset, specific planning tools, specific state initiatives, and knowledge of helpful texts and resources related to participant thoughts and questions. For example, Maggie said, “I learned about a state-funded reading program that I didn’t know about before from [one participant], and after one of our meetings, I was able to learn a little more about it, and within the week my principal had figured out how to get us all access to it.” Other learnings similar to this were discussed during interviews, though they may not have appeared in participants’ lesson plan and reflection submissions.

Proposed Changes to VCOP model

Use of Google Community Space

The asynchronous collaboration and discussion in the Google Community demonstrated by Beth and Lucy’s VCOP group proved to be an invaluable tool not only for the sharing of resources, but also for building a stronger sense of community among participants. Future VCOP groups would be well served by using Beth and Lucy’s approach as an example and copying some of the strategies they used to draw participants to the community and encourage their thoughtful sharing and collaboration there.

Rethinking the Focus of Inquiry Protocol

Although some participants and facilitators found the focus of inquiry protocol to be useful in building community around a shared problem of practice, others found the protocol to be limiting and preferred to “just talk” instead. Perhaps exploring how to use the focus of inquiry in the Google Community space, or engage participants in the protocol using the chat feature during the Zoom meeting could help some participants feel less “on the spot” in the Zoom meeting. This could also allow for more time in the Zoom meeting for unstructured discussion, which was rated highly in the surveys, and could also allow participants to revisit their focus of inquiry using the protocol four or five times over the course of the experience, leading to deeper thinking around their context-specific focus of inquiry.

Small, Manageable, Timely Bites

Lucy and Beth shared that they had to do a great deal of thinking about which resources would be most beneficial to participants. “We figured out quickly that more than a couple of things was just too much to give them in a week. And we sometimes didn’t get them things in time to read,” said Beth. Likewise, Anna and Lynn may have overwhelmed some of their participants by sharing so many resources in the Google Community that participants didn’t feel as though they could get to them all, or did not know where to start or how to prioritize them.

The VCOP facilitators and participants could likely benefit from more guidance and agreement on how much to share, how to share it, and when to share it. Though much of their resource-sharing is specific to the group of teachers with whom they are working and what needs they have, some kind of regular format for resource-sharing could help participants know better what to expect, and could help facilitators know how much to cull their resources before sharing.

Opportunities for Further Research

Google Community

I believe this entire dissertation could have been written about the VCOP group's Google Community posts alone, and the ways in which participants made themselves vulnerable, reflected on their practice, offered support and encouragement to others, critiqued one another's work, and asked for advice. It would have also been helpful to track the number of times participants accessed the Google Community space, as well as each of the resources in it. Several participants mentioned in their interviews the value of the resources that facilitators and other participants posted in the Google Communities, and how they would be revisiting certain resources later, but some of those participants never posted in the Google Community themselves. Further inquiry and study about these spaces intended to be community-building spaces would be worthwhile, and especially studies that use an objective tool to determine the Google Community's impact on teachers' professional practice.

Healthy Peer Pressure in Adult Learning

More research could be done to determine the most effective ways in which facilitators apply "healthy peer pressure" to adult learners in order to build better communities of practice. Although this was not specifically a focus of this study, the idea seemed central to the success of Beth and Lucy's VCOP group. At times during the course of the experience, it seemed they used different strategies – leading by example, leader vulnerability, and even humor – to elicit greater and deeper engagement among their participants. A more focused study of these strategies could help guide future online professional learning experiences seeking to boost participant engagement and effect positive changes in teacher professional practice.

Complexities of the Interstitial.

During the data collection and analysis phases of this study, one thought that kept resurfacing for me was just how complex the interstitial space is. What Lave and Wenger (1991) defined more than 25 years ago continues to be one of the greatest barriers to meaningful, transformative learning for teachers. Further study of the phenomenon would be worthwhile, and may begin to answer some of those “why” questions of teachers’ instructional practice. That any professional is confused by or unable to answer a question about what factors influence their professional decisions is an indictment of the system in which that professional operates. Lack of autonomy at the local level could make any outside professional learning experience for teachers a wasteful endeavor.

Some questions that could inform this line of inquiry include:

In what ways is a local context supportive of changes inspired by professional learning experiences originating from outside the local context?

In what ways do administrators support teacher inquiry?

In what ways do administrators support changes to curriculum and instruction that originate at the classroom level?

In addition to attending to the complexity of the interstitial through further study, possibly re-structuring VCOPs to include teacher-administrator teams, or teams of teachers from the same school could create less of an obstacle for professional learning experiences to inspire change in teacher-participants’ classrooms.

Other Tools

Zoom and Google Communities were used to implement the 2016-17 VCOPs due to its ease of use and wide availability, but there are certainly other tools that could provide a similar

or even more connected experience for teacher-participants. Future studies could explore the effectiveness of communities of practice using different tools for virtual synchronous and asynchronous learning and collaboration.

Limitations

This study and its findings should be of interest to professional learning providers, State Education Agencies, and educators generally interested in professional learning. While the study provides some useful insights into one model of professional learning, the study was limited in a number of ways.

Four participants volunteered to participate in the study, and while they offered some valuable information about the effectiveness of the VCOP model, their perspectives may not be representative of all participants. Similarly, their experiences as members of the VCOP were shaped in part by their prior experiences in their local contexts, in learning communities and as professional educators. Because no two individuals will view the same professional learning experience in exactly the same way, the opinions of one teacher may not be true for other teachers, even those working in the same context.

This study did not include comparative professional learning experiences, so the findings cannot be compared to findings from other professional learning experiences in a manner that would suggest one model to be more effective or less effective than another. The findings should apply to this model only, as it was implemented and experienced by the eight study participants in the 2016-17 school year.

The study was also limited by the technological tools made available as part of the VCOP model – Zoom and Google Communities, as well as email. Some participants were more comfortable than others in navigating these tools and using them for sharing and collaboration.

Because some participants were less comfortable in these spaces or did not feel encouraged to use what they were not comfortable with, the study may not have captured a complete picture of the usefulness of these tools in virtual learning communities.

Concluding Comments

Little (1993) stated that the goals of highly impactful teacher professional learning would be achieved through “innovations on the margin.” Although “the margin” of current teacher communities of practice and PLCs seems now to be what was once their primary goal – increasing the confidence, capacity, and knowledge base of teachers – the Virtual Communities of Practice model used in this study blends those original purposes with the current logistical realities that so frequently obstruct teachers’ ability to meaningfully collaborate with like-minded professionals.

The VCOPs offer a capacity-building structure that keeps teachers in the classroom while engaging them in professional learning that adheres to practices deemed most conducive to transforming practice. As schools become more strapped for funding, costly and time-consuming professional learning experiences that require paid substitutes to replace absent teachers may leave administrators and professional learning providers seeking “innovations on the margin” to continue providing teachers the opportunity to grow in their professional practice.

This study is situated between two bodies of research – research focused on exploring qualities of highly impactful professional learning, and research focused on the exploration of new, technology-rich methods that could be useful in addressing teachers’ unique and ongoing learning needs. Although recent research has found that teachers continue to find professional learning experiences to be disconnected, ineffective, and irrelevant (Phillips, 2014), perhaps one answer to meeting teachers’ needs could be the implementation of models that connect

technological advances with the qualities of high-impact professional learning, as the VCOP model sought to do.

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Appendix A
Lesson Plan and Reflection Analysis Tool

Unit, Lesson and Reflection Analysis Tool

Participant ID:

Lesson/Unit ID:

Date:

Alignment					
Unit and lessons align with appropriate grade-level standards.	Yes	Mostly Yes	Mostly No	No	Unclear
Unit and lessons clearly articulate task(s).	Yes	Mostly Yes	Mostly No	No	Unclear
Reflection considers specific standards, learning goals and ways in which students are intended to show their learning.	Yes	Mostly Yes	Mostly No	No	Unclear
Centrality of Text					
Unit and lessons solicit text-based responses. Student use of the text is a vital component of the unit and lessons.	Yes	Mostly Yes	Mostly No	No	Unclear
Unit and lessons require students to cite evidence from the text.	Yes	Mostly Yes	Mostly No	No	Unclear
Reflection considers the text(s) used, reasons for text choices that include quantitative complexity, qualitative complexity, students' orientations toward the selected text(s), and appropriateness of texts to learning goals and planned tasks.	Yes	Mostly Yes	Mostly No	No	Unclear
Cognitive Challenge					
Unit and lessons consistently require students to perform tasks within level four of Webb's Depth of Knowledge chart.	Yes	Mostly Yes	Mostly No	No	Unclear
Unit and lessons require the creation of both short and extended writings.	Yes	Mostly Yes	Mostly No	No	Unclear
Reflection includes consideration of the depth of knowledge that learning tasks require.	Yes	Mostly Yes	Mostly No	No	Unclear
Motivation and Engagement					
Unit and lessons provide students choice in one of the following areas: task, product, content, process, or text.	Yes	Mostly Yes	Mostly No	No	Unclear
Units and lessons are relevant to students; they focus on a poignant topic, use real world materials, or give students freedom to personally connect to the task and/or topic.	Yes	Mostly Yes	Mostly No	No	Unclear
Reflection includes a consideration for students as individuals in the design of units and lessons.	Yes	Mostly Yes	Mostly No	No	Unclear
Rigor Relevance Framework					
Tasks included in the unit/lesson primarily fall into the indicated quadrant(s) of the rigor relevance framework.	D-Adaptation: Students think in complex ways, apply knowledge and skills to new situations, create solutions and further develop their skills and knowledge.	C-Assimilation: Students extend and refine their knowledge and use it to analyze and solve problems and to create solutions.	B-Application: Students use acquired knowledge to solve problems, design solutions, and complete work. The highest level of application is to apply knowledge to new and unpredictable situations.	A-Acquisition: Students gather and store knowledge and information, and are expected to remember and understand.	

This tool is a modification of the literacy assignment analysis framework used in a September 2015 report from The Education Trust, and William Daggett's Rigor and Relevance Framework.

Appendix B

Guiding Questions for Teacher Reflections

Guiding Questions for Teacher Reflections
Virtual Communities of Practice Research Study

What factors played into your creation of this lesson?

What were the intended objectives of this lesson?

What tasks did you design in order for students to meet the lesson objectives?

To what extent did students use/read/interact with text(s) during this lesson?

How did you select the text(s) used in this lesson? (If no text was used, please skip this.)

To what extent did this lesson require students to think deeply, and in what ways?

To what extent was student choice a part of this lesson? For example, could students select from a range of texts, tasks, processes, etc.?

Appendix C

Planned Teacher and Facilitator Interview Questions

Interview Questions for Teachers

1. In your opinion, what elements need to be present in order to form a functioning community of learners?
2. Which of those elements did you experience in your VCOP group?

If some were present- Of those that you believe were present in your group, which do you think were most important?

If some were not present- Of those elements that were not present in your VCOP group, why do you think they were not present?

3. Did you feel a strong sense of community with your fellow VCOP participants?

If YES-At what points was this sense of community most present?

Did you experience a stronger sense of community during the Zoom meetings, or during other online communications opportunities?

If NO-What factor(s) do you believe kept you from experiencing a sense of community in your VCOP?

4. Do you believe your VCOP facilitator was at least partially responsible for the building of community within your VCOP?

If YES-What were some specific things that your facilitator said or did to build a sense of community within your VCOP?

If NO-What were some specific things that your facilitator said or did that you think kept your group from experiencing a sense of community?

5. Have you participated in other communities of learners in face-to-face/in-person settings?

If YES-In what ways were the VCOPs similar and different from your in-person experiences?

If YES-In what instances would you prefer in-person learning communities to virtual learning communities?

If YES-How does the sense of community you experienced during in-person meetings compare to the sense of community you experienced during the virtual meetings?

If NO-In what ways would you expect an in-person meeting to differ in terms of the sense of community you would feel with other participants?

6. Did you experience any fear, uncertainty, or lack of trust at any time within this VCOP experience?

If YES-What circumstances caused you to feel this way?

If YES-Did this feeling continue throughout the experience?

If NO-Was your facilitator partially responsible for you not feeling any fear, uncertainty, or lack of trust?

If YES-What specific things did your facilitator do in order to prevent you from feeling these emotions?

If NO-Why do you believe you did not feel these emotions?

7. All participants in the VCOP were from Kansas. Do you believe that participants being from the same state was important to the VCOP?

If YES-In what ways do you believe that being from the same state improves a collaborative experience for teachers?

If NO-What, if any, commonalities do you believe are helpful in building a community of teacher-learners?

8. In what ways did technology help or hinder your VCOP's attempts to build a community of learners?
9. Is there anything else you would like to share about your VCOP experience?

Interview Questions for Facilitators

1. How would you summarize your experience as a facilitator of the VCOPs this year?
 2. How do you measure your success as a facilitator?
 3. What did you see as the purpose of the Google Community space?
 4. What did you see as the purpose of the synchronous Zoom meetings?
 5. What specific practices or strategies – your own or others’ -- do you think were most beneficial to advancing your goals for VCOP participants?
 6. What do you think are the most important factors in creating a functional community of learners?
 7. Were there things that you believe impeded your attempt to create a community of learners? If so, what were they? If so, did you try to suppress them and how?

Appendix D
Participant Survey

Virtual Communities of Practice-Participant Survey

Spring 2017

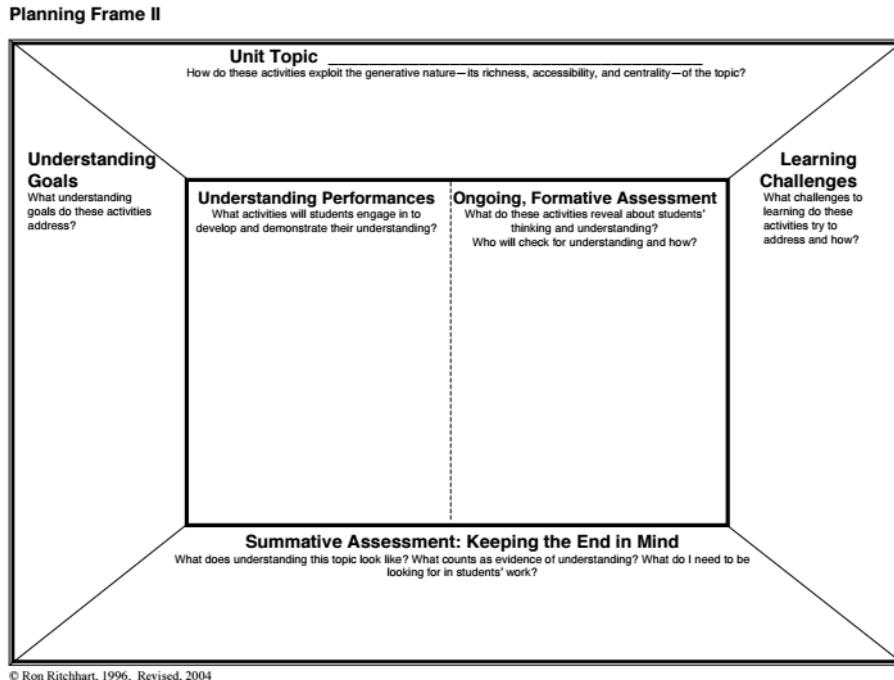
During the 2016-17 school year, I participated in a Virtual Community of Practice as a (please check one):

- Participant
- Facilitator

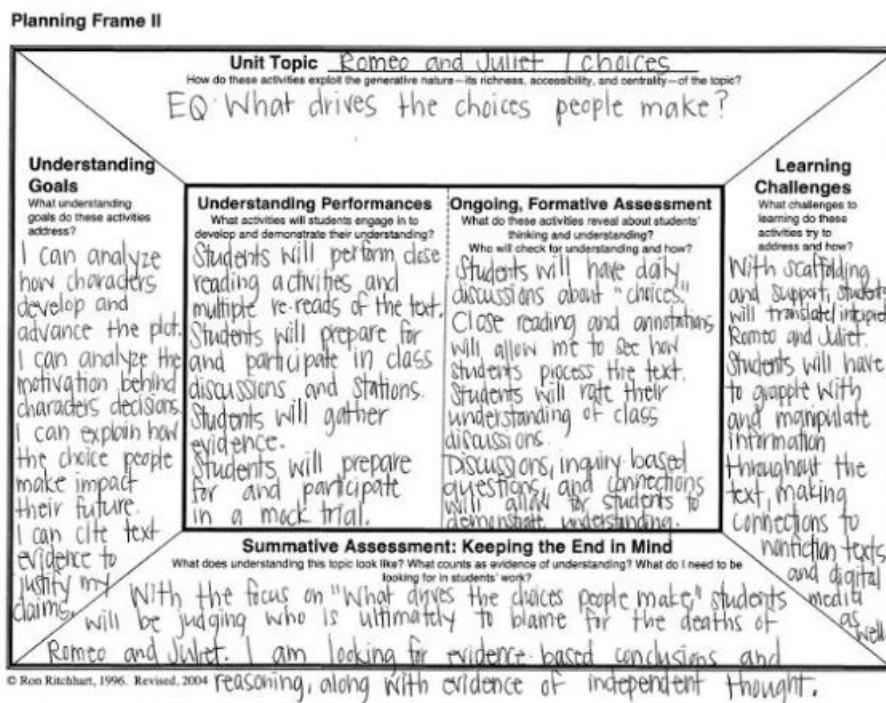
Please mark the degree to which the following practices or strategies engaged you in learning during the 2016-17 VCOPs.	N/A – Did not experience	Not engaging or disengaging; ineffective	Somewhat engaging; more ineffective than effective	Mostly engaging; more effective than not	Highly engaging; Extremely effective
Use of a personalized and teaching context-specific focus of inquiry for each participant					
Use of screen-sharing by facilitator					
Use of screen-sharing by participants					
Presentation software such as Powerpoint or Prezi					
Zoom as a video conference tool					
Use of Padlet or other web tool completed during virtual meeting					
Unstructured discussion time					
Structured discussion time					
Participants offering ideas for solving a problem or issue you raised based on your own experience					
Facilitator sharing articles during virtual meeting					
Facilitator sharing articles outside of virtual meetings (e.g., through email or Google Communities)					
Participants sharing articles during virtual meeting					
Participants sharing articles outside of virtual meetings (e.g., through email or Google Communities)					
Facilitator sharing relevant book titles					
Participants sharing relevant book titles					
Use of Google Communities for resource posting and discussion outside of the virtual meeting times					
Article reading and reflection on your own time					
Other (Please specify.)					
Other (Please specify.)					
Other (Please specify.)					

Appendix E
Google Community Screenshot Samples

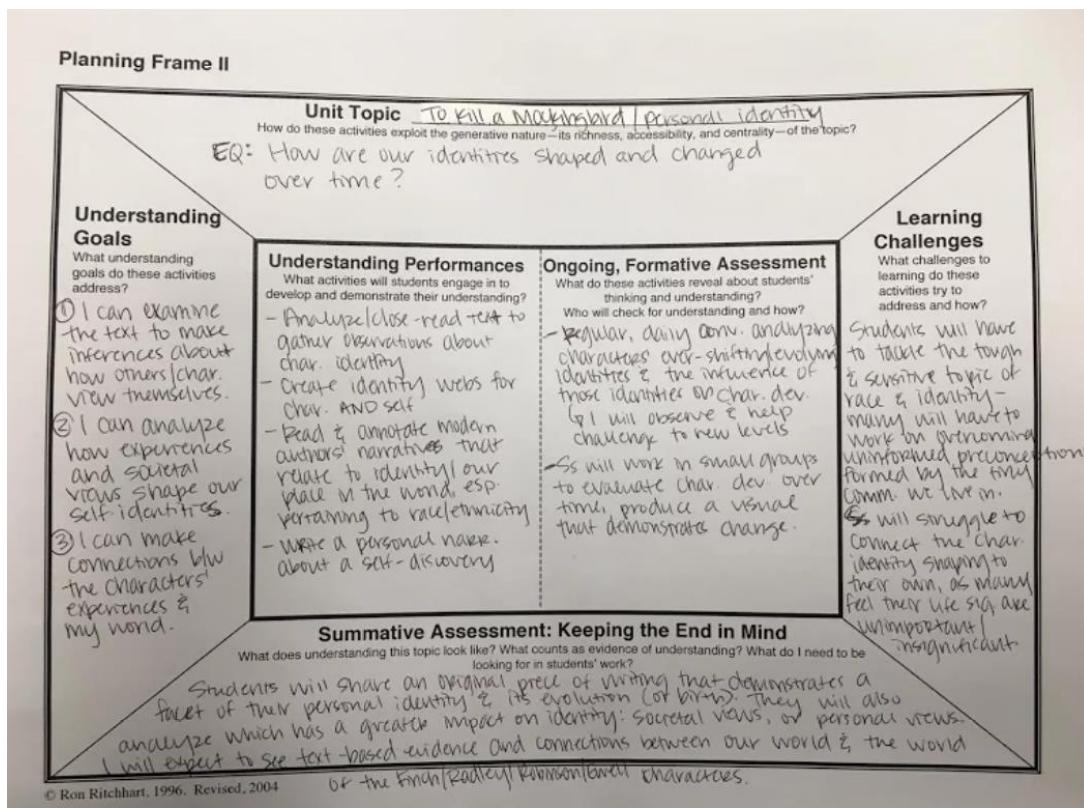
“Planning Frame,” posted to the Google Community by Beth in preparation for the final synchronous Zoom meeting:



“Planning Frame” example, posted by Lucy immediately following Beth’s template post. Participants were to fill out their own templates and poste them to the Google Community prior to the final Zoom meeting:



Rachel's completed "Planning Frame":



Post and responses accompanying Rachel's "Planning Guide":

Unit Plans

This is a template for a unit on TKAM. I am actually teaching this novel for the first time...but was frustrated by some of the basic/role concepts that I had experienced in the past or other teachers had suggested for me.

I really want my learners to analyze how we come to be individuals and not just members of society. We will be reading the entire novel with this focus on identity, noting how identity can be somewhat fluid as we grow and learn. I look forward to the conversations/thinking we will have related to the question—ourselves, or at the end: Who has a greater impact on our personal identity—ourselves, or society?

Planning Frame II

Unit Topic: *To Kill a Mockingbird* / personal identity
How do these activities exploit the generative nature—its richness, accessibility, and centrality—of the topic?

EQ: How are our identities shaped and changed over time?

Understanding Goals
What understanding goals do these activities address?

- ① I can examine the text to make inferences about how others/char. view themselves.
- ② I can analyze how experiences and societal views shape our self-identities
- ③ I can make connections b/w the characters' experiences & my world.

Understanding Performances
What activities will students engage in to develop and demonstrate their understanding?

- Analyze/close-read text to gather observations about char. identity
- Create identity webs for char. AND self
- Read & annotate Modern authors' narratives that relate to identity/our place in the world esp. pertaining to race/ethnicity
- Write a personal narrative about a self-discovery

Ongoing, Formative Assessment
What do these activities reveal about students' thinking and understanding? Who will check for understanding and how?

- Regular, daily form. analyzing characters' ever-shifting/evolving identities & the influence of those identities on char. dev.
- I will observe & help challenging to new levels
- Ss will work in small groups to evaluate char. dev. over time, produce a visual that demonstrates change.

Learning Challenges
What challenges to learning do these activities try to address and how?

Students will have to tackle the tough & sensitive topic of race & identity—many will have to work on articulating unformulated preconceived notions formed by the family/comm. we live in.
Ss will struggle to connect the char. identity shaping to their own, as many feel their life s/o are unimportant/insignificant.

Summative Assessment: Keeping the End in Mind
What does understanding this topic look like? What counts as evidence of understanding? What do I need to be looking for in students' work?

Students will share an original piece of writing that demonstrates a facet of their personal identity & its evolution (of birth). They will also analyze which has a greater impact on identity: societal views, or personal views.
I will expect to see text-based evidence and connections between our world & the world of the Finch/Bradley/Robinson/Jem characters.

© Ron Ritchhart, 1996. Revised, 2004

Shared publicly • View activity

1 love that you're giving this "old-tent" new life with your EQ! I think about the boundaries that Scout pushed-as a girl, as a child, as a Southerner-and how her identity was developed and shaped as a result. This idea of our identities being fluid and shaped and changed as we grow and learn is really cool. Especially today.

I love the ending question as well!

I love your essential question, that will be a great way to help students make connections between To Kill a Mockingbird and their own lives. You can also constantly refer back to that idea of "How is his/her identity being shaped by ___" as you read through the story. You mention tackling the sensitive issues of race and diversity; how

Rigor VCOP Participants' responses to the prompt "The important thing about ___ is..." This prompt was inspired by Beth's sharing of *The Important Book*, a children's book by Margaret Wise Brown:

The Important Thing 5w

For me, the most important thing about this VCOP has been to NEVER SETTLE and ALWAYS ADAPT.

I think if I relied on my materials and units that I've developed over the last 2 1/2 years, I'd be miserable. My favorite AHA! moment is recognizing when things aren't working, and then coming up with some wildly creative solution that engages students, increases rigor and turns the learning over to the students.

+1 Comment Share

Shared publicly

Add a comment...

Moderator ▶ **The Important Thing** 5w

The important thing about a VCOP is that you leave room for growth. If you open your mind, and let new ideas come in, you will grow. If you have an idea and try it out, it will work. Or not. Either way you will learn from it. But the important thing about a VCOP is that you leave room for growth.

+1 1 Comment Share

I agree! Being the only 8th-grade teacher for ELA in our district, I felt that I needed to stretch and grow. This VCOP

The Important Thing 5w

The important thing about student engagement is being actively involved in our own learning. It can be messy, takes effort, requires questioning and creativity, yet brings clarity and a deeper sense of understanding. But the important thing about student engagement is being actively involved in our own learning.

Well stated!

▶ **Videos For Final VCOP** 5w

I chose the video "Higher Order Questions: A Path to Deeper Learning." I have worked this year on getting students more engaged by using collaborative small group discussions. While those discussions have been student-led, the questions have come from me. I felt this video drove home the idea that the discussions would have so much more meaning if the students were inquiring and writing those critical thinking questions. That's the next step I want to try in my classroom.

Higher Order Questions: A Path to Deeper Learning

Appendix F
ELA Virtual Communities of Practice Email Notices

Sent to: ELA/Literacy Listserv
Date: August 12, 2016
Subject: You're invited! Join a Virtual Community of Practice

Welcome back to what will certainly be an exciting year of teaching in Kansas!

KSDE is once again hosting a unique and special learning experience – ELA Virtual Communities of Practice – which will convene in late September 2016 and run through early February 2017. I'd like to invite teachers of English Language Arts (ELA) and those who support teachers of ELA (instructional coaches, curriculum specialists, etc.) to participate in a sustained, cohesive professional learning opportunity designed to enhance instructional practices within each teacher's unique context, and improve student learning in ELA.

Participants may choose from one of six different cohorts:

Elementary

- 1) Authentic student learning, creativity, and innovation in the English Language Arts
- 2) Increasing instructional rigor in the English Language Arts
- 3) Formative assessment for improved student learning in the English Language Arts

Secondary

- 4) Authentic student learning, creativity, and innovation in the English Language Arts
- 5) Increasing instructional rigor in the English Language Arts
- 6) Formative assessment for improved student learning in the English Language Arts

Meeting dates and times are included on the attached document.

Registration is now open and can be found at the following link:

<https://goo.gl/forms/jboyDM1u1KAkaSoy1>

We hope to see you in Oakley or Eudora in September.

Suzy

Suzanne E. Myers

Language Arts and Literacy Consultant
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[\(785\) 296-5060](tel:(785)296-5060)

semyers@ksde.org

www.ksde.org

Kansas State Department of Education

LANDON STATE OFFICE BUILDING, 900 SW JACKSON STREET, SUITE 653, TOPEKA, KS 66612

Sent to: ELA/Literacy Listserv

Date: August 23, 2016

Subject: Kansans Can...Contribute to a community of teacher-learners

"I learned so much about the subject area and levels that I teach and am excited to try new ideas in my classroom. It was great to be a part of something that was geared directly for the ELA classroom." – Judy Gasper, Kansas ELA Teacher

During the 2015-16 school year, K-12 ELA educators experienced collaborative teacher learning at its best. They joined colleagues from across the state to learn about new resources and research, and to think through how to implement English Language Arts standards-based instructional best practices with their students.

This year, rather than having a different topic for each virtual session, participants will dig more deeply into one of the following three topics:

- 1) Authentic student learning, creativity, and innovation in the English Language Arts
- 2) Increasing instructional rigor in the English Language Arts
- 3) Formative assessment for improved student learning in the English Language Arts

There will be an elementary and a secondary cohort within each topic area.

Meeting dates and times are included on the attached document. More information can be found at the registration link, which is now open:

<https://goo.gl/forms/jboyDM1u1KAkaSoy1>

Please email me if you have questions. We hope to see you in September!

Suzy

Suzanne E. Myers

Language Arts and Literacy Consultant
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Kansas State Department of Education

LANDON STATE OFFICE BUILDING, 900 SW JACKSON STREET, SUITE 653, TOPEKA, KS 66612

Sent to: ELA/Literacy Listserv

Date: September 6, 2016

Subject: Register soon to join a virtual community of practice

Thank you to those of you who have already registered to be a part of a virtual community of practice focused on English Language Arts instruction. We are looking forward to seeing you in just a few weeks!

For those of you who are still thinking about joining, here are some highlights our participants from last year experienced:

- Awareness of **current resources** (including **free** resources!) available to assist with ELA instruction
- Assistance from fellow educators with **ideas and strategies** that can help with your current instructional realities
- Ongoing asynchronous **connection to a community of professionals** with common interests and a dedication to learning and improving
- **Synchronous discussions** with fellow teachers
- Ongoing **resource-sharing** throughout the six-month time period
- Guidance and encouragement for **ongoing reflection** and improvement
- **Opportunity to impact** other educators' knowledge and professional practice
- Development of **cross-state relationships** with **supportive colleagues** that can continue even after the sessions end

Virtual Communities of Practice are intentionally a departure from "one-and-done" professional learning. We seek to build programming and structures that will serve your current teaching situation, provide ongoing support, build your bank of knowledge about resources and opportunities to grow professionally, connect you with colleagues from across the state, and to provide cohesive learning from September through February.

Participants can choose from the following cohort topics:

- 1) Authentic student learning, creativity, and innovation in the English Language Arts
- 2) Increasing instructional rigor in the English Language Arts
- 3) Formative assessment for improved student learning in the English Language Arts

There will be an elementary and a secondary cohort within each topic area.

Meeting dates and times are included on the attached document. More information can be found at the registration link, which is open now:

<https://goo.gl/forms/9NTcVawQdYKH9bVX2>

Please email me if you have questions. We hope to see you soon!

Suzy

Suzanne E. Myers

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Appendix G
Human Subjects Committee Approval

On 12/17/2015, the IRB reviewed the following submission:

Type of Review:	Initial Study
Title of Study:	Virtual Communities of Practice
Investigator:	Suzanne Myers
IRB ID:	STUDY00003476
Funding:	None
Grant ID:	None
Documents Reviewed:	<ul style="list-style-type: none">• Consent form,• IRB Submission Form,• Agenda for first in-person meetings,• Virtual Communities of Practice Information Form,• Pre and Post Survey,• Interview Questions

The IRB approved the study on 12/17/2015.

1. Notify HSCL about any new investigators not named in the original application. Note that new investigators must take the online tutorial at https://rgs.drupal.ku.edu/human_subjects_compliance_training.
2. Any injury to a subject because of the research procedure must be reported immediately.
3. When signed consent documents are required, the primary investigator must retain the signed consent documents for at least three years past completion of the research activity.

Continuing review is not required for this project, however you are required to report any significant changes to the protocol prior to altering the project.

Please note university data security and handling requirements for your project:

<https://documents.ku.edu/policies/IT/DataClassificationandHandlingProceduresGuide.htm>

You must use the final, watermarked version of the consent form, available under the “Documents” tab in eCompliance.

Sincerely,

Stephanie Dyson Elms, MPA

IRB Administrator, KU Lawrence Campus



Human Subjects Committee - Lawrence

Submission for Initial Review **For Use with eCompliance Only**

Project Title: Virtual Communities of Practice

Investigator Name: Suzanne E. Myers

Faculty Supervisor: Heidi Hallman

This form must be used when submitting an application through the eCompliance system.
No other methods of submission will be accepted.

You may access the system here: <http://research.ku.edu/ecompliance>

Students and faculty supervisors: Please note an ancillary review process will be required to obtain faculty supervisor approval within the system. Please see the [IRB Study Submission Guide](#) for more information.

For faster processing, ensure all study staff have completed all required training through https://rgs.drupal.ku.edu/human_subjects_compliance_training

Contact hscl@ku.edu with questions!

rev 6/7/13

1. Subject Information**1.1 Number of Subjects:** 5**1.2 Subject Age (Check all that Apply)**

- 0-7
- 8-17
- 18-65
- 65+

1.3 Special Populations (Check all that apply)

- Minors
- Non-English speaking
- Mentally or developmentally disabled individuals
- Pregnant women
- Prisoners
- Individuals with diminished capacity for consent
- Individuals with a Legally Authorized Representative
- Other vulnerable population (describe below)

1.4 Describe any specific populations targeted for inclusion or exclusion:

K-12 Kansas teachers of English Language Arts

1.5 Describe target demographics of proposed subjects; explain how you will ensure that selection is equitable and that all relevant ethnic groups, genders, and populations have access to the study.

This is a case study of a select number (10) of K-12 teachers of English Language Arts who have elected to participate in a professional learning experience -- Virtual Communities of Practice. This professional learning experience is voluntary and is being offered by the Kansas State Department of Education. Data collected from the sample of participants will be representative of the participant population.

2. Recruitment**2.1 Describe the recruitment process for the study. Explain how you will gain access to and recruit the subjects for participation in this project.**

The researcher, who currently works for the Kansas State Department of Education, sent out notices via listservs and social media for K-12 teachers of English Language Arts to register to participate in the Virtual Communities of Practice. Participants will be informed of the opportunity to participate in a research study associated with the Virtual Communities of Practice, and will be asked to sign the consent form in order to be accepted into the study. Consent forms will then be collected by me during an in-person meeting.

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2.2 Identify any cooperating institutions by name.

Kansas State Department of Education, Northeast Kansas Educational Service Center, Greenbush Resource Center

2.3 Where will the research activities take place? List all off campus locations.

Oakley, KS - Northeast Kansas Educational Service Center - 703 West Second Street

Eudora, KS - Greenbush Resource Center - 1310 Winchester Road

Virtual sessions will be conducted via Zoom.

2.4 Identify all applicable recruitment methods. (Please provide copies of materials)

- | | | |
|---|--|--|
| <input type="checkbox"/> Flyers | <input type="checkbox"/> Internet | <input type="checkbox"/> Purchased Sample List |
| <input type="checkbox"/> Letter | <input checked="" type="checkbox"/> E-mail | <input type="checkbox"/> Personal or Professional Contacts |
| <input type="checkbox"/> Telephone | <input type="checkbox"/> Amazon MTurk | <input type="checkbox"/> Other |
| <input type="checkbox"/> Newspaper | <input checked="" type="checkbox"/> Social Media | |
| <input type="checkbox"/> Poster | <input type="checkbox"/> SONA | |
| <input type="checkbox"/> Departmental Communication | <input type="checkbox"/> Third Party (Professional or Charitable Organization) | |

2.5 Are you recruiting students from a class you teach or for which you have responsibility?

No

2.6 Are you recruiting employees who directly or indirectly report to you?

No

2.7 If yes to 2.5 or 2.6, please explain why this population is necessary and describe what precautions have been taken to minimize potential undue influence or coercion.

N/A

3. Compensation

Drawings and raffles may not be permitted for payment or recruiting; see HSCL website for detailed guidance.

Participants will not receive compensation

Students will receive extra credit or course credit

Subjects will receive monetary compensation

Describe the compensation or credit, including amount, scheduling and method. Explain what will happen if participants withdraw from the study.

This is a professional learning opportunity being offered through the Kansas State Department of Education. Some participants have elected to receive one hour of continuing education credit, for which they will pay \$65. The credit is being offered through Baker University.

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4. Project Information

4.1 Expected Study period from: **September 2016** **To:** **February 2017**

4.2 Describe the purpose of the research. Include purpose, aims, and objectives. State the hypothesis to be tested.

Virtual Communities of Practice (VCOPs) are intended to mitigate geographical, financial, and temporal barriers for both the Kansas State Department of Education and school districts, while also aligning with professional learning standards and best practices for professional learning that is likely to create sustained, positive change in teachers' professional practice. The research questions this study will address are as follows:

- 1) In what ways do teachers build community within a virtual community of practice?
- 2) What practices do teachers and facilitators consider most beneficial to their professional practice within a virtual community of practice?
- 3) In what ways do virtual communities of practice increase the use of targeted instructional practices for an SEA's K-12 teachers of English Language Arts?

4.3 Background; describe prior relevant experience and gaps in current knowledge. Provide a brief scientific or scholarly background.

The Career, Standards, and Assessment (CSAS) team at the Kansas State Department of Education is charged with providing professional learning experiences that align with state-adopted professional learning standards to K-12 teachers in all content areas. Unfortunately, time constraints, funding cuts to the CSAS team, and logistical challenges of traveling the state, often keep the few employees on this team from being able to provide the kind of professional learning that research indicates is best for improving teachers' instructional practices.

I was interested in solving this problem, and thus created a plan for Virtual Communities of Practice (VCOPs) for Kansas K-12 teachers of English Language Arts. Challenges having to do with time, money, and geography are not new to educators. KSDE, in an attempt to provide requested assistance to schools, has often resorted to short informational sessions, webinars, or conference presentations, where educators mostly played passive roles and did not experience a good deal of follow-up, attention to application of learning, or encouragement of reflective practice.

Similarly, schools and districts are often at a loss for how to provide what they know to be high-quality professional learning, due in part to personnel and funding cuts, as well as contract limitations. VCOPs will exist in a hybrid in-person/virtual setting, and will provide teachers the opportunity to engage in collaborative inquiry and personal reflection around a set of cohesive, context-specific topics. Studying the effectiveness of the VCOP structure on teachers' instructional practices will provide insight into future practices for providing professional learning opportunities for teachers.

5. Risks & Benefits**5.1 Does this study involve any of the following? (Check all that apply)**

- | | |
|--|--|
| <input type="checkbox"/> Deception | <input type="checkbox"/> Information relating to sexual attitudes, orientation or practice |
| <input type="checkbox"/> Omission | <input type="checkbox"/> Private identifiable information |
| <input type="checkbox"/> Misleading information/False feedback | <input type="checkbox"/> Personal or sensitive information |
| <input type="checkbox"/> Physical or mental stress | <input type="checkbox"/> Private records (academic or medical) |
| <input type="checkbox"/> Collection of fluids or tissue | <input type="checkbox"/> Social or economic burden to participants |
| <input type="checkbox"/> Genetic information | <input type="checkbox"/> Exposure to hazardous materials |

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- Substances taken internally or applied externally
- Mechanical or electrical device applied to subjects
- Information pertaining to illegal activity
- Information pertaining to substance use

- Information that if released could damage an individual's
- financial standing, employability, reputation; or cause social stigmatization or discrimination
 - Other
 - None of these**

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5.2 Describe the nature and degree of the risk or harm checked above. If using deception, include a justification for the deception.

N/A

5.3 What steps will be taken to minimize the risks or harm and to protect the subject's welfare (when risk is greater than minimal)?

There are no greater-than-minimal risks involved in this study.

5.4 Describe the anticipated benefits of the research for individual subjects.

Individual subjects will engage in a community of practice specific to their grade band (elementary K-5 or secondary 6-12) and content area (teachers of English Language Arts). Over the course of six months, facilitators will engage participants in collaborative, inquiry-based learning that encourages and facilitates implementation of and reflection upon ideas shared within the community of practice. Subjects may learn new ideas to improve their instructional practice, may experience a deeper understanding of Kansas' adopted standards, and may then more fully understand how to implement standards-based instruction in their classrooms.

5.5 Describe the anticipated benefits of the research for society or science, and explain how the benefits outweigh the risks.

This study will add to the body of work that currently exists pertaining to effective professional learning for teachers. With the numerous barriers that exist to providing high-quality face-to-face professional learning experiences that are ongoing, sustainable, content-specific, context-specific, collaborative, action-oriented, inquiry-based and reflective, more research needs to be done in order to determine whether some of those criteria can be effectively met in a virtual environment.

6. Data Collection & Security

6.1 Data collection methods (Check all that apply)

- | | |
|--|--|
| <input checked="" type="checkbox"/> Observation | <input type="checkbox"/> Blood draw, saliva swab, or other biological sampling |
| <input checked="" type="checkbox"/> Interviews | <input type="checkbox"/> Tissue biopsies |
| <input type="checkbox"/> Focus groups | <input checked="" type="checkbox"/> Audio recording |
| <input checked="" type="checkbox"/> Surveys/Questionnaires | <input type="checkbox"/> Video recording |
| <input type="checkbox"/> Psychological tests | <input type="checkbox"/> Previously collected data (no individual identifiers) |
| <input type="checkbox"/> Educational tests | <input type="checkbox"/> Previously collected data (with individual identifiers) |
| <input type="checkbox"/> Internet based methods | <input checked="" type="checkbox"/> Other |

6.2 Procedures (Describe the setting and tasks subjects will be asked to perform. Describe the frequency and duration of procedures, tests, and experiments. Include a time line or step by step listing.)

This study will take place both in person and online using Zoom, an online video conferencing tool. An initial in-person meeting is planned for September 2016, in which participants will become oriented to the structure of the virtual communities of practice model, meet cohort members, familiarize themselves with Zoom, and ask any initial questions they may have about the experience.

Virtual meetings will then take place about twice monthly in October, November, December, January, and February.

The sessions will focus on the following broad topics: Authentic Learning and Creativity in English Language Arts Instruction, Rigor in English Language Arts Instruction, and Formative Assessment Process in English Language Arts.

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The following timeline describes a plan for research activities that will occur during the Virtual Communities of Practice experience:

September/October 2016 - Initial in-person meeting, selection of two-four participants in each cohort, obtain permissions
October 2016- Selected participants submit lesson plans, Observations of virtual meetings
November 2016 - Observations of virtual meetings
December 2016 - Selected participants submit lesson plans, Observations of virtual meetings
January 2016 - Observations of virtual meetings
February 2017 - Selected participants submit lesson plans, Observations of virtual meetings, Participant Interviews, Participant surveys
March 2017 - - Review and analyze interview, observation, and survey data
March/April 2017 - Compose report of findings

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6.3 Sharing results with Subjects (*Indicate if results like tests or incidental findings will be shared with the subject or others and if so, indicate how it will be shared.*)

The results of the lesson plan analysis and survey analysis will be shared with participants. Observation and interview data will be shared for purposes of ensuring accuracy of data.

6.4 Withdrawal of Subjects (*Describe the procedures to be followed when subjects withdraw from research or under what circumstances subjects may be withdrawn without their consent.*)

Subjects may withdraw from participation at any time throughout the study. If it becomes necessary for a participant to withdraw, he/she will notify the researcher via phone or email of intent to withdraw.

6.5 Protected data to be collected (Check all that apply)

- | | |
|---|--|
| <input type="checkbox"/> Protected health information | <input type="checkbox"/> Social security number |
| <input type="checkbox"/> Unique ID number (e.g. employee id, driver's license number) | <input type="checkbox"/> Other personally identifiable information |
| <input type="checkbox"/> Academic records | |

6.6 Describe the steps that will be taken to secure the data during storage, use, and transmission. How and where will the data be stored, for how long will it be kept, what safeguards are in place for data with identifying information. Include a description of physical and electronic security.

Data from interviews, observations, and surveys will be stored on a state-owned computer, which is secured via state security software and secured passwords and entry systems for accessing both hardware and software. Data will be kept for a period of one year following the study.

6.7 Identify any direct identifiers like name, unique identifier, address, e-mail, etc. that will be kept with the records. Explain why it is necessary to record the identifiers and describe the coding system to be used.

Subjects' schools of employment and specific positions within their schools (elementary or secondary, teacher or support/administrative staff, content area if applicable) will be retained. These identifiers will help with data analysis and determinations of effectiveness of specific professional learning practices for specific populations of teachers.

6.8 If retaining a link between study code numbers and direct identifiers after data collection is complete, please explain why this is necessary, how long the link will be kept, and how it will be stored.

This will not be necessary for the purposes of this study.

6.9 If using audio and video recording, describe how the recordings will be used, how confidentiality will be maintained, and how and when the recordings will be destroyed.

I will be using audio recording for the interviews only, for transcription and subsequent coding purposes. Recordings will be made on my personal device, and passcode-protected. The recordings will be destroyed upon completion of the interview transcription and member-checking.

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6.10 As part of the study will you:

1. Collect protected health information (PHI) from subjects in the course of providing experimental care, or
2. Have access to PHI in the subject's records?

If yes, please describe how you will satisfy the HIPAA requirements for authorization to use PHI in research below.
(Submit the Statement on Use of Protected Health Information (PHI) form)

N/A

7. Informed Consent

7.1 Specify the type of informed consent you will use with this research project.

 Signed Consent

Consent forms included with this submission:

- | | |
|---|---|
| <input checked="" type="checkbox"/> Adult | <input type="checkbox"/> Assent Script/Procedures |
| <input type="checkbox"/> Parent/Guardian | <input type="checkbox"/> Foreign Language version |

 Oral Consent (Waiver of documentation of consent, include script with application)

- A signed consent form would be the only record linking the subject to the research, and the principal risk of signing a consent form would be potential harm resulting from a breach of confidentiality.
- The research presents no more than minimal risk of harm to subjects and involves no procedures for which written consent is normally required outside the research context.

 Information Statement **Debriefing Statement**

7.2 Describe any potential concerns with obtaining informed consent (Foreign language, minimizing possibility of coercion, etc.)

No concerns.

7.3 Describe the process you will follow to obtain consent and/or assent. Include names of individuals on the research team who will obtain consent, where and when the process will take place and how you will ensure the subject's understanding.

I, Suzanne Myers, will obtain written consent from study participants prior to beginning the study. This will take place in person at the first face-to-face meeting or via email, should participants not be ready to commit at the in-person meeting. Participants will confirm their understanding by signing a consent form that they agree to participate in interviews, agree to be observed, agree to submit lesson plans and reflections, and agree to participate in a post-experience survey. They will also confirm that they understand they may withdraw at any time from the study.