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Smooth Sailing Through Stormy Seas? High School Social Studies Teachers Navigating Their Informal Professional Learning

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SMOOTH SAILING THROUGH STORMY SEAS?
HIGH SCHOOL SOCIAL STUDIES TEACHERS NAVIGATING THEIR
INFORMAL PROFESSIONAL LEARNING

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DISSERTATION

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

By

Emma Sowards Thacker

Lexington, Kentucky

Co-Directors: Dr. Kathy Swan, Professor of Social Studies Education

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ABSTRACT OF DISSERTATION

SMOOTH SAILING THROUGH STORMY SEAS?
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The present study used Nardi and O'Day's (1999) information ecology theory, along with activity theory (Wertsch, 1998), social learning theory (Wenger, 1998), and situated learning theory (Lave, 2009; Lave & Wenger, 1991) to examine the informal professional learning of a high school social studies department. Existing literature is just beginning to attend to the potential of informal professional learning, so this exploratory study used a single-case study of a high school social studies department made up of 12 teachers. Data included observations of scheduled and spontaneous collaborative learning activities, department meetings, and in-service meetings; semi-structured interviews; and relevant documents to consider how high school social studies teacher participants navigate their own informal professional learning. Supporting research questions included: (1) How do high school social studies teacher participants choose what to do to individually and collectively meet their professional learning needs? (2) What actions do participants take to meet their professional learning needs individually and collectively? (3) How do participants evaluate their professional learning growth individually and collectively? (4) How do participants interact with one another and with the environment as they navigate their own professional learning? Results indicated that participants valued their informal professional learning experiences, engaged in reflection throughout their informal professional learning, were influenced by departmental leadership, and experienced successes and failures in their informal professional learning goals. The department's informal professional learning was important but also imperfect. Further consideration of teachers' informal professional learning may offer new ways to support teacher growth.

KEYWORDS: Teacher Professional Learning, Informal Professional Learning, Professional Development, Secondary Social Studies, Social Studies Department

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April 28, 2014
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April 28, 2014

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DEDICATION

To my loving husband, Nathan, for the many sacrifices he made to help us complete this

journey. Thank you for celebrating and complaining along with me. And to our beautiful

son, John, who kept my life in balance and filled our hearts with more love than we knew

was possible. We did it!

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Introduction to the Study

"We've learned a lot about what works [in classrooms] . . . Let's focus on the thing that actually matters the most, which is the teacher." Melinda Gates, 2009

Introduction

The Bill and Melinda Gates Foundation recently committed $335 million to promote student achievement on the premise that having an effective teacher in every classroom is critical for improving student learning in schools; a large proportion of this funding has been set aside for supporting teachers in their professional growth (Gates Foundation, 2009). This commitment to teacher effectiveness is supported by a broad consensus within the academic community that the quality of teachers is one of the most important factors influencing student achievement (Borko & Putnam, 1995; Darling-Hammond, 1997, 1998; Desimone, 2009; Feiman-Nemser, 2001; Garet, Porter, Desimone, Birman, & Yoon, 2001; Guskey, 1995; Ross et al., 2011; Smylie, 1995). In the Gates Foundation's (2013) explanation of their focus on teaching within K-12 schools, they noted that they believe "teachers deserve professional development opportunities that they help shape, give them the support they need when they need it, and enable them to collaborate and share best practices." This push for teacher-centered professional development builds upon the academic literature.

Teacher professional development is one of the key aspects necessary for educational reform to improve student achievement in K-12 public schools (Ball & Cohen, 1999; Elmore, 2002; Guskey & Huberman, 1995). The *No Child Left Behind* (NCLB) Act of 2001 called for highly qualified teachers in every classroom and the

federal government emphasized that high quality professional development is a necessity for all teachers (Borko, 2004). The academic literature includes a variety of qualities recommended for effective professional development, including a focus on the improvement of teachers' content and pedagogical knowledge; the use of active learning methods; ongoing, sustained learning over time; attention to the particular context of the students, teachers, and school; and collective participation and collaboration among teacher participants (Desimone, 2009; Elmore, 2002; Hawley & Valli, 1999; Sykes, 1999). While scholars have identified numerous logical principles of effective professional development for over 20 years, the typical professional development experienced by social studies teachers remains "woefully inadequate" (Borko, 2004, p. 3) and far-removed from the characteristics identified in the literature.

Over 10 years have passed since NCLB came on the scene in the hope of improving public school teaching and learning. Some high-quality professional development programs have emerged; in social studies education, Teaching American History (TAH) grants provided pockets of sustained, content-focused professional development for practicing K-12 teachers (Kortecamp & Steeves, 2006; Valli & Stout, 2004; van Hover, 2008). Unfortunately, federal funding for the TAH grant program is coming to an end with no plans to fund it in other ways. The Gates Foundation's (2013) current focus is limited to literacy and the implementation of the Common Core English Language Arts and Mathematics Standards, so their grants are not directly applicable for social studies teachers. Even though social studies education is central to the preparation of students for participation in civic life (Barton & Levstik, 2009; Engle & Ochoa, 1988;

Hahn, 1998; Parker, 2003; Ross, 2006), the professional development of social studies teachers is rarely a funding priority (Hess & Zola, 2012).

Even with some federal funding in the past decade, much of the professional development to which teachers are subjected remains unchanged—many in-service events for teachers continue to be one-time trainings in which an outside expert delivers content that seems irrelevant to the teacher's daily practice (Borko, 2004; Hawley & Valli, 1999; Hirsh, 2009; Wei, Darling-Hammond, Andree, Richardson, & Orphanos, 2009). Specifically, the majority of professional development offerings for social studies teachers remain traditional, one-shot workshops or institutes (Adler, 1991; Grant, 2003; van Hover, 2008), disregarding the suggested qualities for effective professional development. These "hit-and-run" professional development sessions (Elmore, 2002) are unlikely to fulfill the purposes of professional development: to change teachers' classroom practices, to change teachers' knowledge and beliefs, or to change student-learning outcomes (Clarke & Hollingsworth, 2002; Guskey, 1986).

One of the difficulties in applying the known qualities for effective professional development in practice has been the need for ongoing, site-based support for teachers to implement changes in their practice (Hess & Zola, 2012). Hess and Zola (2012) described three effective social studies professional development opportunities—a Socratic seminar training, a Project Citizen institute, and a summer institute on the Supreme Court. None of these opportunities, however, offered ongoing site-based support for teacher participants. While these programs exemplified many of the characteristics of best practice in professional development, since they were not site-based and embedded in teachers' daily lives, they were limited in the extent to which they could provide ongoing

support for teachers. The majority of formal professional development offerings for social studies teachers are even more limited. Most do not address as many of the criteria for effectiveness as Hess and Zola's (2012) exemplars—they are rooted in the traditional workshop model (Adler, 1991; Grant, 2003; van Hover, 2008)—even though the empirical and theoretical literature in professional development offers clear guidance.

An emerging question in the literature that has the potential to address the persistent shortcomings of teacher professional development is the importance of informal professional learning. *Professional learning* takes place in the school context, when teachers work with one another on common problems and respond to their students (Easton, 2008b; Fullan, 2007; see also Lieberman, 1995; Nieto, 2001). As opposed to formal learning, which can be understood narrowly as those activities titled "professional development" (Jurasaite-Harbison & Rex, 2010), *informal* professional learning includes learning opportunities that are voluntary, unstructured (Richter, Kunter, Klusmann, Lüdtke, & Baumert, 2011), and occurring in the workplace (Jurasaite-Harbison & Rex, 2010). For more detailed definitions of informal and formal professional learning, refer to the review of related literature in Chapter 2. Informal learning is more prevalent in the workplace and potentially more effective than formal professional learning, but it remains an under-researched phenomenon (Eraut, 2004).

Professional development for teachers has been "a patchwork of opportunities—formal and informal, mandatory and voluntary, serendipitous and planned—stitched together into a fragmented and incoherent 'curriculum'" (Wilson & Berne, 1999, p. 174; see also Ball & Cohen, 1999; Elmore, 2002). Due to this incoherent curriculum, it is often up to individual teachers to make their professional learning experiences into

something that is useful for them personally and professionally. Research has shown

repeatedly that mandatory, planned professional development sessions fail to meet the

needs of teachers (Huberman, 1995; Little, 1999; Wei et al., 2009). Previous research has

not focused on the ways in which teachers take advantage of informal learning

opportunities in order to meet their professional learning needs. Emerging research

implies that informal professional learning may be of key importance for meaningful

teacher development (Hanraets, Hulsebosch, & de Laat, 2011; Mesler & Spillane, 2009;

Richter et al., 2011).

Drawing on general literature about workplace professional learning, early

indications are that informal professional learning is more prevalent and potentially more

important than formal professional development for teachers (Eraut, 2004; Hanraets et

al., 2011; Jurasaite-Harbison & Rex, 2010). Informal professional learning has the

potential to address the challenges of formal professional development in meeting some

of the criteria for effectiveness. In particular, recent studies have indicated that informal

professional learning capitalizes on the use of collaborative (Jurasaite-Harbison & Rex,

2010; Mesler & Spillane, 2009) and job-embedded (Mesler & Spillane, 2009; Putnam &

Borko, 2000; Richter et al., 2011) learning opportunities.

Missing from the research is how teachers meet their own needs in—and outside

of—the present system through these informal professional learning opportunities. In the

context of persistent mandated professional development that fails to meet the needs of

teachers, research is needed on the informal professional learning that teachers stitch

together to meet their needs. For social studies teachers, research in this area is

paramount. With a lack of funding for formal professional development (Hess & Zola,

2012) and an emphasis on literacy and mathematics in the national conversation around school reform (Grant, Swan, & Lee, 2012; Rock et al., 2006), social studies teachers will likely need to rely more heavily on these informal professional learning opportunities to guide their own development. Understanding how to support purposeful informal professional learning in educational organizations would be an important contribution to the field of social studies teacher education, as well as the broad literature on professional development.

Purpose of the Study

The present single-case study provides a glimpse into how participating high school social studies teachers identify their professional learning needs, work to meet those needs and find resources to make that possible, and evaluate their growth *beyond* school-, district-, and state-mandated professional development trainings. The main underlying assumption in this study was that teachers do partake in informal professional learning experiences (Eraut, 2004; Jurasaite-Harbison & Rex, 2010; Mesler & Spillane, 2009; Richter et al., 2011). Two further assumptions in this study were that teachers take various informal actions (Mesler & Spillane, 2009) with the purpose of improving their social studies content and pedagogical knowledge and that they work individually and collaboratively (McArdle & Coutts, 2010; Mesler & Spillane, 2009; Richter et al., 2011) to improve their practice. By conducting a single-case study of a social studies department, with individual teachers and groups of teachers as emergent embedded units of analysis, this study provides perspective on how high school social studies teachers navigate their informal professional learning.

Research Questions

The main research question for the present study was: How do high school social studies teacher participants navigate their own informal professional learning? Supporting research questions included:

(1) How do high school social studies teacher participants choose what to do to individually and collectively meet their professional learning needs?

(2) What actions do participants take to meet their professional learning needs individually and collectively?

(3) How do participants evaluate their professional learning growth individually and collectively?

(4) How do participants interact with one another and with the environment as they navigate their own professional learning?

Significance of the Study

Most empirical research on informal professional learning has been conducted internationally—particularly in Europe (e.g., Hanraets et al., 2011; Jurasaite-Harbison & Rex, 2010; Richter et al., 2011)—rather than in the context of the public education system in the United States. Since teacher professional learning varies greatly internationally (Wei et al., 2009), it is important to research informal professional learning in U.S. schools as well. Even including the international studies on informal professional learning, it is still an under-researched phenomenon (Eraut, 2004).

Most reviews of research on social studies teacher development focus on formal professional development programs, such as workshops (e.g., Adler, 1991; van Hover, 2008). Empirical studies tend to focus on effective exemplar professional learning

programs (e.g., Grossman, Wineburg, & Woolworth, 2001; Hess & Zola, 2012) or

teacher perception of their professional learning experiences (e.g., Garet et al., 2001; Wei

et al., 2009) and emphasize pre-service or early-service teacher development (Bransford,

Darling-Hammond, & LePage, 2005; Darling-Hammond, 2000). The present study is

unique in its focus on teacher informal professional learning opportunities; in the broad

definition of what constitutes informal professional learning; and in the unit of analysis

for the case study, a high school social studies department. This rich qualitative data from

an in-depth case study with a social studies department adds to and updates the limited

understanding of how teachers navigate their own informal professional learning.

Chapter 2

Literature Review

Much of the research about teacher practice and professional development refers to a broad consensus around the understanding that the quality of teachers is one of the most important factors influencing student achievement (Borko & Putnam, 1995; Darling-Hammond, 1997, 1998; Desimone, 2009; Feiman-Nemser, 2001; Garet et al., 2001; Guskey, 1995; Ross et al., 2011; Smylie, 1995). Garet and colleagues (2001), for example, concluded, "the success of ambitious education reform initiatives hinges, in large part, on the qualifications and effectiveness of teachers" (p. 916). Bransford, Darling-Hammond, and LePage (2005) demonstrated that teachers are "crucial contributors" to student learning, more so than other factors (p. 2). Because teachers act as curricular-instructional gatekeepers (Thornton, 2005), if change is to make its way into the classroom and to affect student learning, it must first reach teachers. Teachers are central to school improvement efforts because implementing reforms in the classroom depends largely upon them (Guskey, 1995; Smylie, 1995). Accepting the premise that teachers are one of the most important agents in education, it follows that in order for education to change and improve, teachers must change and improve. In order for in-service teachers to change and improve their existing practice, they need professional development of some kind.

In this chapter, I review the relevant literature and situate it for the present study. I begin by framing the importance of continuous learning for educators based in Schön's (1983) concept of the reflective practitioner. I then describe an important shift in the research and theoretical literature on teacher learning—from professional development to

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professional learning—whereby I distinguish between formal and informal learning and outline the criteria for effective professional development identified in the literature. From there, I narrow the scope to informal professional learning and establish the present study within the existing literature while critiquing the literature on teacher informal professional learning. I note individuals and groups to consider in professional learning, such as department chairs and leaders, and illustrate the need for the study. Finally, I discuss my theoretical framework, describing each theory in some detail before situating each in its contribution to this dissertation study.

Ongoing Teacher Learning

Schools are recognized as dynamic environments in which teachers must constantly adapt and respond to changing conditions, from students' learning needs to curriculum innovations (Guskey & Huberman, 1995; Nieto, 2001; Shulman, 1999). Because teachers are such instrumental agents affecting student learning, in order to improve student learning, teachers need to learn continually. Shulman (1999) explained that teachers "operate under conditions of inherent novelty, uncertainty, and chance" and that "a typical day is fraught with surprises" (p. xii). Partially because of the uncertain nature of teaching, teachers must learn "in and from practice" (Ball & Cohen, 1999, p. 10).

Throughout much of the theoretical literature, teachers are called upon to be "reflective practitioners" (Schön, 1983) as a way to manage the constantly shifting nature and demands of the profession. Schön (1983) outlined the concepts of *knowing-in-action* and *reflecting-in-action*. Knowing-in-action involves tacit knowledge on which professionals often act but of which they may be unaware; it is "ordinary practical

knowledge" (1983, p. 54). Reflecting-in-action, simply put, is the idea that practitioners

can "think about doing something while doing it" (p. 54). Schön described examples of

reflecting in and on one's practice as reflection on how a person came to particular

judgments, on what guided a particular pattern of behavior, and on how the professional

framed a particular problem of practice (p. 62). Schön noted that even though reflective

practice is very important in many professions, it is still "not generally accepted—even

by those who do it—as a legitimate form of professional knowing" (p. 69). While

Schön's work focused on professionals in the general sense and was not specifically tied

to teachers, it did draw upon research with groups of teachers; in addition, educational

researchers have emphasized the need for teachers to be reflective as well (e.g.,

Hammerness et al., 2005; McArdle & Coutts, 2010). Dewey (1910) and Griffin (1942)

both emphasized the importance of reflective thought for student learning, but since

teachers are called upon to be lifelong learners, the need for reflective learning applies to

practicing teachers, too.

The theoretical literature in teacher professional growth also uses the term

adaptive experts to describe teachers' ongoing professional learning and change

(Bransford, Derry, Berliner, Hammerness, & Beckett, 2005; Hammerness et al., 2005).

Adaptive experts are those who can balance efficiency and innovation in their practice

(Bransford, Derry, et al., 2005). The constant need for learning and adaptation led Easton

(2008b) to advocate for a change in terminology from professional development to

professional learning in order to be more encompassing of the day-to-day changes to

which teachers must adapt and the highly contextualized environments in which teachers

work. Professional development and/or professional learning are ways teachers can be supported as they fulfill the role of continuous learners.

A Shift from Professional Development to Professional Learning

The term professional development can represent many different programs or experiences, from workshops—whose quality and effectiveness for teacher participants vary wildly—to critical reflection of teaching practice by an individual teacher or a group of teachers, to classroom observation of another's teaching practice, to hallway conversations among teachers (Borko, 2004; Desimone, 2009; Elmore, 2002; Putnam & Borko, 2000; Wilson & Berne, 1999). Because so many professional development seminars were—and are—inadequate, fragmented, and superficial (Borko, 2004), the term professional development has taken on a negative connotation among educators (Fullan, 2007). Easton (2008b) and Fullan (2007) argued that the field should adopt the term professional learning and abandon use of the term professional development; both terms are now common in the literature.

In an effort to further the trend of embracing professional learning over professional development, the latter is here defined narrowly, to refer to traditional workshops and mandated professional development seminars or speakers such as opening day activities. Other varieties of workplace learning such as hallway conversations fall under informal professional learning, while activities such as peer mentoring will be classified as falling on a continuum (Eraut, 2004) from informal to formal professional learning depending on the amount of structure provided for the activity. Easton's (2008b) criteria for professional learning included mostly formal programs—those that provide meaningful time for teachers to work together, are embedded in teachers' work, are

school-based to allow for ongoing support, are planned and implemented with the
meaningful leadership of teachers, and are effective in changing teacher behavior, school
function, student behavior, and/or student achievement (p. 757). To fulfill Easton's
(2008b) definition of professional learning, an activity must be quite structured; however,
unstructured, serendipitous events can produce professional learning as well (Richter et
al., 2011). As teacher professional learning can be interpreted very broadly (Desimone,
2009), a distinction between formal and informal learning is useful.

Formal versus Informal Professional Learning

Richter and colleagues (2011) distinguished formal professional learning as
taking place in a structured environment, such as a mandated in-service event or graduate
coursework, and informal professional learning as those that do not follow a specified
curriculum, are not restricted to a given environment, and are generally voluntary rather
than mandatory. Further, they noted that informal professional learning activities are
"often embedded in the classroom or school context which allows teachers to reflect on
their practice and to learn from their colleagues" (2011, p. 117). Jurasaite-Harbison and
Rex (2010) distinguished formal learning as those activities titled "professional
development" and informal learning as other professional learning that occurs in the
workplace, including teacher reflection and collaboration—both those that are planned
and those that are serendipitous. Mesler and Spillane (2009) examined formal learning
opportunities and what they termed "on-the-job" learning opportunities, that latter of
which are very similar to the concept of informal professional learning defined by others.

Rather than formal and informal professional learning representing distinct types
of workplace learning, Eraut (2004) placed the two on a continuum. Beginning at the

informal end of the continuum, activities may include "implicit, unintended,

opportunistic and unstructured learning and the absence of a teacher. In the middle come

activities like mentoring, while coaching is rather more formal in most settings" (Eraut,

2004, p. 250). Eraut's work was based upon research in general workplace settings and is

not specific to teachers, but his description of formal and informal learning processes is

applicable to education. The existing literature is just beginning to attend to the

importance of informal professional learning and to distinguish between formal and

informal professional learning opportunities for teachers. In this study, informal

professional learning includes planned and serendipitous professional learning

experiences in which teachers engage voluntarily for the purpose of improving their

practice. Excluded from the present concept of informal professional learning are

traditional professional development events such as workshops and those events teachers

complete in order to earn professional development hours required by the school, district,

and state professional standards board.

Qualities of Effective Professional Development

Educational researchers have given much more attention to formal professional

development of teachers, conducting observational, survey, and case studies of teachers'

experiences with a particular professional development program or their experiences with

professional development in general, than to less structured, informal learning.

Academics have also written about teacher professional learning based on their

experiences and theories about adult learning. From the empirical and theoretical

literature, lists of qualities for effective professional development have emerged. While

much of this literature is based upon—and uses the term—professional *development*

rather than professional learning, an understanding of the qualities of effective

professional development is necessary to contextualize professional learning. Indeed, an

activity that meets the qualities of effective professional development—by my

definition—will be called professional learning.

To be effective, professional learning should be content-focused, pedagogically

sound, rooted in context, ongoing, and collaborative (Desimone, 2009; Elmore, 2002;

Hawley & Valli, 1999; Hess & Zola, 2012; Sykes, 1999; Valli & Stout, 2004). Since

professional development in practice, however, has been shown to be largely ineffective

(Borko, 2004), I refer to programs meeting these criteria—whether formal or informal—

as professional learning. It is important to note that these criteria are not distinct, separate

items on a checklist but are interrelated and overlapping.

Content-based. Researchers argue that teachers need to engage in ongoing

learning to increase their understanding and skills in specific content areas and that strong

content knowledge is important for effective teaching (Grant & Gradwell, 2010;

Grossman et al., 2001; Sykes, 1999). Grant and Gradwell (2010) identified content

knowledge—along with knowledge of students and knowledge of their environment—as

one of the necessary kinds of knowledge for ambitious social studies teachers.

Professional learning programs that focus explicitly on improving teacher content

knowledge help teachers stay up to date in their content knowledge and deepen their

current understandings (Borko, 2004; Grossman et al., 2001). As Grossman and

colleagues (2001) pointed out, without ongoing learning in subject area content, many

teachers rely on courses in their undergraduate major area of study for their entire career

(p. 994).

Teachers' knowledge and competency are strong influences on student learning (Darling-Hammond, 2000; Ferguson, 1991; Kortecamp & Steeves, 2006). In his large review of student achievement in Texas public schools, Ferguson (1991) found that the quality and training of teachers explained more of the differences in student achievement than did student socioeconomic status or parent/guardians' level of educational attainment. Smith and Desimone (2003) analyzed data from the Schools and Staffing Survey (SASS) from 1993-94 and 1999-2000 and found that professional development that focuses on content is the most effective. In Borko's (2004) review of the "terrain" of professional development, she explained that programs that focus on subject matter are successful in building teacher content knowledge (p. 5-6). Particularly effective, she noted, are those programs that engage teachers as active learners of content using pedagogical strategies similar to those educators are encouraged to use with their students. In addition to explicit focus on content, the way that content is presented in professional development matters for teacher learners.

Pedagogy. For effective professional learning, those who plan the learning experiences should focus on pedagogy, attending to both what is taught in a particular program and how it is presented to the teacher learners involved. Hess and Zola (2012) explained that an effective professional learning program "*models and provides practice with classroom strategies that have been proven to work well with students*" (p. 189). Not only should teachers learn about effective classroom pedagogy, they should also learn and experience how to use it. Too often, teachers are told about a supposed effective classroom strategy in a professional development seminar, but they are not provided with the opportunity to experience that strategy as a student or practice it as a teacher (Ball &

Cohen, 1999; Borko, 2004; Elmore, 2002). As Ball and Cohen (1999) described, "most

teachers have a shelf overflowing with dusty vinyl binders" from this type of professional

development (p. 4). When teachers experience a particular pedagogy as a learner, they are

more likely to bring it back to their own classrooms and use what they learned with their

students (Hess & Zola, 2012).

Garet and colleagues (2001) used the term *active learning* to describe effective

ways that content can be delivered. They included experiences such as observing other

classroom teachers and being observed themselves; the provision of time to plan for the

implementation of new curriculum and methods in the classroom; examination and

evaluation of student work related to the particular professional learning program; and

production of their own written work, presentations of their work to other teachers, and

participation in discussions (Garet et al., 2001, p. 925). In their national survey of

teachers, they found that the use of active learning strategies in professional learning led

to enhanced teacher content knowledge and skills. In a large-scale status report on

professional development and professional learning experiences in the United States as

compared to several other "high achieving" countries in Europe and Asia, Wei and

colleagues (2009) explained that active learning helps teachers fundamentally change

their teaching. Wei and colleagues (2009) termed active learning "sense-making

activities" (p. 6) that allow teachers to observe models of new practices, practice it

themselves, and reflect on new strategies.

Another consideration for the pedagogical focus of teacher learning is theories of

how teachers—or adults in general—learn. Elmore (2002) argued that a clearly

articulated theory of adult learning is part of the list of necessary qualities for highly

effective professional development (p. 7). However, few studies have used theories of

teacher learning and change to inform professional learning (Smylie, 1995, p. 93).

Despite this limitation, Hawley and Valli (1999) outlined some of the main principles

from the adult learning literature as relevant for professional development (p. 132-133).

The two principles that appear to have made it into more of the professional development

literature are the *knowledge-base principle* and the *context principle*. The knowledge-

base principle states that teachers' existing knowledge is the base for their future

learning. The context principle states that learning is not only individually but also

socially constructed (Hawley & Valli, 1999). These constructivist principles do not

appear to be different from how non-adult students learn; even so, they are useful

principles to keep in mind for approaches to teacher learning. The deficit model of

traditional professional development is problematic partly because it does not adhere to

the knowledge-base principle, approaching teachers as passive recipients of knowledge

rather than as professionals who bring expertise and experience with them to a

professional learning experience (Huberman & Guskey, 1995). As indicated by Hawley

and Valli's (1999) principles, a necessary consideration for planning a professional

learning program is the classroom and school context.

  Context. Grant and Gradwell's (2010) third type of knowledge for ambitious

teachers is that they have an understanding of the many contextual factors that affect their

teaching, including state assessments, standards, and school culture. Effective

professional learning experiences should be designed with these contextual factors in

mind and should include opportunities for teachers to think about and discuss how a

particular strategy or policy change might affect or be relevant for their students (Hawley

& Valli, 1999; Hess & Zola, 2012; Wei et al., 2009). Hess and Zola (2012) described a Socratic seminar training in which teacher participants discussed a content-rich text in the seminar and also posed questions about the relevance of the text for their students, considering issues that were relevant in their particular school. The format of the Socratic seminar training allowed teachers to learn about and experience a powerful pedagogical strategy as well as to work through the ways they could use the strategy in their own classrooms. Because participants for the Socratic seminar training came from different schools, it was important for them to have the opportunity to consider their own circumstances and students throughout the training.

Researchers have also emphasized that professional learning should be site-based, bringing together teachers in the same school or district who would share many contextual factors (Easton, 2008a, 2008b; Fullan, 1995; Grossman et al., 2001). Even good ideas, if they do not take classroom and school context into account, will not be effective. Hargreaves (1995) argued that training for new techniques should "address the real conditions of teachers' work, the multiple and contradictory demands to which teachers must respond, the cultures of teachers' workplaces, and teachers' emotional relationships to their teaching, to their children, and to change in general" (p. 26). Every school setting is unique, and a one-size-fits-all pedagogical strategy or policy reform will not be successful (Easton, 2008a, 2008b; Guskey, 1995). Wei and colleagues (2009) explained the importance of taking context into account for the coherence of a professional learning program, "curriculum, assessment, standards, and professional learning should be seamlessly linked in order to avoid disjunctures between what teachers learn in professional development and what they are able to implement in their

classrooms and schools" (p. 6). Every school has its own unique and ever-changing context, so effective professional learning must consider the students, teachers, community, and society. Existing research illustrates that site-based programs that consider the unique contextual and cultural situation of the students and teachers have been effective (Easton, 2008a; Elmore, 2002; Garet et al., 2001; Grossman et al., 2001; Huberman & Guskey, 1995).

Ongoing. In the introduction to their book *Professional Development in Education: New Paradigms and Practices*, Guskey and Huberman (1995) wrote:

> Never before in education has there been greater recognition of the need for ongoing professional development…the current emphasis on professional development comes from growing recognition of education as a dynamic, professional field. Educational researchers are constantly discovering new knowledge about teaching and learning processes [and] educators must keep abreast of this emerging knowledge base and be prepared to use it to continually refine their conceptual and craft skills." (p. 1)

Because the field of education is never constant, teaching is not constant, either. Easton (2008b) gave further support for the need for continual learning, noting that educators "often need to change what they do, on a daily or sometimes hourly basis, as they respond to the needs of the learners they serve. Doing this takes learning" (p. 755). The teacher as a reflective practitioner (Schön, 1983) is an important part of this continual learning process to become a more effective teacher (Easton, 2008b).

This understanding of teaching as a practice that demands continuous reflection and growth has not always been emphasized. In Britzman's *Practice Makes Practice: A Critical Study of Learning to Teach* (2003), she dispelled some of the common myths of teaching based on her ethnographic study of two student teachers in the 1970s. One of the myths she identified is that teachers are experts. While teachers need to have some

content and pedagogical expertise, what Britzman meant as a myth was the conception of teacher as almost omniscient and as someone who is *developed* rather than someone who is continually developing, learning, or growing. The student teachers Britzman (2003) studied felt they needed to have *all* the answers and enter the classroom as an expert, rather than as a learner. Elmore (2002) and Nieto (2001) also decried the assumption that teachers should enter the classroom knowing how to teach and needing little structured, ongoing learning from that point.

Ongoing professional development, as opposed to the traditional episodic workshop, becomes a process rather than an event (Grossman et al., 2001; Guskey, 1995), which makes it more effective for supporting teacher learning. Professional development programs, with the proper structure in place, can provide the ongoing support and impetus for teachers to implement change in their classrooms (Guskey, 1995). Nieto (2001) emphasized that teachers are continually "becoming" rather than fully developed when they enter the classroom, and that this process of becoming happens through personal reflection, ongoing study and learning, and dialogue and collaboration with their peers (p. 14). Professional learning can be designed to facilitate each part of this continual process of becoming.

Effective professional learning programs should be ongoing, sustained activities rather than the traditional, one-time professional development sessions. Teachers are no longer satisfied—if they ever were—with "episodic in-service training" (Little, 1999, p. 233). The duration of professional learning experiences has been shown to be an important factor in teachers' satisfaction and self-reported growth from professional learning activities (Garet et al., 2001; Wei et al., 2009; Yoon, Duncan, Lee, Scarloss, &

Shapley, 2007). In Yoon and colleagues' (2007) review of studies examining the relationship between teacher professional learning and student learning outcomes, they found that studies of professional learning experiences with 14 contact hours or less did not have a significant effect on student achievement. Similarly, Wei and colleagues (2009) found that other nations with high levels of student achievement on international assessment measures had more sustained formal and informal professional learning opportunities for their teachers.

Job-embedded. A complementary criterion for ongoing professional learning is that it is job-embedded. This is also related to the quality of professional learning being context-based and site-based, discussed above. Professional learning that is embedded in teachers' work is relevant to their day-to-day lives in the classroom and school context and is also more easily sustained over time (Easton, 2008b). Fullan (1995) argued that the traditional treatment of professional development as something *outside* of the regular job of teaching makes it less effective (p. 264). Grossman and colleagues (2001) made a clear case for job-embedded professional learning in their collaboration with secondary social studies and English teachers, noting that it is not "possible to take individuals out of their workplaces, transform them in other settings, and then return them to an unchanged workplace to battle the status quo" (p. 948). Building a professional learning program that is ongoing, site-based, and job-embedded is also related to the final criterion, collective work among teachers.

Collaborative. This final characteristic of effective professional learning is one of the most pervasive in the literature yet is also exceedingly difficult to implement meaningfully. Professional learning as a collaborative enterprise goes by many names in

the literature—communities of practice, study groups, discourse communities, and professional learning communities to name a few. Grossman and colleagues (2001) argued that the word *community* is so pervasive that it has lost its meaning (p. 942). Professional learning and school reforms now include the term community but do not define what community means, nor do they provide the necessary supports for nurturing the growth of a learning community among teachers (Grossman et al., 2001; Westheimer, 2008).

  Theoretical background for collaborative professional learning. Lave (2009) argued that learning in general is a *socially situated* activity building upon social learning theory (Wenger, 1998, 2009) and situated learning theory (Lave, 2009; Lave & Wenger, 1991). Individuals do not learn in isolation from others or from their environment. Lave (2009) explained that situated activity necessarily involves change in people's knowledge and actions. She disputed earlier cognitive theories which treated learning as something that occurs separately from human activity, arguing that the difference depends on one's view of knowledge, "as a collection of real entities, located in heads, and of learning as a process of internalizing them, versus a view of knowing and learning as engagement in changing processes of human activity" (Lave, 2009, p. 203-204). The socially situated view of learning aligns with the latter description. Wenger (1998, 2009) also dealt with the social nature of learning in general, explaining learning for individuals as engaging in and contributing to their communities.

  Communities of practice—or professional learning communities (PLCs) as they are more commonly called in education—have become popular in schools and in education research (Elliott, 2010; Grossman et al., 2001; Vescio, Ross, & Adams, 2008).

The community of practice concept comes out of the larger workplace organization

literature (Hammerness et al., 2005; Sessums, 2009) and is based on the belief that

learning is a social activity (Wenger, 1998). In a community of practice, participation is

central to the meaning of learning for both individual group members and for the group

as a whole (the community): "For *individuals*…learning is an issue of engaging in and

contributing to the practices of their communities. For *communities*…learning is an issue

of refining their practice and ensuring new generations of members" (Wenger, 2009, p.

213).

Putnam and Borko (2000) built upon the broader situative and social perspective

of learning and put it in the particular context of teacher professional learning. They

outlined three aspects of cognition: situated, social, and distributed. The situated nature of

teacher learning goes back to the context criteria for professional learning but also

emphasizes the social nature of context—the interaction of the individual teacher with

others, with the environment, and with materials. The social view of teacher learning

focuses on the importance of the people with whom one interacts on what and how

individuals learn, emphasizing again the importance of collaboration in teacher

professional learning. In particular, Putnam and Borko (2000) used the term *discourse*

communities to represent the importance of community in how a teacher understands his

or her practice (p. 5). Finally, the distribution of knowledge emphasizes the shared nature

of learning and understanding and that different individuals can and do offer unique

understandings to the group; rather than each individual being responsible for all

knowledge, the group is made more knowledgeable by sharing each other's knowledge.

Grossman and colleagues (2001) explained distributed cognition simply, "some people know things that others do not" (p. 973). Put differently, Fullan (1995) argued, "collaboration is essential for personal learning [because] there is a ceiling effect to how much we can learn if we keep to ourselves" (p. 257). When communities of teachers are brought together following the principles of professional communities of practice (Wenger, 1998), studies and analyses of existing research have shown positive outcomes on teachers' instructional practices (Ross et al., 2011; Westheimer, 2008), content knowledge (Grossman et al., 2001; van Hover, 2008), and student achievement (Vescio et al., 2008; Westheimer, 2008). In particular, partnerships between K-12 schools and universities have been effective ways to build and sustain teacher communities (Darling-Hammond, Bullmaster, & Cobb, 1995; Grossman et al., 2001; Putnam & Borko, 2000).

Communities of practice. Because communities of practice, or PLCs, are so pervasive in professional learning reform efforts (Elliott, 2010; Grossman et al., 2001; Vescio et al., 2008), more elaboration on the concept is needed. Building a community of learners is difficult and takes time, resources, and leadership (Grossman et al., 2001) but it is not an inherently positive practice (Cochran-Smith & Lytle, 2009; Elliott, 2010; Little, 2003). As implemented in some school contexts, PLCs may focus on analyzing student assessment data to the detriment of teacher learning (Cochran-Smith & Lytle, 2009; Elliott, 2010). While traditional school structure continues to emphasize the importance of instructional time over collaborative work time with colleagues, flourishing communities of teachers will remain rare (Darling-Hammond, 1990). Darling-Hammond (1990) connected the amount of time provided for teaching tasks to their relative perceived importance, and concluded that those tasks of teaching beyond

instructional time with students are "deemed so unimportant that little or no time is made available" for them (p. 40). Yet, research has found that when meaningful time and support is provided for teacher collaboration, professional learning occurs (Grossman et al., 2001; Mesler &Spillane, 2009). In addition to noting benefits of collaborative work for teachers' development, Mesler and Spillane (2009) found a positive correlation between teacher collaboration and student achievement though they noted that more research is needed relating professional learning to student learning outcomes.

In Grossman and colleagues' (2001) Community of Teacher Leaders project, the researchers worked with a group of high school teachers over a period of two and a half years to build a learning community. The group consisted of social studies and English teachers, a special education teacher, and an English as a second language teacher who met twice a month during and after school, as well as over a week in the summer. The group was a kind of book club/study group that selected texts to study between meetings and then discuss the books and their interpretation and classroom applications at their face-to-face meetings. An important feature of this community was that all of the teachers were from the same school, so they had a common context as well as a shared history. The researchers (2001) noted the importance of this context, "the conflicts and tensions of the workplace accompanied us from the start [which] made the creation of community more difficult but also more ecologically valid" (p. 949). This study is particularly important because it described the challenges of building a professional community among teachers within a school, who do not always get along personally; yet, with guidance from the researchers and their facilitation of open dialogue among participants

as well as their encouragement of participants to take on leadership roles in the group, they were successful in building a community of learners.

However, as Elliott (2010) and Little (2003) cautioned, learning communities for teachers should not be uncritically accepted as positive entities. In her qualitative study of multiple PLCs, Little (2003) not only interviewed and observed participants but also analyzed videotapes of PLC meetings. From this data, she was able to critically examine what occurred in the PLC meetings beyond teacher self-report, which has been a more common method used in existing research. While some of her findings supported the positive possibilities of PLCs for teacher learning, she also found that in some instances teacher learning was constrained. For example, in a department meeting in which a teacher brought samples of student work to share with her peers, the other teachers hardly looked at the work samples and discussion centered on typical teaching practices rather than the specific lesson and students at hand (Little, 2003).

Collaborative culture. Traditionally, teachers have been viewed as isolated from one another rather than interdependent (Lortie, 1975). Lortie (1975) described teachers as preferring to use their time to work in their classrooms over using that time to work on school issues—for example, teachers would prefer to spend time planning instruction rather than serving on a school committee (p. 164). This isolation of teachers is the flip side of Thornton's gatekeeper concept (2005)—teachers have the freedom to make curricular and instructional decisions in the classroom as gatekeepers; yet, they also tend to toil in isolation in that same classroom. Huberman (1995) referred to this independence of teachers in their professional growth as the "lone-wolf scenario" in which teachers work largely alone to improve their teaching; that support they do seek out is autonomous

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rather than systematic (p. 207). While Lortie's (1975) theme of isolationism is pervasive in the academic literature, he did not argue that teachers work completely alone, just that the culture of teaching tends to be more independent than interdependent. An example of this culture of isolationism that is especially relevant for professional development is that teachers want to hide their weaknesses from others and so are hesitant to try new ideas for fear of failure (Lortie, 1975). Teachers' hesitance to reveal their weaknesses in front of one another may make collaborative professional learning difficult.

In addition to the notion of teacher as expert discussed in the criteria that professional learning should be ongoing, another of Britzman's (2003) persistent myths was that teachers are self-made. Many teachers believe they learn how to be a teacher just from their field experiences and their own classroom practices. Related to this myth is that teachers must discover and develop their own style independently. Putnam and Borko (2000) explained that this belief of each teacher finding his or her own style stands in the way of building a collaborative professional community among teachers. If a group of teachers all subscribe to this belief, they will be hesitant to provide assistance to one another, falling back on the old adage, "To each his own." While there is value in allowing teachers to have the freedom to test their own ideas in the classroom, evidence suggests that teachers need guidance from mentors and peers in a collaborative, supportive atmosphere to sustain continuous growth (Darling-Hammond, 2000).

A collaborative teaching culture can be facilitated through professional learning experiences that build a community of practice. Encouraging teachers to engage in action research is one way to encourage a culture of inquiry and collaboration in a school (Cochran-Smith & Lytle, 1992). Cochran-Smith and Lytle (1992) showed that when

teachers engage in collaborative work, they are committed to changing their own practices, their schools and districts, and above all, to improving student learning. Darling-Hammond and Baratz-Snowden (2007) argued that professional learning communities are an effective way for both pre-service and in-service teachers to learn how to improve their teaching practices. Putnam and Borko (2000) explained that discourse communities—in which teachers discuss new materials and strategies, share knowledge, and reflect on their practices—can be effective ways for teachers to gain new insights about their own teaching and learning and their students' learning. Not only can professional collaboration among teachers benefit teachers themselves, it can also improve student attitudes and student achievement (Little, 1990), supporting the key purposes for professional learning.

Summary

The criteria for effective professional learning identified in the empirical and theoretical literature are not limited to the five qualities discussed here; rather, these five qualities are repeated in various lists as important criteria for teacher learning and appear in different arguments for a consensus from the existing literature (e.g., Desimone, 2009; Elmore, 2002). Table 2.1 provides a summary of the previous sections with a succinct definition of the five qualities of effective professional learning used in this dissertation.

Table 2.1

Summary of Qualities of Effective Professional Learning

Qualities of Effective Professional Learning	
Content-based	Because content knowledge is important for effective teaching (Darling-Hammond, 2000; Ferguson, 1991; Grant & Gradwell, 2010; Grossman et al., 2001), professional learning should purposefully focus on improving and increasing teachers' knowledge and skills in relevant content (Borko, 2004).

Table 2.1 (continued)

Summary of Qualities of Effective Professional Learning

Pedagogy	Professional learning experiences should be intentionally planned so that instruction "*models and provides practice with classroom strategies that have been proven to work well with students*" (Hess & Zola, 2012, p. 189).
Context	Contextual factors such as student characteristics, state assessment policies, and school administration influence classroom life (Grant & Gradwell, 2010). To be effective, professional learning experiences must acknowledge the importance of the school context, plan with this in mind, and provide opportunities for teachers to situate the content of the learning experience to their classrooms (Hawley & Valli, 1999; Hess & Zola, 2012; Wei et al., 2009). Site-based professional learning may be particularly useful in accounting for unique contexts (Easton, 2008b; Elmore 2002; Garet et al., 2001).
Ongoing	Effective teachers must constantly learn and adapt to changing circumstances (Easton, 2008b; Guskey & Huberman, 1995) and professional learning should support this continuous learning (Guskey, 1995). The duration of professional learning experiences (Yoon et al., 2007) matters; in addition, job-embedded learning allows for the kind of ongoing support that helps teachers make changes to their classroom practice (Fullan, 1995; Grossman et al., 2001).
Collaborative	Learning is a social activity (Lave, 2009; Wenger, 1998); when meaningful time (Darling-Hammond, 1990) is provided for teacher collaboration, teachers can more effectively change their practices (Darling-Hammond & Baratz-Snowden, 2007; Ross et al., 2011), content knowledge (Grossman et al., 2001), and improve student learning (Cochran-Smith & Lytle, 1991; Vescio et al., 2008). Professional learning communities (PLCs) are a type of community of practice (Wenger, 1998) found in many schools today (Elliott, 2010; Grossman et al. 2001; Vescio et al., 2008) with varying degrees of successful collaboration (Cochran-Smith and Lytle, 2009; Elliott, 2010).

Leadership and Professional Learning

A body of literature that is relevant for the professional learning of educators later in their careers focuses on teacher leaders. In secondary schools, the department chair is often one example of a teacher leader (Bliss, Fahrney, & Steffy, 1996), but other teachers can have formal or informal leadership responsibilities as well. Spillane (2006) outlined a

perspective on leadership in schools, called distributed leadership, which is two-part: leadership-plus and leadership practice. The leadership-plus component of distributed leadership accounts for the sharing of leadership roles among various individuals and in various ways, that "people in formal and informal roles take responsibility for leadership activities" (p. 13). The leadership practice component, Spillane (2006) explained, takes into consideration "the interaction of leaders, followers, and their situation" (p. 14). While Spillane's perspective on leadership does not specifically focus on the learning experiences of leaders in schools, professional learning is embedded in the social interactions and situations in schools, and this literature is helpful in interpreting the informal professional learning experiences of the social studies department in this study.

More specifically, Bliss, Fahrney, and Steffy (1996) focused on the role of secondary department chairs in policy reform and found that the role of department chair was unclear and varied, depending largely upon how the individual educator interpreted her role. Further, they noted that there was no formal professional learning program in place for department chairs. Berry, Byrd, and Wieder's (2013) concept of *teacherpreneur* offers possibilities for professional growth specifically for teacher leaders. In their book, *Teacherpreneurs: Innovative Teachers Who Lead But Don't Leave*, Berry and colleagues (2013) elaborated the concept of teacherpreneur. It:

> represents the bold concept that teachers can *continue to teach* while having time, space, and incentives to incubate big pedagogical and policy ideas and execute them in the best interests of both their students and their teaching colleagues. It is a word expressing our hope that teachers will no longer be isolated in individual classrooms with the doors closed…It is also a word communicating our expectation that teachers will no longer be controlled by meddlesome advocates and rigid bureaucrats. (p. 16)

Berry and colleagues work out of the Center for Teaching Quality (CTQ), a nonprofit

organization that supports teacherpreneurs in the United States. As they described it,

following the teacherpreneur concept would promote professional learning that takes into

account the teachers' context, in that teachers drive their own leadership projects. It also

is collaborative in encouraging teachers to share their learning with others. CTQ provides

financial support for a small number of teacherpreneurs nationally but also provides

resources to assist any teacher in developing her leadership skills while in the classroom.

One such provision in line with the literature on effective professional learning is the

Collaboratory, a virtual meeting place for like-minded teacher leaders. The collaboratory

is free to join and is meant to provide an online community that can serve as "an

incubator for teachers' bold ideas and innovative solutions" (CTQ, 2013). Using

technology such as blogging and discussion boards, it works with the collaborative nature

of professional learning and is designed particularly for teacher leaders, a population that

has been largely left out of the general teacher professional learning literature.

Informal Professional Learning

Beyond the qualities believed to support effective formal and structured

professional learning, the research literature is limited. The majority of empirical studies

and reviews of existing research in social studies teacher professional learning focus on

formal professional development programs (e.g., Hess & Zola, 2012; van Hover, 2008),

which is troubling given the push to move away from that model. Hess and Zola's (2012)

review of professional learning in civic education, which focused on the importance of

the five criteria outlined above for effective professional learning, mainly considered

summer workshops and institutes—both very traditional forms of professional

development that others in the field have urged educators to change. van Hover's (2008) review of professional development in social studies focused mostly on pre-service teacher preparation and early in-service teachers' learning, rather than on in-service teacher learning throughout the career, supporting the conclusion that there is not much research on social studies teacher learning beyond the formal workshop model or early career teachers. For example, Bransford, Darling-Hammond, and LePage (2005) chose to narrow their focus to preparing pre-service teachers while acknowledging that learning occurs throughout teachers' careers. Research studies on teacher learning tend to rely on teacher perception of their own learning experiences through survey research (e.g., Smith & Desimone, 2003; Wei et al., 2009) or qualitative accounts of exemplar professional learning programs or partnerships (e.g., Grossman et al., 2001; Ross et al., 2011) and there are fewer of these studies in social studies education.

While valuable, the existing literature on teacher formal professional learning does not address the importance of teachers' informal learning experiences for their professional growth. Eraut (2004) noted that informal learning is under-researched; yet, there is a larger proportion of informal learning that takes place in the workplace. He argued that treating problems as if a formal training or workshop can fix them oversimplifies the nature of workplace problems, problem solving, and learning. Eraut (2004) focused his studies on learning in professional settings, including but not limited to schools. He identified four concepts of informal learning: "learning from experience, tacit knowledge, transfer of learning and intuitive practice" (2004, p. 247) and explained the importance of the concept of *informal learning*:

> It provides a simple contrast to formal learning or training that suggests greater
> flexibility or freedom for learners. It recognizes the social significance of learning

from other people, but implies greater scope for individual agency than socialization. It draws attention to the learning that takes place in the spaces surrounding activities and events with a more overt formal purpose, and takes place in a much wider variety of settings than formal education or training. It can also be considered as a complementary partner to learning from experience, which is usually construed more in terms of personal than interpersonal learning. (Eraut, 2004, p. 247)

Informal learning is potentially more difficult to study than formal learning, however, because it is not as visible, often deals with tacit knowledge, and learners are not always aware that it is taking place (Eraut, 2004).

Connecting Criteria for Effective Professional Development to Informal Learning

Although the informal learning literature is in its infancy, some overlap exists between the aforementioned criteria for effective professional development and the existing literature on informal and formal professional learning. Suggestions that informal learning activities should be job-embedded—including that they are ongoing, take context into account, and often based in the classroom (Mesler & Spillane, 2009; Putnam & Borko, 2000; Richter et al., 2011)—and collaborative (Jurasaite-Harbison & Rex, 2010; Mesler & Spillane, 2009) are present in the existing literature. Sessums (2009) reported that professional learning communities (PLCs) can provide formal and informal professional learning for teachers, depending on how they are organized. He looked specifically at online communities that provide virtual connection among teachers from different schools and contexts (Sessums, 2009); however, other existing research emphasizes the benefit of school-based collaborations amongst teachers, such as allowing teachers to learn from their immediate colleagues and reflect on common practices (Putnam & Borko, 2000).

The theoretical literature identifies examples of informal professional learning, but very little research has focused specifically on teachers' informal learning experiences. Richter et al. (2011) described informal learning activities as including book study groups, peer observation, collaborative conversations, mentoring, teacher networks, and study groups. However, their research study limited the informal professional learning considered to teachers' use of professional literature—such as journal articles—and teacher collaboration. While teacher collaboration can be broadly defined to include many informal professional learning experiences, Richter et al. (2011) did not delineate amongst different types of collaborative informal professional learning. Their study surveyed German math teachers about their professional learning experiences, so they were limited by the design of the survey in further distinguishing among collaborative learning opportunities.

Mesler and Spillane (2009) examined formal and what they termed "on-the-job" learning opportunities for teachers in elementary schools. Some of what they identified as on-the-job learning opportunities reflect the criteria for informal professional learning used here. They described on-the-job learning as "interactions with colleagues around teaching and learning, including conversations about instruction, peer observation and feedback, and advice seeking about instruction" (2009, p. 324). Simply by the terminology, on-the-job learning implies that it is job-embedded, concerning the daily work of teachers, and most likely site-based taking the school context into account. However, as Sessums' (2009) study emphasized, informal learning can be virtual and over distance as well. Mesler and Spillane's (2009) concept of on-the-job learning, then, meets both criteria so far identified in the literature for effective informal learning, that it

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is collaborative and job-embedded. While Mesler and Spillane (2009) noted that various forms of informal learning take place on the job, they limited their study only to those experiences that involved interaction among colleagues. Like Richter et al. (2011), Mesler and Spillane (2009) used a survey research method to collect data on teachers' self-reported professional learning experiences and thus cannot report in great detail on how teachers experienced their learning.

A theme that runs throughout both formal and informal professional learning literature is the importance of teacher reflection (Hammerness et al., 2005; McArdle & Coutts, 2010). Without reflective thinking, any learning experience will be less likely to change teacher practice or student learning because it is through reflection that the teacher is able to connect what he or she is learning to classroom practice (McArdle & Coutts, 2010). A trainer, mentor, or colleague cannot do the reflective work for an individual teacher. Much of the responsibility rests with the individual. In their review of existing research on Scottish teachers' continuing professional learning, McArdle and Coutts (2010) connected reflection with collaboration, noting that reflection is not only a private exercise but also a social one. Jurasaite-Harbison and Rex (2010) emphasized the importance of teacher reflection for informal professional learning, noting that teachers' understanding of any new learning is framed by their reflection on their own experiences.

Few Studies in the United States

Most of the empirical research considering informal professional learning in education is international. Specifically, Hanraets and colleagues' (2011) research looked at online teacher networks in the Netherlands and advocated for the utility of such networks for informal learning for teachers, but they focused the study on the role of the

facilitator rather than on the ongoing teacher learning. Richter and colleagues (2011) examined teacher formal and informal learning in Germany and attempted to compare their findings with the National Center for Education Statistics' Schools and Staffing Survey (SASS) data out of the United States, but they found that because of structural differences between professional learning for teachers in the United States and in Germany, their comparison was limited. Jurasaite-Harbison and Rex (2010) conducted a comparison study of teacher informal learning in one U.S. elementary school and two Lithuanian elementary schools; however, the American school was a new school with very limited cultural, social, and contextual history as a workplace, which constrained their findings. Because the structure of and support for teacher professional learning varies greatly (Wei et al., 2009), research focusing on teacher informal learning should also be conducted in the United States.

Need for Studies on Informal Learning

The research on informal professional learning for teachers is growing; however, it remains inadequate. Many of the existing studies have used survey methodology to gather self-report data from teachers. More in-depth studies are needed that use observation and interviews of teacher participants. In addition, the existing studies, in their attempt to attend to both formal and informal professional learning (e.g., Mesler & Spillane, 2009; Richter et al., 2011) were forced to limit themselves to only a few kinds of informal learning. Thus, the research base lacks a comprehensive view of the possibilities for teacher informal learning experiences. It is clear that informal professional learning should meet some of the criteria for effective professional development—it should be job-embedded and collaborative; however, questions remain

about what that looks like in practice and how teachers may also grow individually as well as collaboratively, and whether other criteria suggested for effective professional development also apply to informal professional learning.

Theoretical Framework

The theoretical framework for this study is based on information ecology (Nardi & O'Day, 1999), with activity theory (Wertsch, 1998), social learning theory (Wenger, 1998), and situated learning theory (Lave, 2009; Lave & Wenger, 1991) emphasizing the importance of mediated action, collaboration, and context for informal professional learning. Sociocultural theory has shaped each of these theories. As I describe the literature behind each theory, I begin with the most encompassing—sociocultural theory—and move to the most specific—information ecology.

Background: Sociocultural Theory

I begin with the assumption that all people are profoundly shaped by their experiences and surroundings (Dewey, 1910; Vygotsky, 1934/1986; Wertsch, 1985). As individuals construct their understanding of the world around them, those understandings are influenced by individual perceptions, individual history, and experiences. Early constructivist theorists like Piaget and Dewey argued that individuals construct their knowledge and understandings about the world based largely on their own experiences. John Dewey (1938) connected constructivism to education and advocated for experiential learning in schools, acting on his theoretical beliefs (1897) that students' prior experiences shape their current classroom experiences and that students learn best when they are actively participating in their learning. Piaget's constructivist theories of child development are also relevant for early childhood education (Kamii, 1973). In particular,

Piaget's cognitive theory suggested that active learning allows children to construct their own knowledge and thus to understand it more deeply and that cognitive development is a social phenomenon, not an isolated one. Teachers are also learners to whom these theories apply.

Sociocultural theory grew out of the early constructivist theories. Lev Vygotsky developed an early strand of sociocultural theory in psychology (Crandell, Crandell, & Vander Zanden, 2009). In his early research, Vygotsky focused on the use of psychological tools to facilitate the development of higher forms of mental functioning (i.e., memory, attention, decision-making) as a way of supporting the development of a socialist state in the newly formed Union of Soviet Socialist Republics (Smidt, 2009). His research, however, did not turn out quite as government officials had hoped. For example, in one experiment dealing with the use of tools and development, Vygotsky asked children to make up their own image or symbol to help them remember the names of objects. He found that when children made their own cultural tools, they had ownership of the tool, the tool had significance for them, and hence, they could perform better in the task (Smidt, 2009). Curious about these differences, he continued his research, working with another Soviet psychologist, Alexander Luria, to explore the psychology of social groups in Uzbekistan, one of the then-new Soviet Socialist Republics.

Vygotsky and Luria studied peasants, collective farm workers, and college students and found that the groups used different categories and reasoning to perform the classification, concept formation, and problem-solving tasks of the experiment (Vygotsky, 1934/1986; Wertsch, 1985). They found that the "illiterate peasants" used

speech and reasoning in their classifications that were practical and situational rather than conceptual and abstract, just as the more educated social groups did. While the Soviet government did not allow them to publish this research—it was seen as racist since it found differences based on culture and went against the egalitarian mantra of the Stalinist government—Vygotsky and Luria's research was important in that it showed that culture plays an important role in development (Wertsch, 1985). Succeeding generations of theorists have argued that culture plays an important role, not just in how people develop but also in how they make sense of the world and the tools they use to do so. Activity theory is among these.

Activity Theory

Subsequent to Vygotsky's work, others interested in sociocultural theories moved into a variety of investigations and related theorizing. In the Soviet Union, Leontiev— who had begun his work with Vygotsky and Luria, but he and Luria subsequently broke from Vygotsky in the early 1930s—is credited with developing early activity theory (Yasnitsky, 2011), which seeks to problematize the understanding of human action, recognizing it as a complex, socially situated phenomenon. Wertsch (1998) adapted activity theory to emphasize the importance of tools—both material and intellectual—in understanding human action. Wertsch's (1998) conception of activity theory is used in this study. His adaptation of activity theory focused on mediated action, attending to individuals and their use of cultural tools, as well as the interaction between individual and tool. Tools are socially constructed in order to do specific work in the world and individuals develop skills in order to use appropriate tools; Wertsch (1998) explained, "the development of such skills requires acting with, and reacting to, the material

properties of cultural tools. Without such materiality, there would be nothing to act with or react to, and the emergence of socioculturally situated skills could not occur" (p. 31). There must be something that mediates human action and skill development. People develop skills in response to and in preparation for tool use. Wertsch's (1998) concept of mediated action also draws attention to both the affordances and constraints of tool use. In considering tool use—both intellectual and material tools—Wertsch (1998) drew on Kenneth Burke's (1969) framework for literary analysis, arguing that to understand human action, scholars should consider the act, scene, agent, agency, and purpose (see also Barton & Levstik, 2009).

Burke (1969) defined the five terms of his framework, that "any complete statement about [human] motives will offer *some kind* of answers to these five questions: what was done (act), when or where it was done (scene), who did it (agent), how he did it (agency), and why (purpose)" (p. xv). As Burke (1969) described the framework, the five terms are not intended to be exclusive; rather, he argued that the terms overlap and that no one term is enough to explain an action. From Burke's model, Wertsch (1998) chose to focus mostly on the agent and the agency—the individual and the tools he or she uses in action. Part of the reason Wertsch (1998) chose this focus was to emphasize "the need to go beyond the individual when trying to understand human action" (p. 19) while still including the individual in the analysis.

Social Learning Theory

Social learning theory begins with the premise that humans are social beings and that learning occurs as part of and in response to social participation (Wenger, 1998). How individuals participate socially shapes both their actions and their interpretations of

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their actions and experiences, thus shaping their learning. Smylie (1995) outlined social learning theory, that "individuals develop knowledge, skills, strategies, beliefs, and attitudes by observing and interacting with others" (p. 98). Wenger (1998) suggested four components of social learning theory: learning as belonging (community), becoming (identity), experience (meaning), and doing (practice).

The concepts of practice, meaning, and community were the most important for this single-case study. Wenger (1998) defined practice as "a way of talking about the shared historical and social resources, frameworks, and perspectives that can sustain mutual engagement in action," meaning as "a way of talking about our (changing) ability—individually and collectively—to experience our life and the world as meaningful," and community as "a way of talking about the social configurations in which our enterprises are defined as worth pursuing and our participation is recognizable as competence" (p. 5). As Wenger (1998) explained, the four components of social learning theory are not mutually exclusive; rather, they are interconnected and influence each other.

Communities of practice. Wenger (2011) defined communities of practice as "groups of people who share a concern or a passion for something they do and learn to do it better as they interact regularly", noting that the definition "allows for, but does not assume, intentionality" (p. 1). As such, a community of practice can facilitate informal or formal professional learning and are an important concept in the design and analysis of the present study. He outlined three crucial characteristics for a community of practice to exist (2011):

- domain - the community's identity is "defined by a shared domain of interest" (p. 1), for example, an interest in social studies teaching and learning;

- community – as they pursue their mutual interest in the domain, "members engage in joint activities and discussions, help each other, and share information", (p. 2) building relationships and learning collectively, such as discussions of successful teaching strategies or collaborative preparation of social studies curriculum resources, and

- practice – members participate in a shared practice, not just a shared interest; they "develop a shared repertoire of resources: experiences, stories, tools, ways of addressing recurring problems [which] takes time and sustained interaction" (p. 2), for example, social studies teachers do not just discuss instruction, they implement new ideas and share what they learned with others in the department.

Wenger (1998) proposed that social learning takes place in communities of practice and that everyone participates in multiple communities of practice, which can be informal. He argued that participation in a social community "shapes our experience, and it also shapes those communities" (1998, p. 56). Individuals do not learn in isolation; rather, they learn through social interactions in a community, and those social interactions not only cause change in individual knowledge but also in the shared knowledge and understandings of the communities. Knowledge, then, is not a set of facts to be memorized by individuals but is constantly shifting; it is interpreted and constructed socially.

Situated Learning Theory

Lave and Wenger (1991) extended social learning theory to emphasize that the context in which learning takes place is important to how people make meaning. Not only

is learning a social process, but the situation in which learning takes place and in which people interact affects the learning process. Situated learning theory focuses on the relationships between the learning and the social situation in which learning takes place (Lave & Wenger, 1991). An important concept in situated learning is legitimate peripheral participation, through which newcomers to a community of practitioners learn by participating in the community to a lesser extent than full members (Lave & Wenger, 1991).

Lave and Wenger's (1991) concept of communities of practice—defined above in reference to social learning theory—allows the researcher to focus on the person, "as person-in-the-world, as member of a sociocultural community" (p. 52) taking into account the situated nature of learning. The concept of communities of practice brings together the *social* and *situated* nature of teacher professional learning. Since a community of practice is a group of people who share a craft (Lave & Wenger, 1991), a group of high school social studies teachers who share their expertise and experiences and learn together as individuals and as a group will potentially exhibit characteristics of a community of practice. The situations experienced by a single social studies department are largely similar and influence their learning.

Putnam and Borko (2000) applied situated learning theory specifically to teacher professional learning. They argued that, "various settings for teachers' learning give rise to different kinds of knowing" (2000, p. 6). The context in which teacher professional learning takes place affects how teachers make sense of the learning—which will affect how they act upon that learning. For example, they described action research in schools and workshops in which teachers analyzed and discussed student work samples as two

contexts in which teacher professional learning could be situated. Putnam and Borko

(2000) explained strengths of the situated learning perspective for educational research,

"the learning of teachers is intertwined with their ongoing practice, making it likely that

what they learn will indeed influence and support their teaching practice in meaningful

ways" (p. 6). Situated learning theory adds to the argument that teacher professional

learning should be job-embedded, noting that it is often difficult for teachers to apply

learning from off-site workshops or seminars to their classroom practice (Putnam &

Borko, 2000).

Information Ecology

The emphasis on learning in context and on emerging professional communities

of practice generated another theory to help explain "a complex *system* of parts and

relationships" (Nardi & O'Day, 1999, p. 50)—information ecology. Nardi and O'Day

(1999) defined such an ecology as one that "exhibits *diversity* and experiences continual

evolution. Different parts of an ecology *coevolve*, changing together according to

relationships in the system. Several *keystone species* necessary to the survival of the

ecology are present. Information ecologies have a sense of *locality*" (p. 50-51). The

emphasis on locality and continual evolution further emphasize the importance of the

situated and *social* nature of teacher learning. The importance of locality connects to the

importance of context to teachers' learning, while continual evolution harkens back to the

need for teachers to engage in ongoing learning and to learning as both social and

situational. In addition to the general consideration of a department and school as an

ecology, attention to the concepts of coevolution and the identification of keystone

species as teachers navigate their own professional learning may be the most useful

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contributions of theories that situate learning within an information ecology for this study.

In coevolution, as defined by Nardi and O'Day (1999), the ecology changes, but so do the participants—and some evolve in tandem—and the participants play a role in the evolution of the system. Similar to the mutual change experienced in communities of practice (Wenger, 1998), an individual changes because of participation in the community, but the community also changes because of that participation. Coevolution in information ecology is just on a larger scale; a community of practice may very well be part of the ecology, but the ecological system will include more, such as other species (i.e., administrators, special education teachers) and cultural tools (i.e., guidelines for the International Baccalaureate (IB) program, state technology system (STS) applications). For instance, the coevolution phenomenon may be evident in the ways that teachers change their activities to suit school, district, state, national—and in the case of the IB program, international—policies (i.e., changing a lesson plan format to conform to a new building protocol; adopting common unit assessments as a department to measure and compare student achievement) or the way that administrators schedule planning periods in order to accommodate teacher needs for common planning time.

The identification of keystone species immediately points to teachers, the very species that research shows to be of paramount importance for student learning (Borko & Putnam, 1995; Darling-Hammond, 1997, 1998; Desimone, 2009; Feiman-Nemser, 2001; Garet et al., 2001; Guskey, 1995; Ross et al., 2011; Smylie, 1995). Nardi and O'Day (1999) proposed that keystone species are often overlooked, to the detriment of the implementation of a new technology. Similarly, the literature on teacher professional

learning suggests that programs that actively involve teachers in their planning and implementation are more successful (Easton 2008a; Hawley & Valli, 1999; Wei et al., 2009). Applying information ecology to teacher professional learning, then, it follows that if the species of teachers is overlooked in formal teacher professional learning, the new technology (e.g., new content standards, curriculum reform) will not be effectively implemented in the classroom. For the present study, this was reflected in how teachers engage in informal learning that allows for more ownership on the part of the teachers. Since teachers are often overlooked in formal professional development (Easton, 2008b; Wei et al., 2009), they choose to take learning into their own hands and rely more on informal learning experiences to improve their practice. Teachers were not the only keystone species evident in the study, however. Administrators and teacher leaders are also examples of keystone species. As an ecology, the school has diverse species, each of which contributes—or has the potential to contribute—to teachers' informal professional learning.

A final key concept from information ecology is the *technology* itself. Nardi and O'Day (1999) focused information ecology on "human activities that are served by technology" (p. 49) and tended to define technology in a straightforward sense—with examples including medical machines in a hospital ecology, laser printers and scanners in a copy shop ecology, and computers in a library ecology. When we hear the word technology, most think of tools such as computers and cell phones. However, in applying information ecology to teacher informal professional learning, I adapted the term technology more broadly than those chip-powered tools or computer programs that

teachers access and utilize for their growth. I agree with Borko, Whitcomb, and Liston (2009):

> technology, in its broadest sense, is the knowledge, creation, and use of tools and techniques to control and adapt to our environment. This definition encompasses both analogue technologies such as the chalkboard, pencil, microscope, and overhead projector; as well as newer technologies such as the Internet, e-mail, online publications, and video games. (p. 4)

Any innovation or new input into the system—such as new standardized tests, content standards, a communal emphasis on inquiry-based instruction, or a book that a teacher reads independently—may be viewed as a technology. This concept of technology is related to activity theory (Wertsch, 1998) in that technology can be any intellectual or material tool that teachers use to mediate their own growth.

Summary

My theoretical framework can be envisioned as nesting dolls, with all of the theories contained within constructivism, and then sociocultural theory. Activity theory fits snugly within sociocultural theory, followed by social learning theory and then situated learning theory. Finally, information ecology falls within situated learning theory (Wenger, 1998). This theoretical framework was of the utmost importance in designing the method for the study, including framing the research questions; it also directed data collection and analysis throughout the study and, finally, provided perspectives for the findings and implications of the study. While the nesting dolls metaphor is useful for understanding the scope of each theory in general, the "size" of the doll does not determine its expected importance for this study. Specifically, information ecology was the most important theory guiding this study, with activity theory, social learning theory, and situated learning theory serving to maintain a focus on the importance of mediated

action, collaboration, and context in teacher professional learning. From information ecology, the concepts of evolution, co-evolution, and keystone species were very useful, as well as the acknowledgement of the complexity of the system itself.

In addition to theoretical perspective, the lists in the professional development literature regarding qualities for effective professional development also influenced this study. In particular, existing literature suggests that informal professional learning reflects the criteria that teacher professional learning should be collaborative and ongoing. The existing literature on informal professional learning did not suggest that the criteria of content, pedagogy, or context will be as significant, but as discussed in Chapters 4 and 5, this study found evidence to the contrary, indicating that each of the five qualities for effective professional development is applicable to teacher informal professional learning.

Chapter 3

Methodology

This exploratory qualitative study used an embedded, single-case study of a high school social studies department in a mid-sized urban school district in the upper South of the United States to examine informal teacher professional learning experiences. The goal of the study was to examine how high school social studies teacher participants navigate their own professional learning in the context of their department. McMillan and Schumacher (2010) defined exploratory research as research that is "conducted in new areas of inquiry" and specified that qualitative exploratory studies "examine phenomena that have not been studied previously" (p. 53). Previous research in teacher professional learning has tended to focus on formal rather than informal professional learning; as such, the study of social studies teachers' informal learning is well suited to an exploratory design.

The main research question for the present study is: how do high school social studies teacher participants navigate their own professional learning? Supporting research questions include: (1) How do high school social studies teacher participants choose what to do to individually and collectively meet their professional learning needs? (2) What actions do participants take to meet their professional learning needs individually and collectively? (3) How do participants evaluate their professional learning growth individually and collectively? (4) How do participants interact with one another and with the environment as they navigate their own professional learning?

Rationale

Because teacher quality is one of the most important factors influencing student achievement (Borko & Putnam, 1995; Darling-Hammond, 1997, 1998; Desimone, 2009; Feiman-Nemser, 2001; Garet et al., 2001; Guskey, 1995; Ross et al., 2011; Smylie, 1995), teacher professional learning is one of the key aspects necessary for educational reform to improve student achievement in K-12 public schools (Ball & Cohen, 1999; Elmore, 2002; Guskey & Huberman, 1995). The *No Child Left Behind* (NCLB) Act of 2001 called for highly qualified teachers in every classroom and the federal government has emphasized that high quality professional development is a necessity for all teachers (Borko, 2004). However, much of the professional development to which teachers are subjected remains unchanged—many in-service events are still one-time trainings in which an outside expert delivers content that seems irrelevant to the teacher's daily practice (Borko, 2004; Hawley & Valli, 1999; Hirsh, 2009; Wei et al., 2009).

Professional learning opportunities for social studies teachers mirror the trends documented in the broad literature on professional development. The majority of formal professional development offerings for social studies teachers remain traditional, one-shot workshops or institutes (Adler, 1991; Grant, 2003; van Hover, 2008), disregarding the suggested characteristics for effective professional development in the general literature (Desimone, 2009; Elmore, 2002; Hawley & Valli, 1999; Sykes, 1999) and in the social studies literature (Hess & Zola, 2012) surrounding what makes professional development effective. While research has repeatedly found that formal, traditional professional development is largely ineffective for social studies teachers, emerging research involving general workplace learning and some in the field of education has

found that informal learning may be more prevalent and more effective than formal workplace learning (Eraut, 2004; Hanraets et al., 2011; Jurasaite-Harbison & Rex, 2010). Perhaps the traditional focus on providing more, better, or reformed *formal* professional development for teachers has been misplaced; research is needed that explores the possibilities of informal professional learning for teachers.

The present study explores the ways in which teacher participants in one high school social studies department navigate their own professional learning in a context of a diminishing emphasis on social studies education, increasing emphasis on English/Language Arts, and shifting standards and assessments (Grant, Swan, & Lee, 2012; Rock et al., 2006). Research has shown repeatedly that mandatory, formal professional learning seminars and institutes fail to meet the needs of teachers (Huberman, 1995; Little, 1999; Wei, et al., 2009) and that most social studies learning opportunities remain inadequate (Adler, 1991; Grant, 2003; van Hover, 2008). Previous research has not focused on the ways in which teachers take advantage of informal learning opportunities in order to meet their professional learning needs. In an effort to address this gap in the research on social studies teacher professional learning, this single-case study focuses on the informal professional learning of the teachers in a high school social studies department.

This study provides a glimpse into how participating high school social studies teachers identify their professional learning needs, work to meet those needs and find resources to make that possible, and evaluate their growth *beyond* school-, district-, and state-mandated professional development trainings. This study is unique in its focus on teacher informal professional learning; in the inclusive definition of what constitutes

informal professional learning; and in the unit of analysis for the case study, a high school social studies department. Rich qualitative data from an in-depth case study with high school social studies teachers strengthens our limited understanding of how teachers navigate their own learning.

Case Study Design: An Exploratory Approach

Yin (2009) argued that case study is the best research method when "examining contemporary events, but when the relevant behaviors cannot be manipulated" and that case study allows a phenomenon to be examined in its real-life context (p. 11). The present case study examined contemporary events as teachers in a social studies department navigated their own professional learning. Yin (2009) further explained that case studies can be exploratory, descriptive, or explanatory and that the type of case study is largely dependent upon the research questions being addressed and the goals of the study. He evaluated types of research questions for case studies; the use of "what" questions in case study research is beneficial for exploratory studies because such studies can help develop relevant hypotheses and propositions for future research (p. 9). Further, Yin argued that "how" and "why" questions can generally be addressed using case study method (p. 10). The research questions for this study, including both "how" and "what" questions, were best answered using an exploratory case study method. In addition, because very little research has been conducted in the area of informal professional learning for teachers, an exploratory approach was an effective way to begin this line of inquiry.

Yin (2009) outlined a two-part definition of the case study research method. Table

3.1 illustrates each aspect of Yin's definition and how the present study fulfills the

characteristics of case study research method.

Table 3.1

Case Study Definition Applied to Present Study

Yin's Definition of a Case Study as a Research Method	Present Case Study's Application of the Definition
"1. A case study is an empirical inquiry that	
"investigates a contemporary phenomenon in depth and within its real-life context	The current phenomenon for this case study is teacher professional learning in the real-life context of teachers' daily work, both individually and collectively.
"when boundaries between phenomenon and context are not clearly evident."	Research has shown that the social context of teachers' professional learning is important (Putnam & Borko, 2000); yet, the boundaries between self- and communal-learning have not been emphasized.
"2. The case study inquiry	
"copes with the technically distinctive situation in which there will be many more variables of interest than data points…	Multiple variables include the teachers' years of experience, gender, subject(s) taught, level of students taught, attitudes towards professional learning, and approach(es) taken for professional learning.
"relies on multiple sources of evidence, with data needing to converge in a triangulating fashion…	Sources of evidence included interviews with participants, observation of department meetings and other professional learning experiences, and professional documents.
"benefits from the prior development of theoretical propositions to guide data collection and analysis."	Theories that guided this case study included: information ecology (Nardi & O'Day, 1999), social learning theory (Wenger, 1998, 2009), situated learning theory (Lave & Wenger, 1991; Putnam & Borko, 2000), and activity theory (Wertsch, 1998). Important concepts were communities of practice and the tools teachers used as they grow professionally.

(Yin, 2009, p. 18)

Yin further emphasized that case study is the method of choice when the context of a situation is particularly relevant. The main theories guiding this dissertation study are information ecology (Nardi & O'Day, 1999) and activity theory (Wertsch, 1998), influenced by social learning theory (Wenger, 1998, 2009) and situated learning theory (Lave & Wenger, 1991; Putnam & Borko, 2000). Within social and situated learning theories, the concept of community of practice was key. Each of these falls under the umbrella of sociocultural theory (e.g., Vygotsky, 1934/1986), which recognizes that the context of learning is influential. Since the context of participants' learning was significant in the study, case study proved to be an appropriate research method.

Single-case, Embedded Design

Yin (2009) identified two main types of case study designs: single-case designs and multiple-case designs. He explained that a single-case design should be used when the study will analyze one set of contextual conditions while a multiple-case design should be used when analyzing situations in multiple contexts. I analyzed a single context—a high school social studies department—in this dissertation study. According to Yin, case study analysis can either be holistic or embedded depending on the unit(s) of analysis for the case. An embedded case study gives attention to multiple units of analysis in the same study design and a holistic case study analyzes the entire phenomenon as a whole (p. 50). There are strengths and weaknesses to single- and multiple-case studies and to embedded and holistic analyses, but this study was best served by a single-case design with embedded units of analysis.

Single-case design. Yin (2009) identified five rationales for using a single-case design. A *critical* case tests whether a well-formulated theory's propositions are correct; a phenomenon and/or context that is rare calls for an *extreme* or *unique* case; a *representative* or *typical* case examines a phenomenon in a situation that is believed to be commonplace; when a researcher gains access to a phenomenon that has not been accessible before, a *revelatory* case is called for; and a *longitudinal* case is used when the researcher can study the same single case over time (p. 47-49). Whatever rationale is used for choosing a single-case design, Yin warned that the case should be selected carefully to avoid a situation in which the case does not turn out to be as expected (p. 50).

I selected a single-case design for this study because it was a representative case. The site of the study was George Washington High School (GWHS, a pseudonym), a public high school part of a mid-sized urban school district in the upper South. GWHS is organized in subject matter departments. The social studies department is large—12 teachers—which is consistent with other schools of similar size in the region. According to local school district records, the school enrollment is 1,790 students with socioeconomic and racial diversity that reflects the community in which the school resides: 47% of the students qualify for free-and-reduced meals; 5% are English Language Learners; and the racial makeup of the student body is 65% White, 24% African American, 6% Hispanic, 3% Asian, and 2% other. It is neither the most nor the least diverse high school in the district. Because the present case study focused on a social studies department within a school and hence, a single context, it was a single-case study. While the individual teachers varied in terms of their years of experience, their

content backgrounds, and the courses they teach, the context in which they worked and learned—as a department—was much the same.

Embedded units of analysis. Using an embedded design increases the sensitivity to potential shifts in research questions and can help to focus the case study inquiry (Yin, 2009, p. 52). Yin warned that researchers using an embedded design must be sure to return to the larger unit of analysis rather than only focusing on the subunits in the analysis. I used an embedded design with the social studies department as the larger unit of analysis with the expectation that topical, embedded subunits would emerge; for example, individual teachers and small groups of teachers with similar characteristics (i.e., years of experience, content specializations) within the department emerged as subunits. The analysis of the subunits informed the larger analysis of how the teacher participants navigated their professional growth within the ecology of the social studies department and school.

While Yin (2009) recommended that researchers conduct multiple-case studies when possible, a single-case study was the better choice for this research. Yin argued that the analysis of two or more cases is stronger than analyzing only one case; however, I analyzed multiple embedded subunits, which strengthened the analytical vigor of the single-case study. In addition, Yin noted that "single-case designs are vulnerable if only because you will have put 'all your eggs in one basket'" (p. 61). I carefully screened the site for this single-case study so as to maximize the potential that I would get useful data and results from the study.

Selection of research site. For this single-case study, I limited the possible sites to local high school social studies departments for reasons of practicality and

efficiency—namely, travel time and cost. Because I conducted on-site observations, limiting the geographical distance to the school site allowed me to spend more time at the site and less time traveling to and from the school. Yin (2009) suggested that researchers can screen a site by "querying people knowledgeable about each candidate" and advised avoiding an "extensive screening procedure that effectively becomes a 'mini' case study" (p. 91). There are five local public high schools, each of which has a social studies department of comparable size. Since I had ongoing professional relationships with teachers in each of the local high schools, I was able to talk with social studies teachers in each school to help me assess which department would best meet my criteria for a case study site.

In selecting a high school social studies department to serve as my case study site, my criteria were that the department include: teachers with a variety of years of experience, at least one teacher with a reputation for voluntarily and enthusiastically participating in professional learning, and at least one teacher with a reputation for implementing changes to classroom practice based on professional learning experiences. Research indicates that teachers go through various stages in their careers, with experience being one of the key determinants of stage (Fessler, 1995; Huberman, 1993, 1995). In Huberman's (1993) survey and interview study of Swiss teachers, he connected teachers' receptiveness to new reforms and changes to their years of experience, "if teachers are seduced at the beginning by their own pedagogical discoveries, rare are those who continue to be attracted by *imposed* [emphasis added] reforms or innovations" (p. 163). Huberman (1993) argued that teachers' attitudes towards traditional professional development change over the course of their careers, so I included teachers with various

years of experience in this case study in order to explore whether similar changes occur in teacher informal learning experiences and attitudes over the career cycle. The criteria for teacher participation in and implementation of professional learning ensured that this case study illustrates the possible (Shulman, 1983).

George Washington High School (GWHS) was the site for the single-case study with all 12 social studies teachers as participants in the study; the department includes teachers with a relatively wide variety of years of experience and includes teachers who are enthusiastic about ongoing professional learning. GWHS provides a representative case for the research, based on student population and diversity and experience of teachers in the social studies department. In addition, the high school runs one of the state's few International Baccalaureate (IB) Diploma Programmes that serves the school's academically competitive college-bound students and is open to all students who choose to enroll in the program. The school's website states that the goal of the IB program is to prepare students to be ready to participate in a "rapidly globalizing world" and requires rigorous internationally regulated professional standards and evaluations for teachers in the program. As such, teachers at GWHS are part of a culture of ongoing professional learning which will be beneficial for the proposed study.

Access. In February 2013, I approached the social studies department chair at GWHS and asked her about the demographics and attitudes of the social studies department to determine whether the site would provide the amount of diversity in experience and teachers with the positive professional learning attitudes needed for this study. I had previously spoken with teachers in other high schools to determine which local school would likely provide the best data. I determined that GWHS met all of the

criteria for my study. The department chair, Ms. Allen, agreed to participate in the study and to assist me in gaining permission from the school administration and access to the rest of the social studies department.

I negotiated access with the district administration at the local school district and, after securing district approval, I met with Ms. Allen and with the GWHS principal to secure formal permissions from the school. In March 2013, Ms. Allen invited me to attend a social studies department meeting at GWHS in order to introduce myself to the teachers and to let them know I would be returning and asking for their participation in the case study. I told them about my research interests, answered their questions, and asked them to think about whether they would be willing to participate—individually and as a department—in my research study. I did not have any problem gaining access to the site and participants, and after securing formal consent (Appendix A) from all participants, I began data collection in the summer of 2013.

Participants. All 12 social studies teachers in the department participated in this single-case study. I solicited initial background information using a demographic survey (see Appendix B). Then, using that information, I conducted preliminary interviews (Appendix C) with all of the department members. These were focused, semi-structured interviews in order to get to know each participant and develop an idea of their approach to informal professional learning. In addition, I had informal conversations with the entire department (e.g., lunch breaks, after-school conversations) and observed professional learning in which the entire department was involved (e.g., department meetings). Protocols for individual, small group, and group observations are provided in Appendix D.

Over the course of the research, several department members emerged as "representative informants" as topical subunits emerged for more targeted embedded analyses. Subunits included beginning/middle/late career teachers, teachers who prefer individual or collaborative learning, and groups of teachers by social studies disciplinary emphases, such as world history teachers and psychology teachers. I conducted mid-point (for a sample midpoint interview protocol, see Appendix E) and exit interviews (for a sample exit interview protocol, see Appendix F), as well as classroom and out-of-classroom observations with representative informants. In Table 3.2, I describe the participants in terms of years of experience and the courses they taught during the study period.

Table 3.2

Participant Summary

Pseudonym	Years Experience	Courses Taught
Ms. Wayne	2	HOA 1 & 2; US History
Ms. Wilson	2	Honors Global Economics, Criminal Justice
Mr. Cole	3	ISS, Psychology
Mr. Stewart	3	Honors Global Economics, Sociology, ISS
Ms. Todd	3	US History; African American Heritage
Ms. McDonald	3 1/2	World Civ., Honors World Civ., HOA 1
Mr. Dodd	5	US History, ISS, Honors Global Economics
Mr. Hall	5	ISS, World Civ., Honors World Civ.
Ms. Owen	5	ISS, Honors Global Econ, US History
Mr. Davis	8	Psychology, IB Psychology; IB Theory of Knowledge
Ms. Allen	27	HOA 2, US History, EBCE
Mr. Simpson	27	World Civ., Honors World Civ.

Note. Participants are listed in order of years of experience, from least experienced to most experienced. Years Experience reflects how many years of teaching the participant had completed prior to Fall 2013. Course abbreviations: HOA 1 = IB History of the Americas, Year 1; HOA 2 = IB History of the Americas, Year 2; World Civ. = World Civilizations; ISS = Integrated Social Studies; EBCE = Experience-Based Career Education

Data Sources

Yin (2009) identified six sources of evidence for case studies: documents;

archival records; interviews—which he further distinguished as either in-depth interviews

or focused interviews; direct observation; participant-observation; and physical artifacts

(p. 99). I primarily gathered data from interviews with participants and representative

informants but also used direct observation (e.g., department meetings, professional

learning community meetings) and documents (e.g., professional growth plans, planning

materials). As Yin suggested, I used the data from documents to corroborate information

from observations and interviews, as is common in the use of documents in case study

data collection.

Interviews are particularly significant for case study research and should be

conducted as "guided conversations rather than structured queries" (Yin, 2009, p. 106).

Because of the prominence of interviews for case study research, I expected that

interview data would be very informative in this study and found that to be the case.

Observations were of secondary significance so I could gain more knowledge and

appreciation of the context in which the participants were navigating their professional

learning. In addition, observations informed my interviews and informal conversations

with participants and vice versa. I observed department meetings and informal

interactions between and among the social studies department members and others at the

site. In addition, as representative informants emerged, I observed their informal

professional learning experiences and their classroom practice to see how it related to

their learning. Documents helped me corroborate what I learned in interviews and

observations. Interview and observation protocols (Appendices C and D) were helpful in

the initial interviews, but as the study unfolded, more and different interview questions emerged and interviews became less structured as I talked with participants on a regular basis. I followed the observation protocol throughout the study.

Data Collection

Yin (2009) identified three principles of data collection for case study method: (1) using multiple sources of evidence, (2) creating a case study database, and (3) maintaining a chain of evidence. I followed each principle in the present case study, which helped me to address the tests of construct validity and reliability.

Multiple sources of evidence. One of the strengths of using a case study method for research is the ability to use many different sources of evidence (Yin, 2009, p. 115). Yin described *converging lines of inquiry* as a "process of triangulation and corroboration" that is made possible by collecting data from multiple sources (p. 115-116). In using converging lines of inquiry to corroborate the findings from a case study, the researcher must use the multiple sources of evidence to address the same findings, rather than using different types of evidence to support different findings in the study (Yin, 2009). I used data from interviews, observations, and documents and conducted ongoing analyses to ensure that I collected evidence that would enable me to use converging lines of inquiry.

Case study database. In case study research, records and data should be kept in a database that is separate from the case study report (Yin, 2009). Building and maintaining a case study database increases the reliability of a case study, Yin explained, because it allows other researchers to review all the evidence used in a case study, rather than just what the initial researcher chose to use in a report. The database should include case

study notes—which he argued will be the most important component—that are organized in such a way as to be accessible and usable for the researcher and for others; case study documents summarized in an annotated bibliography to allow for easier access to necessary documents; tabular materials such as quantitative data, either created by the researcher or collected during the study; and narratives produced by the researcher in which the researcher writes "*open-ended answers to the questions in the case study protocol*" (2009, p. 121). As noted in Table 3.3, I built a case study database using all of my case study data. A sample interview transcript (Appendix G) and observation notes (Appendix H) are included in the appendices.

Chain of evidence. Along with the case study database, maintaining a chain of evidence increased the reliability of the present case study (Yin, 2009). The chain of evidence will allow others to check the claims in my findings and the conclusions I drew by tracing the steps back to the questions and data collected as illustrated in Figure 3.1.

Case Study Report

↕

Case Study Database

↕

Citations to Specific Evidentiary Sources in the Case Study Database

↕

Case Study Protocol (linking questions to protocol topics)

↕

Case Study Questions
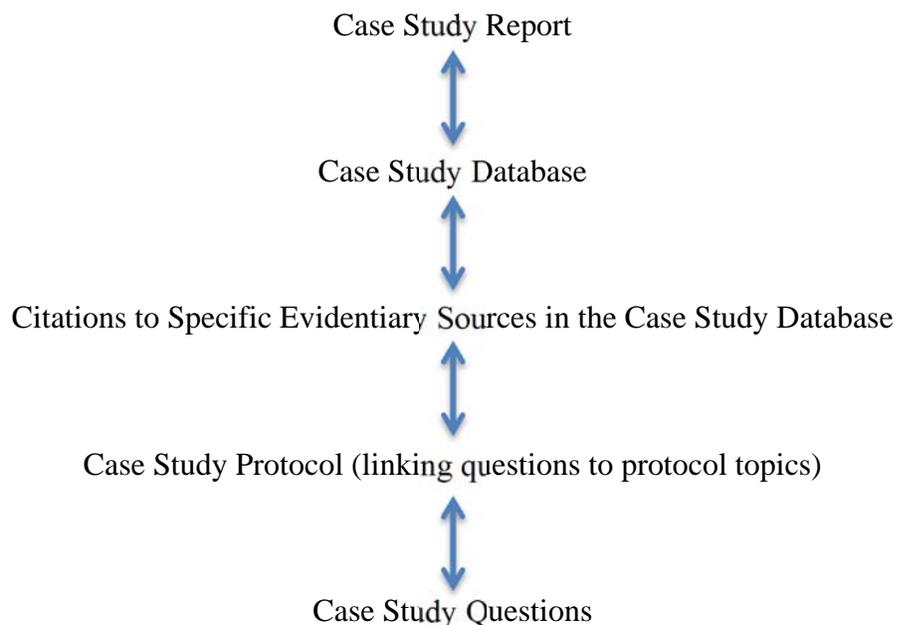
Figure 3.1. Chain of evidence for case study research. (Yin, 2009, p. 123)

In addition to keeping an organized case study database, I also followed a detailed case study protocol (Appendix I) in order to maintain a chain of evidence. According to Yin (2009), the case study protocol includes an overview of the case study project, including objectives, issues, and relevant literature; field procedures, including human subject protection procedures, sources of data, and procedures for data collection; case study questions, including both the questions and potential sources in the case study data to answer the questions; and a guide for the case study report. Since I did not conduct a pilot case study, I was particularly aware of my case study protocol and attentive to shifts in research questions and emphases as I conducted the study.

Case Study Quality

Yin (2009) connected four of the common tests for the quality of social research specifically to case study method (p. 40). Of the four identified tests—construct validity, internal validity, external validity, and reliability—Yin noted that the tests for internal validity are relevant for explanatory case studies, not for exploratory or descriptive studies. However, internal validity is relevant for exploratory and descriptive case studies in supporting inferences in general. Yin explained that "a case study involves an inference every time an event cannot be directly observed" (p. 43), so I address the tests of internal validity with regard to making inferences, rather than to supporting causal relationships. Yin defined construct validity as "identifying correct operational measures for the concepts being studied"; internal validity as "seeking to establish a causal relationship, whereby certain conditions are believed to lead to other conditions, as distinguished from spurious relationships"; external validity as "defining the domain to which a study's findings can be generalized"; and reliability as "demonstrating that the

operations of a study—such as the data collection procedures—can be repeated, with the

same results" (p. 40). In Table 3.3, I describe how this study met the criteria for case

study quality.

Table 3.3

Case Study Quality Tests and Application in Present Case Study

Tests	Case Study Tactic	Present Case Study Tactic
Construct validity	Use multiple sources of evidence	Multiple sources of evidence included interviews with participants, observations of department meetings and professional learning experiences, and relevant professional learning and planning documents.
	Establish chain of evidence	I maintained a chain of evidence from case study questions to conclusions and vice versa.
	Have key informants review draft case study report	I asked participants to member check my conclusions to check my interpretations of events. Participants agreed with my interpretation of events.
Internal validity	Do pattern matching	This test is not directly relevant for exploratory case studies.
	Do explanation building	This test is not relevant for an exploratory case study; however, Glaser & Strauss' (1967) hypothesis-generating process is similar, and I included hypotheses to guide future research at the end of my analysis.
	Address rival explanations	I proposed and addressed rival explanations for my theoretical propositions (see Table 3.4) as well as for inferences and conclusions throughout the study.
	Use logic models	Because logic models are used to establish causality, they are not relevant for the proposed case study.
External validity	Use theory in single-case studies	I used information ecology (Nardi & O'Day, 1999), activity theory (Wertsch, 1998), social learning theory (Wenger, 2009), and situated learning theory (Lave & Wenger, 1991; Putnam & Borko, 2000) to test the generalizability of my case study to existing theory. It is not the intent of this case study to generalize to other contexts, just to theories.

Table 3.3 (continued)

Case Study Quality Tests and Application in Present Case Study

Tests	Case Study Tactic	Present Case Study Tactic
External validity (continued)	Use replication logic in multiple-case studies	This test is not relevant for my single-case study.
Reliability	Use case study protocol	I used a detailed case study protocol that included an overview, field procedures, case study questions, and guide for the case study report (Yin, 2009, p. 81).
	Develop case study database	I created a case study database to store all of my data, notes, and reflections in an organized manner.

(Yin, 2009, p. 41)

As mentioned in the reliability test in Table 3.3, I created a case study database to

organize and document all of the data for the case study (Yin, 2009). Yin emphasized that

all case study data must be available in order for a third party to evaluate the accuracy of

the case study report and that the database should enable another investigator to follow

the chain of evidence along each step in the case study—case study questions; protocol;

citations to specific evidence in database; database; and report. My case study database

includes notes from interviews and observations, transcripts from interviews, collected

documents, and narrative drafts of my reflections on case study questions.

Analytic Strategies

Yin (2009) emphasized that using an analytic strategy or strategies is crucial for a

fruitful case study and urged researchers to identify analytic strategies during the

preparation phase of case study research—prior to collecting data and well before

attempting to analyze the data. Four general strategies for case study analysis are: relying

on theoretical propositions, developing a case description, using both qualitative and

quantitative data, and examining rival explanations. Yin argued that relying on theoretical

propositions is the preferred strategy for case study analysis, so I used theoretical

propositions to ground the analyses for the present case study. In addition to theoretical

propositions, I examined rival explanations; as Yin explained, it is important to identify

potential rival explanations prior to collecting data to ensure the researcher considers all

relevant data that might support the rival explanations. Table 3.4 provides theoretical

propositions and rival explanations for each research question for this single-case study.

Table 3.4

Case Study Theoretical Propositions and Rival Explanations

Research Question	Theoretical Proposition	Rival Explanation
How do high school social studies teacher participants navigate their own professional learning?	"Local changes may disappear without a trace if they are incompatible with the rest of the system" (Nardi & O'Day, 1999, p. 51).	Local changes by teachers persist even without support from the rest of the system.
	Learning occurs as part of and in response to social participation (Wenger, 1998).	Participants learn individually, without interaction with others.
How do high school social studies teacher participants choose what to do to individually and collectively meet their professional learning needs?	Wertsch (1998) explains the principle of mediated action, focusing on individuals and their use of cultural tools, as well as the interaction between individual and tool.	Cultural tools or participant skills with various tools do not influence participants' choices of professional learning activity.
	Wenger describes the social learning component of *practice* as "a way of talking about shared historical and social resources, frameworks, and perspectives that can sustain mutual engagement in action" (1998, p. 5). Practice involves ongoing social interaction; individual and community practices evolve through interaction (p. 102)	Participants do not engage in professional learning within community practices.
		A community of practice is not present in the teacher professional learning ecology.

Table 3.4 (continued)

Case Study Theoretical Propositions and Rival Explanations

Research Question	Theoretical Proposition	Rival Explanation
What actions do participants take to meet their professional learning needs individually and collectively?	Different parts of the ecology "coevolve, changing together according to relationships in the system" (Nardi & O'Day, 1999, p. 51).	Participants' actions are not influenced by the ecology; their actions do not influence the ecology.
	"Mediational means constrain as well as enable action" (Wertsch, 1998, p. 25).	Cultural tools do not mediate participants' actions.
How do participants interact with one another and with the environment as they navigate their own professional learning?	The ecology "exhibits *diversity* and experiences continual evolution….*keystone species* necessary to the survival of the ecology are present" (Nardi & O'Day, 1999, p. 50-51).	Participants do not change or adapt in relation to one another or the context.
	Learning occurs as part of and in response to social participation (Wenger, 1998).	Participants learn individually, without interaction with others.

Brief theoretical clarification. Since theoretical propositions were of the utmost importance in the analyses in this research, a brief summary of my theoretical framework may be helpful. I primarily used information ecology (Nardi & O'Day, 1999) throughout the present study, with activity theory (Wertsch, 1998), social learning theory (Wenger, 1998), and situated learning theory (Lave & Wenger, 1991; Putnam & Borko, 2000) providing support for the importance of mediated action and the social and contextual nature of teacher learning. These theories informed the research questions and were very important in data analysis as well. The theoretical background for the study is presented in more detail in the review of related literature in Chapter 2.

Information ecology. An information ecology is a "complex *system* of parts and relationships" (Nardi & O'Day, 1999, p. 50). In addition, "it exhibits *diversity* and

experiences continual evolution. Different parts of an ecology *coevolve*, changing together according to relationships in the system. Several *keystone species* necessary to the survival of the ecology are present. Information ecologies have a sense of *locality*" (Nardi & O'Day, 1999, p. 50-51). If changes occur at the level of an individual teacher within the social studies department and are not shared with other social studies teachers, or with school or district administrators, it is likely that the change will remain an isolated one. On the other hand, if an individual teacher shares an idea for change with other teachers in the department, those teachers may implement the change in their practice as well, affecting the function of the system rather than just a single participant. The old adage that teaching takes place in isolation without meaningful collaboration among teachers (Lortie, 1975) may not tell the full story of teachers' professional development, but as Thornton (1991, 2005) suggested, teachers have considerable independence in their role as curricular-instructional gatekeepers, with varying degrees of control over what they teach and how they teach it in their classrooms. Information ecology provides a lens through which to analyze the interaction among teachers and the department and school environment as they navigate their professional learning, with an emphasis on how teachers make changes at the individual and collective level and how such changes affect the system and department as a whole.

  Activity theory. According to Wertsch (1998), activity theory emphasizes the importance of tools—both material and intellectual—in all human action. Wertsch explained the principle of mediated action, focusing on individuals and their use of cultural tools, as well as the interaction between individual and tool. Action can be "external as well as internal, and it may be carried out by groups, both small and large, or

by individuals" (Wertsch, 1998, p. 23). Applying activity theory to teacher professional

learning can shed light on how teacher participants navigate their learning experiences

using cultural tools. Participants have various degrees of expertise with one cultural tool

or another that mediates their professional learning activities. Their varied expertise with

cultural tools also contributed to their shared learning as a department, with the group as

a whole benefitting from an individual's expertise.

   Situated learning theory. Lave and Wenger (1991) emphasized that the context in

which learning takes place is important to how people make meaning. Putnam and Borko

(2000) applied situated learning theory to teacher professional development, arguing that,

"various settings for teachers' learning give rise to different kinds of knowing" (p. 6).

The context in which teacher professional learning takes place affects how teachers make

sense of the learning—which will affect how they act upon that learning. The context in

which teachers' professional learning takes place affects how they change. For example,

when a teacher participant heard from a colleague that students responded well to using

technology response systems (clickers) for formative assessment in class, the teacher

participant asked for support and advice from that colleague and implemented the

technology in a similar way.

   Social learning theory. Social learning theory begins with the premise that

humans are social beings and that learning occurs as part of and in response to social

participation (Wenger, 1998). Wenger suggested four components of social learning

theory: learning as belonging (community), becoming (identity), experience (meaning),

and doing (practice). The concepts of meaning, practice, and community were the most

important for this case study. Meaning is "a way of talking about our (changing) ability—

individually and collectively—to experience our life and the world as meaningful,"

practice is "a way of talking about the shared historical and social resources, frameworks,

and perspectives that can sustain mutual engagement in action," and community is "a

way of talking about the social configurations in which our enterprises are defined as

worth pursuing and our participation is recognizable as competence" (Wenger, 1998, p.

5). Teachers' informal professional learning occurred in interaction with others, both

within and outside of the department.

In addition, Lave and Wenger's (1991) concept of communities of practice allows

the researcher to actually focus on the person, "as person-in-the-world, as member of a

sociocultural community" (p. 52). Communities of practice bring together the *social* and

situated nature of teacher professional learning. A community of practice is a group of

people who share a craft—such as social studies teachers—who share their expertise and

experiences and learn together as individuals and as a group (Lave & Wenger, 1991).

Teacher participants navigated between different communities of practice—for example,

the social studies department, professional learning communities (PLCs) within the

department, and district collaborations—as they acted on their own professional learning.

Data Analysis

Qualitative data analysis is inductive in that the researcher makes meaning from

the data beginning with the specific data and ending with categories and patterns

(McMillan & Schumacher, 2010). As Glesne (2011) outlined, qualitative data analysis

can be accomplished in different ways. I used ongoing thematic analysis for the present

case study. Using thematic analysis, I identified themes and patterns in the data,

beginning by coding my data (Glesne, 2011, p. 187). Stake (2010) defined coding as "a

common feature of microresearch and all qualitative analysis and synthesis. Coding is

sorting all data sets according to topics, themes, and issues important to the study" (p.

151). As Glesne (2011) and McMillan and Schumacher (2010) suggested, I coded my

data as I collected it by keeping a research journal, coding interviews immediately after

transcribing them, and coding observation notes immediately. Glesne (2011) argued that

consistent reflection on the study data and ongoing analysis makes a study "more relevant

and possibly more profound than if you view data analysis as a discrete step to be done

after data collection" (p. 188).

From the coded data, I identified categories/themes using a constant comparison

method. McMillan and Schumacher (2010) defined constant comparison as a process "in

which the researcher is continually searching for both supporting and contrary evidence

about the meaning of the category" (p. 377). From identified categories, they explained,

the researcher identifies patterns in the data. Identifying patterns is a key step in the data

analysis because it is here that the researcher begins to make larger meaning from the

detailed data (McMillan & Schumacher, 2010). McMillan and Schumacher (2010)

described this process as follows:

> Pattern seeking starts with the researcher's informed hunches about the
> relationships in the data. It demands a thorough search through the data,
> challenging each major hunch by looking for negative evidence and alternative
> explanations. The researcher then shifts to a deductive mode of thinking—moving
> back and forth among codes, categories, and tentative patterns for confirmation.
> (p. 378)

Towards the end of my data collection, when I had identified patterns in the data, I began

to find meaning in the data to formulate case study findings (Glesne, 2011).

Validity. McMillan and Schumacher (2010) defined validity in qualitative

research as "the degree of congruence between the explanations of the phenomena and

73

the realities of the world" (p. 330). They outlined ten strategies to enhance validity; Table

3.5 outlines how I considered most of these strategies for the present case study.

Table 3.5

Validity for Case Study Data Collection and Analysis

Strategy	Description	Case Study Application
Prolonged and persistent fieldwork	"Allows interim data analysis and corroboration to ensure a match between findings and participants' reality	Data collection occurred over a period of five months with extensive time with participants during those months.
Multimethod strategies	"Allows triangulation in data collection and data analysis	By collecting multiple kinds of data (interviews, observations, documents), I was able to corroborate findings with multiple sources.
Participant language; verbatim accounts	"Obtain literal statements of participants and quotations from documents	I transcribed interviews verbatim; in addition, I used participant language for terms (e.g., professional learning rather than professional development) throughout the study.
Low-inference descriptors	"Record precise, almost literal, and detailed descriptions of people and situations	I took detailed notes of all observations and avoided drawing conclusions about what I observed until I reviewed and reflected on the data.
Mechanically recorded data	"Use of tape recorders, photographs, and videotapes	I used a digital tape recorder to record all interviews.
Member checking	"Check informally with participants for accuracy during data collection	I asked participants for feedback on my emerging findings and conclusions.
Participant review	"Ask participant to review researcher's synthesis of interviews…for accuracy of representation	Similar to member checking, I asked participants to review their interview transcripts for accuracy as well as a draft of the case study report.

Table 3.5 (continued)

Validity for Case Study Data Collection and Analysis

Strategy	Description	Case Study Application
Negative or discrepant data	"Actively search for, record, analyze, and report negative or discrepant data that are an exception to patterns or that modify patterns found in data"	As Yin (2009) urged, I searched for evidence of rival explanations for inferences throughout the proposed case study.

(McMillan & Schumacher, 2010, p. 330)

Glesne (2011) presented more general checks of trustworthiness for data analysis, asking

the following questions: What do you notice? Why do you notice what you notice? How

can you interpret what you notice? and How can you know your interpretation is the right

one? (p. 210). Posing these questions overlapped with some of McMillan and

Schumacher's (2010) validity checks—such as negative cases and spending enough time

at the research site—but also offered some new ones, such as considering my own biases

and predispositions and enlisting other researchers' feedback on my interpretations.

Limitations

The main traditional criticism of case study research is that it lacks rigor (Yin,

2009, p. 14). However, following Yin's suggestions for case study research, including the

development of a detailed case study protocol, the development of a case study database,

and the maintenance of a chain of evidence, the present case study was conducted in a

rigorous manner. Another perceived limitation is that the case study will not be

generalizable; however, the goal of the case study was not to generalize to an entire

population but to add to existing theories (Yin, 2009). In addition, Stake (2010)

explained, "the qualitative researcher emphasizes particularization over generalization"

(p. 136). The findings from the present study will not be generalizable, but that is not the

intended purpose. To ensure high quality qualitative case study research, I adhered to Yin's (2009) criteria for case quality as outlined in Table 3.3 and McMillan and Schumacher's (2010) strategies for validity in qualitative research outlined in Table 3.5.

This single-case study only explores the informal professional learning of teachers in one social studies department, so the results will not be generalizable to all social studies departments, schools, or to all teachers. Narrowing my focus from 12 participants to fewer representative informants made the large amounts of qualitative data more manageable but also limited the breadth of data collected. Since little is known about social studies teachers' informal professional learning, however, this study serves as an introduction to the prospects of this line of research, rather than a representation of all possibilities. More studies of different social studies departments will be needed to gain a deeper understanding of teachers' informal professional learning.

Summary

This single-case study of a high school social studies department focused on teacher informal professional learning, using emergent subunits of analysis. A theoretical framework that builds on information ecology and activity theory through the lens of social learning theory and situated learning theory informed the study. Data included participant interviews and informal conversations, departmental observations, in-depth interviews and observations with representative informants, and relevant documents. I used ongoing thematic analysis throughout the study to identify codes and themes in the data that assisted me in identifying larger patterns in the data to draw conclusions. My goal is for my conclusions to inform future research in social studies teacher professional

learning—with the greater goal of improving teacher professional learning

opportunities—and to add to my theoretical framework.

Chapter 4

Findings

This exploratory qualitative study used an embedded, single-case study of a high school social studies department in the upper Southern United States to examine the informal professional learning experiences of the department and the teachers within it. As defined in Chapter 2, informal professional learning includes planned and serendipitous professional learning experiences in which teachers engage voluntarily for the purposes of improving their practice. Excluded from the present concept of informal professional learning are traditional professional development events such as workshops and those events teachers complete in order to earn professional development hours required by the school, district, and state professional standards board.

The goal of the study was to examine how the department and participants navigated their own informal professional learning. The main research question was: how do high school social studies teacher participants navigate their own professional learning? Supporting research questions included: (1) How do high school social studies teacher participants choose what to do to individually and collectively meet their professional learning needs? (2) What actions do participants take to meet their professional learning needs individually and collectively? (3) How do participants evaluate their professional learning growth individually and collectively? (4) How do participants interact with one another and with the environment as they navigate their own informal professional learning?

I applied ongoing thematic analysis to the case study data and constantly considered theoretical propositions and rival explanations. In this chapter, I present the

results of my data analysis. The findings are grouped into five claims, encompassing data from interviews, individual and group observations, and relevant documents. The first three claims address the informal professional learning at the individual and small group levels; the final two claims look at the department as a whole.

1. Participants were engaged in a variety of formal and informal professional learning experiences, both individually and collaboratively, but placed a greater value on their informal professional learning experiences.

2. Participants relied heavily on reflection throughout their informal professional learning.

3. Participants engaged in little tangible evaluation of their professional learning or its effect on student learning.

4. Leadership and departmental dynamics were influential for informal professional learning.

5. Progress towards informal professional learning goals was varied, with more progress being made on those goals with the most departmental support.

Informal Professional Learning is Significant

While participants engaged in some formal professional learning activities, most of the professional learning in which participants engaged was informal—both individually and collectively. Department teachers described their informal learning as significant in that their informal learning activities precipitated changes in their teaching practice. Ms. Wilson said that her most important professional learning was talking with her colleagues about issues and practices in her classroom. She said, "it makes me feel like I have support within the school and that makes me feel better about my job," adding

that informal professional learning "makes a big difference…and just makes me a better teacher. And it makes the kids learn more and be more interested in learning." Table 4.1 provides a list of the individual and collective informal learning in which the department was engaged. By "collective," I mean activities in which participants engaged with others in some way, but not necessarily engaged in a task together. I draw a slight distinction from collaborative learning experiences in which participants would work together to accomplish a shared task; all collaborative activities would be collective, but not all collective activities are collaborative. An example of a collective informal professional learning activity that was not collaborative is the PLC meetings in which participants shared their upcoming plans but did not work on tasks together. An example of a collaborative learning experience was a spontaneous discussion between Ms. Wayne and Ms. McDonald to plan a group project for one of their classes.

Table 4.1

Informal Professional Learning in the Social Studies Department at GWHS

Individual	Collective
Professional reading	Sharing and/or discussing reading materials
Researching and/or troubleshooting technology implementation	Scheduled and spontaneous meetings to troubleshoot technology implementation
Reflecting on instruction (student reactions, student achievement, teacher feelings)	Scheduled and spontaneous solicitation of feedback from students and/or colleagues
Planning curriculum and developing and/or revising materials	Scheduled and spontaneous collaborations to plan/revise curriculum
	Scheduled and spontaneous common planning meetings (PLC, other)
	Email communications to share resources and/or engage in common planning activities

Note. Common planning meetings are distinguished from collaborations to plan/revise curriculum because the former were focused on timing of instruction and assessment and the latter included a broader range of activities, such as developing curriculum materials.

While some participants within the department preferred individual informal professional

learning and others preferred collective learning experiences, all participants engaged in

both individual and collective forms of informal professional learning. Tables 4.2 and 4.3

summarize the informal professional learning in which each participant was engaged

during the course of the study, broken down by individual and collective learning

experiences.

Table 4.2

Participants' Individual Informal Professional Learning

Pseudonym	Professional Reading	Researching/ Troubleshooting Technology Implementation	Reflecting on Instruction	Planning Curriculum and/or Revising Materials
Ms. Allen	x		x	x
Mr. Cole	x		x	x
Mr. Davis		x	x	x
Mr. Dodd			x	x
Mr. Hall		x	x	x
Ms. McDonald	x		x	x
Ms. Owen		x	x	x
Mr. Simpson	x	x	x	x
Mr. Stewart			x	x
Ms. Todd		x	x	x
Ms. Wayne	x	x	x	x
Ms. Wilson	x		x	x

It is striking, though not surprising, that each participant engaged in both reflection and

planning and/or revision of curriculum individually. Such activities are, as Mr. Davis

said, part of "doing my job."

Table 4.3

Participants' Collective Informal Professional Learning

Teacher	Sharing and/or Discussing Reading Materials	Trouble-shooting Tech. Integration	Soliciting Feedback	Planning/ Revising Curriculum	Common Planning Meetings (PLC, other)	Emails Sharing Resources and/or Planning
Ms. Allen	x	x			x	
Mr. Cole		x	x	x	x	x
Mr. Davis			x			
Mr. Dodd					x	
Mr. Hall		x		x	x	x
Ms. McDonald	x	x	x	x	x	
Ms. Owen		x	x	x	x	x
Mr. Simpson	x	x		x	x	x
Mr. Stewart		x			x	
Ms. Todd		x			x	
Ms. Wayne	x		x	x	x	
Ms. Wilson		x		x	x	x

Note. Common planning meetings are distinguished from collaborations to plan/revise curriculum because the former were focused on timing of instruction and assessment and the latter included a broader range of activities such as developing curriculum materials.

On the surface, there is more variety among participants' collective informal professional learning (Table 4.3) than the kinds of individual informal professional learning (Table 4.2); however, with both individual and collective informal professional learning, the extent to which and the ways in which teachers participated in different activities varied. For instance, Mr. Simpson was a school leader in using technology for

student assessment, so he participated in collective informal professional learning for technology integration more often than, say, Ms. Todd, who sought assistance from her colleagues to learn how to better integrate document cameras in the classroom. In his collective informal professional learning, Mr. Simpson was often the source of others' technological learning, rather than working towards improving his own knowledge and capabilities. Similarly, Tables 4.2 and 4.3 illustrate that Mr. Cole participated in quite a variety of both individual and collective learning experiences; he was a willing, enthusiastic participant in both. However, he preferred individual experiences and said, "I like to find things out on my own." Each participant described the variety of individual and collective informal learning as a positive influence on their professional learning, beginning with the self-guided nature of informal learning.

Self-guided Informal Professional Learning

All participants engaged in both individual and collective learning activities, but several teachers' first inclination when faced with a need to learn something was to "go find it myself" (Simpson, personal communication, August 23, 2013). Mr. Cole began by finding resources and guidance on his own before enlisting the help of his colleagues. He said, "I've heard all kinds of great things about Socratic Seminars, but I've never done one. I had no clue what they were. So I researched it and then I did one last week." He also found a video of a Socratic Seminar on YouTube and watched that before implementing the strategy in his classroom. He preferred a little bit more independence, though he was always willing to help others and work with others as well.

Ms. McDonald described something similar, noting how she took advantage of individual informal professional learning in order to focus her content learning on the

area of most pressing need at the time—and that it allowed for a necessary degree of

flexibility:

> I know [the principal] gets mad at me every year because I'll say, 'this is the area I'm going to study this year—I'm going to study Latin America because I don't know a lot about it' and then I'll find a really cool book about Canada…I just go by what I feel I need at the time period…as long as I can use it in the classroom.

While Ms. McDonald strayed from the content focus as reported to the administration,

she was still improving her content knowledge and enjoyed the freedom to modify her

plans to better fit her changing needs. Mr. Cole, too, said he gained a great deal of

content knowledge through independent reading, "Usually, it's something psychology-

related, so it's building content knowledge. And I've learned so much, just on my own."

Mr. Simpson belongs to a history book club from which he buys and reads several

content-related books each year; for example, during the study period, he purchased the

book, *1913: In Search of the World Before the Great War* by Charles Emmerson (2013).

The book gives a more global perspective on the events leading up to World War I,

challenging the typical lead-up to war narrative. He said he did not believe anyone else in

the school knew he read so much independently, but others in the department did

recognize him as the go-to resource for history content knowledge, dubbing him

"Simpsopedia" after the popular online encyclopedia, Wikipedia. In each of these cases,

teachers enjoyed the opportunity to pursue their own content and pedagogical interests.

Collective Informal Professional Learning

Participants who preferred a collective approach to informal professional learning

enjoyed the give and take of talking with peers. Ms. Wilson explained that she liked to

talk to her colleagues about what they are doing with their students because "it's really

interesting" and that by hearing others' teaching strategies, "they give me ideas." Ms.

Wayne explained that often, she will learn about social studies content or teaching strategies not by asking for ideas directly but by asking, "'how was your day?' [And they will say], 'Oh, I did this and oh, [the students] did so great' or 'one class did great, the other didn't.' So I get ideas from…talking to other teachers."

One such exchange happened after school when Ms. Wilson stopped by Ms. McDonald's room just to say hello and ask about the day. Ms. McDonald asked what papers Ms. Wilson had in her hand, and Ms. Wilson launched into a story about how some of her students plagiarized a writing assignment by failing to cite their sources. She had already alerted the students to the problem in a previous draft of the papers—these were the final drafts. The two teachers immediately began brainstorming how best to deal with the situation—they settled on contacting the offending students' parents immediately to warn them of the issue and that students had failed the assignment for now but would be given the chance to re-do it with proper citation for partial credit. While Ms. Wilson already had a similar plan of action in mind, she appreciated the opportunity to share the struggle with a fellow social studies teacher and said she felt more confident in her action because of their conversation.

Ms. Todd also noted the power of a communal culture in the social studies department, especially as it increased her comfort in asking for help. In talking about implementing new instructional technologies, such as the recently purchased document cameras, she said, "we feel free to ask each other, 'hey, I need help with this,' and they'll come right down [to my classroom] and help." In describing how freely department members seek guidance from one another, Ms. Allen noted that, as a veteran teacher and

department chair, "I used to literally have a line at my door" of other social studies teachers asking questions before and after school.

Students as collaborators in informal learning. In addition to asking one another for help and sharing ideas when they interact with each other socially and professionally, several participants also talked about getting help and feedback from their students in order to add to their professional learning. Ms. Allen, for instance, said that she relied on her students in learning about new uses for technology. Given how far instructional technology has come in her 28 years of teaching, she noted, "now you're doing things like, I've got a Twitter feed, by gosh, for one of my classes! Who would have thought it?" She elaborated, "I learn from students, because they know more than I do…I'm not afraid to ask, 'Hey, what's this Google Chrome thing?'" Similarly, Mr. Davis, Mr. Cole, and Ms. Wilson all mentioned seeking feedback from their students regarding the content that most interested students when planning for their elective courses. In his elective psychology course, for example, Mr. Cole noted:

> Last year, we did a whole other unit—I've never done sleep and consciousness before, but so many [student] questions were about that…So I did have to build up that throughout the year and say, "OK, we're going to do a whole new unit on this because you-all wanted to know about this."

Ms. Wayne and Mr. Davis talked about asking their students for feedback on their teaching methods as well. Mr. Davis said that he asks his IB psychology students for feedback about the course after they have completed the IB exam, "to ask them what [instruction] worked and what didn't work. Or what I should throw out or what I should add [for next year]." Ms. Wayne said that she regularly asks her students throughout the school year for feedback on their learning styles and needs, "'You like this? OK, we can

do more of that.' [Or, students say] 'We don't like notes.' 'OK, we'll do this.' I've no problem adjusting. I tell them, 'I'm much more flexible than you-all think I am.'"

Ms. McDonald changed her instruction and formative assessment strategies as a direct response to student cries for help. Multiple students complained to her that they were struggling with the multiple-choice questions on summative assessments. The summative assessments were designed to mirror and prepare students for the IB test at the end of the two-year IB History of the Americas (HOA) course, so they were challenging for students and different from assessments they had experienced in other courses. Many students were struggling with the tests, and she had been thinking about the best way to help them improve their test-taking abilities, including implementing small daily quizzes. She said, "I talked to the kids, and I was like, you know, 'what do you-all need to do [to perform better on the tests]? I'd like start, just thinking, 'what should I do?'" The final impetus came one day when "a student in the morning came to me at like 7:45 and was like, 'I can't do this, can you help me?' And I was like, 'I'll pull [a quiz] out right now' [to use in class today]". Since Ms. McDonald began using regular reading quizzes, with questions similar to those students encounter on the summative assessment, students have become more confident in their abilities to answer IB-style multiple-choice questions and their test scores have improved.

Peer observations as a missed opportunity. At the beginning of the study period, several participants talked about how beneficial it would be for their professional learning if they could observe other teachers teach. Ms. Todd observed several other teachers during her internship year at GWHS and said that those observations helped her improve her classroom management. She did not observe other social studies teachers, so

her learning was limited to general teaching and management strategies, but given that it was during her first year of teaching, she said it was still beneficial. Mr. Dodd said he wished he could see other social studies teachers implement instruction:

> If I could take a day off and sit in everyone's class, I can see things they're good at and try to get better at those. And some things that don't work for them, maybe I can give them suggestions. But, you know, no one wants to do that. Everyone's so set in their ways, they don't want other teachers judging how they teach.

As Mr. Dodd noted, a perception of hesitancy on the part of teachers regarding being observed—and evaluated formally or informally—by their peers impedes potential learning from peer observations. Mr. Cole also mentioned that he wished regular observation of other social studies teachers continued as a veteran teacher. He remembered all of the different teachers he had the opportunity to observe as a pre-service teacher and appreciated seeing different styles of teaching but did not have much opportunity to continue that practice as an in-service teacher.

There is hope, however. Due to an impending policy change in the teacher evaluation system at the state level that will require teachers to observe one another in the coming years, the principal encouraged teachers to begin to participate in peer observations. In department meetings in October and November, Ms. Allen shared the principal's encouragement for teachers to engage in short (15-20 minute), informal peer observations, but very few participants took advantage of the opportunity—Mr. Dodd and Ms. Todd observed one another, and Mr. Cole observed Mr. Davis. Those who did not observe another teacher cited lack of time as the reason for not participating, rather than a lack of interest or willingness. The peer observations had to be completed during the observing teacher's planning period, precious time many of the teachers did not feel able to give up. Most participants said they planned to conduct a peer observation in the spring

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semester, given the administrative push to do so; however, since there was little structural support for these peer observations, more participation is not guaranteed. During the study period, there was not a protocol in place or a guidance document for how teachers should conduct the observations or what they might discuss with one another before/after the observation. The few participants who did conduct peer observations did not find the experience to be very beneficial for their professional learning.

Ms. Todd commented that she "didn't really know what to expect" from the observation process and that it might be helpful to have a protocol to follow or guidance in what to discuss with the other teacher before and/or after the lesson observation. Without such guidance, she said that she and Mr. Dodd had just talked about what content they were teaching and how they were teaching it in that lesson, not discussing the effectiveness of the lesson, alternative ideas, or shared problems. She also commented that she and Mr. Dodd are friends who often pop in on each other's classes during their planning periods and noted that she might benefit more from seeing another person teach, with whom she's not as familiar, in order to "broaden my horizons more." However, she noted that since they were already comfortable with one another's presence, it was less intimidating to observe one another a little bit more formally.

Similarly, Mr. Cole observed Mr. Davis because they both teach elective psychology courses. However, Mr. Cole had already observed Mr. Davis extensively when he was a student teacher at GWHS, so he said he did not really learn anything new from that experience; rather, it "reinforced…what I'm already doing." The two talked a little bit prior to the lesson about their psychology classes in general, similar to what would occur in a common planning meeting. Mr. Cole said they talked about the

upcoming unit and the rest of the semester and were happy to find out they were both "on the same page." Since psychology is an elective course, they did not participate in a professional learning community (PLC) for it, so it was valuable for the two to take a moment to discuss the courses in general. Beyond that, however, neither seemed to walk away with any new ideas or questions.

When asked if these peer observations might count as part of teachers' professional growth plans or for "PD hours" to fulfill state requirements for teacher continued learning, the principal quickly responded, "No! PD is where teachers are *learning*!" He then paused, thought about it for a moment, and conceded that yes, maybe teachers could learn from those experiences and that he would follow up with the district PD coordinator about that possibility. While he was supportive of the idea of teachers observing one another, the principal had not yet considered the potential learning that could result from this program; nor it seemed, had the teachers.

Professional Learning Communities

All of the participants—with the exception of Mr. Davis, who did not teach any non-elective courses—were part of professional learning communities (PLCs) organized by shared content courses. There was one PLC for each of the options through which students could fulfill their required social studies courses at George Washington High School: U.S. history (including both IB History of the Americas (HOA) year 2 teachers and the non-IB U.S. history teachers), world civilizations, integrated social studies (ISS), and honors global economics. Although participation in PLCs was required by the school administration, the teachers nonetheless described them as an informal learning experience. As Ms. Owen, who was involved in the PLC for honors global economics,

ISS, and U.S. history, explained, "to be honest with you, if you don't go, no one's going to know." Talking about PLC participation and attendance, Ms. Todd added, "we enjoy it, so we go." Ms. Owen explained one of the benefits of PLC collaboration being that it is "good just to be with common subject-area teachers because oftentimes I notice we're teaching the same content but they're teaching it in a totally different way…and sometimes I get good ideas from them." This degree of informality separated the PLCs from less popular formal professional development requirements and led teachers to consider them informal.

Outside of the scheduled PLC meetings, Mr. Simpson and Ms. McDonald collaborated spontaneously, adding another degree of informality to the learning. Mr. Simpson explained:

> I have a really, really good working relationship with [Ms. McDonald]. And she will come in here and ask what I am doing on something and I'll go in there and say, "what do you think about this?" And we don't—honestly, we don't do real well when we just have sit-down meetings. We just tend to do things very spontaneously. And we get a lot accomplished that way. Both of us have our own area. And so, for instance, she'll get something together for a unit that we're doing and I may put together an exam or document question we're doing on that…We're back and forth between each other's rooms multiple times a week.

Ms. McDonald agreed, adding that they are "so in tune" after working together for several years, that they "don't even feel like we need PLCs." Mr. Hall, who also taught world civilizations and was a member of the same PLC, attended the scheduled PLC meetings, but since so much of the collaboration was unscheduled, he tended to play catch-up at the scheduled PLC meetings and accepted the decisions Mr. Simpson and Ms. McDonald had already made prior to the scheduled meeting.

Because Mr. Simpson and Ms. McDonald discussed their world civilizations classes on a daily basis, they found scheduled meetings to be a bit repetitive. As an

example, during their lunch break, Ms. McDonald was eating in Ms. Wayne's classroom and Mr. Simpson popped in to trouble-shoot how to implement their upcoming unit exam using the student response system ("clickers"). Ms. McDonald was hesitant to use the clickers for student assessment because she feared that feeding student achievement results into the new state technology system (STS, a pseudonym) would be used to assess teacher effectiveness. Mr. Simpson replied that she was probably right, but that using the STS for student assessment was "going to happen," so she should get used to it. Since Ms. McDonald had not previously used the clickers with her students—nor was she particularly excited about it in this case—she and Mr. Simpson quickly decided on a plan of action in which Mr. Simpson would help her set up the technology and run through the program prior to using it with students to ensure the technology aspect would run smoothly in order to help allay some of Ms. McDonald's discomfort. In just a few minutes' time, the two were agreed that they would implement the clicker technology with students for the upcoming test in order to better track student achievement across their classes, in line with school, district, and state goals. In this particular case, Mr. Simpson said he was also going to stop by Mr. Hall's room to make sure he was ready to implement the clickers on the next exam. Then, in the subsequent scheduled PLC meeting, since all three teachers already knew about using the clickers for the unit exam, they just reaffirmed that decision rather than talking through it during a scheduled meeting. This illustrates the informality of PLC decision-making as it occurred outside of scheduled meetings; each teacher was involved, with Mr. Simpson leading Ms. McDonald and Mr. Hall in using STS for student assessment.

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Ms. McDonald was also involved in an informal collaboration with Ms. Wayne because they were both teaching the first year of the IB History of the Americas (HOA) course. Because they were teaching the first year of the HOA course, and the course is a two-year sequence with students tested at the end of the second year, Ms. McDonald did not attend the larger group U.S. history PLC meetings (Ms. Wayne did attend because she taught general U.S. history and the HOA year 2 course as well). As Ms. McDonald explained, "it just works better for me and her if we see each other in the hallway and like, 'Oh, I thought about this. Think about it a little bit,' and then we'll come back to it when we get a chance" and added, "we don't even have to have a formal sit-down [meeting]." In addition to impromptu hallway discussions, Ms. Wayne also shared content books with Ms. McDonald, which helped her gain needed content knowledge for teaching the HOA year 1 course. These two teachers are friends outside of school and discuss American history content at social functions as well as in school. Ms. McDonald explained:

> [Ms. Wayne] and I hang out outside of school, and so, I mean, there's been times that we've, you know, been sitting at [a local bar] arguing history. And everybody's like, "Leave work at school! Just leave it there." But that's just something that she and I really like to do….And there's been times when I'm, you know, sitting in there and I'm like, "all right, [Ms. Wayne]. Give me an interesting story. This is a really boring topic. Give me something interesting." And then that leads to a whole discussion about, you know, about the content that we're talking about that time period.

Scheduled PLC meetings tended to be brief and informal. They lasted 10-20 minutes and typically involved participants reporting to one another where they were in the content, when they were planning to assess the current unit, and discussing the common assessment and whether it needed updating. For example, my notes from the September 4, 2013, honors global economics PLC meeting state:

Mr. Dodd and Mr. Stewart are both quizzing and getting ready to teach the Articles of Confederation; Ms. Wilson is on the Articles of Confederation; Ms. Owen has finished the Constitution and is on quiz 2 (about the Federalists and Antifederalists). Ms. Owen said she went too fast because last year (she missed a day of class for an LDC training and did not miss that this year), so she's a little ahead.

This reporting and coordination of the timing of instruction and assessment was typical in the scheduled PLC meetings. PLC meetings were friendly and laid back, with the teachers often sharing amusing stories or commiserating about challenging interactions with students and/or parents.

Reflection is Central for Informal Professional Learning

Throughout the informal professional learning process of identifying learning goals, choosing actions, taking actions, and evaluating their learning, participants relied heavily on reflection to guide their decisions and actions. Following Schön's (1983) definition of reflective practitioner outlined in chapter 2, here, reflection occurred when teachers thought about their practice before, during, or after a learning experience (e.g., recalling past teaching while planning instruction, gauging student engagement during a lesson, evaluating the effectiveness of a particular lesson while reviewing student assessment scores). Participants engaged in both individual and collective reflection and described reflection as a continuous process.

Individual Reflection

When participants thought about their own professional learning without the influence of students, colleagues, or others, I characterized it as individual reflection. For example, Ms. Allen reflected on her weaknesses and areas in which she needed to grow in order to set her course for learning. She described how she decided on her informal professional learning goals as having "self-awareness." In Ms. Allen's case, she decided

that she could always stand to grow in her technological understanding and use of

instructional technology and that she would like to improve her IB HOA year 2 course.

She said that the past several years, she focused too heavily on a standardized test

required by the state and has been limited by its content, rather than the more rigorous

and inclusive IB content. Similarly, Ms. Wilson described how she selected the content

books she used to improve her content knowledge for her criminal justice elective course:

> I try to come up with a list of what my units are going to be like and what my
> lessons will be like. And then if I see, like, gaps in a lesson or I think, "well, it'd
> be really great to talk about dating violence among teenagers," then I look for
> things [to address that]. But it's like, maybe I don't know that much about it. I'll
> look for it at the bookstore [to gain content knowledge about the topic].

Ms. Wilson was introspective regarding her own content knowledge in order to guide her

growth in that area; in addition, she independently reflected on her instructional plan as

she critically reviewed her plan for the year.

Ms. Wayne talked about using reflection as a way to evaluate her informal

professional learning. Specifically, one of her goals was to improve some of her lessons

in HOA year 1. She said she could tell if she has improved a lesson from reflecting on

how she feels about it, "Honestly, it's just kind of feeling better about it." She went on to

describe her reflection in more detail. She said that if she did not feel good about a

lesson, she would think, "I didn't like the teacher I was today. Is that okay with me or is it

not? If it's not, what can I do that's different?" In this way, Ms. Wayne used reflection

both to evaluate her informal professional learning (her goal of improving her instruction

in HOA 1) and to guide how she will act on this goal in the future (thinking about what

she could do differently). Ms. Wayne's description of her reflection brings to light the

intangible quality of reflection as a form of professional learning. Her thoughts were

based on her *feelings* about her learning, which is difficult to quantify or evaluate, but does not discount the value of the learning itself. Collective reflection also had an intangible quality to it but was no less important.

Collective Reflection

While reflection would seem to be a solitary endeavor, some of the reflection in which participants engaged was collective, meaning that teachers interacted with one another or with students as they thought about their professional learning. In collective reflection, participants did not necessarily work together to think through part of their learning, so I do not call it a collaborative endeavor, but they did interact with one another or with students in a way that influenced their thinking. One of the main ways in which participants engaged in collective reflection was through their interactions with students. Ms. McDonald talked about her reflection and subsequent informal professional learning goals and actions being influenced by her students' responses to instruction. Since Fall 2013 was her first semester teaching the IB HOA year 1 course, Ms. McDonald focused much of her informal professional learning on adapting her instruction to meet the needs of her students in that course. She described her typical way of teaching as "presenting information that I had. [Then students] are talking about why is this trustworthy, why it's not." She explained:

> I tried to do that with HOA, just because that was my comfort zone. That was what I felt really comfortable doing, but it wasn't working…they weren't getting anything from it. And so it wasn't—I didn't feel comfortable with it. And so, you know, in an effort to try to meet all the kids, it was like, let's go back to the drawing board. What's my new way going to be? How am I going to [teach] now?

Ms. McDonald called to mind her interactions with students, interpreted students' responses to instruction, and considered their formative and summative assessment

results to initiate the change in her instruction to meet the needs of her new course and students. Much of her thinking was done alone, but it was in response to her interactions with students and students' needs.

For Mr. Davis, interactions with his students also drove his reflection and subsequent informal professional learning actions. One of his professional learning goals was to improve the instruction for his IB psychology course. He explained that in a course with a high stakes standardized assessment at the end of the year, such as his IB course, he felt pressured to "be very efficient" in getting through the content. He said, "I can tell sometimes [discussion is] not the most exciting for them, but it seems to be the fastest way to get through some material." Reacting to his students' lack of enthusiasm for the typical class discussions about content material, he said this year:

> I've taken a step back from that and sort of balanced just interest or just change up with like the fact that we need to get here by "X" date…I'm trying to loosen up a little bit with [teacher-centered discussion], only because I just feel like that sometimes can be monotonous or weigh on their morale.

Like Ms. McDonald, Mr. Davis included students' needs and responses to instruction in his thought process as he progressed in the goal of improving instruction in IB psychology.

In addition to reflection in response to teachers' interactions with students, participants also engaged in collective reflection with one another. In one spontaneous interaction during the teachers' lunch, Ms. Wayne and Ms. McDonald discussed their HOA year 1 students and their struggles with the standardized assessment for the IB curriculum. The two teachers followed the IB testing format for their unit assessments in the HOA year 1 course, including multiple-choice questions. Ms. McDonald noted that her students seemed to perform better on tasks when they had an opportunity to practice

it first, and for that reason, she started to use reading quizzes with her students as a way

to help prepare them for the types of multiple-choice questions on the unit assessments.

Ms. Wayne agreed that her students also responded well to such opportunities. While Ms.

Wayne did not use the reading quizzes with her students, she provided them with other

opportunities to prepare for the unit tests, such as practice with writing a thesis for their

essays. Although the two teachers were not using exactly the same methods, their

discussion shed light for them both on the positive effect that their small shifts in

instruction and formative assessment were having for their students.

Similarly, Mr. Cole and Ms. Owen—and to a lesser extent, others in the ISS

PLC—engaged in collective reflection focused on the effectiveness of the ISS

curriculum. Because it was Ms. Owen's first year teaching ISS, she questioned what had

been done in the past and why, spurring the group to reconsider lesson plans, materials,

and assessments they used in the past. Mr. Cole said:

> It's been kind of nice having [Ms. Owen] in the Integrated Social Studies because
> I think if we would've had the same people teaching it again, we would have
> done the exact same thing. Because it's not like it was broken but definitely could
> be improved. It's nice to have her say, "Okay, what is this? Why are we really
> doing this? This doesn't make sense to me." And we look back and say, "you
> know, it really doesn't. We don't need that."

Mr. Cole and Ms. Owen worked closely together via email to communicate about the ISS

curriculum. While they attempted to include the other members of the PLC, they both

noted that an email chain would start out including all of the ISS teachers, but only the

two of them replied. This collective reflection on past instruction as they planned each

unit served to strengthen the curriculum both teachers used with their students and, to a

lesser extent, benefitted the rest of the PLC because they shared their materials with the

entire group and referred to instructional changes in PLC meetings.

Continuous Reflection

Participants engaged in reflection before, during, and after taking action towards their informal professional learning goals. In particular, Mr. Cole used a relatively structured note-taking system to track his daily reflections. For each instructional unit, he kept a 3-ring binder of planning documents. Each year, he planned out the unit day by day in a rough outline, looking back on how he implemented the unit the year before and the notes he made to himself about how it went. And each day, he added notes to the day's plan, recording how much time each segment of class took and anything he should add or modify in the future. Figure 4.1 is an example of Mr. Cole's reflection notes.
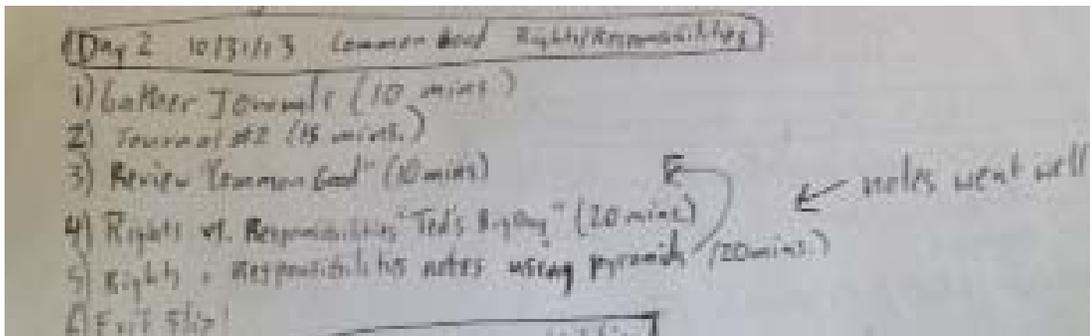
Figure 4.1. Mr. Cole's daily reflection notes.

Figure 4.1 shows one day of Mr. Cole's planning for the Integrated Social Studies (ISS) unit on rights and responsibilities of citizens in the United States. In addition to an outline of his plan for the second day of unit instruction, his notes show that he recorded the amount of time that each part of the lesson took; drew an arrow from the "Rights & Responsibilities notes using pyramids" from the fifth lesson segment to the third, indicating that in the future, he would probably do the notes earlier in the lesson; and he noted that the "notes went well." He explained that next year, when he begins to plan for

the rights and responsibilities unit, he will look at the notes and plans he had for this year and let that guide his planning. Mr. Cole noted that reflection is not "always so conscious, but you're just kind of unconsciously, you're always, hopefully, reflecting."

Ms. Wayne described a more unconscious method of reflecting on her teaching than Mr. Cole's note-taking but not necessarily less effective. She said:

> I will often teach lessons that I don't like. And I can walk away from that and say, "I don't like it"…I can recognize I wasn't a successful a teacher this day. I can either be okay with that or I can say, "what can I do to improve?"

In this way, Ms. Wayne used reflection both to evaluate her effectiveness as a teacher and to drive her future informal professional learning actions—how she would further modify her lessons to improve their effectiveness. Reflection proved to be an important part of evaluating her professional learning.

Little Emphasis on Evaluation of Informal Professional Learning

When I asked participants about how they evaluated their informal professional learning, they seemed surprised. Most often, participants used reflection—either individual or collective—as a means of evaluating their informal professional learning and described evaluation of their own informal professional learning as something difficult to quantify. Only rarely did they consider student achievement data as part of their evaluation of their own informal professional learning.

When I asked Mr. Davis to describe how he evaluated his informal professional learning, he replied:

> That's – that's a great question. The "assessment." Um…because oftentimes, I think the most important things are not the things that are easily assessed. So, and I – and we want this – we want the education process to be mathematical and that's why we're worried about professional development. You went to this training and so therefore you are an expert in something. And so, I'm a little—I guess, jaded, about that idea….So, me…talking about motivation and creating

curiosity [with my students]; I don't think that really flies with [a quantifiable assessment]… And you may see it on the [students'] test. Maybe a student does well or maybe they don't. Maybe they're a bad test taker, you know? So I don't really know. A [better] goal would be just, just to [be] more structured in terms of like the machine that you create…in a smoother process throughout the year where things…get graded faster or, you know, you get through a particular unit in a more efficient, productive way, or finding where you – where are you wasting time? What is the excess information? And what is necessary to be sort of wasteful because it creates curiosity, you know, because students like to talk about it?

Mr. Davis explained that it is not only acceptable but also inevitable that many important informal professional learning goals may not be easily evaluated. While the effect of some instructional changes may be evident in student test scores, Mr. Davis pointed out that test scores are problematic themselves because students' test-taking abilities vary. Just because a student's test score does not improve does not mean that the teacher's efforts were unsuccessful. Further, he discussed that he valued student curiosity in the subject (psychology) as an outcome of his class and that he would feel successful in his teaching if his students left his class more curious about psychology than they were before they entered.

Reflection as Evaluation

Participants often described their evaluation of their informal professional learning as being a reflective process. Ms. Allen, for example, said in order to know whether she has made progress in her goal of improving her use of technology in the classroom she will independently reflecting on her practice. She said, "that's going to be a little reflexive exercise. You know, what [forms of technology] did I use? How did I use it? Did I use it well and wise? And…more than I did last year and the previous year?" Similarly, Ms. Wilson referred to students' attitudes and reactions to her instruction as she considered her progress in her goal of improving her content knowledge for her

criminal justice elective. She said, "they seem a lot more interested than they used to. I think—I hope—it's because I'm enthusiastic about it." She went on to say, "I hope the kids have noticed [my improved content knowledge] because I feel like they've been talking to people that took it last year and I think it's even more interesting than last year." Because she improved her content knowledge in criminal justice content and topics, she was able to be more enthusiastic in her teaching. When she thought about her current instruction, her past instruction, and student responses, she interpreted her students' increased interest to mean that her purposeful professional learning improved students' experiences in the class.

Mr. Cole also used cues from his students' actions to gauge the effectiveness of the changes he made in his teaching as part of his informal professional learning activities. One of Mr. Cole's emphases in his informal professional learning was to improve the ISS course. He began to focus more on the alignment of his instruction to the necessary social studies content standards. In taking another look at his instruction—in collaboration with Ms. Owen, who was teaching ISS for the first time—he discovered that some of the lessons he had taught in the past couple of years were not necessary. He said that he could tell that the changes he made in his instruction were positive for students because:

> They were playing a game yesterday on that *iCivics* [website]. And it was just like, hey, they finished their [LDC] paper. [I said,] "If you finish it, I'll give you bonus points if you go on this website, play the game, write a sentence summary, write, you know, a paragraph summary about it." And so I'm floating around the computer lab and I'm watching them play it. And these kids are—they're getting into it! And it was really interesting for me to see…in years past, this wouldn't have happened.

Mr. Cole streamlined his instructional design to make student learning more focused, and his students responded positively. Simply by reflecting on student reactions to instruction, comparing his current class to previous years, he could conclude that his instructional changes were having the desired effect.

Student Achievement Guiding Evaluation

Participants rarely considered student achievement as part of their evaluation of their own informal professional learning. More often, they talked about the *possibility* of using student achievement data but had not yet done so. When Ms. Owen talked about evaluating her informal professional learning in increasing differentiation in her classes, she said, "I guess I could use—you know, you always have test results, so I could analyze data that way." When pressed on whether she actually does use student test data in that way, she laughed and replied, "unless I was forced to, maybe not!" However, she went on to explain how she used test data in a less structured way:

> I look at test averages on unit to unit and I also look at different classes…because usually I have, you know, one class is like rock star, and even within the same [level], like both advanced, one [class] does better. And I'm like, "okay, what was I doing differently in that class? How did that operate differently?" And a lot of the times it does go back to management because certain classes have certain personalities.

She went on to describe her two honors level U.S. history classes, with one being very well behaved and the other more challenging, adding that she has "noticed a difference in the quality of work" between the two classes, with the well behaved class achieving more highly.

Ms. Wayne talked about one of her informal professional learning goals being to improve her teaching. Much of how she could judge her improvement was based on the feeling she got from students in class, but she also discussed:

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One very concrete way is with this research paper—the historical investigation [paper]. Well, after teaching it the first year, that summer I made a booklet. And part of me did that to make my life easier, [and part to] make their life easier. They don't have excuses. I can say, "did you look in there? Because I put specifically, 'Don't do that!'" And the average for their rough draft [last year] was higher than the final draft average for my previous year of classes.

By comparing her students' scores from year to year on one major assignment, with the main variable between the two years being her development of a booklet to guide students through the research and writing processes for the paper, Ms. Wayne could evaluate the impact of that change. She concluded that the booklet was an effective change and updated the booklet to use again with her classes in 2013-2014. She also shared the booklet, called *Historical Investigation for Students: Guidelines for [GWHS] International Baccalaureate Students*, with other social studies teachers. The booklet was modeled after the self-help books for dummies series and was eye-catching and engaging for students.

As discussed above, one of Mr. Cole's main learning goals for the year was to more closely tie his instruction to what he called "learner outcomes" in order to make the class more relevant for students. He reflected on his ISS students' responses to an extension activity in the computer lab to evaluate the effectiveness of instructional changes. In addition to evaluating through reflection, he also based some of his evaluation on student achievement. Since many of Mr. Cole's classes were electives (psychology), he did not have the benefit of working from state standards like he did for ISS. He took multiple steps to address this goal for his psychology classes. He first identified learner outcomes for each unit by compiling relevant social studies standards, other state standards (such as science standards), Advanced Placement guidelines, and guidelines from psychological organizations such as the American Psychological

Association. He then shared the unit learning outcomes with students at the beginning of each unit and referred to the goals throughout the unit, asking students to look at the learner outcomes and identifying on which outcome the day's instruction would focus. He said, "every couple days, I'll say, 'Okay, so we're checking this learner outcome off for today.' And I think [students] know what they are now. They know, 'that's a learner outcome. I should be able to know that.'" Finally, after Mr. Cole tied his instruction to learner outcomes, he was able to use the new state technology system (STS) to formatively assess student learning before the end of a unit.

By using the STS to assess student learning during a unit of instruction, in addition to just at the end of a unit, Mr. Cole was able to modify instruction to increase students' understanding of key concepts and learner outcomes before the summative assessment. He said, "I analyze [the halfway learning check scores] and then we can go back and say, 'okay, up until [now], we don't get this concept and these three concepts. Let's go back and talk about them. And [students] know that now." Not only did his use of STS for formative assessment help him evaluate his students' learning, it also gave him evidence of the effectiveness of the changes he was making to his instruction by aligning instruction to learner outcomes. The growth of his students also indicated that his own professional learning was effective.

Leadership Steers Informal Professional Learning

The social studies department at GWHS benefitted from the strong leadership of multiple department members. As the department chair, Ms. Allen influenced much of the department's informal professional learning. She acted as a liaison between the administration and the department and also supported the leadership efforts of other

department members, as seen through the example of a new departmental writing plan. Another veteran in the department, Mr. Simpson, also greatly influenced the department's growth, particularly in using a new student assessment tool developed—and required—by the state department of education.

Social Studies Writing Plan

When the state standardized test scores were reported in the fall of 2013, Ms. Allen attended a meeting with the administration and chairs of the other departments in the school to analyze the students' scores. The administration presented the department chairs with areas of focus for all teachers in the school with the goal of improving test scores. At the subsequent October 2013 department meeting, Ms. Allen led the social studies teachers through interpreting the test scores and brainstorming exercises to determine ways the department could address the new school-wide achievement goals. The school focus areas that were applicable to the social studies department were in reading and writing, so during the department meeting, the teachers discussed ways they could work to improve students' writing and reading skills within their social studies classes. Ms. Allen recorded all of the teachers' ideas and submitted a departmental "gap reduction plan" (an overarching focus of the upper Southern state in which this study took place is to reduce achievement gaps among learner groups, with student demographics, such as ethnicity and socioeconomic status, determining groups) to the school's writing committee and to the school administration.

In response to the new school and departmental focus on writing skills, Ms. McDonald initiated a new assignment. She edited textbook passages to contain incorrect grammar and language mechanics and assessed students both on history content from the

passage and on identifying the grammatical and mechanical errors within it. Ms. McDonald shared her strategy with Ms. Allen, who was impressed by it and called upon Ms. McDonald to share it with the group at the November department meeting. In this way, Ms. Allen simultaneously nudged Ms. McDonald into more of a leadership role in the department and supported the congenial departmental culture she has helped to cultivate for years. All of the teachers in the department benefitted from learning about Ms. McDonald's new teaching strategy; whether they chose to use the strategy in their own classrooms or not, it represented an increase in shared knowledge.

Like Ms. McDonald, Mr. Cole also changed his instruction in response to the new departmental writing plan. He planned and implemented a research paper assignment for his elective psychology classes. He said that part of his thought process for adding a research paper in his curriculum was, "[if the principal] walks in my room and says 'how are you…improving grammar?' well, I can say I've done this." In addition, Mr. Cole also began to use a rubric that included grammar as part of the assessment for every writing assignment in his classes, which was one of the agreed-upon strategies in the departmental writing plan. Ms. Owen suggested the use of a rubric in the October department meeting, and Mr. Cole showed initiative by taking her suggestion and putting it into practice, but he did not share his changes with other department members. As a result, his individual change, while admirable and effective, did not influence others' instructional practices.

Ms. Allen's leadership style encouraged shared innovation and a more distributed form of leadership than might be found in other departments. In the example above, Ms. Allen encouraged Ms. McDonald to share an innovation with the entire department, and

Ms. McDonald did so. On the other hand, Mr. Cole, while an active and enthusiastic department member, did not share his innovations with the department chair or other members of the department. Interestingly, although he was not as vocal as Ms. McDonald in department meetings, he was a leader in his PLC, initiating the ISS PLC's use of the STS for unit assessment and engaging in ongoing critical collaboration with Ms. Owen, which led to substantive instructional shifts. Mr. Cole, however, rarely gave advice unless it was solicited, while Ms. McDonald tended to share everyday trials and successes with multiple other teachers, including Ms. Allen. As a result, her ideas were more likely be considered by and for the whole department.

State Technology System

In addition to sharing the responsibility for innovation among department members, particular teachers shared their areas of expertise with the department. For example, Mr. Simpson was known for both his strong history content knowledge and his technological prowess. His fellow teachers frequently came to him—either in person or through an email request—to get assistance with using instructional technology in the classroom. Because of his interest and competence with technology, Mr. Simpson was called upon to lead the school in implementing a new technology policy.

During the study period, George Washington High School (GWHS) began to focus on several policy initiatives coming from the state department of education. The most noticeable was the implementation of a new state technology system (STS, a pseudonym). Eventually, the state plans to use STS for formative assessments, building curriculum, and sharing instructional resources, but GWHS was focused on getting teachers to use it for common assessments for units of instruction. When a teacher wrote

a test in the STS, he/she connected each question to state standards and had the option to share the test with other teachers in the department, building, district, and/or state. Teachers could also give tests to students using the STS; by using STS to administer tests, the system would provide an analysis of student achievement data and enter student grades into the teacher's online grade book. As noted above regarding evaluation of professional learning, Mr. Cole already began using STS for formative assessment in his halfway learning checks. The school administration asked Mr. Simpson to be the school leader with the STS because he was known for his technological prowess and was a veteran, well-respected teacher.

Since Mr. Simpson was the school point-person for the STS, he wanted the social studies department to be the city on the hill; he encouraged each PLC to get at least one common assessment up on STS in the Fall 2013 semester and to implement it using the technology system. At each department meeting, Ms. Allen put time on the agenda for Mr. Simpson to talk about STS and she also encouraged everyone to get on board with the initiative. A volunteer in each PLC put a common assessment on STS and shared it with the rest of the PLC—Ms. Owen for U.S. History; Mr. Cole for ISS; Mr. Stewart for Honors Global Economics; and Mr. Simpson for World Civilizations. The U.S. History, ISS, and World Civilizations PLCs all implemented unit assessments using STS; the Honors Global Economics PLC has yet to do so. Each volunteer heavily relied on Mr. Simpson to help him/her with the technology.

For example, Mr. Cole was in charge of entering a common assessment on STS for the 9th grade ISS PLC. On a day when I was scheduled to observe Mr. Cole's teaching and learning, I arrived before school to find Mr. Simpson in Mr. Cole's

classroom, helping him set up a test on STS. Mr. Cole was having trouble getting the test items to align to the social studies standards—he was selecting the appropriate standards, but they weren't saving correctly when he got to the next screen. Mr. Simpson helped Mr. Cole troubleshoot for over 20 minutes before school.

Similarly, when Ms. Todd was ready to implement her first U.S. History test using STS, she chose to use the clicker system to capture student responses. Mr. Simpson came to her classroom and helped her set up the clickers, assigning each student a clicker in STS and making sure everything was working properly so students could use the clickers without issue and so the assessment scores would save correctly. Ms. Owen volunteered to lead the writing of a U.S. history test in STS; in addition to getting help from Mr. Simpson with the technology of STS, she also worked with Mr. Cole on writing the test, since he was writing a test for ISS at the same time that she was writing one for U.S. history. Ms. Owen said:

> What was funny is we were at our LDC [Literacy Design Collaborative – a national grant funded by the Gates Foundation, of which the state is a part that encourages writing instruction across content areas] meeting and we were supposed to give the test [in U.S. history] later that week, and so while we were there he showed me how to set it up with my [STS] classroom.

Not only did Mr. Simpson help all of the social studies teachers—and other teachers throughout GWHS as the school leader for STS—but the teachers within the department paid it forward to help one another as well. While Mr. Simpson was the main leader of the STS implementation, Mr. Cole again showed the distributed leadership present in the department by helping Ms. Owen build an assessment on STS, just as Mr. Simpson had helped him.

Progress Towards Informal Professional Learning Goals Varied

While some individual and collective goals were forgotten, ignored, or failed, others were approached or met. Overall, the department made significant progress in using the STS for summative assessment, relying heavily on the leadership and support of Mr. Simpson. Ms. Allen provided support for the implementation of STS testing by including Mr. Simpson and STS information in each department meeting. Individuals and small groups also successfully changed their instruction to better address student wants and needs. Teachers tended to succeed in those professional learning goals that were individual and/or collective priorities, while neglecting professional learning goals of lower priority.

Making Progress Towards Goals

Participants enjoyed much success in progressing towards the goals that they valued. The departmental goal that was most successful was the use of the state technology system (STS) for common assessments. Teachers who focused on increasing their content knowledge and revising their instruction, either individually or collaboratively, were also largely successful.

Successful use of STS. Three out of four PLCs—U.S. history, ISS, and World Civilizations—used STS for at least one unit assessment, and the World Civilizations PLC used STS for multiple unit assessments during the study period. Although some of the teachers—most notably, Ms. McDonald—were hesitant about using STS, teachers' responses to using STS were positive. Ms. McDonald, as noted above, had reservations about using STS in principle because she feared that such standardized, automated assessment systems would be used to evaluate teacher effectiveness without taking other

variables into account, such as student demographics and teacher expertise. After using

STS for unit assessments in world civilizations, though, she said:

> You start to actually really analyze [student achievement data] versus just passing it through on the Scantron machine and just seeing, you know, 25% of students got this wrong. Well, that doesn't really tell me…"did all the 25 actually fail the test or was this, like, random?" So now I can actually do that. So that was a good thing that Mr. Simpson convinced me that I should use.

Similarly, Mr. Hall, who was also part of the World Civilizations PLC, said, "we've been

able to use STS as a pretty useful tool, both in administering tests and then utilizing the

data that comes as a result of the tests once it's been given" and that "it's been a lot easier

than we thought it would be when we first were told that we needed to start integrating

[STS] into instructional techniques in class."

Ms. Owen reflected on the process of leading the creation of a test in STS for U.S.

history. She said:

> It wasn't difficult, but it just took a while. So if there were a way to, like, copy and paste a question and put it in [the STS test bank], it would be so much simpler, but there's not a way to do that yet…It was just time-consuming. And now that I know—there's a few steps that you have to click for it to work right for everyone to see, and I kind of learned from my mistakes on that one so now I know how to set that up in the future.

Mr. Simpson helped Ms. Owen figure out how to make the test available for all of the

U.S. history teachers to use. In addition, Ms. Owen said:

> [Mr. Simpson] also helped me get to where each student has their own user name and password, that he showed me how to assign. Not only do you have to copy the test from a big server to your [online STS] classroom and set it to send to your [online] grade book, and then also you have to assign it certain sections [of your students]. So you had to go in there and find which sections to assign it to, so he helped me do all that.

Mr. Simpson and Ms. Owen exchanged emails and Ms. Owen dropped by Mr. Simpson's classroom several times as she worked through the process of getting an assessment posted on STS.

The widespread use of STS for implementing unit assessments was a focus in all department meetings and also enjoyed informal support through Mr. Simpson's technological assistance. In her role as department chair, Ms. Allen encouraged the department to take action in order to implement STS. Mr. Simpson was an appropriate leader for the group and worked with the school, district, and state administration to clarify a distinct goal for the semester—implementing one common assessment in STS for each PLC. He was in a unique position to support the department in working towards the goal of widespread use of STS in that he was leading the school in complying with the STS policy mandate. While he was in an official leadership position, he helped other social studies teachers succeed in using STS informally; he physically went to their classrooms before, during, and after school and emailed with them to make sure they were ready to use STS with their students. In talking about the forms of support he had been offering teachers in implementing STS, he said:

> Because of the nature of it, I try and catch people before school or after school. But realistically, a lot of times this requires me to be there when they're actually getting ready to do something, you know, to actually walk them through it. That's been really difficult [for me], and I've had to get people to come in and cover the class while I go with somebody and get them going on [STS].

There were some difficulties with the actual technology using STS, such as the Internet going down while giving a test in the computer lab, the clickers not syncing properly with STS and teachers' online grade books, and also the computer labs themselves. Mr. Simpson said, "the lab is the problem. Physically getting in the lab, getting the lab

scheduled, and then finding a lab where the kids have not destroyed a number of the computers." But as Mr. Hall noted, "you've always got to have a backup plan" when using technology, so he still described the process as "pretty smooth," with much of the responsibility for that smooth transition going to Mr. Simpson for his support and expertise. Despite challenges and the occasional technological glitch, the department began to use STS for student assessment and most teachers became more comfortable with the system along the way.

Successful changes in teaching and learning. When individual teachers or small groups of teachers set a priority to change something about their instruction, they tended to succeed. Through critical reflection on past instruction, learning goals, and student assessments, participants evaluated past instruction and changed their curriculum materials to better suit their students' needs. For example, Mr. Davis set out at the beginning of the year to update his unit assessments for his general psychology classes, "because, as teachers, you kind of get in the comfort zone of 'I already have this test' [and fail to improve upon it from year to year]". For each unit in the fall of 2013 semester, he carefully edited the assessment, critiquing each test question—evaluating the language used in the question, the importance of the content contained, and the relevancy for students. Because it was a goal that was important to him and for his students' achievement, he said, "I've made myself go through the tests and ask myself about the questions. And so I have done what I wanted to do." While he has made progress in revising his assessments, he noted, "it's a continued process."

Ms. Owen worked with Mr. Cole and others in the Integrated Social Studies (ISS) PLC to plan her instruction and gather curriculum materials. She focused on planning

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instruction for ISS over her other courses because Fall 2013 was the first time she taught

the course. She said, "I've definitely learned a lot…probably the biggest help is just

talking to other teachers who teach it or have taught it before." While Ms. Owen "learned

a lot" through planning for ISS, Mr. Cole also credited working with her as greatly

improving the ISS curriculum for the entire PLC. Since Ms. Owen questioned the way

things had been done in previous years, she helped the group critique past curriculum. In

particular, the collaboration between Mr. Cole and Ms. Owen helped Mr. Cole narrow his

curriculum for students and focus more clearly on learning goals.

Like Ms. Owen, Ms. McDonald was in her first semester teaching a new course—

the first year of the IB U.S. history course, History of the Americas. In addition to

planning for the course, much of which was done collaboratively with Ms. Wayne, Ms.

McDonald also focused her learning on U.S. history content knowledge. She said:

> I've just realized I have to, you know, any time I can, pick up a textbook, pick up
> any kind of book, any kind of historian's like writings, whatever it is, and start
> reading it, and not worry so much about the facts but at the end of it kind of write
> down, all right, this is what, you know – because it's not so much about the facts.
> It's more about creating an overall picture that's going to, you know, help the
> kids. And so now that I started doing that, I see better results from them, better
> results on their bell ringers, better results in the different things that we're doing
> in class. And they're participating more and they're connecting and they're asking
> questions.

Ms. McDonald's efforts to improve her U.S. history content knowledge paid dividends.

She felt more confident in the material, was able to help students increase their

understanding of the material beyond the textbook, and noticed improved student

responses in class and on formative assessment. When participants focused on a

professional learning goal, they tended to make progress towards meeting that goal;

however, many participants were pulled in divergent directions in their learning.

Not Every Goal Can Be a Focus

When participants had multiple learning goals, it was difficult to make progress toward every professional learning goal. Teachers' focus was split among different types of learning goals. Some goals were personal, such as focusing on improving one's own content knowledge or revising the curriculum for a course independently. Other goals were collective, as in Ms. Wayne and Ms. McDonald's goal of improving the curriculum for the first year of the IB History of the Americas course. Another type of goal was departmental, such as the institution of the social studies writing plan and implementing the state technology system (STS) for common assessments. The departmental goals tended to be the implementation of some change mandated by the school, district, or state administration. Teachers' limited time, energy, and outside support forced them to choose certain goals over others.

Following the overall success of implementing STS as a department, Mr. Simpson's own informal professional learning goals suffered. He explained, "this fall, I have not really had an opportunity to do much of anything [for myself] with some of the other things I've taken on," such as leading STS for the department and school, presenting at several local and state conferences and meetings, and communicating with the state on STS issues. He had wanted to focus on further expanding his world history content knowledge but did not have the time to read history books as he usually did. Mr. Simpson's individual learning took a back seat to his leadership in the department and school, but he still remained very active with his ongoing collaboration with Ms. McDonald, as the two continually worked together to plan instruction and assessments for their classes.

Ms. McDonald, too, felt the strain of limited time to commit to some of her goals. She was in her first semester of teaching the IB History of the Americas year 1 class and spent much of her time focusing on content and curriculum for the new course, often working with Ms. Wayne on both. But she said:

> Because I'm so focused on that, I feel like some of my world [civilizations] classes might be lacking a little bit because there's things that I thought about, like, "oh, I need to change that." And then I run out of time to change it.

It is important to note, however, that she did institute several changes that she had not planned, such as developing a new strategy to integrate reading and writing skills into social studies instruction and implementing assessments in STS using the clicker system, both of which benefitted the department's goals rather than her own learning.

Mr. Davis also did not focus on one of his individual learning goals—creating an online presence for his class. Early in the fall semester, he talked about wanting to set up something online to have materials and information be more convenient and accessible for students. When I asked him towards the end of the study period about that goal, he laughed and replied, "Didn't happen. Didn't happen….I thought about it quite a bit!" He went on to provide a strong explanation of setting priorities for various goals and having to make tough choices on the focus of his informal professional learning. He said:

> With other things that I'm trying to do, I think I've been sort of like, I think I kind of put that on the back burner because it is a way to make things more convenient [for students] but I'm not necessarily sure if it's something that's as important as improving the quality of what's going on in class.

Mr. Davis still wanted to set up an online presence for his classes, but that goal was not a priority. He successfully revised all of his unit assessments, began using the iPad in class, and engaged in more student-centered learning practices; he devoted much of his time to those changes rather than to setting up a Twitter account.

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Summary

Through a careful analysis of all of the case study data—informal discussions and formal interviews throughout the study period, informal and formal observations of scheduled and spontaneous learning experiences, and relevant documents such as written reflections—several themes emerged as important findings. I organized these themes into five claims about this social studies department's informal professional learning. Participants were engaged in a variety of formal and informal professional learning experiences, both individually and collectively, but placed a greater value on their informal professional learning experiences. They relied heavily on reflection throughout their informal professional learning and engaged in both individual and collective reflection on practice. Participants engaged in little tangible evaluation of their professional learning or its effect on student learning. Leadership and departmental dynamics were influential for informal professional learning. Finally, progress towards informal professional learning goals was varied, with more progress being made on those goals with the most departmental and administrative support or of highest priority for the individual.

Chapter 5

Discussion and Implications

The main purpose of this study was to explore how secondary social studies teachers navigate their informal professional learning. Using an embedded single-case study, I followed the informal professional learning of one secondary social studies department. Individual teachers and pairs of teachers emerged as embedded units of analysis within the department. I applied ongoing thematic analysis to my case study data—interviews, observations, and relevant documents. In design and analysis, I also considered theoretical propositions and rival explanations, as outlined in Chapter 3.

Participants' informal professional learning consisted of continuous reflection on their teaching practice and social studies content knowledge with a focus on improving their knowledge and practice to benefit students. Participants' experiences with informal professional learning supported an existing understanding of professional learning as, "*learning to do the right things* in the setting where you work" (Elmore, 2004, p. 73). Professional learning requires ongoing, sustained reflection and adaptation over time as well as teachers working together, supported by school administration and policy changes (Fullan, 2007).

In this chapter, I will expand upon the study findings and discuss further concerns and implications of the study—connecting to the existing literature and the theoretical framework for this study—and conclude with recommendations for future research. Findings indicated that participants were engaged in a variety of formal and informal professional learning experiences, both individually and collectively, but placed a greater value on their informal professional learning experiences. Participants relied heavily on

reflection throughout their informal professional learning but engaged in little tangible evaluation of their professional learning or its effect on student learning. Leadership and departmental dynamics were influential for informal professional learning. Progress towards informal professional learning goals was varied, with more progress being made on those goals with the most departmental support or of highest priority for the individual. It is clear from the findings that informal professional learning was effective but also imperfect; the ways in which departmental and administrative leaders steered teacher informal professional learning warrants further consideration; and while technology is clearly utilized in other cases of teacher professional learning, it was largely missing here.

Imperfections of Informal Professional Learning

While informal professional learning was an effective form of learning for the social studies department, as experienced by the participants in this study, it was not enough to provide for all of their professional learning needs. It has both affordances and constraints and should not be construed as a substitute for formal professional learning. Previous research in teacher professional learning suggests that programs should focus on the improvement of teachers' content and pedagogical knowledge; use active learning methods; be sustained over time; pay attention to the particular context of the students, teachers, and school; and include collective participation and collaboration among teacher participants (Desimone, 2009; Elmore, 2002; Hawley & Valli, 1999; Sykes, 1999). Participants' informal professional learning experiences confirmed the importance of these qualities for effective learning and emphasized the affordances of informal professional learning. The informal professional learning in which participants engaged

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allowed them to attend to these characteristics more than formal professional development they found less relevant to their own learning needs. In particular, participants chose informal professional learning experiences that allowed them to focus on their content knowledge (i.e., reading books independently); pedagogical knowledge (i.e., hallway interactions with a colleague asking for advice on a lesson); sustain their learning over time (i.e., independently reflecting on their instruction each day); attend to their own teaching context (i.e., participation in subject-area PLCs); and collaborate with others (i.e., sharing ideas over lunch for integrating new technology). However, participants' informal learning could have been even more effective if some of the limitations of the department's informal professional learning were addressed.

The informal professional learning in which the social studies department engaged lacked outside support, which allowed other initiatives to take priority over teachers' own learning goals; in addition, in some cases, the informality itself limited the effectiveness of teachers' learning, especially in collaborative learning experiences. Finally, while this study did not include a focus on teachers' formal professional learning, it was clear that some formal professional learning opportunities were available for the department but not capitalized upon. In the following sections, I connect these constraints of participants' informal professional learning with the literature and theoretical framework that informed this study.

Limitations on Informal Professional Learning

While informal professional learning was an effective form of learning for the social studies department as a whole and for the individual teachers, it was also limited. As defined previously, informal learning includes voluntary and unstructured (Richter et

al., 2011) learning experiences that occur in the workplace (Jurasaite-Harbison & Rex, 2010). As the definition implies, informal professional learning lacks the support and structure of more formal learning opportunities. In many ways, the lack of support and structure was beneficial; for instance, it allowed participants to tailor their learning experiences more closely to their needs and their students' needs and liberated participants from administrative demands. Yet in other ways, more support or structure may have made the informal professional learning more effective, particularly in peer observations and professional learning community (PLC) meetings. The concept of communities of practice within social and situated learning theories (Lave, 2009; Lave & Wenger, 1991; Wenger, 1998, 2009) suggests that meaningful learning can occur in collaborative settings, but as discussed in the following subsections, the potential of collaborative informal learning was not fully realized in the social studies department at GWHS.

Peer observations. Fullan (2007) and Easton (2008) envisioned professional learning within a school context that includes teachers observing one another in a non-evaluative manner and has structured time for teachers to collaborate during the regular school day. Although they described peer observation and structured teacher collaboration as formal learning experiences, because neither follow traditional professional development models, they better fit the definition of informal professional learning as used in this dissertation. Participants expressed an interest in observing one another's teaching but also expressed reservations about the willingness of colleagues to be open to such exchanges. As noted in Chapter 4, an impending policy change in the teacher evaluation system at the state level will move such observations along the

continuum (Eraut, 2004) from informal professional learning closer to formal

professional learning by requiring teachers to observe one another. As a result, the

principal encouraged teachers to participate in peer observations in order to prepare

themselves for the required peer observations in the next school year. Few of the social

studies department members did so during the study period; those who did expressed

disappointment with the experience, largely because there was not a structure in place to

guide their participation. They did not have a clear purpose for the peer observations

beyond complying with an administrative mandate, nor did they have an expectation of

how participation might benefit them. While the answer to every challenge in education

cannot be one more form to fill out, perhaps a form or an observation protocol would

help teachers focus on the learning that can take place before, during, and after a peer

observation. If the department had taken some time to brainstorm purposes of peer

observation, how they might conduct the observations, and how both parties might

benefit from the peer observation process, teachers may have better understood the

purpose and process and, hence, may have gleaned more from their participation.

     The implementation of a policy change without a supporting structure—as was

the case in encouraging peer observations with little administrative guidance—illustrates

the absence of one of the characteristics of an information ecology, support from

keystone species. A keystone species is one that is "crucial to the shape and stability" of

the ecosystem (Nardi & O'Day, 1999, p. 79). Nardi and O'Day (1999) explained, "when

we add new technologies to our own information ecologies, we sometimes try to work in

the absence of essential keystone species….necessary to support the effective use of

technology" (p. 53). In the ineffective peer observations, administrators who provided

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more structure or support to teachers in their observations might have formed a missing keystone species. In this case, the administration suggested the implementation of a new technology—peer observations—but called upon teachers to implement it on their own, without administrative support. It remains for additional research to examine the extent to which this might be the case, but it is clear that the peer observation was not an effective change in the ecosystem of the GWHS social studies department.

Nardi & O'Day (1999) emphasized the importance of community members asking a multitude of questions when adapting a new technology to an information ecology. In this case, even in the absence of administrative support, if participants had taken more time to question the new policy of peer observations, they might have come up with their own purposes for the observation and, hence, found the process to be more beneficial. Nardi & O'Day (1999) wrote, "'why' questions explore motivations, objectives, and values, while 'how' questions focus on logistics and tactics. Unless the 'why' questions are answered, the greatest skill in addressing 'how' questions can still result in a misguided technology implementation" (p. 70). Only 4 of the 12 participants found ways to institute the new policy of peer observations, and, since they did not fully consider the "why" questions, the resulting learning was limited. The lack of community members asking these critical questions represents another missing keystone species. Perhaps a small group of teachers asking critical questions about the implementation of the peer observations would have increased the effectiveness of the change.

Professional learning communities. PLC meetings offer both affordances and constraints in terms of teachers' informal professional learning. As I noted in Chapter 4, scheduled PLC meetings were quite short—lasting 10-20 minutes—and lighthearted.

Both characteristics of the PLCs supported a strong, friendly community culture in the

department and encouraged attendance and participation in the meetings. Participants

often joked with one another about recent formal professional development meetings,

interactions with difficult students, and challenges with teaching in general. I never

observed a cross word between colleagues or even tension; when participants

disagreed—which was rare—it was settled in a collegial manner. Because the meetings

were so brief, however, engagement in collaborative work was also rare.

It was the spontaneous collaborations between teachers, rather than the monthly

PLC meetings, that showed evidence of building a more productive community of

practice. While all participants enjoyed meeting in their PLCs, they did not actively work

on shared tasks in those groups. Outside of the scheduled PLC meetings when teachers

engaged in *joint enterprise*—a collective process in which all participants were mutually

engaged in negotiating a response to their shared endeavor (Wenger, 1998, p. 77)—the

communal learning ascribed in the literature to a community of practice was evident. For

example, Ms. McDonald and Ms. Wayne met after school to map out the upcoming unit

in History of the Americas (HOA) 1. After they discussed the upcoming unit, Ms.

McDonald brought up her wish to have students conduct some small group research and

present it to the class as a way to get students more deeply engaged in some of the

content. The two negotiated to include a small group research project in a future unit.

Developing this project represented a joint enterprise in which they were mutually

engaged. While Ms. Wayne was hesitant at first, she agreed to plan and implement the

project with her classes; similarly, although Ms. McDonald had envisioned a group

project on a grander scale (she had proposed that students plan 20-minute presentations

all in one day but agreed to limit the student presentations to 10 minutes and to have groups present on different days throughout the unit), by negotiating with Ms. Wayne, she agreed to scale down the project so that it would take less time for students to complete and allow for more in-class instructional time throughout the unit.

With the community of practice growing out of spontaneous interactions rather than scheduled PLC meetings, membership in the communities of practice tended to be limited to those teachers who gathered spontaneously. Spontaneous interaction was influenced by geographic location within the school (e.g., Ms. McDonald and Ms. Allen's classrooms were right next door to one another, so they could easily share ideas and discuss common problems just by poking their head in the classroom next door), social interactions (e.g., Ms. McDonald and Ms. Wayne became friends outside of work and discussed HOA year 1 in social situations), and physical presence (e.g., Mr. Simpson always arrived to school at least an hour and a half early; other teachers knew his early arrival time and would ask him for help, particularly with the new state technology system, before school started).

Wenger (1998) described participants in a community of practice as mutually engaged in negotiating meaning with one another (p. 73). Although some teachers were mutually engaged, not all participants were equally engaged. Mr. Hall, for instance, attended all scheduled world civilizations PLC meetings, but because he was not included in the unscheduled meetings between Mr. Simpson and Ms. McDonald, he was not "on the same page" with them. This disengagement did not seem particularly purposeful; Mr. Hall attended and participated in all scheduled meetings, but because Mr. Simpson and Ms. McDonald were geographically (their classrooms were just around the corner from

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one another, while Mr. Hall's classroom was in another hallway), and socially closer to one another than to Mr. Hall, they found it convenient to work together and then later fill Mr. Hall in on the work they had done or the decisions they had made. No one seemed unhappy with the arrangement, but it did limit the functioning of the world civilizations PLC as a community of practice. If the building and functioning of the community of practice occurred primarily in the PLC meeting, rather than during spontaneous collaborations, mutually negotiated engagement might have been more common.

Presence of Formal Professional Learning

While I focused exclusively on informal professional learning in this study, I did observe and talk with participants about some of their formal professional learning. Teachers discussed their formal professional learning opportunities in department meetings as well as in spontaneous hallway or after-school conversations. Much of their experiences reinforce the common conception of formal professional development as ineffective and poorly constructed. For example, throughout the study period, the teachers of core social studies classes were required to participate in several trainings for the Literacy Design Collaborative (LDC) project, a national project funded by the Gates Foundation, of which the state is a part, that encourages writing instruction across content areas. Each core social studies class was required to complete an LDC writing project with students. Over the past several years, department members had attended these trainings to construct writing prompts for students that combine social studies content with literacy skill building. The implementation of LDC was staggered, so the 9th grade teachers had been using LDC modules for three years, while the U.S. history teachers were using LDC writing projects for the first time this year. During the fall of 2013, LDC

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trainings were focused on using a common scoring rubric to evaluate student writing on LDC tasks; teachers complained that the district-generated rubric did not hold students to the same high expectations as the George Washington High School (GWHS) teachers did. Participants expressed frustration with being taken out of their classrooms to attend trainings in which they did not have a voice in the scoring rubric they were using. They disagreed with the value of the rubric itself, believing it to lower standards for student writing, rather than raising those standards as intended by the LDC project. Participants' frustration with the LDC trainings was universal among department members and discussed often in both spontaneous and planned meetings.

Attendance at the National Council for the Social Studies (NCSS) annual conference was also a topic of conversation among the teachers. Ms. Allen, the department chair, attended the 2012 conference—and has attended the national conference regularly throughout her years of teaching social studies—and she encouraged others to attend the 2013 conference. At the August and September department meetings and U.S. history PLC meetings, Ms. Allen shared information about the dates and prices of NCSS and asked if anyone was interested in going. She said that she believed teachers could be funded for part of the cost of attending but that teachers would need to pay some of the cost out of pocket. Teachers seemed interested in attending the conference but wary of the financial cost to them. As Hess and Zola (2012) noted, the funding of formal professional development for social studies teachers is rarely a priority. These participants were, in fact, in a better situation than many in that their school would provide some financial support for their attendance at a professional social studies

conference; however, in the absence of full financial support, none of the teachers was able to attend NCSS 2013.

Finally, department members missed an opportunity for no-cost formal professional learning at the state level. The upper Southern state in which this study occurred was in the midst of revising its social studies standards, a task that involved teachers invited from across the state. None of the teachers in the GWHS social studies department was among those invited, however. Participation in a statewide reform effort could have offered opportunities for quality formal and informal professional learning, but the opportunity to be on the standards committee was quite an exclusive one. Those teachers who were selected to serve on the committee were those who worked with the state department of education in recent years on other initiatives. In the past, teachers from GWHS' school district participated on such committees, but without a strong leader or advocate for social studies at the district level, they were not included in the standards reform effort. This exclusion highlights another potential keystone species (Nardi & O'Day, 1999): central administration advocates. While department teachers showed strong leadership within the social studies department and school, with Mr. Simpson even called upon to present about the State Technology System (STS) at state conferences, they were not represented at the district or state level as expert social studies teachers or leaders (Mr. Simpson was recognized as a technology leader, rather than a social studies expert) so were not included in the standards revision project in social studies.

Considering the Importance of Leadership

The interaction between leadership and teachers' informal professional learning warrants further consideration. In the social studies department at GWHS, teachers

shared leadership roles and experiences in various ways; leadership—whether a participant's own or someone else's—steered teachers' informal professional learning. The concept of distributed leadership (Spillane, 2006) complements information ecology theory by taking the interaction among members and context into account. Distributed leadership emphasizes "the collective *interactions* among leaders, followers, and their situation" (Spillane, 2006, p. 4). Leadership was shared within the department; for example, Ms. Allen encouraged other U.S. history teachers to lead PLC meetings. Even though she had a formal leadership role as department chair, she wanted to ensure that others were able to lead as well.

Role of the Department Chair

The communal culture of the GWHS social studies department was remarkable, due in part to the strength of leadership of Ms. Allen, the department chair. Spillane (2006) cited four forms of capital that teachers use to describe influential leaders:

- *Human capital* involves a person's knowledge, skills, and expertise.
- *Cultural capital* refers to a person's way of being and doing, interactive styles that are valued in particular contexts.
- *Social capital* refers to a person's social networks or connections but also concerns the prevalence of norms such as trust, collaboration, and a sense of obligation among individuals in an organization.
- *Economic capital* includes money and other material resources, including books, curricular materials, and computers, among other things. (p. 48)

Ms. Allen exhibited each of these forms of capital.

As one of the most experienced teachers in the social studies department, other teachers relied on her *human capital*—coming to her for advice about classroom management, pedagogical strategies, or even interactions with other faculty members. The door to her classroom was always open for other teachers in the department; Ms. McDonald, in particular, would come by during the day when Ms. Allen had a planning

period to talk about common issues, such as motivating students to write high quality essays in the HOA class. Ms. Allen's welcoming demeanor was part of her *cultural capital*. The departmental culture was heavily influenced by Ms. Allen's *social capital* through her ability to build a trusting, team-oriented atmosphere. Siskin (1994) found that social studies departments are particularly unlikely to enjoy a collaborative atmosphere, so the influence of Ms. Allen's social capital is all the more notable. Finally, as department chair, Ms. Allen had access to the department's funding, so she had *economic capital*—she was able to order curriculum resources for the department, organize formal learning experiences on behalf of the department, and request additional funds for departmental purposes, such as support for teachers to attend NCSS. But in keeping with her valued cultural and social capital, she included the department in financial decisions and asked them how they would like to spend departmental funds.

Ms. Allen, as a strong leader who also facilitated a trusting, communal environment within the social studies department, represents a keystone species (Nardi & O'Day, 1999): a departmental leader exhibiting the four important forms of capital to influence others' learning and practice (Spillane, 2006). Spillane's focus was more on administrative leaders, such as principals and assistant principals, with teacher leaders sharing in leadership roles. Ms. Allen illustrates some ways in which teacher leaders can also influence the learning and functioning of teachers within a school—in this case, within the GWHS social studies department. The growth of teachers into leaders and the continued professional learning of teacher leaders also deserve further attention.

Roles of Teacher Leaders

Several teachers in the GWHS social studies department took on leadership in the department and/or school. These various roles of leaders and participants contributed to the functioning of the information ecology of the department. Nardi and O'Day (1999) wrote, "a diverse information ecology is a lively, human, intensely social place…[that] has many different resources and materials and allows for individual proclivities and interests" (p. 52). Each teacher had different strengths and interests that benefitted the whole; in return, individual weaknesses could be balanced by others' strengths. For example, while Ms. McDonald was uncomfortable using clicker technology to assess student learning, Mr. Simpson often used the clickers with his students and volunteered to help Ms. McDonald set up the technology in her classroom.

Ms. Allen, the department chair, and a veteran social studies teacher with 28 years of experience, was at the forefront of departmental leadership. She led and organized monthly department meetings and also facilitated communication with the administration and the enactment of policy initiatives. She was a common go-to person for advice about classroom management, balancing engaging social studies instruction with the demands of high stakes testing, and general teaching challenges, such as time management and parent-teacher conferences. She commented that several years prior to the research study, when there were a significant number of beginning teachers in the social studies department, she "used to literally have a line at my door" after school, with teachers asking for advice on everything from planning instruction to discipline. As noted above, Ms. Allen fit Spillane's (2006) description of an influential leader for other teachers. She had a formal leadership role, but she also provided informal guidance for other teachers

through her open-door policy and her willingness to put others' learning above her own.

When talking about the line of other teachers at her door after school, she said:

> Of course I never got anything done, but I figured if they wanted it and that they
> needed it, and if—I would rather they come to me and supposedly get the "right"
> answers than go to somebody else that would just blow them away and tell them
> something entirely different.

Another teacher with 28 years of experience teaching social studies, Mr. Simpson,

led the school-wide implementation of the state technology system (STS), and

particularly encouraged social studies teachers to get "on board" with the use of the

technology system for their common unit assessments. In addition to being a resource for

social studies teachers and others regarding STS and technology implementation in

general, Mr. Simpson was also known as an expert in history content within the

department. Other social studies teachers nicknamed him, "Simpsopedia", a play on the

name of the popular online encyclopedia, Wikipedia. Similarly to Ms. Allen, less

experienced teachers turned to him for help and advice—mostly with content knowledge

and instructional technology. Ms. Wayne said:

> I call [Mr. Simpson] my work dad. So I've gone over [to his classroom next door]
> and just—even just textbooks. I'm using this one, and he'll be like, "Here, take
> this [textbook, too]." He, at some point last year, brought me over boxes [of
> content books] and he goes, "Here, you're teaching [HOA] year 2."

Like Ms. Allen, Mr. Simpson played an important role in the functioning of the social

studies department as an ecology. Particularly with the implementation of the policy

changes surrounding the STS, he helped the other department members adopt the change

so that it would be effective (Nardi & O'Day, 1999). Without his guidance and

encouragement, it is likely that the policy change would not have been as effectively

implemented. He noted that each school in the state selected one person to lead the STS

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coordination and that some other schools did not necessarily have a teacher leading the change; rather, other schools used administrators or guidance office staff. While it was difficult for him to spend time out of the classroom attending trainings and helping other teachers, Mr. Simpson explained that a classroom teacher would be more "experience[d] with [STS]" than a non-classroom staff member, which helped make the change more effective in the school ecosystem.

Less experienced teachers also took on leadership roles, particularly when they were encouraged by others to do so. Ms. McDonald shared with the department—at Ms. Allen's prompting—her instructional strategy to address school literacy goals while still attending to social studies content. Ms. Owen joined a school committee focusing on student behavior management because one of the administrators "emailed me and said that she would like for me to be on it. I didn't have to, but I thought it was nice to be asked." She further noted that being part of that school-wide committee had been good for her because previously, "I haven't really had that [leadership role] as much." Ball, Maguire, and Braun (2012) argued that policy is *enacted* in schools, and that this process involves a diverse set of actors, including teacher leaders. Their choice of the term enacted was purposeful, to mean that policy did not just happen or become implemented without interaction with the school context and those within it. They defined policy enactment as "collective and collaborative…in the interaction and inter-connection between diverse actors, texts, talk, technology and objects (artefacts) which constitute ongoing responses to policy" (2012, p. 3). The importance of context in enacting policy changes again points to the complex interactions among the species within the ecosystem in order for a new technology to effect change in the ecosystem (Nardi & O'Day, 1999).

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The leadership roles that Ms. McDonald and Ms. Owen adopted illustrate the way that

multiple species—here, emerging leaders—influence the growth of the department and

school ecologies.

Not only did Ms. Allen encourage other teachers in the department to speak up in

department meetings and take on other leadership roles, she also made it a point to ask

other teachers in the United States history PLC to host PLC meetings in their rooms. She

said that she was not the leader of the U.S. history PLC; rather, it was a collaborative

endeavor, and as such, meetings should be held in other teachers' classrooms, not just her

own. Such seemingly small acts contributed to the communal culture of the social studies

department because "a diverse set of perspectives is needed to develop a healthy

information ecology" (Nardi & O'Day, 1999, p. 74). Siskin (1994) described four types

of secondary departments, with the strongest community type being the bonded

department and the next strongest being bundled:

> *Bonded* departments represent the 'socially cohesive community of Michael
> Huberman's challenge, where members all work collaboratively with a high
> degree of commitment toward departmental goals. *Bundled* departments are those
> in which inclusion is high, but commitment to a common purpose is low: teachers
> support each other when needed and coordinate their efforts, but still preserve
> much of the image of individual artisan. (p. 99-100)

Based on Siskin's descriptions in her case study of the math, English, science, and social

studies departments at three high schools, the GWHS social studies department falls

somewhere in between a bonded department and a bundled department. The cohesiveness

of the GWHS social studies department is particularly remarkable because, "of the four

subject areas studied, Social Studies appears to be the least likely to form bonded groups"

(Siskin, 1994, p. 164). Indeed, the culture of the GWHS social studies department shifted

over time. When Ms. Allen and Mr. Simpson joined the department over 20 years prior to

this study, the department was deeply fractured and more what Siskin labeled as a *split* department, where "loyalties and inclusion are split between conflicting factions" (p. 100).

Part of the change from split department to a more bonded department simply occurred over time as older, "factioned" teachers retired and new, community-oriented teachers joined the department. Clearly, this change was not preordained; different new hires would have affected the community building of the department. But as department chair, Ms. Allen also intentionally encouraged community-building activities; for example, she organized department celebrations at the end of the school year and at winter break. Such social activities helped department members build relationships, which, in turn, made them more comfortable with one another professionally. As social learning theory suggests, these interactions are vitally important for building a community that contributes to individual and group learning (Wenger, 1998). To the extent that it was built upon shared understandings and goals, the department represented an authentic community of practice to a greater extent than the more intentional collaborations of the PLCs.

Growth of Teacher Leaders

The two most experienced teachers in the GWHS social studies department—Ms. Allen and Mr. Simpson—were often the source of advice and support for others in the department, but they rarely sought help from their less experienced colleagues. Ms. Allen noted, "I think I've reached the point where I'm kind of the wise sage, which is kind of scary! And I'm the one responsible for their professional learning as opposed to my professional learning." Through these interactions with younger teachers seeking her

advice, however, she got new ideas for her own teaching. Ms. Allen was open and receptive to new ideas, and they seemed to come to her, rather than her needing to seek out advice or ideas from colleagues. She said, "I still learn from young teachers. I mean, how can you not learn from young teachers?" She explained how she benefitted from the expertise of newer teachers and student teachers:

> They always bring something new…some of those little, those teaching strategies, it's like, "Hey, that's cool." So I'm like, "here's something [good]" then I'll go, "Show me what you did" or "How did you do that?" Or, again, I'm not above asking because I think you can learn best from others sometimes.

Ms. Allen seized the opportunity to learn more about new ideas and teaching strategies when younger teachers came to her for help or just to talk; she also organized an informal group of other social studies department chairs—mostly experienced teachers—in the local school district who got together throughout the school year to communicate and share ideas.

Bliss, Fahrney, and Steffy (1996) noted in their study of the roles of secondary department chairs that there is little or no support for the learning and training of department chairs. By organizing a regular gathering for local social studies department chairs, Ms. Allen answered this lack of formal support for this group in an informal way. Huberman (1995) and Fessler (1995) identified stages in teachers' careers; both noted that at the later stages, when teachers near retirement, they begin to disengage. But Mr. Simpson and Ms. Allen did not disengage; rather, they actively led the department—and others in the school and district—in various ways. While they were fully engaged in supporting the learning of others, they had less support for focusing on their own professional learning. This is not to say that they did not continue their own informal professional learning, just that they did so with limited support of others. Ms. Allen

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benefitted from collegial conversations with her fellow social studies department chairs, gleaned new instructional ideas from younger teachers, and learned about new technology from students, but all of these informal avenues for professional learning were self-initiated. She was exceptional in many ways, but the zeal with which she stayed engaged in her own and others' informal professional growth was particularly remarkable.

While Ms. Allen and Mr. Simpson were able to continue their informal professional learning with little support, based on the literature, they seem to be the exception among teachers who are close to retirement. More focus on how to support the continued professional growth of experienced teachers is needed. Some of the benefit of informal professional learning is that it is less structured and more individualized than formal professional learning; however, we might be able to find a balance that offers support yet freedom for teachers to steer their own learning. One promising model for supporting continued professional learning of teacher leaders is the concept of the *teacherpreneur* (Berry, Byrd, & Wieder, 2013). They defined teacherpreneur as "a classroom expert who still teaches while finding time, space, and (ideally) much-deserved reward for spreading both sound pedagogical practices and policy ideas" (p. xvii) in a way that benefits "both their students and their teaching colleagues" (p. 16). The Center for Teaching Quality (CTQ), home of Berry, Byrd, and Wieder, describes itself as "a national nonprofit that is transforming the teaching profession through the bold ideas and expert practices of teachers. CTQ cultivates opportunities for teachers to connect, learn, and lead—for the benefit of all students" (2013, p. x).

CTQ's work focuses on how teacherpreneurs can benefit students and other teachers, but it also builds in support for teachers as they develop into teacher leaders, or teacherpreneurs. For example, each chapter of Berry, Byrd, and Wider's (2013) book, *Teacherpreneurs: Innovative Teachers Who Lead But Don't Leave*, ends with a series of activities, encouraging the leader to create his/her own goals for teacher leadership, reflect upon his/her teaching career, build capacity as a leader through taking action, and collaborate with others. Each chapter ends with the "Now What?" activity, which is four-fold: "Goal," "Think," "Act," and "Share." A teacher who reads the book and follows the series of chapter activities would be able to grow as a leader. Similarly, CTQ hosts a virtual collaborative for teachers to come together and share ideas called the *Collaboratory* (CTQ, 2013). The collaboratory is open to all teachers and other interested parties and is free to join. However, even though there was a teacherpreneur who was working with CTQ in another high school in GWHS' school district, none of the teacher leaders in the GWHS social studies department participated with CTQ online or otherwise. Given the department's enthusiasm for continued learning—particularly the leadership and continuous learning of Ms. Allen and Mr. Simpson—I can only conclude that they were not aware of CTQ's work or support. In supporting informal professional learning, it is not just a lack of support that is problematic, but also limited awareness of the support that does exist.

Digital Technology as a Tool for Informal Professional Learning

While my interpretation of *technology* within Nardi and O'Day's (1999) information ecology is broad—including not only digital technology tools but any innovation or new input into the system—digital technology tools for teacher informal

professional learning deserve special attention. For better or worse, "digital technologies are changing the way we live, work, and learn" (Borko, Whitcomb, & Liston, 2009, p. 3). Borko and colleagues (2009) summarized the most common forms of digital technology used for teacher professional learning, "(a) video and digitized artifacts as a tool to provide a shared classroom experience in teacher education and professional development, (b) online social networks for educators, and (c) online professional development programs" (p. 5). CTQ's online collaboratory, part of the teacherpreneur project discussed above, is just one example of ways digital technology can support teachers' professional learning. The only participant who talked about using technology to access professional learning tools was Mr. Cole, who taught general and advanced psychology elective courses and one section of Integrated Social Studies (ISS). He accessed a video of classroom use of Socratic Circles to help him prepare to implement a Socratic Circle in his classroom for the first time; in addition, he enrolled in one online course through Stanford University—a MOOC run by Coursera, discussed below—to build his psychology content knowledge. Although the social studies department at GWHS rarely used digital technology to facilitate their informal professional learning, it is clearly utilized in teacher professional learning, both formally and informally.

Massive open online courses (MOOCs) are quickly growing and provide both online professional development courses and voluntary online social networking opportunities. Two major MOOC providers, Coursera and edX, partner with elite universities to provide course content (Pappano, 2012). The professional development courses are free to audit, but there is generally a fee to receive a certificate verifying completion of the course. In addition to MOOCs, online social networking sites are

growing and can "enable educators to work and learn together in synchronous and asynchronous discussion forums, with the purpose of sharing expertise and supporting practice" (Borko et al., 2009, p. 5). CTQ's collaboratory provides one example of a social networking site aimed at teachers; for over 10 years, *Tapped In* provided a network for teachers (Schlager & Fusco, 2003) before lack of funding caused the collaborative site to close. Teachers utilize other social networking sites for professional purposes, such as Twitter (e.g., #sschat, a weekly synchronous meeting of social studies teachers on Twitter to discuss various topics), Facebook (e.g., AP World History Teachers group, a closed group in which teachers share lesson plans, ideas, and discuss common issues), and *LinkedIn* (for general professional networking) provide opportunities for teachers to come together in various ways.

Even though the GWHS social studies department had a fair amount of access to instructional technology—for example, each participant had a projector hooked up to their teacher computer, a document camera, and access to student response clickers in the classroom—and all department members focused on improving their instructional and administrative uses of technology as part of their professional learning goals (e.g., STS), with the exception of Mr. Cole, they did not utilize technology to advance their own informal or formal professional learning. Several participants used Twitter and/or Facebook to communicate and share documents with their students, but none talked about using social networking sites for their own professional learning. In addition, two participants—Ms. Allen and Mr. Stewart—"connected" with me on LinkedIn, but it is unclear how or whether they benefit from using the site.

Implications

This study suggests expanding the academic dialog surrounding teacher informal professional learning to include the perspectives and experiences of secondary social studies teachers working within a department. Findings indicated that participants value their informal professional learning experiences, engage in reflection throughout their informal professional learning, are influenced by departmental leadership, and experience successes and failures in their informal professional learning goals. This study highlights the informal professional learning activities in which teachers engage as they continually learn and reflect on their teaching practice. Informal professional learning offers new ways to support teacher growth, particularly important in the context of shrinking budgets for staff development. The recent *College, Career, and Civic Life (C3) Framework for Social Studies State Standards* (NCSS, 2013) adds a level of urgency for finding effective ways to support the professional learning of social studies teachers as teachers will need support in order to implement the C3 Framework (Swan & Griffin, 2013).

Affirmation of Teachers' Informal Professional Learning

One of the ways in which this study is important is the respect it affords in-service teachers. Too often, educators and the general public subscribe to the deficit model of teacher professional learning (Huberman & Guskey, 1995). Just as students do not come to the classroom as empty vessels to be filled with the teacher's knowledge, teachers do not come to the classroom—or to a formal professional development seminar—*lacking*. They have strengths and experiences that should be built upon, rather than ignored. Public berating of teachers and the failings of public schools have become commonplace in recent years (e.g., *Waiting for Superman*). This study shows that the perception of

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teachers as lazy, complacent, or mired in mediocrity is incorrect. More research should celebrate the hard work and dedication of classroom teachers, even while challenging them to apply that work more and more effectively.

Even knowing my focus on the informal learning of their social studies department, many of my participants discounted their own growth as something less than "learning." In positive ways and in limiting ways, they viewed their continued growth as part of the job of being a teacher. It is laudable that this secondary social studies department is deeply committed to ongoing professional growth; however, they do not always appreciate or celebrate their own successes, nor do they see the potential inherent in informal learning opportunities. While there is certainly something to be said for not resting on their laurels, failing to see the value of informal professional learning limits their growth. For example, since participants did not consider the peer observation initiative encouraged by the administration to be a worthwhile learning opportunity, they failed to benefit fully from the experience. Had they seen more value in observing and discussing others' teaching practices, each participant in the peer observation could have learned more. Acknowledging and appreciating the informal professional learning of teachers, viewing and treating them as professionals, is a first step toward supporting continual professional growth and improvement.

Addressing Constraints of Formal Professional Learning

Research has shown repeatedly that mandatory, formal professional learning seminars and institutes fail to meet the needs of teachers (Huberman, 1995; Little, 1999; Wei, et al., 2009) and that most social studies learning opportunities remain inadequate (Adler, 1991; Grant, 2003; van Hover, 2008; Wei et al., 2009). Particularly in the context

of a diminishing emphasis on social studies education and increasing emphasis on English/Language Arts (Grant, Swan, & Lee, 2012; Rock et al., 2006), in which social studies professional development is unlikely to be a funding priority (Hess & Zola, 2012), and shifting standards and assessments, we should look for new ways to support the professional learning of social studies teachers. This study sheds light on one relatively new—yet at the same time, age-old—avenue for meaningful teacher professional learning, the informal professional learning in which good teachers are already engaged. Finding ways to capitalize upon and extend these practices may help address the limits of formal professional development for social studies teachers today.

This study showed that teachers may already be addressing some of the constraints of formal professional learning in their own informal professional learning choices. Participants' informal professional learning allowed them to focus on improving their content and pedagogical knowledge; participate actively in their own learning; sustain their learning over time; attend to their particular context; and include collaboration with others (Desimone, 2009; Elmore, 2002; Hawley & Valli, 1999; Sykes, 1999). The informal professional learning in which participants engaged allowed them to attend to these characteristics more than formal professional development they found less relevant to their own learning needs. At best, participants described formal professional development—which they steadfastly called formal professional learning—as a necessary evil; at worst, it was a waste of time. They valued their informal professional learning opportunities because through informal professional learning, they were able to design learning experiences to attend to the needs of their students, their department, and themselves.

Social Studies Teachers' Professional Learning and Policy Changes

This study illustrates that teachers' informal professional learning has the capability of supporting policy changes and policy shifts, but it can also hinder the implementation of top-down changes. Thornton's (2005) concept of teacher as curricular instructional gatekeeper applies here. Not only does the social studies teacher control what and how they teach in the classroom, they also control the extent to which they implement a mandated policy change. The social studies department in this study was in the midst of several such changes, some of which were more successfully supported by informal professional development than others. The implementation of the state technology system (STS), led by Mr. Simpson, is an example of one such successful policy change, while peer observation was the least successful attempt at policy change. In the latter case, only 4 of 12 social studies department members participated, and those teachers did not ascribe value in the experience. Comparing and contrasting the two aforementioned policy shifts suggests some broader implications for the ways in which teacher informal professional learning can strengthen the implementation of policy changes. I see two clear differences between the successful policy mandate (STS) and the less successful mandate (peer observations): (1) the presence of a leader with the knowledge, skills, and commitment to help others implement a change; and (2) a clear, relevant purpose for the policy change.

While some department members were hesitant to implement the STS policy changes, Mr. Simpson encouraged them to do so and explained why it would benefit them in the end. He provided leadership and support for teachers to implement STS but also provided clarity of the purpose from a teacher's perspective. Ms. Allen, as the

department chair, supported Mr. Simpson in his STS duties by providing time for him to speak about STS at each department meeting and by encouraging the other members of the social studies department to follow Mr. Simpson's lead in implementing STS. Mr. Simpson spent much of his time learning about the STS in order to be able to implement it himself so that he could help others do the same. He was always the first to try a particular feature—often the first in the state to do so, but always the first at GWHS. If a feature of STS did not work properly—such as pairing the student response clickers with STS in order to facilitate immediate feedback on student achievement—Mr. Simpson worked to fix the glitch before others attempted to implement it in their classrooms. He said, "the clickers that we use…we've encountered some issues with them too, and, you know, I've corresponded with, you know, the people at the state help desk about this, I made them aware [of the problem], we've gone back and forth." He was motivated to gain the knowledge and skills necessary to help lead the implementation of STS, and he was so committed to the task that he spent much of his own time helping others with the change.

Even though the members of the social studies department were reasonably open to mandates from the school and the state—as evidenced by some teachers' attempts to participate in peer observations even without a clear administrative or instructional purpose—the changes appeared to take hold more effectively if the purpose was clearly connected to their teaching context. In this regard, Mr. Simpson introduced STS as part of the school and state's technology plan that was not going to change any time soon and recommended they "get on board" sooner rather than later. He also explained that using STS would save them time grading unit assessments and inputting grades into their

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online grade books, would allow them to easily analyze student achievement data, and would facilitate the sharing of curriculum resources among teachers in the future. Mr. Simpson helped the social studies teachers see STS as a tool to improve their efficiency, not just one more thing the school was asking them to do. As Nardi and O'Day (1999) explained, in order for a new technology to be effective in a system, it must have a clear purpose and the participants within the system need to understand both *why* and *how* it will be used (p. 70). Mr. Simpson helped the social studies department think through both the how and why questions as they implemented STS. On the other hand, without a clear purpose for implementing peer observations, the social studies teachers understood the *how* but not the *why* of the system change, which limited the effectiveness of the new policy.

Each of these factors—leadership and purpose—might usefully be applied to encouraging teacher buy-in on national as well as state-level reform efforts. The new C3 Framework is an example of a potential policy change that is likely to affect the teachers in this study and has the potential to influence policy decisions across the nation. The upper Southern state in which this study was conducted is currently revising its social studies standards to incorporate the C3 Framework. The framework developers describe their work as an attempt to "usher in an ambitious new era in social studies education" (Swan & Griffin, 2013, p. 321). The C3 Framework (NCSS, 2013) was written to provide states with guidance for preparing rigorous social studies standards for student learning with the overarching goal of preparing students for civic life. The framework is organized in four dimensions, which form an Inquiry Arc consisting of: (1) developing questions and planning inquiries, (2) applying disciplinary concepts and tools, (3) evaluating

sources and using evidence, and (4) communicating conclusions and taking informed action. Using inquiry methods in the classroom is not a new suggestion, but research in social studies classrooms has shown that these ambitious, effective pedagogical strategies are the exception rather than the norm (e.g., Barton & Levstik, 2009; Saye, Kohlmeier, Brush, Mitchell, & Farmer, 2009). Such innovations may represent considerable change in instructional practices for many teachers. Swan (2014) describes these instructional shifts as:

1. Crafting questions that matter

2. Establishing a collaborative context for inquiry

3. Integrating content *and* skills meaningfully

4. Articulating disciplinary literacy practices and outcomes

5. Providing opportunities for taking informed action

Swan and Griffin (2013) argue further that supporting these shifts will require formal professional development funding and the development or application of support networks. Given the findings in this study, it is worth considering how informal professional learning could support these instructional shifts.

First, social studies departments might adapt the framework more successfully if they articulate a clear, shared purpose for such implementation. Secondly, and equally important, they would need to identify and support strong, committed teacher leaders to facilitate the implementation within a department. In the case of the GWHS social studies department, Ms. Allen kept the department informed about the publication of the C3 Framework throughout the summer and fall of 2013 and supported teachers' understanding of the Framework by purchasing printed copies of the C3 Framework for

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each teacher using departmental funds (following her leadership style, she first asked the department if they would like to use part of their funds to purchase copies of the Framework, of course). In order to further departmental implementation of instructional changes in regards to the C3 Framework, the social studies department at GWHS will need to engage in more conversations to ensure a shared understanding of the Framework itself and the purposes for instruction implied within it. Ms. Allen has shown that she does not have to be the leader of this change; rather, she would be happy to support another social studies teacher taking the lead in the department to institute changes in response to the C3 Framework. It is clear from this study, however, that in order for changes to occur in response to the C3 Framework or another future policy change, it will be helpful for the department to support a leader or group of leaders as they learn and adapt in response to the systemic change. A knowledgeable and committed leader or leaders, along with a focused purpose, could positively influence the success of the C3 Framework as well as future policy changes.

Suggestions for Future Research

Informal professional learning is an area that requires more study to explore the potential ways educators can use it to improve social studies teachers' practice. This study indicates several areas ripe for future study:

- the role of the department in informal professional learning—a particularly interesting theoretical and analytical framework to consider would be social network analysis (Akers, 2011; Schlager, Farooq, Fusco, Schank, & Dwyer, 2009) applied to the dynamics of departmental informal professional learning;

- the role of leadership—both within and outside of a department—in steering

  teachers' informal professional learning;

- whether and/or how to provide supports (administrative, structural, financial) for

  teacher informal professional learning—particularly for collaborative learning

  such as professional learning communities, peer observations, or co-teaching; and

- the role of technology in teacher professional learning (e.g., MOOCs, social

  networking sites).

In addition to the above avenues for related research, since this study focused only on one

secondary social studies department, additional studies that examine the informal

professional learning in other departments or in multiple departments would be valuable.

Conclusion

This exploratory study examined how a secondary social studies department

navigated their informal professional learning. Using an embedded single-case design, I

followed the informal learning experiences of individuals, pairs, small groups, and the

whole department, and I analyzed data from interviews, observations, and relevant

documents. I found that participants valued their informal professional learning

experiences, engaged in reflection throughout their informal professional learning, were

influenced by departmental leadership, and were successful to varying degrees in meeting

their informal professional learning goals. These findings are not generalizable, nor were

they intended to be. However, they do shed light on the valuable informal learning

activities in which social studies teachers may be engaged and suggest several points for

further consideration in future research and in discussion within academic circles. The

lack of guidance for the professional learning of teacher leaders and experienced teachers

is cause for some reflection, and possibilities for technology to support teacher informal professional learning are evident. Given the recent marginalization of social studies and the even more recent hopeful resurgence of social studies with the publication of the C3 Framework, now, more than ever, social studies teachers need support for all the ways they learn to improve their practice.

Appendix A

Informed Consent Letter

Consent to Participate in a Research Study

High School Social Studies Teachers Navigating their Professional Learning

WHY ARE YOU BEING INVITED TO TAKE PART IN THIS RESEARCH?
You are being invited to take part in a research study about how high school social studies teachers seek and practice their own informal professional learning. You are being invited to take part in this research study because you are part of a successful high school social studies department that engages in professional learning. If you volunteer to take part in this study, you will be one of 12 people to do so.

WHO IS DOING THE STUDY?
The person in charge of this study is Emma Thacker (*Principal Investigator, PI*) of [upper South State University] Department of Curriculum & Instruction in the College of Education. She is being guided in this research by Dr. Kathy Swan [Advisor].

WHAT IS THE PURPOSE OF THIS STUDY?
By doing this study, we hope to learn how high school social studies teachers initiate and negotiate their own professional learning individually and collectively.

ARE THERE REASONS WHY YOU SHOULD NOT TAKE PART IN THIS STUDY?
You should not participate in this study if you are under 18 years of age.

WHERE IS THE STUDY GOING TO TAKE PLACE AND HOW LONG WILL IT LAST?
The research procedures will be conducted at [George Washington] High School in you normal learning/working environment. You will need to come to your classroom for each observation and interview during the study or another predetermined site at your request. You will be asked to participate in one interview, which will last about 30 minutes. Other observations will be conducted during your typical work—such as department meetings—and will not take any additional time on your part. Participation in the study is expected to take 30-60 minutes of your time outside of learning activities in which you are already engaged.

WHAT WILL YOU BE ASKED TO DO?
You will be asked to participate in 1 interview, which will last approximately 30 minutes. You may be asked to participate in 1-2 follow-up interviews, which will last approximately 30 minutes and/or individual observations (i.e., of your classroom teaching or an individual learning experience you are doing) which will take place during your normal work day and will not take any additional time on your part and will be scheduled at your convenience. You may also be asked to provide copies of professional learning documents (i.e., lesson plans) that are relevant for your learning experiences. Your participation in the study will last from August-December 2013.

Expected Timeline:
August, 2013: Introductory Interview and Questionnaire. First, you will be asked to complete an introductory questionnaire including demographic and background information about your professional learning experiences. Later, we will schedule a time to discuss your career history, professional learning experiences, and current foci of your professional growth in more detail. The introductory interview is expected to last approximately 30 minutes.

September-October, 2013: Follow-up Interview. If you are asked and agree to participate in a follow-up interview, we will discuss your current professional learning goals and how you have been working to meet

them over the past several months. We may schedule an observation of your classroom teaching or out-of-class learning experiences.

November-December, 2013: Follow-up Interview. If you are asked and agree to participate in a follow-up interview, we will discuss your current professional learning goals, how you have been working to meet them over the past several months, and how you think your knowledge and/or practice has improved in response to your professional learning experiences. We may schedule an observation of your classroom teaching or out-of-class learning experiences.

August-December, 2013: Additional observations of collaborative learning experiences may be possible. For example, if you are a member of a Professional Learning Community (PLC) at school or outside of school, Emma Thacker would like to attend some of those meetings; if you eat lunch with your department or other colleagues during the school day where you discuss your teaching practices and share ideas, she would like to attend some of those informal meetings as well. In addition, Emma Thacker would like to attend scheduled department meetings throughout the Fall 2013 semester.

WHAT ARE THE POSSIBLE RISKS AND DISCOMFORTS?
To the best of our knowledge, the things you will be doing have no more risk of harm than you would experience in everyday life.

WILL YOU BENEFIT FROM TAKING PART IN THIS STUDY?
There is no guarantee that you will get any benefit from taking part in this study. Your willingness to take part, however, may, in the future, help educators as a whole better understand teacher professional learning.

DO YOU HAVE TO TAKE PART IN THE STUDY?
If you decide to take part in the study, it should be because you really want to volunteer. You will not lose any benefits or rights you would normally have if you choose not to volunteer. You can stop at any time during the study and still keep the benefits and rights you had before volunteering.

IF YOU DON'T WANT TO TAKE PART IN THE STUDY, ARE THERE OTHER CHOICES?
If you do not want to be in the study, there are no other choices except not to take part in the study.

WHAT WILL IT COST YOU TO PARTICIPATE?
There are no costs associated with taking part in the study.

WILL YOU RECEIVE ANY REWARDS FOR TAKING PART IN THIS STUDY?
You will not receive any rewards or payment for taking part in the study.

WHO WILL SEE THE INFORMATION THAT YOU GIVE?
We will make every effort to keep private all research records that identify you to the extent allowed by law.

Your information will be combined with information from other people taking part in the study. When we write about the study to share it with other researchers, we will write about the combined information we have gathered and will refer to you individually only by a pseudonym. You will not be personally identified in these written materials. We may publish the results of this study; however, we will keep your name and other identifying information private. We will refer to the school and district only by pseudonym as well.

We will make every effort to prevent anyone who is not on the research team from knowing that you gave us information, or what that information is. Emma Thacker will assign a pseudonym to you and use that pseudonym with all records of your participation in the study. Ms. Thacker will remove your name from all planning and professional development materials you give her and she will replace your name with the pseudonym. All electronic materials will be stored on a secure, password protected, computer. Electronic

information will be backed up on an external hard drive which will be kept in a locked filing cabinet in a locked office.

We will keep private all research records that identify you to the extent allowed by law. However, there are some circumstances in which we may have to show your information to other people. Emma Thacker is conducting this study as part of her requirements to complete a Ph.D. and may need to share your information with her advisor, Dr. Kathy Swan or other doctoral committee members. Also, we may be required to show information which identifies you to people who need to be sure we have done the research correctly; these would be people from such organizations as the [upper South State University].

CAN YOUR TAKING PART IN THE STUDY END EARLY?
If you decide to take part in the study you still have the right to decide at any time that you no longer want to continue. You will not be treated differently if you decide to stop taking part in the study.
The individuals conducting the study may need to withdraw you from the study. This may occur if you are not able to follow the directions they give you, if they find that your being in the study is more risk than benefit to you.

WHAT ELSE DO YOU NEED TO KNOW?
There is a possibility that the data collected from you may be shared with other investigators in the future. If that is the case the data will not contain information that can identify you.

WHAT IF YOU HAVE QUESTIONS, SUGGESTIONS, CONCERNS, OR COMPLAINTS?
Before you decide whether to accept this invitation to take part in the study, please ask any questions that might come to mind now. Later, if you have questions, suggestions, concerns, or complaints about the study, you can contact the principal investigator, Emma Thacker at [cell phone] or emma.thacker@uky.edu. If you have any questions about your rights as a volunteer in this research, contact the staff in the Office of Research Integrity at the [upper South State University] at [phone numbers removed for appendices]. We will give you a signed copy of this consent form to take with you.

_____   _____
Signature of person agreeing to take part in the study   Date

_____
Printed name of person agreeing to take part in the study

_____   _____
Name of (authorized) person obtaining informed consent   Date

Appendix B

Introductory Questionnaire

Thank you for your willingness to participate in this research study. If you are willing to participate in an introductory interview, please complete this questionnaire. The interview will last about 20 minutes.

Name: _____

Years of teaching experience: _____

Years of high school teaching experience (if different from above): _____

Years of experience at GWHS (if different from above): _____

What classes do you currently teach? _____

What other classes have you taught (when/how long)? _____

_____

Please participate in this "MadLib" to describe your outlook on professional learning. Fill in the blanks on your own or select one of the provided options:

1. I _____PLC meetings.
        (look forward to/put up with/despise)

2. I am a _____ in department meetings.
                (leader/participant/prisoner)

3. If I hear about a new teaching strategy that I have never tried, I am going to _____
_____.
(use it tomorrow/use it next week/find out more about it/forget about it/modify it)

4. When I have a problem in the classroom, I am most likely to _____
_____.
(take a personal day/ask a co-worker for help/Google it/try out different things on my

own/ask my students for ideas/bring it up in a department meeting)

5. When I'm with other teachers, I am likely to start a conversation about _____

_____.

(GWHS football/my students/social studies curriculum/Common Core Standards/

teaching strategies/Alexander Hamilton/classroom management)

6. If I had free reign for my own PD, I would _____.

(go to Disney World/work on unit plans/work on common assessments/read a book/go to

KCSS)

Appendix C

Preliminary Interview Protocol

Introduction.

Thank you for agreeing to participate in this research. I am interested in how high school social studies teachers learn *outside* of formal PD like workshops and institutes. What you say will help me understand how you think about your own professional learning, and how you feel about learning as a social studies department. When I write about your learning experiences, I will not use your name or the name of your school or district. Do you have any questions before we begin?

Answer any questions.

Preliminary interview:

1. Can you please tell me about your career history?

Follow-up:

- How many years have you been teaching? Where? What classes?
- Why did you enter the teaching profession?

2. This research study is about teacher professional learning. What does the term "professional learning" mean to you?

Follow-up:

- What does informal learning mean to you?
- What does formal learning mean to you?

3. Think about a professional growth goal (or goals) that you had in the past in which you feel like you achieved significant professional growth. Please tell me about that experience.

Follow-up:

- What was your goal?

- How did you identify that goal? Why?
- What did you do to learn how to improve?
    - Was formal PD involved? If so, how did it contribute to your learning?
    - Did you seek out your own opportunities for PD? If so, describe.
    - Did you work with colleagues? If so, describe.
    - Did you use new tools in the classroom or out of the classroom? If so, tell me about those. How did you find them and adapt them for your use?
    - Did you get assistance (i.e., advice, financial support, resources) from others in the school/district (administrators)? If so, who? How did you approach getting needed assistance?
- What changes did you make (to your teaching practice, to your attitudes/beliefs, to your knowledge)?
- What outcomes did you experience?
- Did this impact student learning?
    - If so, how? How do you know?

4. Think about a recent challenge you had in your work. Tell me about the challenge (e.g., classroom management incident; new grading requirements).

Follow-up:
- What steps did you take to meet the challenge?
- Did you talk to other teachers about it (formally/informally)? If so, how did those conversations go? If not, why not?

5. What are your current professional growth goals?

Follow-up:
- Why?
- What prompted this/these goals?
- How did you decide which goals to focus on?
- Do you have any current plans to address these goals? If so, what are your plans?

      o How will you achieve your goals?

      o How will you know if you have achieved them?

6. What is something you learned today?

Follow-up:

- How did you learn it?
- Will you tell other teachers about this?
  - o If so, how/when?
  - o If not, why not?

7. What (informal) professional learning experiences are you currently involved in?

Follow-up:

- What is required (e.g., PLC)? What is by choice? At school/during school/outside of school?
- Why have you selected the self-initiated PL?
- Which of your current learning activities do you feel is most useful at this time? Why?

8. How do you expect your current PL(s) to impact your practice?

Follow-up:

- Can you give me an example?

Appendix D

Observation Protocols

Individual Observation Protocol

Date: _____   Teacher observed (pseudonym): _____

Subject(s) Taught: _____

Years of Experience: _____

Context: Activity observed (e.g., PLC meeting; planning period; lunch break; hallway conversation); duration of activity:

Teacher-identified areas for growth ("look for"s):

Teacher-identified evidence to look for:

Description of learning activity:

Observed evidence of growth:

Observed evidence of continued need for growth:

Additional notes:

Group Observation Protocol   Date: _____

Teachers observed (pseudonyms): _____

_____

_____

Context: Activity observed (e.g., PLC meeting; planning period; lunch break; hallway conversation); duration of activity; environment:

Description of Learning:

Informal $\longleftrightarrow$ Formal

Characteristics of learning (content-focused; pedagogy; context; ongoing; collaborative):

Social interactions:

Tool/"Technology" use:

Additional notes:

Sample Midpoint Interview Protocol

Ms. Owen (pseudonym) – Follow-up Interview: November 6, 2013

1. You mentioned that you wanted to improve on differentiation this year, especially in your Advanced U.S. history classes. How has that been going?

Follow-up:
- Have you differentiated more? If so, how?

- Where did you find out new info on differentiation (PD, colleagues)?

- Have you noticed an impact on student learning?

2. You also mentioned incorporating new instructional strategies. What new strategies have you tried this fall? Can you tell me about them and their impact on student learning?

Follow-up/Focus areas:
- Use of tools?

- Collaboration with others?

3. Have you used the Turning Point clickers? How did you learn to get them set up (librarians? Mr. [Simpson]?)?

Follow-up:
- Did that work well?

- How many times have you used the clickers?

- Students' responses?

4. I know you've also taken the lead with the US History test on [STS, a pseudonym]. Can you tell me about that?

Follow-up:
- How did that process work?

- How did you become the leader for the STS test in US History?

- Have you implemented the test on STS yet? If so, how did that go?

Appendix F

Sample Exit Interview Protocol

Mr. Cole (pseudonym) – Exit Interview: December 10, 2013

1. You mentioned that you wanted to work on making your courses, especially psychology, more applicable for students. Can you tell me a little bit about what you've been doing for that this semester?

Follow-up:
- What content have you learned?

- What pedagogical/context lessons have you learned?

- How have you collaborated with others?

- Have outside speakers been able to come in?

2. You and Ms. Owen (pseudonym) seem to collaborate pretty closely with common planning for ISS. Can you tell me some examples of your work together?

Follow-up:
- What have I missed?! ☺

3. You mentioned that you would like the opportunity to observe your colleagues' teaching. With the new [teacher evaluation] program, it seems like that will be supported. Who do you think you'll observe and why? What do you hope to get out of it?

4. What other kinds of learning/growth have you engaged in this semester?

5. What has been the most beneficial learning experience you've been involved in this semester?

* Can I have a copy of an annotated/reflected lesson?

Sample Interview Transcript

Midpoint Interview with [Mr. Simpson]
This interview was in Mr. Simpson's classroom after school on November 12.

Q   So this is a follow-up interview with Mr. [Simpson], and it's November 12th. So I already kind of told you the purpose of –

A   Uh-huh. (Affirmative)

Q   -- of following up, but one of the things we talked about back in August was your own professional learning, and you seemed to focus a lot on acquiring new content knowledge, reading books, et cetera.

A   Uh-huh. (Affirmative)

Q   So have you been reading content books this fall, or is that more of a summer activity?

A   Well, I mean, I have -- I actually ordered several the other day. I'm kind of waiting for them to come in. This fall I have not really had an opportunity to do much of anything with some of the other things I've taken on. (*Mr. Simpson is the STS leader for GWHS and for the district*)

Q   Uh-huh. (Affirmative)

A   Yeah. But, yeah, I do have some things coming in, and so I'll start working through some of those. I try to line it up for like winter break –

Q   Uh-huh. (Affirmative)

A   -- when I'll have a little bit more time.

Q   What did you order? What were the topics?

A   Let's see. Actually two of them -- see, we're approaching the centennial of World War I, so two of the books, one of them is called *1913*, and it's kind of a topical book looking at various areas in the world right before World War I started. One is -- and another one is -- I can't remember the exact title of it, but it looks at the very opening months of World War I and tries to look at why Germany didn't win.

Q   Uh-huh. (Affirmative)

A   And then the other one is actually -- I think it's called *The Time Traveler's Guide to Elizabethan England*, so just thought I'd get that in, maybe for next year.

Q   Yeah. Yeah. Where are you with your content right now in your classes?

A   Right now we are -- we just shipped Napoleon off to Saint Helena, so we're in 1815.

Q   Okay. So as I mentioned, your colleagues mention you often. You've been called [Simpson]-pedia.

A   Oh.

Q   Is that a name that you know?

A   (laughs) I've heard that.

Q   So can you tell me -- I've heard a lot from their perspective of running to you for answers, but can you tell me from your perspective how that kind of content guru role works?

A   That really doesn't happen anymore.

Q   Really?

A   I had that -- that name came from Mrs. [Sharp], who used to be next door, and I think -- and she used to come over on a regular basis and ask things. She was teaching AP U.S. History, and when she got kind of out of that area I think she didn't feel real sure on things, so I had -- I usually -- that was back when I -- we had AP World History, and a lot of the kids that she would have I'd had the year before --

Q   Uh-huh. (Affirmative)

A   -- and they'd say, go ask Mr. [Simpson], so --

Q   So you -- so like this year you can't think of an example of when somebody's come to you with a content --

A   Well, I mean, I do have some people do that, but in general it doesn't happen as much anymore, and I feel like I've got -- I mean, with [Ms. Wayne] next door, she really can take care of most of her -- if she has a question, she can figure out the answer to it.

Q   Uh-huh. (Affirmative)

A   And so that doesn't -- you know, she can take care of herself. She doesn't really do that [come and ask questions] much.

Q   What about [Ms. McDonald], does she come over for that much?

A   No.

Q   Okay.

A   Now [Ms. McDonald], we consult a lot on kind of the technical parts of doing class.

Q   Uh-huh. (Affirmative)

A   And again, I've been doing some things this year that we haven't done previously, and I've been -- I've been kind of organizing those, and so she does come over and ask me about -- you know, to get -- like she came over and asked for a spreadsheet basically from this -- from a Google form that I put out there for the kids to put their HI (*Historical Investigation*) topics on, and she was using that too –

Q   Uh-huh. (Affirmative)

A   -- so I had to print up her kids on that and give that to her. I actually sent her a copy of it.

Q   So with [Ms. McDonald] now the collaboration is more of like common planning, common resources type things more than content?

A   It's more coordination.

Q   Uh-huh. (Affirmative)

A   Content, not -- I mean, but even -- even when it's content, it's more coordination about what we're going to -- what we're going to do or how we're going to go about doing it, not that she needs me to answer questions for her.

Q   Uh-huh. (Affirmative) So you said there has been some of that. Can you think of a specific example?

A   Of what?

Q   Of people coming for specific content help.

A   Well -- like I say, it is not -- that's not been something real recently that's happened.

Q   Okay.

A   Now in the -- you know, like when Mrs. [Sharp] was next door, I mean, that happened on a pretty regular basis. But, you know, recently, not so much. [Ms. Wayne] will come over sometimes and ask not really for information but for resources.

Q   Uh-huh. (Affirmative)

A   And so I can go through things and usually pull some things out for her and, you know, send those her way.

Q   Uh-huh. (Affirmative) Okay. What about have there been any instances when you've had a content question this fall and you've had to figure it out from your resources, or you're pretty -- it's not like you have a new prep or anything.

A   You mean from -- for mine? --

Q   For your own classes have you come up with a new content question that you've needed to research on your own?

A   Well, I mean, I look up -- I look up things, you know, on a regular basis, but honestly, at this point, unless somebody just asked me something really strange, I generally can give some kind of a reasonable answer for them.

Q   Uh-huh. (Affirmative)

A   So --

Q   So you said you look up things on a regular basis. Can you think of a specific example of something you've looked up recently, specifically on content?

A   Recently, no.

Q   Okay. Okay. Now I know you've been doing a lot with [STS], personally, for the department, for the school, maybe for the district; I'm not sure. Can you tell me how that's been going?

A   Well --

Q   I guess start small with you and your class and then --

A   Well, in my class things are about where they were because I'd already gotten pretty far into this last year.

Q   Uh-huh. (Affirmative) Last year.

A   By second semester last year I was giving all of my assessments through [STS], and so, you know, we were already -- we're up to, I mean, personally where I needed to be.

Q   Uh-huh. (Affirmative)

A   So this year -- and I don't know if it probably -- I don't know if it had happened when I talked to you last, but Mr. [Mann] asked me to be the school representative, which has basically entailed trying to get the rest of the school on where we should be on our rollout plan, which is actually implementing common assessments on [STS]. So that's what I've been spending a lot of time doing, and it's taken -- it's eating up a lot of time.

Q   Is that time, well, before school, during your planning, all of the above, after school?

A   All of the above. There have been -- because of the nature of it, I try and catch people before school or after school, but realistically, a lot of times this requires me to be there when they're actually getting ready to do something --

Q   Uh-huh. (Affirmative)

A   -- you know, to actually walk them through it. That's been really difficult, and I've had to get people to come in and cover the class while I go with somebody and get them going on it, and so that's not -- that's been -- that has not been real easy. So --

Q   Uh-huh. (Affirmative) Have you mostly been helping other Social Studies people or --

A   No. I've been -- I made a push year to try and get every content area, particularly those people who dealt with ninth and tenth grade students, to be getting their assessments, common assessments, and I've done pretty well so far. I've been able to recruit people, people to do an -- a person to do an Algebra test, they made that and it's been given as a common assessment, biology, ISS, U.S. History. I've got -- I have a person doing -- Mr. [English teacher] actually doing one for English. Now I can't say that we've gotten that one actually done yet, but, I mean, I've got just about every one of our main content areas have actually done this.

Q   How have you gone about recruiting those people?

A   I try and find a weak link. What I've found is those people who've been around for a while don't want anything to do with this, and so the people who I've gotten have been young people, and I don't know whether it's because they feel --they don't know that they could say no, but at any rate, they haven't, and I don't know whether it's they have a greater comfort level maybe with technology. The ones I've gotten all have. And so those are the people who I've gone after.

Q   Uh-huh. (Affirmative)

A   And so, so far that's -- you know, that has worked out. Now as far as some of their colleagues, I mean -- I mean, like there are a few of these people that have been around for a long time and they're going to now give some of these assessments. They haven't made them or anything, but they're going to give them that one -- that another teacher's made.

Q   Uh-huh. (Affirmative)

A   So that's where I am on it.

Q   Uh-huh. (Affirmative) Are most people doing this in the lab or clickers?

A   This is -- there have been problems.

Q   Uh-huh. (Affirmative)

A   Now the lab, the lab is the problem. Physically getting in the lab, getting the lab scheduled, and then finding a lab where the kids have not destroyed a number of the computers, that's a problem.

Q   Uh-huh. (Affirmative)

A   I've got other delivery systems. The clickers that we use are more accessible. We've encountered some issues with them too, and, you know, I've corresponded with, you know, the people at the state help desk about this, I made them aware, we've gone back and forth. I've never heard a resolution on it, but they've -- you know, they are looking at it. So that's been an issue. We also have a third method, which is actually a paper --

Q   Right.

A   -- scan that we have a printer here at school --

Q   Uh-huh. (Affirmative)

A   -- we're one of the few schools that had a printer that can -- that could scan these. Once they're scanned they're actually sent directly to Infinite Campus [*online classroom, that teachers use to store grades, attendance, etc.*], but then a spreadsheet is actually generated which can then be exported into [STS] with the data. A number of the people that I've been working with in the last few days have felt more comfortable with that --

Q   Uh-huh. (Affirmative)

A   -- because it is familiar.

Q   Right.

A   And we've not run it yet, but there's -- there's probably four or five people that within the next few days are getting ready to give one of these, and we'll see how it goes.

Q   With your classes how have you been given the [STS] exams?

A   I have not been able to -- I've not gone to the lab this year, so I've been using the clickers.

Q   Okay.

A   Which I use -- I mean, I use those with every class every day, and they're very comfortable with that, so that's what I've been doing.

Q   And so your students respond favorably to clicking them?

A   I mean, they're used to doing this.

Q   Yeah.

A   They know how it works. And as a matter of fact, when they go into other teachers' rooms, they're actually showing the teacher how to use them because they've been using them in here so much. They're all very comfortable with how they work.

Q   Okay. Okay. And then you've been to one or two meetings at the district level for this?

A   I've been -- I've been to more than that. Earlier in the year there were several. I just had one last week. I don't know whether -- I don't know whether I told you this or not, but I actually spoke at the State Assessment Coordinators conference in [large city in the state] --

Q   Uh-huh. (Affirmative) I didn't know that.

A   -- in October on [STS]. And so, you know, did that. So this has been -- I've been running a lot.

Q   Is that all time out of class, or is it after-school things?

A   Both.

Q   Uh-huh. (Affirmative)

A   Most of this early investment has been time out of class.

Q   Uh-huh. (Affirmative)

A   So I've been -- I've been gone a lot.

Q   Uh-huh. (Affirmative)

A   Now the meetings -- I think supposedly the meetings from here out the rest of the year are after school, but anyway --

Q   How often have those meetings been or will they be?

A   Well, it's been at least once a month.

Q   Okay.

A   And earlier in the year we had -- I think we had -- we had more than that because we had some equipment we were looking at too.

Q   And so is there one person from each school and that's what Mr. [Mann] asked you to --

A   Right.

Q   Okay.

A   There's supposed to be one coordinator from each school. Some of these people are administrative-type personnel from the guidance office.

Q   Uh-huh. (Affirmative)

A   Some of them are also classroom teachers.

Q   Uh-huh. (Affirmative)

A   And, so, you know, they were a little bit leery about that because they didn't know it was going to take time out, but, I mean, you kind of have to get people who have at least some experience with it, and about the only ones really are going to be classroom people.

Q   Right. Yeah, that makes sense. And then we talked last time a little bit and I've heard you talk about it since just in passing about your Facebook page --

A   Uh-huh. (Affirmative)

Q   -- with class. How's that going?

A   Other than I've made a small number of people very, very angry --

Q   I remember the parent e-mail.

A   Yeah.

Q   What else?

A   The -- I mean, the page itself seems to be working really well. I've gone on and done some other things, like I've put for our HI - I put several forms on there --

Q   Uh-huh. (Affirmative)

A   -- that kids have been able to fill out and they get exported immediately to an Excel sheet, so I'm able to get all that stuff together. I've gone, with the exception of just the work in class, pretty much paperless. And so between that and turnitin.com, virtually everything is being submitted electronically.

Q   Wow.

A   Which is -- which gives us a lot better record-keeping for it.

Q   So are the vast majority of your students now accessing the Facebook page?

A   In the -- well, in the honors classes, I can't really tell now because we've actually gone over the number of people that are actually enrolled in the class, so there are probably some parents and other people --

Q   Uh-huh. (Affirmative)

A   -- that have gotten on that. So I would say, I mean, if we're not at 100 percent, it's real close to it.

Q   Real close.

A   Now in the general classes not so much, but that's also indicative of just a lot of other things too.

Q   Uh-huh. (Affirmative) They're probably just not doing the assignments as well.

A   Not doing it, yeah.

Q   Yeah. Okay. And then you mentioned making people angry.

A   Yeah.

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Q   I know the parent e-mail that she copied Mr. [Mann] and all that. Are there other instances of --

A   There have been some others too.

Q   Uh-huh. (Affirmative)

A   And it's all come down really just to the same thing, parents who have -- who are not allowing their children to use social media at all.

Q   Uh-huh. (Affirmative)

A   Most of them have been handled rationally, and when I've talked to the parents and told them the kid doesn't actually have to have --

Q   Uh-huh. (Affirmative)

A   -- a Facebook page, they just need access to it, then that's actually solved most people's concerns.

Q   Uh-huh. (Affirmative) Good.

A   I think they were wanting -- they were concerned that their child had to have their own -- their own page, and when they find out they don't, it's like, well, that's all right.

Q   Uh-huh. (Affirmative)

A   Yeah, the other one was an exception.

Q   Did that get resolved?

A   No!

Q   No? Awesome [*sarcastic*]

A   There was an indication that Mr. [Mann] was going to respond back, and I would assume that he would cover me on whatever he sent back. I never saw anything. And the parent never -- I've never heard anything again from them, so who knows what the situation is with that?

Q   And the student is still doing okay in the class? Because you said it was a good student.

A   And ironically, when I went back and kind of looked things over, that student had been one of the earlier ones to respond using the form, which only existed on Facebook,

so you can draw whatever kind of conclusions you want on that. I don't know what the deal was there, but, you know, it actually was not a case where they were -- where it was affecting their grade.

Q   Uh-huh. (Affirmative)

A   They were fine. It was just the idea.

Q   Uh-huh. (Affirmative) Okay. All right. Is there anything else you think I should know about your goings-on this fall?

A   I mean, this has been kind of the things that have eaten up a large part of my time. As far as, you know, we've also been taken out to do another LDC workshop, we've got another one in January coming up, even though that program, as far as I can tell, is pretty much dead now.

Q   Uh-huh. (Affirmative)

A   And, you know, it's one of those things we really -- we can't say -- I don't think any of us that attend that have said that it's been of any great value.

Q   Uh-huh. (Affirmative) Okay. Well, thank you.

Appendix H

Sample Observation Notes

Observation Protocol

Date: __10/25/13___   Teacher observed (pseudonym): <u>Ms. Allen</u>

Subject(s) Taught: <u>General US History; IB HOA 2; EBCE_____</u>

Years of Experience: <u>28th</u>

Context: Activity observed (e.g., PLC meeting; planning period; lunch break; hallway conversation); duration of activity:

I observed Ms. Allen's 3rd and 4th block HOA 2 classes. She went over HOA 2, Paper 1 --- discussed OPVL, which should be familiar with students—analyzing 4-6 documents. She gave out guidelines for paper 1 and will have students practice one after lunch today. It's worth 25 points. Paper 1 plus a good HI equals a passing grade on the IB Test! For the IB testing at the end of the year, students will do Paper 1 (May 14) and Paper 2 that day. They get an hour to do paper 1. Ms. Allen recommends 10 minutes to read the documents, then:
- Q1: Look at the image. Tell why it says_____
- Q2: Compare/Contrast 2 documents
- Q3: What makes the source valuable, logical (OPVL: Origin, Purpose, Value, Limitations)
- Q4: Use your own knowledge and the documents provided

Then, Ms. Allen did a brief lecture on Canada during WWI
At the end of class, students did a practice Paper 1.

Teacher-identified areas for growth ("look for"s):
content knowledge on Canada

Teacher-identified evidence to look for:
1) "Continue to research the scope of Canadian history needed for the IB History of Americas II class". Expected impact: "By focusing on Canadian history for the senior level of IB History of Americas, my content knowledge will increase which should have a direct correlation on the student scores on the IB external exams" (from PGP document, April 29, 2013)
^
Linked to goal: Design/Plans Instruction: "To continue to refine and improve instruction of the IB History of Americas II course"

2) "Incorporate additional writing assignments into all classes" with expected impact: "More writing instruction will also assist students in raising test scores, especially when focusing on analytical essays."

^
Linked to goal: Designs/Plans Instruction: "Create curriculum units and lesson plans to address the demands of the History EOC paying particular attention to the curriculum not covered at the high school level." and "To continue to refine and improve instruction of the IB History of Americas II course"

3) "Create lessons and develop instructional material that will reflect knowledge of the current constructs and principles of the IB course"
^
Linked to goal: Designs/Plans Instruction: "To continue to refine and improve instruction of the IB History of Americas II course"
(from PGP document, April 29, 2013)

Description of learning activity:
Ms. Allen had consulted a secondary source (Canadian History for Dummies) to improve her own content knowledge.

Observed evidence of growth:
Included deep information about Canada's involvement in WWI in lecture.
Ms. Allen incorporated a practice writing task for Paper 1 to help students succeed on HOA II test.

Observed evidence of continued need for growth:
Ms. Allen is continuing to refine instruction and focus on student writing in order to prepare students for IB exams.

Additional notes:

Appendix I

Case Study Protocol

Overview

This case study will examine how high school social studies teacher participants navigate their own professional learning experiences. Specifically, it will explore their experiences with informal learning. Informal learning is typically site-based and job-embedded, involving collaboration among teachers, reflection on practice, and manipulation and analysis of authentic artifacts of their work, such as lesson plans and student work (Jurasaite-Harbison & Rex, 2010; Richter et al., 2011). Informal learning can be planned events, such as professional learning community meetings, or serendipitous events, such as hallway conversations (Jurasaite-Harbison & Rex, 2010).

Objectives

The primary goal of this case study is to explore the informal learning practices of high school social studies teachers. Empirical literature points to the potential of informal learning in the workplace (Eraut, 2004), but no studies in education have been conducted that focus specifically on informal learning. A goal of this study, then, is to begin to address the dearth of research on how teachers experience their own informal professional learning. The single-case study will provide a glimpse into how participating high school social studies teachers identify their professional learning needs, work to meet those needs and find resources to make that possible, and evaluate their growth *beyond* school, district, and state mandated professional development trainings in the context of a social studies department. The main research question guiding the case study

is how do high school social studies teacher participants navigate their own informal

professional learning? Supporting research questions include:

(1) How do high school social studies teacher participants choose what to do

individually and collectively to meet their professional learning needs?

(2) What actions do participants take to meet their professional learning needs

individually and collectively?

(3) How do participants evaluate their professional learning growth individually and

collectively?

(4) How do participants interact with one another and with the environment as they

navigate their own professional learning?

Issues in the Literature

Teacher professional development is one of the key aspects necessary for

educational reform to improve student achievement in K-12 public schools (Ball &

Cohen, 1999; Elmore, 2002; Guskey & Huberman, 1995). The *No Child Left Behind*

(NCLB) Act of 2001 called for highly qualified teachers in every classroom and the

federal government has emphasized that high quality professional development is a

necessity for all teachers (Borko, 2004). The academic literature includes a variety of

qualities recommended for effective professional development, including focus on the

improvement of teachers' content and pedagogical knowledge; the use of active learning

methods; ongoing, sustained learning over time; attention to the particular context of the

students, teachers, and school; and collective participation and collaboration among

teacher participants (Desimone, 2009; Elmore, 2002; Hawley & Valli, 1999; Sykes,

1999). While scholars have identified numerous logical principles of effective

professional development for over 20 years, the typical professional development experienced by teachers remains "woefully inadequate" (Borko, 2004, p. 3) and far-removed from the characteristics identified in the literature.

Professional development for social studies teachers is no exception. Over 10 years have passed since NCLB came on the scene with the hope of improving the landscape of public school teaching and learning; however, much of the professional development to which teachers are subjected still remains unchanged—many in-service events for teachers in general and social studies teachers in particular, continue to be one-time trainings in which an outside expert delivers content that seems irrelevant to the teacher's daily practice (Borko, 2004; Hawley & Valli, 1999; Hirsh, 2009; Wei et al., 2009). Specifically, the majority of professional development offerings for social studies teachers remain traditional, one-shot workshops or institutes (Adler, 1991; Grant, 2003; van Hover, 2008), disregarding the consensus surrounding what makes professional development effective. These "hit-and-run" professional development sessions (Elmore, 2002) are unlikely to fulfill the purposes of professional development: to change teachers' classroom practices, to change teachers' knowledge and beliefs, or to change student-learning outcomes (Clarke & Hollingsworth, 2002; Guskey, 1986).

One of the difficulties in applying the research-based qualities for effective professional development in practice has been the need for ongoing, site-based support for teachers to implement changes in their practice (Hess & Zola, 2012). Hess and Zola (2012) described three effective social studies professional development opportunities—a Socratic seminar training, a Project Citizen institute, and a summer institute on the Supreme Court; however, each lacked the capacity to provide ongoing site-based support

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for teacher participants. An emerging question in the literature that has the potential to address the persistent shortcomings of teacher professional development is about the importance of *informal* professional learning. *Professional learning* takes place in the school context, when teachers work with one another on common problems and respond to their students (Easton, 2008b; Fullan, 2007; see also Lieberman, 1995; Nieto, 2001). As opposed to formal professional learning, which can be understood narrowly as those activities titled "professional development" (Jurasaite-Harbison & Rex, 2010), informal learning includes learning opportunities that are voluntary, unstructured (Richter et al., 2011), and occurring in the workplace (Jurasaite-Harbison & Rex, 2010).

Drawing on general literature about workplace professional learning, early indications are that informal professional learning is more prevalent and potentially more important than formal professional development for teachers (Eraut, 2004; Hanraets et al., 2011; Jurasaite-Harbison & Rex, 2010). Informal professional learning has the potential to address the challenges of formal professional development in meeting some of the criteria for effectiveness. In particular, the literature includes a focus on the importance of collaborative (Jurasaite-Harbison & Rex, 2010; Mesler & Spillane, 2009) and job-embedded (Mesler & Spillane, 2009; Putnam & Borko, 2000; Richter et al., 2011) learning opportunities.

Professional development for teachers has been "a patchwork of opportunities— formal and informal, mandatory and voluntary, serendipitous and planned—stitched together into a fragmented and incoherent 'curriculum'" (Wilson & Berne, 1999, p. 174; see also Ball & Cohen, 1999; Elmore, 2002). Due to this incoherent curriculum, it is up to individual teachers to make their professional learning experiences into something that is

useful for them personally and professionally. Research has shown repeatedly that mandatory, planned professional development sessions fail to meet the needs of teachers (Huberman, 1995; Little, 1999; Wei et al., 2009). Previous research has not focused on the ways in which teachers take advantage of informal learning opportunities in order to meet their professional learning needs. Emerging research implies that informal professional learning may of key importance for meaningful teacher development (Hanraets et al., 2011; Mesler & Spillane, 2009; Richter et al., 2011) but these studies lack an explicit focus on teacher informal professional learning in the United States. Missing from the research is how teachers meet their own needs in—and outside of—the present system through informal professional learning. In the context of persistent mandated professional development that fails to meet the needs of teachers, research is needed on the informal professional learning that teachers stitch together to better meet their needs.

Field Procedures

Human Subject Protection Procedures

The case study will go through the Institutional Review Board approval process at a major university in the upper South to ensure it meets all requirements for protecting the research participants. The participants are all adults, full-time social studies teachers at George Washington High School, the research site, so are not a particularly vulnerable population. No minors will be involved in the study and the case study will not involve deception in any way. There are no foreseeable risks to participants in this study.

Participants. All 12 of the high school social studies teachers at GWHS will participate in the study, assuming I receive informed consent from each individual. I will

solicit initial background information using a demographic survey (see Appendix A).

Then, using this information, I will conduct preliminary interviews with all of the

department members. These will be focused, semi-structured interviews in order to get to

know each participant and develop an idea of their approach to informal professional

learning. In addition, I will have informal conversations with the entire department (e.g.,

lunch breaks) and will observe professional learning in which the entire department is

involved (e.g., department meetings). I expect, over the course of the research, that

several department members will emerge as "representative informants" as topical

subunits emerge for more targeted embedded analyses. Potential subunits may include

beginning/middle/late career teachers or social studies disciplines, but I will not know

what the subunits will be until I begin data collection.

The identity of all participants—including the key participants—will be kept

confidential. All participants will be assigned a pseudonym and all electronic records

(audio recordings of interviews; transcripts; field notes) will be stored on an external hard

drive kept in a locked filing cabinet in a secure office.

Procedural Notes. Gaining access to the site will be very important and

maintaining positive, open relationships with the participants and others at the site will be

important for collecting data. The researcher has been granted preliminary access by the

social studies department chair and by the school district administration but still needs to

be granted formal approval by the school administration and consent of all of the social

studies teachers to participate.

Once access is secured, it will be important for the researcher to introduce herself

to the office staff and all administrators so that gaining access to the building throughout

the study period will not be difficult. In addition, the researcher will need to inquire as to whether there is a place at the site that can serve as a "home base" for conducting interviews and writing field notes.

Data Sources and Collection

The case study will primarily collect data through interviews and observations with emerging representative informants but will also conduct preliminary interviews with all participants, direct observations (e.g., of department meetings) and collect relevant documents. As Yin (2009) suggested, the data from documents will be used to corroborate information from observations and interviews, as is common in the use of documents in case study data collection. Because of the prominence of interviews for case study research (Yin, 2009), I expect that interview data will be very informative for the proposed case study. Observations will be of secondary significance so the researcher can gain more knowledge and appreciation of the context in which the participants are navigating their own professional learning. In addition, observations will inform interview conversations with participants and vice versa. The researcher will observe department meetings and informal interactions between and among the social studies department members and others at the site. Preliminary interview and observation protocols are included in Appendix B with the understanding that as the study unfolds, more and different interview questions will emerge.

The proposed case study will use data from interviews, observations, and documents and the researcher will conduct ongoing analyses to ensure that the evidence being collected will enable the use of converging lines of inquiry. The researcher will build and maintain a case study database using all of the case study data including notes,

documents, and narrative. The case study database will assist in maintaining a chain of evidence to include case study questions, case study protocol, citation to specific evidentiary sources in the case study database, the case study database, and case study report.

Case Study Questions

The case study questions build upon and connect back to the research questions for the study as a whole. Consideration of the case study questions will guide analysis of the embedded subunits as well as ensure that the researcher returns to the analysis of the larger unit of study—the social studies department. Table I.1 outlines the research questions, aligned to the case study questions and potential sources of evidence for each question. Throughout the research, I will add to and revise the case study questions as necessary.

Table I.1

Case Study Questions

Research Question: How do high school social studies teacher participants navigate their own informal professional learning?		
Supporting Research Question	**Case Study Questions**	**Sources of Evidence**
How do high school social studies teacher participants choose what to do to individually and collectively meet their professional learning needs?	What process(es) do participants use to identify professional learning needs?	Interviews and observations with key participants; observations and informal conversations with whole department and small groups of department members
	To what extent do participants function individually and collectively to identify needs?	
	To what extent do participants function individually and collectively to choose how to meet their needs?	
	What actors and cultural tools are involved in these processes?	

Table I.1 (continued)

Case Study Questions

Supporting Research Question	Case Study Questions	Sources of Evidence
What actions do participants take to meet their professional learning needs individually and collectively?	What are various forms of informal professional learning in which participants engage?	Observations of department members; conversations with participants
	To what extent do participants interact with others and with the environment (technology, tools) as they take their chosen course of action?	Interviews with key participants; observations with key participants
How do participants evaluate their professional learning growth individually and collectively?	To what extent do participants connect their professional learning to student achievement?	Interviews and observations with key participants
	To what extent do participants evaluate their professional learning individually and collectively?	Observations of department; interviews and observations with key participants
	What process(es) do participants use to evaluate their professional learning?	Interviews and observations with key participants
How do participants interact with one another and with the environment as they navigate their own professional learning?	Who are the actors involved in participants' professional learning?	Observations of department; observations and interviews with key participants
	How is each actor involved in the participants' learning experiences?	
	What cultural tools mediate participants' professional learning?	
	To what extent is professional learning social?	Interviews and observations with key participants; observations of and conversations with department
	To what extent is professional learning situated?	

Guide for Case Study Report

The format for the full case study report will be a finished dissertation. As such,

the researcher will include an introductory chapter providing background and an

explanation of the problem leading to the need for the case study; a chapter reviewing the

relevant empirical and theoretical literature; a chapter detailing the methodology and how

the case study research was conducted; a chapter detailing the findings; and a chapter discussing the findings, their implications, and drawing conclusions. In addition to the dissertation, the researcher will prepare smaller pieces of the case study research for publication and presentation purposes.

The case study database the researcher builds maintains throughout the study will be an important resource for compiling the case study report. The database will include case study notes, relevant study documents—including an annotated bibliography that summarizes all documents, such as an interview transcript or school mission statement—and tabular materials as needed. Narrative drafts of ongoing reflections on case study questions, outstanding questions, and emerging themes will also be included in the case study database.

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Books
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- Swan, K., Grant, S. G., & Thacker, E. (2014). *Whose swings are they, anyway? Thinking Like a Citizen Series*. Upper Saddle River, NJ: Pearson.
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