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A Journey to Improve Collaboration Efforts Between Stakeholders and
Teacher Librarians: A Mixed Method Study

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by

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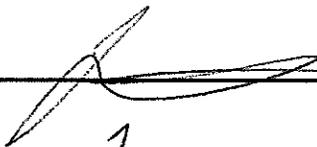
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ABSTRACT OF THE DISSERTATION

A Journey to Improve Collaboration Efforts Between Stakeholders and Teacher Librarians: A Mixed-Method Study

by

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Collaboration between teachers and teacher librarians (TLs) faces fundamental challenges in the high school setting. Studies of professional library organizations have suggested that collaborations between teachers and TLs are effective in improving student learning, encouraging personal reading, and raising digital citizenship awareness. The conceptual framework and structure of the teacher and librarian collaboration model (TLC-III) is based on the notion that robust collaboration efforts involving groups of teachers have positive effects on students. Researchers have validated the TLC-III model in studies with various groups of teachers and TLs as instructional partners, but have not done so at the high school level. The aim of this study was accordingly to validate the TLC-III model at this level with various high school teachers across disciplines and to determine why some choose to collaborate with TLs while others do not and the factors that influence the formation of a collaborative environment at a large, comprehensive high school. This mixed-method study relied on 62

anonymous surveys and 22 face-to-face interviews to assess what is needed to improve collaboration as part of the learning environment at this school.

Keywords: teacher librarian, high school collaboration, school library programs, librarian-teacher collaboration, student achievement, principal-librarian collaboration, school culture, relationships.

CHAPTER 1: BACKGROUND

Collaboration is an effective and indeed powerful instructional method; thus failure to collaborate can have negative impacts on teachers and administrators alike. Collaboration is particularly crucial because individual, isolated teaching efforts no longer suffice when it comes to equipping students with the skills necessary for their future success, including working well with others. Numerous studies have noted that collaboration between teachers and teacher librarians (TLs) remains a relatively novel concept for teachers in general, though it is valuable for TLs and highly recommended in their preservice training (Loertscher, 2014). Thus research into the effectiveness of teachers working closely with TLs on curriculum planning and implementation for improving student academic achievement (Lance, Rodney, & Hamilton-Pennell, 2000, 2001, 2002, 2005) is often cited in the library literature but only rarely in the education literature (Montiel-Overall & Jones, 2011). In the education world, working on an intellectual endeavor means collaboration, as two or more individuals integrate and share information that promotes student learning and engagement (Montiel-Overall, 2005a).

Collaboration has emerged as a trend within in the twenty-first century classroom owing to the advent of new technologies (American Association of School Librarians [AASL], 2007), as educators are moving from teaching in isolation to learning from their peers, for instance forming professional learning communities (PLCs) to improve their teaching skill sets. There has also been a shift in society toward preparing students for college and careers by providing them with skills useful for thinking and working together, especially in the context of an increasingly global job market. This shift has affected both educators and administrators, who can support students' move from thinking about their own individual efforts to group work, from independence to awareness and awareness of their community and surroundings (Leonard &

Leonard, 2001b). Educators represent a model for students to learn how to be effective collaborators. Collaboration thus involves stakeholders who share a collective idea working together to achieve it to foster student achievement.

TLs have a direct influence on student achievement (Lance et al., 2000, 2001, 2002, 2005), in part through implementing collaboration efforts within the broader school community (Farmer, 2007). Successful collaboration occurs when TLs and fellow teachers incorporate information literacy into their teaching, promote reading for both acquisition of knowledge and personal enjoyment, and integrate technology within the classroom in ways that increase students' depth of knowledge through their learning experiences (Farmer, 2007; Loertscher, 2014; Montiel-Overall, 2005a). The most successful school library programs in terms of direct impacts on student achievement are those in which TLs collaborate with teachers as equals in the instructional process (Cooper & Bray, 2011).

Roles of the Teacher Librarian

In today's school setting, the roles of TLs are changing rapidly as they work to prepare students for the rigors of education and of changing and emerging technologies. TLs and school library programs encourage collaboration with teachers to promote students' academic success. Thus, the AASL (2007) described information literacy and technology skills as crucial for effective functioning in today's knowledge-based society. Indeed, all educators must integrate the teaching of information literacy and technology skills into the regular curriculum (Kuhlthau, 2004; Scott & O'Sullivan, 2005). The emergence of new pedagogical methods with respect to information literacy has affected the ways in which teachers and TLs impart these skills to students to keep pace with the emergence of new tools (Chu, Tse, & Chow, 2011).

TLs' professional objectives include acting as proponents of literacy programs, promoting effective digital research skills, and managing information that students can utilize for school assignments and for the act of learning more generally (Zmuda & Harada, 2008). TLs are increasingly working as, among other things, collaborative teachers, program administrators for professional development, information specialists, and technology integrators (Cooper & Bray, 2011; Mardis & Everhart, 2014; Montiel-Overall, 2009; Purcell, 2010). Further, TLs take on leadership positions both in the school setting and at the district level in their efforts to improve the learning landscape (Chu et al., 2011).

In order to be prepared to bridge the needs of school libraries and classrooms, TLs undergo special training. In California, for example, TLs earn both a state teaching credential and a state TL services credential (California Department of Education, 2017). Credentialing requires a minimum of three years of classroom teaching, completion of graduate coursework, and submission of a portfolio to the California Commission on Teacher Credentialing. TLs may hold various titles, including school librarian, school library media specialist, and TL. These terms all describe the same responsibility for leading a school library program. Thus, what the AASL terms a TL position may be described by a district or state as "school library media specialist," a designation that reflects the reality that modern school libraries contain more than books. Other districts use the term TL to emphasize the school librarian's primary role as an educator rather than a custodian of books (American Library Association, 2015). In this study, I use the term TL because the California Commission on Teacher Credentialing uses it when issuing the librarian teaching credential and it is preferred by the California Department of Education.

Given all of the responsibilities and challenges that TLs face daily, it is necessary to clarify their roles so that stakeholders may accurately identify and understand how schools can best utilize them in efforts to improve student achievement (Purcell, 2010). Misperceptions on the part of administrators, teachers, and other stakeholders can create an unnecessary burden for TLs as they attempt to conduct meaningful work, build relationships, collaborate, and promote literacy (Shannon, 2012). When effectively deployed, TLs can act as co-teachers and fellow curriculum planners; they can influence students' lifelong learning habits, helping them to conduct continual inquiries and to extend research habits that they first encounter in a school setting (Bush, 2013). TLs as collaborators can help in the process of creating relevant learning experiences for all students and thereby also influence how students view their relationships with the school community and how they view themselves as self-learners and readers.

Statement of the Problem

There has been research on collaboration among teachers who teach similar content or at the same grade level, but little work on collaboration among teachers and other school professionals in other content fields, such as TLs (Kimmel, 2012a). Collaboration forms part of the teaching model and standards that guide TLs as they seek to realize instructional goals. Planning and collaborating among teachers are not neat and tidy linear processes (Wolcott, 1994). Teachers plan for various reasons using various strategies, and TLs need to understand and accommodate various ways of collaborating with teachers and of leveraging their roles as providers of resources (Kimmel, 2012b).

While many studies have explored the ways in which TLs impact student achievement and help to close the achievement gap as well as theories and models that schools have used to promote and enhance collaboration efforts, little research has focused on collaboration involving

high school TLs and single-subject teachers. Rather, attention has been given to planning by academic college librarians' and the impact of research skills on graduation rates. There are thus important areas awaiting future research regarding TLs' changing leadership roles and gaps in knowledge regarding the implementation of collaborative efforts are implemented in the high school classroom.

Research Questions

The overarching research question for this study concerned the elements that foster effective collaborative exchanges between high school teachers and TLs. The following sub-questions grew out of this main idea:

- (a) How do high school teachers, administrators, and high school TLs who work in the same school setting define collaboration?
- (b) Does an individual's definition of collaboration affect how he or she interacts and collaborates with other teachers or teaching support staff?
- (c) What factors contribute to or detract from collaboration between teachers and TLs?

Conceptual Framework

Collaboration is a prominent theme within the AASL's standards for the twenty-first century learner, in that the standards advance students' learning and achievement and thereby help them to become productive members of a global society. Relationships among fellow educators, teachers and students, and other stakeholders are critical in the education field, for they can define how teachers approach the classroom or the types of access to information that are available for themselves, students, and colleagues. According to Daly (2010), the relationships that teachers cultivate within the school community increase their chances of staying in the education profession, the extent to which they work with others, and their

willingness to learn from each other. These relationships can positively influence how teachers present the curriculum in the classroom through shared experiences, conversations, and observations. The role of TLs is to create a positive social network within the school system and to facilitate positive organizational change as they promote information literacy standards and collaborate continually with teachers and other stakeholders.

Montiel-Overall (2005a) defined the five core elements of teacher-TL collaboration as interest, innovation, intensity, integration, and implementation. This overall “TLC model” involves specific core elements that promote to shared thinking, planning, and creation of something new (Hamilton, 2011; Montiel-Overall, 2005a). Montiel-Overall (2005a) also outlined four models of collaboration between teachers and TLs. Model A, coordination, which requires the least involvement, occurs when a teacher works autonomously with little or no interaction with a TL. Model B, cooperation, involves combining the efforts of teachers and TLs in instruction while formal lesson planning continues to be done by individuals. Montiel-Overall (2012) later revised the TLC model, renaming it “TLC-III,” but the core elements remained the same. Researchers have emphasized that both teachers and TLs need to avoid the codependency model (Cooper & Bray, 2011), according to which the classroom teacher leaves all of the instruction to the TL without learning how to present the material better in future instruction. Model C, integrated instruction, involves high-level involvement that demonstrates, again, shared thinking, planning, and creation of something new. Model D, integrated curriculum, represents the implementation of Model C school-wide in collaboration with the district and other administrators at the district level rather than in a specific school setting.

Integration, as a core element of collaboration, is a major factor in student achievement. Collaboration to integrate research and literacy skills across the school curriculum in its entirety

facilitates student comprehension of a broad range of subjects (math, history, language arts, science, etc.) while simultaneously developing information literacy and research abilities. Interdisciplinary connections foster a deep understanding of information that may in fact be the most important factor when it comes to improving academic achievement (Montiel-Overall, 2006), though it seems to be the case that teachers only collaborate with specific other teachers (Kimmel, 2012a). As discussed earlier, the call has increasingly been for teachers to leave their isolation as content experts in order to make their knowledge explicit and to engage in collaborative inquiry about practice. It is up to TLs to learn how to engage in collaborative inquiry with other teachers. Additional research is necessary to identify and develop best practices for promoting collaboration between TLs and high school teachers. In any case, it is imperative to advocate for the roles of TLs and the school library curriculum in ways that improve such collaborative relationships.

Teachers' Perspectives on Collaboration

Collaboration, then, is one of the most important aspects of a TL's role, but, for a variety of reasons, it has proved challenging to implement (Wilson, 2012). Some classroom teachers may not know how students stand to benefit from teacher-TL collaboration owing to a lack of exposure to the relevant concepts during their preservice teacher training or to working with a TL. However difficult it may prove, though, student teachers are likely to continue collaborating when they learn to do it during their training (Latham, Gross, & Witte, 2013; Moreillon, 2008).

Education and librarian professionals are increasingly interested in finding solutions to collaborative challenges, and one branch of research on the topic focuses on improving collaborative efforts between classroom teachers and TLs (Cooper & Bray, 2011; Kimmel, 2012a; Loertscher, 2014; Montiel-Overall, 2009). This work has pointed to the need for TLs to

identify teachers who are willing to work together on various projects. When a collaborative project proves successful, word-of-mouth discussion can encourage other teachers to collaborate as well. High school teachers are, as noted, typically isolationists in this respect (Loertscher, 2014), so they may be unwilling to relinquish control of their students, classrooms, or schedules (Wilson, 2012). For successful TLs, on the other hand, collaboration is more than just a catch phrase or buzzword in the field: it is the very core of what they do (Moreillon, 2008).

In the shared creation that is collaboration, each educator needs to establish a trusting and working relationship with other stakeholders and to have faith in the process itself (Montiel-Overall, 2005b). Once educators have established such a relationship, they are prepared to develop learning opportunities jointly while executing varying but complementary approaches to instruction. All members of a collaborative teaching team must therefore understand the others' roles, perceptions, and objectives in order to overcome the barriers to effective collaborative teaching. Collaboration is worth the effort because it can, when done correctly, promote relationships within the school community so that everyone is treated equally in the classroom setting and no one is marginalized (B. Johnson, 2003).

This model, while valuable, does not fall within the research scope of this study. Teachers who view collaboration positively are likely to continue to seek out others with whom to work towards a common goal while creating additional opportunities to enhance classroom practices (Vangrieken, Dochy, Raes, & Kyndt, 2015). The idea that educators perform better when they work together and grow professionally is based on organizational theory, which resembles approaches followed in the business sector and in the implementation of PLCs, which are prominent in school settings (Leonard & Leonard, 2003). PLCs assist teachers in deepening their pedagogical knowledge collectively, exchanging ideas, learning from one another, and

expanding their understanding through social interactions and conversations supported by data (Popp & Goldman, 2016). The substantial research on PLCs indicates that TLs are not always involved, an omission that impedes collaborative efforts.

A PLC can likewise be described as a group of educators across a school who work in common toward similar goals in order to benefit the school community. Such educators share a set of values and norms regarding the teaching profession and labor collectively so that everyone may grow and reflect upon practices in the education field (Achinstein, 2002). Teachers can learn from one another by avoiding mistakes and improving reflection practices and confidence with a commitment to the idea of continuous improvement for the school community (Hargreaves, 2000). Shared decision-making is an important aspect of educators coming together to help to improve the school setting.

Collaboration can take many forms, not being specific to a practice, time frame, or setting (Cooper & Bray, 2011; Loertscher, 2014; Montiel-Overall, 2005b). Team teaching, planning, coaching, mentor-mentee relationships, and formal or informal professional dialogue are just a few examples. When educators work together to build relationships and foster ideas, individuals may benefit in various ways, including the empowerment of teachers (Hargreaves, 2000). Collaboration does not look any different when a TL is involved, since TLs are educators who develop relationships with other staff members and with students.

Roadblocks to Collaboration

Collaboration, then, can take a variety of forms in the educational setting depending on the previous experiences of the participants. Education philosophy and theories that guide teachers' decision making may also vary among collaborative partners. Useful here is Buzzeo's (2002) definition of collaboration as "two or more equal partners who set out to create a unit of

study based on content standards in one or more content areas plus information literacy standards, a unit that will be team-designed, team taught and team-evaluated” (p. 7). This conception of collaboration emphasizes positive student learning, but it raises the question of whether the differences among the ideas and perspectives of the various partners represent impediments to educators’ daily tasks.

Common barriers to collaboration include lack of administrative support, lack of time or other scheduling conflicts, and limitations of the school culture (Buzzeo, 2003; Farmer, 2007; Leonard & Leonard, 2003; Montiel-Overall, 2006) when it comes to engaging in PLCs or turning to some other model. School administrators, classroom teachers, researchers, and TLs recognize the impact that collaboration can have in terms of improving instruction. The time required may be one reason for a school’s neglect of the collaborative model. In any case, as Kimmel (2012a) and DuFour and Marzano (2012) have suggested, additional research is necessary to determine the nature of effective collaboration among teachers and the steps that school administrators can take to provide time for and otherwise encourage it.

Administrators should not need to act alone or to feel that they are in a vacuum when it comes to shared decision making; rather, leaders should encourage shared governance that involves active participation in decision making (Farmer, 2007). TLs need to advocate for and share with administrators the integral role that the school library plays in student learning. The principal, as an instructional leader, is key to the development of a school library program that supports and enhances teaching and learning (Church, 2008). When administrators understand the importance of the TL and school library in a wide variety of educational contexts, instructional leaders will be empowered to enhance and support collaboration efforts that further the mission and vision of the school and district.

A roadblock to collaboration mentioned earlier is teachers' preference for working and planning on their own and tendency to seek guidance from others only when they are comfortable doing so (Hargreaves, 2000). TLs work in various capacities within a school depending on teachers' personalities and teaching styles, and conflicts can arise. Teachers and TLs can, however, embrace their differences, which define their teaching ideals and indicate how to make changes to the curriculum within the classroom. TLs must therefore know how to work with various personalities on campus while effectively demonstrating ways in which a school library can help teachers to enhance their lessons. TLs cannot force themselves and their educational ideas on others, and there are differing points of view regarding how best to utilize library resources within the classroom. TLs need to act as a support system and to appreciate that time may be required before teachers are willing to collaborate. When a TL works well with one teacher, others may hear of their success and seek to recreate it, thereby improving teaching practices across a school.

Educators have shared values and goals for their students, and the disagreements can occur can help professionals to grow and learn and to improve the collaboration process going forward. The importance of collaboration lies in its positive effect on student engagement and willingness to work with and learn from others (Montiel-Overall, 2006).

Research Methodology

This mixed-methods study was informed by the above research question and sub-questions. It involved an online survey of 128 teachers and 5 administrators, who in this way shared their thoughts and experiences on the topic of collaboration. The survey was designed so that participants would consent to individual interviews that would further reveal the in-depth reality of high school teaching and thus better answer the research questions. The high school

level was selected for this study because this is the context in which most of California's 859 TLs were employed at the time it was conducted (California Department of Education, 2017). Thus, in San Diego County only a few school districts have TLs at the middle-school level. As mentioned, few studies have investigated how teachers and TLs collaborate at the high school level.

This study, then, collected and analyzed survey data, interview data, and my notes utilizing the TLC-III model that was first developed by Montiel-Overall in 2005 and improved over the following seven years thanks to various research studies. The TLC-III model emphasizes ways in which teachers and TLs typically collaborate and the various stages that they observe. This study also explored the barriers to collaboration that teachers and administrators identified through the data-collection process, survey results, my notes, and suggestions were considered in terms of the implications for future research and how the data collected can help TLs to improve collaborative efforts at the high school where the research study took place.

Significance of the Study

As discussed, collaboration faces many challenges and, though it has been practiced for a long time, relatively few TLs use it to its full potential (Cooper & Bray, 2011). This situation needs to change in light of research indicating that collaboration between TLs and teachers has a positive impact on student achievement (Cooper & Bray, 2011; Kimmel, 2012b; Loertscher, 2014; Montiel-Overall, 2009). Fortunately, with the adoption and implementation of the Common Core State Standards (CCSS), teachers are becoming more likely to appreciate the skill set that TLs possess, while administrators have an opportunity to see the value in the ways in which TLs can influence and improve teaching practices and the understanding of informational literacy. The CCSS gives teachers the responsibility of developing skills and learning in ways

that advance students' understanding of their education and the expectations of them (Loertscher & Marcoux, 2010). The CCSS works to help educators to set forward-thinking goals about student performance that are based on evidence rather than speculation (Loertscher & Marcoux, 2010). Under the CCSS, the library program and the TLs can become increasingly integrated into students' education while promoting collaboration efforts between TLs and other teachers (Morris, 2012).

Collaboration can improve school community efforts, so this study explored how high school teachers work with TLs, the desirable characteristics of collaboration in the high school setting, and the barriers to collaborative efforts. This study was designed to inform school administrators about how to support teachers and TLs alike in the collaborative process and how to prevent typical impediments to the collaborative process. This study also enabled the researcher to gain a better understanding of the process of collaborating with other teachers and the various forms of formal and informal collaboration at the high school in which the study took place, and it provided insight into the characteristics that teachers view as beneficial when working with a collaborative partner. Moreover, this study is intended to contribute to the literature on how relationships affect TLs' collaboration efforts and the characteristics, challenges, and opportunities that the collaborative process represents for teachers, administrators, and students. In sum, it is hoped that this research will benefit teachers, TLs, administrators, and, ultimately, their students.

TLs represent the gateways to the promotion of reading and social justice, for they can identify and promote resources that feature multicultural and diverse characters within the library and the classroom. They can likewise promote various types reading materials to help students engage in critical thinking and to cultivate a lifelong love of reading. Collaborating with TLs in

these ways is similarly important for teachers and principals, whose perspectives influence how students use a school library, how stakeholders can promote collaborative efforts, and the capacity of TLs to promote social justice through literature.

The twenty-first century student needs to possess literacy in reading, information, and technology, skills for personal knowledge building, and oral literacy (Barrett, 2010). Teachers create various digital literacy lesson plans but, owing to a lack of knowledge regarding information literacy instruction, may fail to promote knowledge creation and research skills. Fostering some of today's essential skills, including critical evaluation, synthesis, empathy, and communication, should take place in a natural, self-motivated manner, which means through reading and information seeking, which in turn means investing in school libraries (Kyle, 2014).

Learning is a process of internal dialogue, of making sense of new information. Information obtained through library resources, such as books, articles, and websites, provides a stimulus to an internal dialogue of learning. Thus "Understanding knowledge, how it works, how it is dynamic and relational, not static or hierarchical, changes how librarians facilitate learning and knowledge creation" (Lankes, 2012, p. 10). Inquiry-driven models of learning facilitated by TLs and classroom teachers promote this knowledge-driven conversation, which is a prerequisite for students to develop critical thinking.

Since TLs are typically skilled in technology use, they should take the lead in teaching technology skills during professional development for teachers (Cooper & Bray, 2011). TLs are proactive leaders in technology integration owing to the changes in research standards over the years, including the profusion of online resources that are continually updated and the promotion of digital literacy in the face of evolving technologies. When defining the responsibilities of TLs, the professional standards of the AASL and other guidelines for TLs emphasize leadership

in the context of collaboration. Owing to their broad and general nature, however, these standards offer little practical guidance for practicing TLs, who need more clarification regarding their roles and explicit techniques and strategies for leadership and for implementing and supporting a collaborative culture within a school community (Johnston, 2012). Very few studies have considered how TLs and high school teachers collaborate, the characteristics that teachers would like TLs to possess in order to promote collaboration, or the environment necessary to foster collaboration in the high school setting. TLs and library programs help students learn how to conduct research, and they improve student learning and have an impact on college retention rates, but very little is known regarding the factors that contribute to these key outcomes.

Organization of the Study

Chapter 1 has provided an overview of this study, including the research questions, conceptual framework, background regarding the various roles played by TLs in today's school setting, the rationale for collaboration in high school teaching, and insights into ways in which teachers' ideas can impact their collaboration with other teaching and support staff. Amid the many definitions of collaboration in the education world, Montiel-Overall's TLC-III model of collaboration was chosen as particularly useful for the present inquiry. Chapter 2 includes a review of the literature on collaboration in the classroom from the perspectives of TLs and administrators as well as the benefits of and barriers to collaboration efforts. There follows in Chapter 3 the detailed plan for this mixed-methods study, the specific questions asked, methods of data collection and analysis, participant recruitment, and selection, and the interview questions. In Chapter 4, the data collected for this study, which were gathered from 62 completed online anonymous surveys and 22 face-to-face interviews conducted in the spring of

2017, are presented, along with the coding process and the themes that emerged from the survey and interview questions. In Chapter 5, the implications of the findings for the TL/researcher, teachers, and administrators are discussed.

Definition of Terms

Collaboration

For this study, collaboration is defined as a “trusting, working relationship between two or more equal participants involved in shared thinking, shared planning and shared created of integrated instruction” (Montiel-Overall, 2005b, p. 5). From this perspective, the instructional process is improved when teachers talk and share with each other in efforts to improve student learning in all areas of the curriculum and particularly in promoting concrete and integrative teaching.

Teacher Librarian

The American Library Association and the AASL have officially adopted the term *school librarian*, but that term overlooks the very important instructional aspect of the job; for the school librarian is a certified teacher too, as is recognized by the Department of Education. The term teacher librarian (TL) thus best describes the multifaceted responsibilities of the position, for which reason I have used it throughout this study to refer to library media specialists (at the elementary, middle, or high school levels), school librarians, and media coordinators (Wolf, Jones, & Gilbert, 2014).

Twenty-First Century Skills

The meaning of this term is consistently changing owing to the constant evolution of technologies and understanding, but a useful definition takes into account that technology and

culture are changing the kinds of skills that are demanded in the global workplace (Kyllonen, 2012).

School Culture

A school's culture is the sum of its unofficial norms, its "unwritten rules and traditions, customs, and expectations" (Deal & Peterson, 2016, p. 7) and is therefore specific to a given school. These norms influence how members of the staff interact, how they view students, and their preference either to work together or rather apart from the school-wide culture.

Chapter Summary

Building collaborative relationships, then, is a complex and evolving process that requires considerable effort and involves many external factors that can be beyond the control of either teachers or TLs. A collaborative culture in the school is equally vital, along with the attendant internal factors that influence the relationships among teachers and have the potential to foster a professional community that is constantly learning and advancing student achievement (Muronaga & Harada, 2007). The interpersonal dynamics of teachers' collaborations may vary in consistency, impact, and sustainability. It takes time to develop trust and respect, but effective partnerships are possible with support from administrators, understanding of the process, and the conviction that positive change can occur even if the process may be both messy and noisy (Muronaga & Harada, 2007). Everyone needs to contribute resources and ideas, for a team effort can potentially change in meaningful ways how teachers deliver the curriculum to students and in general promote learning improvement.

CHAPTER 2: LITERATURE REVIEW

California is in the bottom tier of U.S. states in terms of its TL-to-student ratio, with one TL for every 7,187 students, roughly one ninth of the national average and forty-second in the nation. Just 9% of California schools employ a credentialed TL, with most staffing at the high school level, and in 86% of these schools only a qualified staff member manages the library (California Department of Education, 2017). Students are at a considerable disadvantage when their schools lose or have never had a school library or employed a TL (Lance & Hofschire, 2011). For the fact is that a school library alone is not enough (Todd & Kuhlthau, 2005b); TLs need to collaborate actively and to take a leadership role with their teacher colleagues and school administrators in order to ensure that school libraries are effective in contributing to student achievement.

Schools that employ a full-time TL as part of the teaching staff have shown increases in student achievement on standardized reading tests according to data collected over a period of years in Colorado, Idaho, Kansas, New York, and other states (Dow, McMahon-Lakin, & Court, 2012; Francis & Lance, 2011). Regardless of the relative affluence of the communities in which they lived, students performed significantly better on reading tests when they had access to library programs run by TLs (Lance & Hofschire, 2011). Research continues to demonstrate that an increase in school library usage tends to correlate with higher achievement on state-mandated assessments, again regardless of a school's educational or financial needs (R. V. Small, Shanahan, & Stasak, 2010).

School libraries are environments in which TLs act as agents of active learning. Thus a study of 39 school libraries in Ohio that were effective according to a set of criteria validated by a panel of experts (including representatives from the Institute of Museum and Library Services,

representatives from the Ohio Educational Library Media Association, and researchers from the Rutgers School of Communication and Information) found that TLs function as inputs by supporting students in the learning process and as outputs by promoting positive learning outcomes and improving students' individual and academic achievements (Todd & Kuhlthau, 2005a, 2005b). TLs and school libraries are “not just informational, but transformational and formational, leading to knowledge creation, knowledge production, knowledge dissemination and knowledge use, as well as the development of informational values” (Todd & Kuhlthau, 2005a, p. 85).

This chapter reviews the current literature regarding the leadership role of the TL as a collaborative partner, especially in the public high school setting, as it evolves in response to the changing nature of school settings, such as increasing implementation of technology and the Common Core Standards. The literature also discusses how collaboration among groups of teachers affects student learning, including factors that prevent teachers and TLs from working together on planning. TLs help stakeholders to understand school library programs and to utilize the library effectively for curriculum development and self-learning. This chapter also looks at the relationships among principals, teachers, and students and how interactions among subgroups impact the leadership roles that TLs play in public schools.

TLs are essential for the overall success of students, schools, and districts. Collaboration between teachers and librarians has, however, been a relatively low priority in schools and in educational policy and research (Eri & Pihl, 2016). Recent studies have, as just observed, found that TLs contribute to student achievement. The following discussion covers TLs' differing roles as program administrators, collaborators, and information specialists, the necessity of collaborations between TLs school administrators, principals, and teachers, and the importance

of identifying TLs as leaders within their educational communities. Most importantly, the literature demonstrates the positive impact of collaborations involving TLs on the school community through literacy programs and technology integration and in the process provides the theoretical framework for this study.

Roles of Teacher Librarians

Ideally, TLs collaborate with teachers to plan, conduct, and evaluate learning activities that incorporate information literacy while at the same time cultivating a collaborative culture throughout the school community according to the AASL and the Association for Educational Communications and Technology (AECT) (1998). Collaborative endeavors include finding resources for teachers (Loertscher, 1988), developing information literacy instruction (Breivik & Senn, 1998), assisting classroom teachers in planning, developing, teaching, and evaluating information literacy in the context of student learning (AASL & AECT, 1998; Callison, 1997).

Collaboration is more likely to be discussed in TL and special education preparation classes than in single-subject teacher preparation credential programs (Asselin & Doiron, 2003; Hartzell, 2002; Hunt & Luetkehans, 2013; Roux, 2008). Previous studies have found that classroom teachers' failure to understand the role of TLs and information literacy often impedes collaboration between the two groups (Asselin, 2000; Roux, 2008). A case study examining school librarians and their consulting role in a team approach to curriculum development (van Deusen, 1996) was the first to demonstrate the need to include school librarians in education programs for teachers, many of whom saw librarians as outsiders because they were neither classroom teachers nor administrators. New teachers who understand the role and impact of TLs in regards to student achievement, by contrast, are more likely to collaborate with TLs and other teachers (Asselin, 2000).

In order to raise awareness of the many ways in which TLs can benefit the educational community, VanTuyle and Watkins (2012) suggested that TLs advocate actively for library programs and for their roles as collaborators and connectors to information and knowledge while sharing this information with administrators. Thus TLs are encouraged to promote research that empirically demonstrates the effectiveness of their library programs in contributing to student achievement and thus success for schools and districts and to push for job descriptions and evaluations that properly define and assess their roles and qualifications. Finally, there should be an expectation on the district level for teachers to integrate library services into their curricula. With administrative support, TLs can organize and coordinate workshops, model instructional strategies, and coach other teachers, sharing the outcomes of and data from their inquiries with other interested parties (Asselin, 2000). Involving administrators can impact future decisions and relationships in regard to the role that TLs play in the public-school setting.

Benefits of Collaboration

As the AASL and AECT (1998) put it, “Collaboration—working with others—is a key theme in building partnerships for learning” (p. 50). Collaboration between teachers and TLs creates a resource-rich teaching and learning environment for students. Working together, teachers and TLs establish positive relationships so that people can learn from one another (Hughes-Hassell & Wheelock, 2001). These collaborative environments connect classroom goals, curriculum mapping, and collection development to a school’s resources. In addition, effective collaboration helps teachers and TLs to engage in ongoing professional development and professional reflection and contributes to overall morale (Hughes-Hassell & Wheelock, 2001; Lindsay, 2005; Loertscher, 2014). Teachers learn when others share their experiences, reflections, and mistakes. Collaboration helps to develop new and improved routines,

procedures, and ways of thinking about student learning and the development of knowledge (Hughes-Hassell & Wheelock, 2001).

Through collaboration, both teaching parties help to improve student engagement in inquiry-based projects that incorporate information literacy skills. Schools want to produce lifelong learners and readers, and one way to do so is to teach students how to use school library resources not only during but also outside school hours and for multiple purposes. Students benefit from the formulation of objective learning goals (AASL & AECT, 1998; Hughes-Hassell & Wheelock, 2001).

Collaboration requires active participation, genuine effort, and commitment on the part of both the teacher and the TL, for it can take considerable time. The benefits can be significant, however, particularly in terms of information literacy that encompasses the content and all areas of the curriculum and content-related objectives (AASL & AECT, 1998). Educational researchers are aware of the benefits of collaboration involving TLs, but teachers and administrators tend not to be; indeed, many teachers do not even view TLs as co-teachers (Montiel-Overall, 2010). For teachers and TLs to collaborate successfully in the school setting, all involved need a solid understanding of what they are doing and why if they are to learn from one another and plan effectively (Montiel-Overall, 2009, 2010). Collaboration is difficult but valuable, especially since society prizes the development and implementation of partnerships (Rosenfeld & Loertscher, 2007).

Fostering Collaboration

A variety of factors, including events, experiences, and the influence of other people can affect teachers' attitudes toward collaboration (Clark, 1992; Smith, 2001). It is in this respect that a TL can assist teachers and students alike so as to promote reading and overall learning

success. In the past, high school teachers have tended to be autonomous and isolated from their teaching colleagues, but the promotion of professional learning has been embraced by educators in pursuit of a more “organic, context-sensitive process of learning” (Levine & Marcus, 2007, p. 118). In this context, personal investment in reform efforts will occur when teachers realize a shared vision for improving information literacy in the classroom (Dufour & Marzano, 2012; Smith, 2001). However, even those with high hopes for promoting teacher and TL collaboration are often uncertain regarding how teachers and TLs learn in these created communities (Levine & Marcus, 2007).

A number of U.S. studies have used large correlational and quantitative data assessments to demonstrate a link between quality libraries staffed by full-time professionals and student achievement. TLs have circulated such studies widely as part of an effort not simply to halt the decline of libraries but even to expand them by informing administrators of the benefits of libraries so that they can make better-informed decisions (Lance et al., 2000, 2001, 2002, 2005). These studies have provided TLs with authoritative evidence of their contributions and have promoted awareness of the potential of school libraries, but, amid the emphasis on test-driven assessments, the contributions of the TL remain underappreciated (Loertscher, 2014).

Administrators’ Knowledge

School administrators (e.g., superintendents and principals) tend to be poorly informed about their districts’ school library programs and the role of TLs (Shannon, 2012; Todd & Kuhlthau, 2005b; VanTuyle & Watkins, 2012). They often stereotype TLs as the keepers of books without understanding their specific teaching roles in relation to information and technology (Hartzell, 2002). Thus superintendents in Illinois and Iowa reported being unfamiliar with the role of TLs and their capacity to assist the administration with instruction, lacking as

they did both knowledge of the relationship between library media services and assessment scores and trust in the research on the roles and responsibilities of TLs and the relationships that they can form (VanTuyle & Watkins, 2012). Researchers have attributed this unfamiliarity with the roles of TLs to their “occupational invisibility” (Hartzell, 2002, p. 92). The professional preparation and socialization of administrators do not acquaint them with the roles that school library programs and TLs play in student achievement (Lance & Hofschire, 2011).

One factor contributing to administrators’ shortcomings in this regard is the content of their courses of study and credentialing programs. Simply put, these programs place such emphasis on executive decision making and administrative accountability that they fail to acknowledge the ways in which TLs can serve administrators’ needs as connectors and information specialists (Hartzell, 2002; VanTuyle & Watkins, 2012). Administrators do need to remain up-to-date professionally after completing their preparation programs in order to cultivate new ideas, part of which effort involves reading research publications, and it is in this context, through publications in administrative journals that share research findings, that TLs and their advocates can raise the profile of school libraries for administrators. Thus the latter can attend the AASL’s conferences free of charge because the organization recognizes the need for administrators to appreciate the impact of TLs and school library programs generally.

School districts hold superintendents accountable for their decisions and expect them to provide information necessary for effective decision making. TLs accordingly need to share reliable data with administrators (VanTuyle & Watkins, 2012) and to participate in short- and long-term strategic planning at the district level. In this way, superintendents come to perceive the value of the TL and the role of the school library in information literacy and knowledge

attainment. TLs for their part must be vigilant about advocating for school library programs and demonstrating their value to the school district.

Research also shows that school principals, like superintendents, tend to be uninformed about the contributions that TLs and school library programs can make to the success of students and schools. School library programs are chronically underfunded in California; thus, as discussed, many lack a TL (Zmuda & Harada, 2008). It is in part because principals have not prioritized school library programs that they have remained underfunded. Not surprisingly, principals who work closely with their school librarians seem to have a better understanding of their school library programs (AASL, 2007; Shannon, 2012). Nevertheless, most principals have only a limited understanding of ways in which a school library can embed effective instructional programs in the curriculum or of the effectiveness of librarian-teacher collaborations for student achievement.

Principals' lack of understanding of the roles that TLs play, then, can impact utilization of the school library and can result in the elimination of TL positions from school budgets (Church, 2008; Gavigan & Lance, 2015; Hartzell, 2007; Shannon, 2012). Gaps in preparation programs for principals and the professional literature are a significant factor in this lack of understanding (Shannon, 2012). Thus, in one study, less than 2% of elementary school principals surveyed in Virginia named coursework completed during their principal preparation programs as their primary source of information regarding the instructional role of TLs (Church, 2008). It is increasingly apparent that administrative credential preparation programs need to draw attention to the effectiveness of school library programs in promoting student achievement, as do administrators' professional organizations. The relevant information is available; the American Library Association, for instance, publishes numerous research articles on these topics.

Because effective school library programs are built on strong partnerships between principals and TLs (Oberg, Hay, & Henri, 2000), the latter need to increase their visibility to former. Thus, one study reminded TLs not to assume that principals have had exposure to successful school library programs (Shannon, 2012). TLs need to end their “occupational invisibility” in order to educate principals about the importance of libraries and library professionals for students, teachers, and the educational community in general (Hartzell, 2002; Shannon, 2012). Principals who understand and appreciate libraries, and TLs, are naturally more likely to advocate on their behalf (Lance & Russell, 2004; Oberg et al., 2000; Shannon, 2012), for they understand the correlation between student achievement and productive relationships between teachers and TLs. Thus, one study showed that higher-performing schools were led by principals who valued regular meetings with TLs and encouraged collaboration between them and classroom teachers (Lance & Russell, 2004). Principals can help by observing and offering constructive criticism of lessons that emerge from collaborative partnerships.

In promoting collaborative programs, it is accordingly crucial that principals witness firsthand how their participation facilitates learning. Student assessments should therefore reflect preferred modes of instruction and demonstrate ways in which collaboration promotes student ownership of learning (Loertscher, 2014). Such assessments identify strengths and weaknesses in the curriculum, while partnerships involving TLs, principals, and classroom teachers provide students with opportunities to witness education communities working together to promote learning. Students benefit when principals value library programs and share their positive outputs within their learning communities (Lance & Russell, 2004). In sum, when principals participate in the process, they experience firsthand how beneficial collaboration is for the school community.

Expert Models of Collaboration

One model of collaboration involving TLs is for universities to integrate it into teacher preparation programs. Instructive in this context is a study by Roux (2008), who partnered with a faculty member in the secondary education preparation program at her university to create a collaborative project meant to raise awareness of the role of school librarians in promoting student learning. For the project, the students created a research presentation that involved interviewing and collaborating with a school librarian, finding in the process that several of the 19 preservice teachers who participated were unaware of the various types of librarians. Some students interviewed public librarians, and one attempted to interview a university librarian. Many of the presentations contained stereotypical images of libraries and librarians. Overall, Roux found the exercise helpful for educating preservice teachers about the roles of school librarians. Preservice teachers who received adequate training regarding collaboration with TLs tended to continue the practice, being better able to plan for it (Latham et al., 2013; Moreillon, 2008).

Education and librarian professionals are increasingly interested in finding solutions for challenges to collaboration. Thus, one branch of research has focused on improving collaborative efforts between classroom teachers and TLs (Cooper & Bray, 2011; Kimmel, 2012a; Loertscher, 2014; Montiel-Overall, 2009). These studies have shown that TLs need to identify teachers who are willing to collaborate on various projects and that, when projects are successful, other teachers engage in collaboration as well.

Particularly useful here is Loertscher's (1988) taxonomy of library media specialists, which has eleven levels corresponding to the various stages of a library media program in which TLs can participate throughout the school day (Figure 1). At Level 1, the library does not enter

into a teacher's thought processes when planning. At Level 2, the library serves a warehouse of materials that are available for checkout, and the TL often remains at this level, performing daily tasks that help others or maintain the order and the attractiveness of the collection and the library. Level 3 involves the retrieval process of materials based on requests from teachers and students, while at Level 4 the retrieval process responds to spur-of-the-moment planning to accommodate educators' need for flexibility. At Level 5, teachers and TLs interact in passing or during lunchtime to further planning goals, to entertain suggestions, and discuss the arrival of new materials. At Level 6, TLs fulfill teachers' requests for access to materials pertaining to a given research topic, often at the same time every year. At Level 7, the TL promotes the capacity of the library program to promote student achievement, and at Level 8 the TL serves as a support planner, providing materials for a previously-devised lesson including additional resources based on learning best practices. At Levels 9 and 10, TLs participate in the instructional design, development, execution, and the evaluation of the unit at the school site. At Level 11, the TL participates in the planning process with other educators to develop a curriculum that can improve teachers' instructional practices in ways that can be of use to others throughout the district. The many levels of collaboration, shared thinking, and planning described in this model assist districts in implementing effective strategies as professionals learn from each other to improve student learning in all curricular areas. The goal is to build metacognitive skills that help in the analysis, synthesis, and transfer of informational literacy in the context of true collaboration.

	Librarian's Taxonomy	Teacher's Taxonomy
Level 1	No involvement. Library media center is bypassed.	No involvement of library media center specialist or use of materials from the library media center.
Level 2	Students access information when needed.	Permanent room collection created. Little need to interact with the library media center.
Level 3	Specific requests from teachers and students addressed.	Materials borrowed from the library media center, public library or other sources for classroom use.
Level 4	Materials gathered on the spur of the moment.	Library media center specialist provides ideas and suggestions regarding materials for instruction.
Level 5	Informal planning in hall or lunchroom.	Use of library media center materials to supplement unit content.
Level 6	Advance notice for needed library materials.	Library media center materials/activities are integral to unit content rather than supplementary.
Level 7	A concerted effort to promote library.	Library media specialist is a teaching partner to construct unit of instruction (of information literacy).
Level 8	Formal planning with teacher on a resource based project or unit.	Library media specialist is consulted as curriculum changes are being considered.
Level 9	Participation in development, execution, and evaluation of a resource-based teaching unit (Level 1).	
Level 10	Participation in resource-based teaching units where the entire unit content depends on the resources of the LMC program (Level 3).	
Level 11	Participation and contribution made along with teachers to planning and structure of what will be taught in school.	

Figure 1: Loertscher's taxonomy

According to Montiel-Overall (2006), there are at the heart of a teacher-TL collaboration five core elements, namely interest, innovation, intensity, integration, and implementation, that together promote shared thinking, planning, and creation of something new (cf. Hamilton, 2011).

As discussed earlier, Montiel-Overall (2006) also described four models of collaboration

between teachers and TLs (Figure 2). Model A, coordination, which requires the least involvement, describes situations in which the teacher works autonomously, interacting little if at all with a TL. Model B, cooperation, describes situations in which teachers and TLs combine their efforts for instruction but carry out formal lesson planning individually. Other researchers have urged teachers and TLs to avoid relationships of codependency in which the classroom teacher leaves everything to the TL without learning how better to implement the material in the future (Cooper & Bray, 2011). Model C, integrated instruction, is an example of high-level involvement that demonstrates shared thinking, planning, and creation of something new. Model D, integrated curriculum, involves integration of Model C locally or across a school district as the TL works on the curriculum and implementation of instruction, drawing attention to the vast literacy resources that are available and offering guidance regarding how best to use these resources in teaching all subjects.

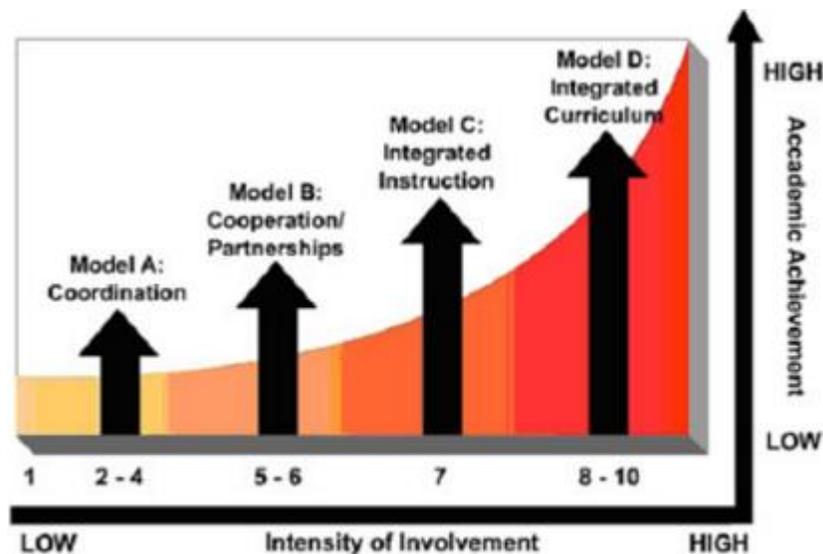


Figure 2: Models of librarian and teacher working relationships

Hamilton (2011) reported on an embedded collaboration between herself and an English teacher that provides a good example of Montiel-Overall's Model C, integrated instruction.

Through their collaboration, these educators developed the library and classroom into a shared environment that was learning-centered and focused on scaffolding students' ability to read, write, and create content independently and confidently through social interaction in physical and virtual learning spaces. The collaborators were able to facilitate conversations with students regarding research strategies and how best to utilize various research tools. This participatory environment encouraged student collaboration and discussion within the context of the learning process.

Integration is in fact a core element of collaboration and a major factor in student achievement. Collaborative integration of library instruction across the school curriculum facilitates students' comprehension of a broad range of subjects (math, history, language arts, science, etc.) while simultaneously developing information literacy and research abilities. Through interdisciplinary connections, a deep understanding of information emerges, which, as noted earlier, may be the most important factor in improved academic achievement (Montiel-Overall, 2006).

A more recent study has furthered this line of inquiry by arguing that teachers mainly collaborate with others who uphold the same standards or teach the same subject (Kimmel, 2012a). Increasingly, the call is for teachers to move out of their isolation, to make their knowledge explicit, and to engage in collaborative inquiry about practice, in which context TLs must learn to engage in collaborative inquiry with other teachers. Additional research is necessary to identify and develop best practices for facilitation collaboration between TLs and classroom teachers. In any case, advocacy for TLs and the school library curriculum is imperative for improving collaborative relationships between teachers and TLs.

The TL is an instructional leader within the school community. When participating in school committees, TLs provide a unique perspective because they work with the entire school community in individual (students, teachers, and administrators) and group contexts (Church, 2011). When TLs collaborate with classroom teachers, they are master teachers, ensuring that students develop critical thinking skills by becoming effective users of ideas and information (Church, 2011).

Montiel-Overall's (2005a, 2005b) TLC model describes a continuum of interactions between teachers and TLs ranging from high- to low-level activities depending on the objectives for student learning. The revised TLC-III model is a simplified version Loertscher's (1988) taxonomy of collaboration, in which, as discussed above, there are 11 possible levels of interaction between the two types of teachers across the grade levels involving the school library. Teachers develop their own teaching styles as their expertise grows in terms of both content knowledge and mastery of teaching practices. Teachers have ideas that students can explore and expand through the use of information resources, and it may be necessary to tweak or adapt methods to meet the changing needs of students (Loertscher, 1988). Whatever a teacher's strengths in the classroom, the relationships that he or she builds with students and the school community can help the school to improve. Improvement can come through reaching out to others to for ideas, for clarification, or to tinker with a lesson. It is in these contexts that the TL can be of assistance as a sounding board, source of ideas, resource gatherer, expert on applying technology, collaborator, or co-teacher.

Barriers to Collaboration

Several studies have indicated that the manner in which TLs operate has a significant impact on student achievement and learning (Lance et al., 2000, 2001, 2002, 2005). I have

explored the benefits of collaboration throughout this literature review, but in many cases there are barriers that prevent both teaching groups from coming together to plan, implement curricula, co-teach, or reach a meaningful understanding of how best to utilize TLs in planning at the school and district levels. These barriers, again as discussed above, include availability of time, attitudes on the part of teachers and principals, and scheduling conflicts (Haycock, 2007).

Collaboration between TLs and teachers has a positive effect on student interest in and ownership of learning (Haycock, 2007). Studies have emphasized the importance of trust in building foundations for connecting, working together, and sharing information and skills (Montiel-Overall, 2008). Trust takes time to build among teacher groups, but information sharing and collegiality help teachers to feel that they are part of a team or a school community, thereby reducing the likelihood that they will continue working in isolation (Montiel-Overall, 2008). Communication takes various forms in a school setting, including face-to-face as well as through e-mail, online chatting, messaging services and other technologies, phone calls, and the sharing of documents, things that students can do almost anywhere. Through these various communication channels, teachers can interact continually, on and off school grounds.

Management of time, such as finding a time to meet, is a recurrent issue in research into collaboration between classroom teachers and TLs, and the role of the principal appears key in this respect (Giorgis & Peterson, 1996; Kimmel, 2011; Leonard, 2002; Leonard & Leonard, 2001a, 2001b, 2003; Loertscher, 2014; Montiel-Overall, 2005a, 2005b, 2006, 2008; Rawson, 2014). Multiple meetings on overlapping topics can exacerbate scheduling problems, lower expectations, and impede the free exchange of ideas.

Loertscher (2014) has reported that, during the past decade of financial strain across the United States, many school districts have eliminated professional TLs, which has occurred in

both middle- and high schools, especially in California. Large cuts to school library budgets reflect a growing sentiment on the part of administrators that the Internet and Google have made the role of the TL redundant owing to the immediate availability of information through a simple online search.

Numerous studies have suggested that teachers support collaboration in theory but tend to be unwilling to invest the time required to make it work (Leonard, 2002; Leonard & Leonard, 2001a, 2001b). As just discussed, teachers typically do not have time to work with colleagues or to observe what other professionals are experiencing in the classroom (Hartzell, 2002; Lindsay, 2005; Loertscher, 2014). Other challenges include finding a common preparation period, aligning visions and standards, and understanding differing teaching styles.

Chapter Summary

TLs fulfill various roles at the school level and within the district. Rather than being mere gatekeepers of the library and its books, they are program administrators, instructional collaborators, information specialists, and community leaders. All stakeholders can benefit from a deeper understanding of the role of the TL and the school library within the school curriculum. Preparation programs for teachers and administrators could alleviate some of this lack of understanding by addressing collaboration with TLs. In California, TLs follow the guidelines set by the state's School Library Model Standards, which also help school officials to make coherent decisions regarding TLs, since the roles that they play can vary depending on the needs of a given school. A dialogue involving TLs and district administrators, principals, and classroom teachers needs to take place so that their collective efforts can lead to improvements in student achievement. True collaboration demonstrates to students that an education system is a functioning unit. TLs need to advocate for themselves and school library programs, and they

cannot assume that all stakeholders understand their roles within the school community. An effective TL works in collaboration with the entire school community to serve it, the students, and the teachers.

As noted throughout this literature review, the TL maintains a unique role in facilitating the transfer of knowledge (Lankes, 2012) by providing access, baseline information, a safe atmosphere, and motivation. Thus, the TL provides access to materials and prepares a physical place that can inspire and stimulate conversations among students by providing the tools that facilitate knowledge transfer. Information literacy is an integral part of this knowledge provision (Church, 2011; Hamilton, 2011; Lankes, 2012). TLs further create safe environments in which students feel comfortable conversing with their peers and a participatory culture through collaboration with classroom teachers to engage students and motivate participatory learning (Hamilton, 2011; Lankes, 2012). When teachers and TLs create collaboratively in a participatory culture focused on twenty-first century instructional practices, students are motivated to analyze critically and to synthesize the materials that teachers present during instruction (Gross & Latham, 2007).

CHAPTER 3: METHODOLOGY

TLs are trained educational specialists who play many roles, not the least of which is delivering information literacy curricula. Information literacy is the ability to find and utilize information from a variety of digital, visual, and textual sources (Cooper & Bray, 2011). Other responsibilities of TLs include evaluating resources, promoting literacy, helping students to understand digital citizenship, program administration, technology integration, and in general responding to the needs of teachers and students. Any of these responsibilities may involve collaboration with other teachers.

As the review of the literature made clear, there have been some studies of this collaboration process, the various stakeholders' perspectives on TLs, the leadership roles of TLs, and the importance of collaboration for the teaching profession. None, however, has explored how organizational change can affect this process at the high school level, the practices involved in planning, or the first steps in teacher-TL collaboration (Montiel-Overall, 2007).

In order to shed light on these issues, the present study utilized a mixed-method approach incorporating the diverse perspectives and experiences of high school teachers and administrators at one high school on collaboration. To be more specific, the aim was to promote understanding of the issues involved in collaborative efforts of high school teachers and TLs at a large high school in southern California. Data were collected through survey instruments, face-to-face interviews with staff members on campus, and I took personalized notes during the interviews, the aim again being to explore how one high school defined collaboration involving the TL, the types of teachers participating in collaborative efforts, and the impact of collaboration on the teachers' other relationships and on their information literacy skills. My calendar was also utilized to help with past practices in relation to the various levels of

collaboration too. All aspects of the data collection were designed to support the call for improved understanding of the perspectives of stakeholders (in particular teachers and administrators) on the knowledge and skillset that a TL can bring to a high school campus. The hope is to provide more and more nuanced information to teachers and administrators regarding how a TL can foster learning and improve informational and teaching practices and information literacy. Further, through this study I as a TL have arrived at a greater appreciation for my role as a collaborator and for teachers' preferences in collaborative efforts. Within this specific school district, therefore, this study stands to improve communication efforts concerning all that the TL has to offer.

Conceptual Framework

The main conceptual framework for this study is Montiel-Overall's (2006) TLC model. According to this model, as described in detail above, the four facets of collaboration within the school setting are "coordination, cooperation, integrated instruction, and integrated curriculum" (p. 30) that take the form of a range of limited to intensive efforts. As such, the four levels of cooperation offer a perspective on the teacher-TL relationship that can be applied to a single school setting or across a district. The overarching notion, then, is that collaboration is fundamental to a successful school library program, meaning one that has a positive impact on student achievement.

Research Questions

As discussed in Chapter 1, but repeated here for the sake of completeness, the overarching research question for this study concerned the elements that foster effective collaborative exchanges between high school teachers and TLs. The following sub-questions grew out of this main idea:

- a) How do high school teachers, administrators, and high school TLs who work in the same school setting define collaboration?
- b) Does an individual's definition of collaboration affect how he or she interacts and collaborates with other teachers or teaching support staff?
- c) What factors contribute to or detract from collaboration between teachers and TLs?

Research Design

This study used a mixed-method research design, which can be defined as an intellectual and practical synthesis based on qualitative and quantitative research; it is the third methodological or a research paradigm (along with qualitative and quantitative research). It recognizes the importance of traditional quantitative and qualitative research, but also offers a powerful third paradigm choice that often will provide the most informative, complete, balanced, and useful research results. (R. B. Johnson, Onwuegbuzie, & Turner, 2007, p. 129)

The mixed methodology in this case consisted of an online anonymous survey, interviews with teachers and administrators conducted at the end of the 2016-2017 school year, and my personalized notes taken during the interviews.

The survey was administered as follows. First, the Institutional Review Board (IRB) gave its consent to the study, and the IRB consent form for participation was duly placed at the very beginning of the survey, before the questions (Appendix A). Next, the principal and superintendent agreed on a timeframe for the survey, and a Qualtrics survey link was emailed to all teachers and administrators at the school informing them about the study. Once participants accessed the link, they also saw the following statement also appeared before the questions: "By continuing with the survey, you are verifying that you, as a participant, have read this consent information and voluntarily agree to participate in this survey portion of the study." Thus, by answering the first question, participants gave their consent to the study and acknowledged the risks associated with it—which, as mentioned in the consent form, included boredom and the potential

difficulties involved with preserving participants' anonymity. The survey was emailed to every teacher and administrator employed at the specific high school during May 2017. The window for the survey window was six weeks. During this period, an IRB-approved reminder was sent every week and a half to potential participants who had not submitted a completed survey using the automatic setting in the Qualtrics survey program; those who completed the survey ceased to receive these reminders. Participants took part of the study and interviews after IRB approval. One part of the initial process before the study took place, was to obtain IRB approval while following school district guidelines. The school district needed to give permission for the study to take place at the high school. Both the principal and superintendent perused the survey, interview questions, and consent forms that the participants would be asked during the approved agreed upon time-period. Both administrators agreed to this request in writing letters to the IRB board granting their approval for conducting the study at the high school. After IRB approval, the survey was first sent out to the potential participants at the high school.

As discussed, the purpose of the survey was to capture individual perspectives on collaboration and information literacy in relation to the TL. Also gleaned from the survey were insights into the impressions of high school teachers and administrators regarding the school library program, the potential represented by the TL, and the resources available within the school setting. The survey thus provided a broad picture of participants' views of collaboration at this particular high school.

The results of the survey also yielded insight into whom to interview in the pursuit of a more in-depth understanding of collaboration at the school. The interviews revealed various perspectives on collaboration from teachers who had taught in the school setting for many years and others who had been there three years or less. The three data-collection methods thus triangulated the thinking of teachers and administrators about collaboration and revealed whether

there were themes in common with Montiel-Overall's TLC model. Notes were taken during the interviews also provided insight into the various ways in which teachers collaborated with the TL and other specific questions requiring follow-up after the interviews were complete. Each mode of data collection, then, supported and balanced the others, and, overall, the mixed-method approach generated appropriate research questions and confidence in the quality of the research findings and outcomes (R. B. Johnson et al., 2007; M. Small, 2011).

To be more specific, the interview data that I collected illustrated various recurrent themes in the collaborative efforts of the participants. When teachers defined collaboration in a given way, the effort was made to determine whether they were following through with and operationalizing their ideas or whether instead their biases had created barriers to collaborating with a TL. Multiple data points were necessary to elucidate the nature of these teacher-TL collaborations, since each supplemented the others in the production of a detailed account of collaboration between high school teachers and TLs.

The interviews were arranged, as stated, after the online survey had been completed. Participants who finished the survey received a thank you message to which a second survey attached. Respondents could then indicate whether they were willing to be interviewed (no, maybe, yes) and, if so, they were asked to provide a name. Those who declined to participate in an interview received another thank you, while I contacted those who had provided names to make future arrangements for the interviews. In the end, 22 individuals agreed to participate, 19 teachers and 3 administrators. Interviews took place on campus.

Participants

Of the 42 public school districts in San Diego County at the time of the survey, 20 were serving high school students at one or more facility. According to the California Longitudinal

Pupil Achievement Data System (2017), six districts at the time employed TLs at the high school level, of which three were served by a single district librarian working with or visiting multiple school facilities within a given week. The San Diego County Office of Education employed one TL who provided for the informational needs of the smaller districts, for which either the town or county library served as the school library owing to limited funds, personnel, and services. Again, private or charter schools were not taken into consideration.

As noted, this study focused on a single high school, a facility located in one of the six districts that employed a TL and at which I was employed. I used convenience sampling because my employment gave me access to 128 credentialed teachers and administrators as potential participants, making every effort to reach out to teachers, administrators, and support teaching staff. I also tried to have a representative from each department on campus.

Setting

This comprehensive high school in San Diego County served a community that was diverse in both cultural and economic terms. Thus, in terms of ethnic composition, the school's student population of 3,053 was 54% Hispanic, 25% White, 7% African American, 6% Filipino, 2% Pacific Islander, 3% Asian, and 0.3% American Indian/Alaskan. Many students came from military families, and 51% were eligible for free or reduced lunch. The staff consisted of more than 200 certificated and classified staff members, including 110 teachers in the classroom, 13 support teachers (i.e., guidance counselors, a TL, and a speech and language pathologist), and 6 administrators.

The survey collected statistics on the teachers, staff, and administrators employed at the school, including ethnicity, years of teaching experience at the present high school and

elsewhere, and level of education. These data allowed for a demographic comparison of the populations of students and staff.

Data Collection

This mixed-methods study involved three phases of data collection. The purpose of the first was to collect data from a broad cross-section of teachers and administrators within the same high school, who self-reported whether they had collaborated in any way with the TL, irrespective of their information literacy skills. The data collected included the current year of certification and any collaboration with TLs at previous schools. I invited all teachers and administrators at the high school site to complete the survey.

The survey itself (Appendix A) was adapted from Schultz-Jones and Ledbetter's (2009) Teacher-Librarian Collaboration Survey. Survey questions included inquiries relating to confidence in the research process, assisting students with their information needs, barriers to collaboration, including less obvious ones, and to any need for additional clarification of the validated survey. As noted, the survey also asked respondents about their willingness to participate in a follow-up interview. The survey phase thus helped me to gain a picture of how each group viewed collaboration and prepared for the next phase. The responses also provided me with insights into how my role as a TL was viewed by the school's teachers and administrators, into positive and negative aspects of collaboration, and into possible best practices for selecting high school teachers to interview in the follow-up phases. Further, by accessing a cross-section of experienced and new teachers, I became more aware of the effect of school culture on collaboration efforts among the staff of each subject department.

Following distribution of the online survey and assessment of the initial responses using SPSS software, 30 participants were identified who agreed provisionally to the interviews to

represent the various departments in the high school campus to confirm interest in participating in interviews. For a variety of reasons, including scheduling conflicts, changes of mind, and last-minute cancellations, 22 interviews were actually conducted. Again, one goal was to have a representative cross-section of teachers in terms of disciplines, years of teaching, gender, level of and disposition to collaborate, and backgrounds in fields other than education. The survey also provided information about teachers who had worked with a TL thanks to carefully-worded survey questions and, again, identified teachers and administrators to interview.

The second phase of data collection, then, involved establishing, through the interview process, interviewees' perspectives on collaboration and any themes associated with any of the specific demographic characteristics discussed above. I interviewed both administrators and certified teachers. My notes from the interviews captured previous collaborative efforts or examples, clarified the nature of the collaborative culture within the school community, and indicated any need for clarification. The intent was to document whether teachers were using each other's expertise to help to achieve an educational goal on which the group had collectively agreed as part of their efforts to increase student knowledge with respect to information literacy. I recorded the interviews individually on audio tape in order to preserve as clear a record as possible of the various opinions regarding collaboration, factors that influenced teachers' decisions to collaborate, prevalent ideas when teachers collaborated, and possible elements to retain and changes to be made for future collaborative efforts. Interviewees were also asked whether their views had changed about collaboration with the TL, whether they had collaborated before, their assessments of the value of the TL in the collaboration process for their colleagues, and the overall impact of the collaborative process on their personal experiences (Appendix B).

These interviews offered added value for the data from the survey sessions while providing an opportunity for reflection to the participants too. Positionality can affect the outcome of the data collected for research studies like this one; thus the participants knew me in the school setting even if they had not collaborated with me on projects. Before the interviews, I gave the participants the option of an interview with me or with a neutral person. The thinking was that, if any one teacher preferred a neutral interviewer, then a third party would conduct all of the interviews for the sake of consistency as well as to obtain any information that might have been withheld had I conducted the interviews myself. However, no participant chose to be interviewed by a third party.

The interviews were conducted and notes were taken in person, since it was important to gain an understanding of the school dynamic, the personality of each participant, the specific language that they used within the group, and other nuances of collaboration. I recorded and transcribed the face-to-face interviews, as discussed, in order to identify themes and occurrences relevant to the research questions, as is explored in detail in Chapter 4. Every interviewee provided his or her unique perspective, so there was variability in regard to the insights and experiences shared. My own personal and calendar notes described the collaborative process from my perspective.

Again, this study employed a mixed-methods approach that emphasized the integration of qualitative and quantitative data collection and analysis in order to arrive at an in-depth understanding of the research questions (Plano Clark & Ivankova, 2015). The distinctive characteristic of mixed-methods research is the

level of prioritization of one form of data over the other, by the combination of data forms in the research process (such as during the collection or analysis phases), and by the timing of data collection, such as whether the quantitative and

qualitative phases take place concurrently or sequentially, and if so, in what order. (Driscoll, Appiah-Yeboah, Salib, & Rupert, 2007, p. 19)

Timing was important within this study in that each form of data collection relied upon the others.

The study, then, included surveys, individual interviews with participants across disciplines, and notes were taken during the interview process. The aim was to assess the collaborative process in terms of the various levels developed by both Montiel-Overall (2006) and Loertscher (1988), which describe the value and experiences of the participants in the context of the ways in which they have collaborated as well as the ways in which their biases affect collaboration efforts, in particular with the TL. The survey thus collected the quantitative information, while the interviews and notes supported the qualitative data.

Data Analysis

A mixed-methods analysis was identified as the most effective research design for this study. At the collection stage, quantitative data can play a role in providing baseline information and helping to avoid bias (R. B. Johnson et al., 2007). In this case, each data collection component supported the others so as to illuminate the significance of the data in regard to collaboration efforts with TLs. I analyzed the survey data through SPSS software to gain a quantifiable result as a basis for the specific tests that I ran, such as, Chi square tests of associations, *t* tests for independent samples since I was comparing teachers and the factors that contributed to collaboration. It proved easy to compile the survey data for analysis, and the results, as discussed, informed the selection of interview candidates. The results of the survey also provided big-picture information in terms of the frequency with which teachers collaborated and the nature of their collaborations. The interviews, on the other hand, provided a closer, more in-depth view of collaboration.

At first, I hand-coded the data that were collected through the interviews and notes in order to identify themes based on the frequency of key words and themes utilizing Montiel-Overall and Hernández's (2012) TLC-III framework, which is a revised version of Montiel-Overall's (2005a) TLC model. I then decided to use a specific qualitative analysis tool, *HyperRESEARCH*, to accelerate the coding process and to connect the data. The interviews and my own personalized notes told a story about the actual practices involving teachers and TLs and provided a few examples of successful projects that had helped other teachers and administrators learn how to deploy the TL better within the school setting. The analysis also identified barriers to collaboration at the school. The goal of the analysis was, again, to identify various factors that facilitate and impede successful collaboration between teachers and TLs so as to assist administrators at both the high school and district levels in providing for the time and other resources necessary for teachers to plan and work with TLs and other support staff effectively.

Validity

According to Creswell and Plano Clark (2011),

research needs to utilize procedures to ensure that the validity of the data, results, and the interpretations. Validity differs in quantitative and qualitative research, but in both approaches, it serves the purpose of checking on the quality of the data, the results, and the interpretation. (p. 210)

For this study, outside researchers validated the survey questions to ensure clarity before I administered it, and the interviews and notes served to triangulate and verify the survey data. Through analysis, another researcher was able to help validate the codes and themes, for I was concerned that I might overlook themes. The participants were able to check the results, such as the themes that emerged from the interviews, for correctness, which also helped to triangulate the data.

The notes I took during the interviews were meant to be “thick with rich descriptors” (Creswell, 2013; Geertz, 1993, p. 3) that would help to validate the information I that collected and to provide a glimpse of how collaboration actually took place in the specific school setting. These thick and rich descriptors were thus intended to be consistent with the results of the survey and interviews. Both my calendar and notes that I took during the interviews and can be considered part of a collaborative process involving the colleagues who were interviewed in terms of the conceptual frameworks of Montiel-Overall and Loertscher. My notes and saved calendar meetings also helped to establish the types of collaboration taking place, the departments that were utilizing library services, and unfulfilled needs relating to collaboration.

By asking when a wink is just a wink, Geertz (1993) illustrated the researcher’s need to rely on thick and rich descriptors; in his words,

quoted raw, a note in a bottle, this passage conveys, as any similar one similarly presented would do, a fair sense of how much goes into an ethnographic description of even the most elemental sort—how extraordinarily “thick” it is. (p. 9)

I made an effort to consider the participants’ various levels of understanding of the research questions without being one-sided or overly precise and to demonstrate these levels in terms of the cultural exchange of information between the groups. Thick descriptions from my notes that were sufficiently multi-faceted to contribute to answering the research questions revealed a new level of understanding of what I observed free of the limitations of the educational setting of culture transformation in their capacity as a “comprehensible meaning frame” (p. 30).

The following three validation strategies designed by Creswell (2013) assisted in the collection and analysis of the data. Prolonged engagement and persistent notes helped me to remain in contact with the participants and to keep in mind what was in the best interests of the study. In surveying, interviewing participants, and taking personalized notes, I continually

validated my hypothesis through negative case analysis, refining my ideas so as to provide a realistic perspective on and assessment of the data on collaboration and the ideas of TLs. So also clarifying my bias (Creswell, 2013) was a necessary part of my research study, for readers of this study need to be aware of any biases or assumptions on my part regarding high school teachers or TLs—again, I was a TL at the high school under study at the time that the research was conducted.

Limitations

This research study has certain limitations. One just mentioned is positionality, specifically my employment as a TL at the school at which I was conducting the study, a fact that might have made my colleagues hesitant to share their opinions regarding the collaborative process, my role as the TL at the school, or about the school library program in general. My position may have enabled one group of teachers to talk freely while hindering others during the data-collection process. Additionally, my role as TL could color my analysis of the dataset, as I naturally viewed the data through what might be called my TL lens. It is important that a researcher be as unbiased as possible so as to consider various interpretations, both negative and positive, of the data.

The selection of interviewees must similarly be objective in order to identify groups of teachers able provide the most useful data and reflections on collaboration. However, because the end of the school year fast approaching when I conducted the interviews, rather than being selective, I interviewed every willing participant.

Self-reporting by teachers and administrators through interviews also represents a potential limitation, though I sought to compensate for it by collecting data from multiple sources, specifically the combination of surveys, interviews, and notes. I also, as alluded to

above, engaged a colleague to analyze the interview data in order to validate my themes by demonstrating that two researchers arrived at the same conclusions. Also as mentioned, I gave participants the option of a third party to conduct the interviews, but no one chose this option.

Chapter Summary

A mixed-methods research approach was selected for this study as the best means to reveal to the educational field how teachers' viewpoints and ideas affect their relationships with each other. This approach provided a solid understanding of how schools utilize TLs and the level of uncertainty among teachers and administrators regarding the role of the TL on campus, particularly as it evolves in response to the demands of technology and information literacy. The goal was to examine the perspectives of as many educators as possible on a single campus in which a common cultural understanding had been established. Following Creswell and Plano Clark (2011), then, I identified a mixed-methods approach as the appropriate one to explore the research questions, since the data were validated by multiple methods.

CHAPTER 4: RESULTS

The purpose of this study was to gain an understanding of why some high school teachers collaborate with TLs while others do not and of the factors that influence utilization of library services. Put slightly differently, I was interested in gaining a deeper understanding of how the school culture at a particular high school influenced the TL's role in facilitating learning. The overarching research question for this study—which has already been presented repeatedly but will be reproduced here again for the sake of completeness—concerned the elements that foster effective collaborative exchanges between high school teachers and TLs. The following sub-questions grew out of this main idea:

- a) How do high school teachers, administrators, and high school TLs who work in the same school setting define collaboration?
- b) Does an individual's definition of collaboration affect how he or she interacts and collaborates with other teachers or teaching support staff?
- c) What factors contribute to or detract from collaboration between teachers and TLs?

This chapter addresses these research questions by offering analysis of 62 (n=62) anonymously completed surveys and 22 follow-up, face-to-face interviews with high school teachers. The study design and methods involved recruiting interviewees at one high school and relied on purposeful sampling methods. Survey data were analyzed using the research analysis software tool SPSS, and interview data were coded for themes. The following discussion summarizes the raw data and discusses the findings in three sections. The first describes the statistical analysis of the online survey. The second section presents the raw data of the interviews using counts of the various themes that were coded; pseudonyms are used to protect the identities of the interviewees. The third section reviews the emerging themes and sub-themes

that developed from the participants' interviews and my notes that were taken throughout the course of the study. Data were collected between April and June 2017. Surveys were emailed to 123 certificated staff members and 6 administrators at one high school, for a total sample size of 128 participants (n=128). Since the survey was anonymous, it is unclear how many administrators and teachers completed the survey, but in any case, 62 surveys were completed of the possible 128, which represents a return rate of 48%.

Survey Data Results

The high school at which this survey was administered employed 123 teachers and 6 administrators. The breakdown by department was 16 English teachers, 15 social science teachers, 16 mathematics teachers, 12 science teachers, 9 world languages teachers, 8 physical education (PE) teachers, 15 special education teachers (including credentialed support providers), 10 visual and performing arts teachers, 1 junior Reserve Officer's Training Corps (JROTC) teacher, 3 industrial arts teachers, 3 Advancement Via Individual Determination (AVID) teachers, 7 academic counselors, 1 teacher librarian, 5 Academic Acceleration and Recovery Center (AARC) teachers/counselors, and the 6 administrators. Of the 128 staff, 62 completed the survey (see Appendix A for survey questions). There were in fact 129 certificated staff members, but since the researcher of this was one, the potential sample size of the survey was 128 (n=128). All surveys were completed by the participants anonymously through a Qualtrics Software Survey link. The survey, as detailed in the previous chapter, included demographic questions on age, gender, teaching experience, education, other careers, and previous teaching positions. Other survey questions, which collected information using a Likert-type scale survey instrument, concerned the respondents' various types of relationships with the TL, including any collaboration, the various roles played by the TL, the credentialing process for

TLs, and barriers that prevented certificated staff from collaborating with the TL. The option of filling out paper copies of the survey was offered to the participants, but none requested this format. The quantitative survey questions were analyzed using SPSS software. Descriptive statistics, chi square tests of association, and *t* tests for independent samples were used to analyze the data.

Ten surveys were removed from the analysis pool because participants failed to complete them; in fact, they all stopped with the fifteenth question. This outcome could have been due to the length of the specific subsection or to some other form of survey fatigue. One feature of the Qualtrics online platform is that the participants had the option of completing their surveys at intervals rather than all at once, though it is necessary to use the same device and browser to do so.

The participants' demographic characteristics are presented in Table 1. Most of the respondents were female (53.2%), White (80.6%), and had a Master's degree and a teaching credential (64.5%). A plurality had 21 years or more years of teaching experience (29%). Over half (51.6%) had been previously employed in a field other than teaching, and 71% had worked at another school. By way of comparison, the ethnic composition of the school's staff as a whole was as follows: 75.6% White, 10.2% Hispanic, 3.1% African-American, 1.6% Filipino, 0.8% Pacific Islander, 2.4% Asian, and 1.6% American Indian/Alaskan; 2.4% identified with more than one ethnicity and another 2.4% did not report an ethnicity. The average number of years of teaching experience (during the 2016-2017 school year) among the staff as a whole was 12, with 5 teachers having completed only their first year of teaching. The gender makeup of the staff is nearly evenly split (50.4% female, 49.6% male). In terms of education, among the staff 55 (42.6

%) certificated staff held a bachelor's degree, 70 (54.2%) a master's degree, 3 (2.3%) a doctorate, and 1 (0.7%) a special degree (specifically, a Juris Doctor).

Table 1: Participants' Demographic Characteristics

Factor	<i>n</i>	%
Gender		
Male	29	46.8
Female	33	53.2
Total	62	100.0
Race/Ethnicity		
White	50	80.6
Black or African American	1	1.6
Hispanic or Latino/a	6	9.7
American Indian or Alaskan Native	1	1.6
Asian	1	1.6
Native Hawaiian or Pacific Islander	1	1.6
Other	2	3.2
Total	62	100.0
Highest Level of Education		
Bachelor's degree plus teaching credential	15	24.2
Master's degree	2	3.2
Master's degree plus teaching credential	40	64.5
Doctorate degree	3	4.8
Other	2	3.2
Total	62	100.0
Years of Teaching Experience		
Less than 1	2	3.2
1-2	1	1.6
5 or less	5	8.1
6-10	10	16.1
11-15	10	16.1
16-20	16	25.8
21 or more	18	29.0
Total	62	100.0
Previously Employed in Another Field Besides Teaching		
No	30	48.4
Yes	32	51.6
Worked at Another School		
Yes	44	71.0
No	18	29.0
Total	62	100.0
Collaboration with a teacher librarian in any manner		
Yes	21	33.9
No	27	43.5
Not applicable	14	22.6
Total	62	100.0

Descriptive Statistics for the Quantitative Survey Questions

The participants provided various personal statistics, while the questions were designed to explore their perceptions of and interactions with TLs. Around a third (33.9%) of respondents indicated that they had collaborated with a TL in some manner in previous school setting, while nearly three fourths (73.3%) reported having collaborated with the TL at this high school or planning to do so.

Confidence in Research Skills

Participants rated their confidence levels regarding their own skill in using a variety of educational tools, their knowledge of how to create an effective search, and their use of the library as a tool or resource to share ethical research skills with students (Question 13). Higher confidence levels were assigned higher code values in the survey and the “not sure what this means” response was assigned a code value of zero. Sixty-two respondents gave an answer regarding research skills. The survey did not ask respondents to assess their overall confidence in their own research skills, but one of the sub-questions asked them to rate their confidence in appropriately using the library resources and services for research, and for the responses “describes me extremely well” was selected by 11 (17.7%), “describes me very well” by 14 (22.6%), and “moderately well” by 22 (35.5%), while another 11 (17.7%) had only slight confidence, 3 (4.8%) did not feel that the question described them, and 1 (1.6%) was unsure what the question was asking. These responses are presented in Table 2.

Table 2: Participants' Confidence in Their Research Skills

Survey Question 13	n	%
I feel confident in my understanding of the structure of information within the field of education research.		
Not sure what this means	3	4.8
Does not describe me	4	6.5
Describes me slightly well	15	24.2
Describes me moderately well	21	33.9
Describes me very well	11	17.7
Describes me extremely well	8	12.9
Total	62	100.0
I feel confident in my ability to identify and use key educational research tools to locate relevant information.		
Does not describe me	3	4.8
Describes me slightly well	9	14.5
Describes me moderately well	24	38.7
Describes me very well	15	24.2
Describes me extremely well	11	17.7
Total	62	100.0
I feel confident that I can plan effective search strategies as needed.		
Does not describe me	2	3.2
Describes me slightly well	7	11.3
Describes me moderately well	24	38.7
Describes me very well	17	27.4
Describes me extremely well	12	19.4
Total	62	100.0
I feel confident that I will recognize and make appropriate use of library services in the research process that I use.		
Not sure what this means	1	1.6
Does not describe me	3	4.8
Describes me slightly well	11	17.7
Describes me moderately well	22	35.5
Describes me very well	14	22.6
Describes me extremely well	11	17.7
Total	62	100.0
I feel confident that I understand the technical and ethical issues involved in research in the field of education.		
Not sure what this means	1	1.6
Does not describe me	2	3.2
Describes me slightly well	12	19.4
Describes me moderately well	11	17.7
Describes me very well	17	27.4
Describes me extremely well	19	30.6
Total	62	100.0
I feel confident that I can locate information about the field of education.		
Describes me slightly well	4	6.5
Describes me moderately well	14	22.6
Describes me very well	25	40.3
Describes me extremely well	19	30.6
Total	62	100.0
I feel confident that I understand that some new information sources are more authoritative than others.		
Does not describe me	1	1.6
Describes me slightly well	4	6.5
Describes me moderately well	11	17.7
Describes me very well	22	35.5
Describes me extremely well	24	38.7
Total	62	100.0
I feel confident that I demonstrate critical thinking in the research process that I use.		
Describes me slightly well	1	1.6
Describes me moderately well	10	16.1
Describes me very well	26	41.9
Describes me extremely well	25	40.3
Total	62	100.0

School Library Resources

Participants were asked to rate the significance of a variety of factors associated with the school library. Various sub-questions were linked to concepts, such as library resources that can be utilized by both teachers and students, the need for information to be kept in one central space, collaboration with the library staff to improve teaching practices, and the assistance that students receive in the library (Question 14). Twenty-four (38.7%) participants answered that it was extremely important to know to collaborate with the library staff to support their teaching, 17 (27.4%) answered that this statement described them well, 13 (21%) felt it was moderately descriptive of themselves, while 8 (12.9%) felt that it described them only slightly. No participant answered that the statement did not describe them or was unsure what the question was asking. These responses are presented in Table 3.

Table 3: Importance of Factors Related to the School Library

Survey Question 14	<i>n</i>	%
It is important for me to understanding why information should be stored in a central place.		
Not sure what this means	5	8.1
Does not describe me	4	6.5
Describes me slightly well	8	12.9
Describes me moderately well	21	33.9
Describes me very well	12	19.4
Describes me extremely well	12	19.4
Total	62	100.0
It is important for me to know how materials are loaned and shared.		
Does not describe me	5	8.1
Describes me slightly well	11	17.7
Describes me moderately well	17	27.4
Describes me very well	17	27.4
Describes me extremely well	12	19.4
Total	62	100.0
It is important for me to know how the library staff assists my students with their information needs.		
Describes me slightly well	5	8.1
Describes me moderately well	15	24.2
Describes me very well	21	33.9
Describes me extremely well	21	33.9
Total	62	100.0
It is important for me to knowing how the library staff can collaborate with me to support my teaching.		
Describes me slightly well	8	12.9
Describes me moderately well	13	21.0
Describes me very well	17	27.4
Describes me extremely well	24	38.7
Total	62	100.0
It is important for me that my students be aware of the various library resources and tools that are available.		
Describes me slightly well	2	3.2
Describes me moderately well	9	14.5
Describes me very well	17	27.4
Describes me extremely well	34	54.8
Total	62	100.0

Collaboration with the Teacher Librarian

Participants responded to a series of sub-questions regarding how helpful collaboration with the teacher librarian would be in the performance of a variety of tasks (Question 15).

Participants rated one collaborative in particular as extremely important, that of helping teachers follow citation policies for crediting resources that are utilized: 29 (47.5%) rated that this kind of collaboration as extremely important, 16 (26.2%) as important, 7 (11.5%) as moderately important, 6 (9.8%) as slightly important, and 3 (4.9%) as not at all important. These findings are presented in Table 4.

Table 4: Importance of Collaborating with a Teacher Librarian of Various Tasks

Survey Question 15	<i>n</i>	%
Collaboration with a teacher librarian would be helpful in defining and articulating the need for research in my field within education.		
Not at all Important	1	1.7
Slightly Important	6	10.0
Moderately Important	12	20.0
Very Important	13	21.7
Extremely Important	28	46.7
Total	60	100.0
Collaboration with a teacher librarian would be helpful in identifying various types and formats of potential sources of information.		
Slightly Important	4	6.6
Moderately Important	9	14.8
Very Important	16	26.2
Extremely Important	32	52.5
Total	61	100.0
Collaboration with a teacher librarian would be helpful in weighing the costs and benefits of acquiring the needed information.		
Not at all Important	2	3.4
Slightly Important	4	6.8
Moderately Important	15	25.4
Very Important	18	30.5
Extremely Important	20	33.9
Total	59	100.0

Table 4: Importance of Collaborating with a Teacher Librarian of Various Tasks Continued

Survey Question 15	<i>n</i>	%
Collaboration with a teacher librarian would be helpful in reevaluating the nature and extent of the information needed.		
Not at all Important	2	3.3
Slightly Important	5	8.2
Moderately Important	12	19.7
Very Important	25	41.0
Extremely Important	17	27.9
Total	61	100.0
Collaboration with a teacher librarian would be helpful in selecting the most appropriate methods of information retrieval for accessing information.		
Slightly Important	4	6.7
Moderately Important	8	13.3
Very Important	22	36.7
Extremely Important	26	43.3
Total	60	100.0
Collaboration with a teacher librarian would be helpful in constructing and implementing effective search strategies.		
Slightly Important	3	5.0
Moderately Important	6	10.0
Very Important	26	43.3
Extremely Important	25	41.7
Total	60	100.0
Collaboration with a teacher librarian would be helpful in retrieving information online or in person.		
Slightly Important	5	8.2
Moderately Important	7	11.5
Very Important	22	36.1
Extremely Important	27	44.3
Total	61	100.0
Collaboration with a teacher librarian would be helpful in extracting, recording, and managing information and its sources.		
Not at all Important	1	1.6
Slightly Important	3	4.9
Moderately Important	12	19.7
Very Important	16	26.2
Extremely Important	29	47.5
Total	61	100.0

Table 4: Importance of Collaborating with a Teacher Librarian of Various Tasks Continued

Survey Question 15	<i>n</i>	%
Collaboration with a teacher librarian would be helpful in summarizing the main ideas for extraction of information gathered.		
Not at all Important	1	1.7
Slightly Important	12	20.0
Moderately Important	11	18.3
Very Important	19	31.7
Extremely Important	17	28.3
Total	60	100.0
Collaboration with a teacher librarian would be helpful in articulating and applying initial criteria for evaluating the information and its sources.		
Not at all Important	1	1.6
Slightly Important	9	14.8
Moderately Important	20	32.8
Very Important	19	31.1
Extremely Important	12	19.7
Total	61	100.0
Collaboration with a teacher librarian would be helpful in synthesizing main ideas in order to construct new concepts.		
Not at all Important	4	6.7
Slightly Important	12	20.0
Moderately Important	20	33.3
Very Important	12	20.0
Extremely Important	12	20.0
Total	60	100.0
Collaboration with a teacher librarian would be helpful in comparing new and prior knowledge to determine the value added, contradictions, or other characteristics of information.		
Not at all Important	5	8.5
Slightly Important	11	18.6
Moderately Important	16	27.1
Very Important	17	28.8
Extremely Important	10	16.9
Total	59	100.0

Table 4: Importance of Collaborating with a Teacher Librarian of Various Tasks Continued

Survey Question 15	<i>n</i>	%
Collaboration with a teacher librarian would be helpful in determining whether new knowledge has an impact on my values system and on steps to reconcile differences among various resources.		
Not at all Important	5	8.5
Slightly Important	9	15.3
Moderately Important	21	35.6
Very Important	15	25.4
Extremely Important	9	15.3
Total	59	100.0
Collaboration with a teacher librarian would be helpful in understanding and interpreting information through discourse with individuals, subject-area experts, and/or practitioners.		
Not at all Important	7	11.5
Slightly Important	10	16.4
Moderately Important	16	26.2
Very Important	15	24.6
Extremely Important	13	21.3
Total	61	100.0
Collaboration with a teacher librarian would be helpful in understanding ethical, legal, and socioeconomic issues related to research in education.		
Not at all Important	4	6.5
Slightly Important	10	16.1
Moderately Important	13	21.0
Very Important	17	27.4
Extremely Important	18	29.0
Total	62	100.0
Collaboration with a teacher librarian would be helpful in following laws, regulations, polices, and etiquette related to the access and use of information resources.		
Not at all Important	3	4.9
Slightly Important	4	6.6
Moderately Important	13	21.3
Very Important	14	23.0
Extremely Important	27	44.3
Total	61	100.0

Table 4: Importance of Collaborating with a Teacher Librarian of Various Tasks Continued

Survey Question 15	<i>n</i>	%
Collaboration with a teacher librarian would be helpful in acknowledging the use of information sources to communicate research in education.		
Not at all Important	4	6.6
Slightly Important	6	9.8
Moderately Important	13	21.3
Very Important	17	27.9
Extremely Important	21	34.4
Total	61	100.0
Collaboration with a teacher librarian would be helpful in applying new and prior information in the planning and creation of a particular product or performance.		
Not at all Important	3	4.9
Slightly Important	9	14.8
Moderately Important	17	27.9
Very Important	18	29.5
Extremely Important	14	23.0
Total	61	100.0
Collaboration with a teacher librarian would be helpful in revising the development process for the product or performance for a specific assignment.		
Not at all Important	2	3.4
Slightly Important	8	13.6
Moderately Important	22	37.3
Very Important	14	23.7
Extremely Important	13	22.0
Total	59	100.0
Collaboration with a teacher librarian would be helpful in communicating a product or performance to others for a specific assignment.		
Not at all Important	5	8.2
Slightly Important	7	11.5
Moderately Important	21	34.4
Very Important	14	23.0
Extremely Important	14	23.0
Total	61	100.0

Table 4: Importance of Collaborating with a Teacher Librarian of Various Tasks Continued

Survey Question 15	<i>n</i>	%
Collaboration with a teacher librarian would be helpful in assisting students to assess their own learning process.		
Not at all Important	2	3.3
Slightly Important	3	4.9
Moderately Important	13	21.3
Very Important	19	31.1
Extremely Important	24	39.3
Total	61	100.0
Collaboration with a teacher librarian would be helpful in evaluating the effect of the collaborative process on student achievement.		
Not at all Important	4	6.6
Slightly Important	5	8.2
Moderately Important	17	27.9
Very Important	17	27.9
Extremely Important	18	29.5
Total	61	100.0
Collaboration with a teacher librarian would be helpful in following citation policies for crediting resources that I utilize.		
Not at all Important	3	4.9
Slightly Important	6	9.8
Moderately Important	7	11.5
Very Important	16	26.2
Extremely Important	29	47.5
Total	61	100.0

Knowledge of Teacher Librarians' Roles

To make full use of the services that the library and teacher librarian provides to teachers and students, participants need to be able to identify what is available to help them both in and outside the classroom and how the TL can play a larger role in curriculum development and assisting students to be mindful of their role as digital citizens. Participants indicated using the Linkert-style scale whether they agreed or disagreed that the TL was qualified to perform various job roles at the school or district levels (Question 17). Most of the sub-questions for survey

Question 17 were answered by participants, who indicated that they were either neutral about the specific role mentioned (neither agreeing nor disagreeing) or that they somewhat or strongly agreed about the job role. One sub-question in particular elicited a range of participant opinions, specifically regarding the TL's participation in developing the school curriculum. According to the TLC-III model, the highest level of collaboration involving a TL happens when he or she participates in the development of the school curriculum both at the site and district levels. Of the 62 participants, 2 (3.2%) strongly disagreed that TLs should take part in curriculum development, 7 (11.3%) somewhat disagreed, 21 (33.9%) neither agreed or disagreed, 18 (29%) somewhat agreed, 13 (21%) strongly agreed, while 1 (1.6%) was unsure about the meaning of the question. These results are presented in Table 5.

Table 5: Participants' Assessments of Survey Items

Survey Question 17	<i>n</i>	%
Teacher librarians provide information resources appropriate to students' information needs and learning tasks.		
Neither Agree nor Disagree	1	1.6
Somewhat Agree	8	12.9
Strongly Agree	53	85.5
Total	62	100.0
Teacher librarians match the information needs and interests of individual users with appropriate library resources.		
Neither Agree nor Disagree	1	1.6
Somewhat Agree	11	17.7
Strongly Agree	50	80.6
Total	62	100.0
Teacher librarians develop a collection of information resources that supports instruction and individual interests.		
Neither Agree nor Disagree	2	3.2
Somewhat Agree	11	17.7
Strongly Agree	49	79.0
Total	62	100.0

Table 5: Participants' Assessments of Survey Items Continued

Survey Question 17	<i>n</i>	%
Teacher librarians provide leadership in using technology for teaching and learning.		
Somewhat Disagree	1	1.6
Neither Agree nor Disagree	2	3.2
Somewhat Agree	13	21.0
Strongly Agree	46	74.2
Total	62	100.0
Teacher librarians facilitate teaching of the school's curriculum.		
Not sure what this means	1	1.6
Strongly Disagree	1	1.6
Neither Agree nor Disagree	14	22.6
Somewhat Agree	18	29.0
Strongly Agree	28	45.2
Total	62	100.0
Teacher librarians participate in developing the school curriculum.		
Not sure what this means	1	1.6
Strongly Disagree	2	3.2
Somewhat Disagree	7	11.3
Neither Agree nor Disagree	21	33.9
Somewhat Agree	18	29.0
Strongly Agree	13	21.0
Total	62	100.0
Teacher librarians identify needs of the school community.		
Strongly Disagree	1	1.6
Neither Agree nor Disagree	15	24.2
Somewhat Agree	18	29.0
Strongly Agree	28	45.2
Total	62	100.0
Teacher librarians teach students how to be independent learners.		
Somewhat Disagree	1	1.6
Neither Agree nor Disagree	9	14.5
Somewhat Agree	22	35.5
Strongly Agree	30	48.4

Table 5: Participants' Assessments of Survey Items Continued

Survey Question 17	<i>n</i>	%
Teacher librarians plan instructional activities in collaboration with classroom teachers.		
Not sure what this means	1	1.6
Somewhat Disagree	2	3.2
Neither Agree nor Disagree	6	9.7
Somewhat Agree	21	33.9
Strongly Agree	32	51.6
Total	62	100.0
Teacher librarians create instructional materials for teaching and learning.		
Somewhat Disagree	3	4.8
Neither Agree nor Disagree	16	25.8
Somewhat Agree	11	17.7
Strongly Agree	32	51.6
Total	62	100.0
Teacher librarians guide teachers in the effective design of instruction.		
Strongly Disagree	3	4.8
Somewhat Disagree	6	9.7
Neither Agree nor Disagree	21	33.9
Somewhat Agree	13	21.0
Strongly Agree	19	30.6
Total	62	100.0
Teacher librarians support the concept of the intellectual freedom of information.		
Not sure what this means	2	3.2
Somewhat Disagree	1	1.6
Neither Agree nor Disagree	11	17.7
Somewhat Agree	12	19.4
Strongly Agree	36	58.1
Total	62	100.0
Teacher librarians foster collaborative as well as individual inquiry.		
Not sure what this means	1	1.6
Strongly Disagree	2	3.2
Neither Agree nor Disagree	9	14.5
Somewhat Agree	19	30.6
Strongly Agree	31	50.0
Total	62	100.0

Table 5: Participants' Assessments of Survey Items Continued

Survey Question 17	<i>n</i>	%
Teacher librarians help students to develop lifelong learning skills.		
Neither Agree nor Disagree	8	12.9
Somewhat Agree	16	25.8
Strongly Agree	38	61.3
Total	62	100.0
Teacher librarians help students to develop critical thinking skills.		
Neither Agree nor Disagree	12	19.4
Somewhat Agree	18	29.0
Strongly Agree	32	51.6
Total	62	100.0

Analysis of Survey Data

The aim of the survey was for the participants to share their plans to collaborate with the TL at the high school site. As can be seen in Table 6, 44 participants indicated that they would collaborate ($n = 60, 73.3\%$) as opposed to 26.7% shared that they would not collaborate with the TL. Reasons for not planning to collaborate with the TL were explained by the participants in survey Question 19. The “plan to collaborate” variable was accordingly used in subsequent analyses. The *t* test for independent samples was used to compare the mean ratings for the survey items in terms of plans to collaborate with a TL (yes/no) (see Table 7).

Table 6: Collaboration with TL and the Collaboration Variable

Survey Question	<i>n</i>	%
Planning to collaborate with the teacher librarian on campus		
No	16	26.7
Yes	44	73.3
Total	60	100.0

Table 7: T Test for Independent Samples Comparing the Mean Ratings for Survey Question 13 with Plans to Collaborate with the TL

Survey Item	Plan to Collaborate	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>P</i>																																																																																
I feel confident in my understanding of the structure of information within the field of education research.	No	16	2.63	1.40	-0.98	58	.32																																																																																
	Yes	44	3.00	1.25				I feel confident in my ability to identify and use key educational research tools to locate relevant information.	No	16	3.19	1.22	-0.75	58	.45	Yes	44	3.43	1.06	I feel confident that I can plan effective search strategies as needed.	No	16	3.56	1.03	0.27	58	.78	Yes	44	3.48	1.06	I feel confident that I can recognize and make appropriate use of library services in the research process that I use.	No	16	2.63	1.50	-2.53	58	.01*	Yes	44	3.48	1.00	I feel confident that I understand the technical and ethical issues involved in writing research for the education field.	No	16	3.19	1.42	-1.36	58	.17	Yes	44	3.70	1.25	I feel confident that I can locate information about the field of education itself.	No	16	3.69	1.01	-1.46	58	.15	Yes	44	4.07	0.84	I feel confident in my understanding that some new information sources are more authoritative than others.	No	16	3.88	1.08	-0.58	58	.56	Yes	44	4.05	0.96	I feel confident that I demonstrate critical thinking in the research process that I use.	No	16	4.13	1.02	-0.44	58	.65
I feel confident in my ability to identify and use key educational research tools to locate relevant information.	No	16	3.19	1.22	-0.75	58	.45																																																																																
	Yes	44	3.43	1.06				I feel confident that I can plan effective search strategies as needed.	No	16	3.56	1.03	0.27	58	.78	Yes	44	3.48	1.06	I feel confident that I can recognize and make appropriate use of library services in the research process that I use.	No	16	2.63	1.50	-2.53	58	.01*	Yes	44	3.48	1.00	I feel confident that I understand the technical and ethical issues involved in writing research for the education field.	No	16	3.19	1.42	-1.36	58	.17	Yes	44	3.70	1.25	I feel confident that I can locate information about the field of education itself.	No	16	3.69	1.01	-1.46	58	.15	Yes	44	4.07	0.84	I feel confident in my understanding that some new information sources are more authoritative than others.	No	16	3.88	1.08	-0.58	58	.56	Yes	44	4.05	0.96	I feel confident that I demonstrate critical thinking in the research process that I use.	No	16	4.13	1.02	-0.44	58	.65	Yes	44	4.23	0.67								
I feel confident that I can plan effective search strategies as needed.	No	16	3.56	1.03	0.27	58	.78																																																																																
	Yes	44	3.48	1.06				I feel confident that I can recognize and make appropriate use of library services in the research process that I use.	No	16	2.63	1.50	-2.53	58	.01*	Yes	44	3.48	1.00	I feel confident that I understand the technical and ethical issues involved in writing research for the education field.	No	16	3.19	1.42	-1.36	58	.17	Yes	44	3.70	1.25	I feel confident that I can locate information about the field of education itself.	No	16	3.69	1.01	-1.46	58	.15	Yes	44	4.07	0.84	I feel confident in my understanding that some new information sources are more authoritative than others.	No	16	3.88	1.08	-0.58	58	.56	Yes	44	4.05	0.96	I feel confident that I demonstrate critical thinking in the research process that I use.	No	16	4.13	1.02	-0.44	58	.65	Yes	44	4.23	0.67																				
I feel confident that I can recognize and make appropriate use of library services in the research process that I use.	No	16	2.63	1.50	-2.53	58	.01*																																																																																
	Yes	44	3.48	1.00				I feel confident that I understand the technical and ethical issues involved in writing research for the education field.	No	16	3.19	1.42	-1.36	58	.17	Yes	44	3.70	1.25	I feel confident that I can locate information about the field of education itself.	No	16	3.69	1.01	-1.46	58	.15	Yes	44	4.07	0.84	I feel confident in my understanding that some new information sources are more authoritative than others.	No	16	3.88	1.08	-0.58	58	.56	Yes	44	4.05	0.96	I feel confident that I demonstrate critical thinking in the research process that I use.	No	16	4.13	1.02	-0.44	58	.65	Yes	44	4.23	0.67																																
I feel confident that I understand the technical and ethical issues involved in writing research for the education field.	No	16	3.19	1.42	-1.36	58	.17																																																																																
	Yes	44	3.70	1.25				I feel confident that I can locate information about the field of education itself.	No	16	3.69	1.01	-1.46	58	.15	Yes	44	4.07	0.84	I feel confident in my understanding that some new information sources are more authoritative than others.	No	16	3.88	1.08	-0.58	58	.56	Yes	44	4.05	0.96	I feel confident that I demonstrate critical thinking in the research process that I use.	No	16	4.13	1.02	-0.44	58	.65	Yes	44	4.23	0.67																																												
I feel confident that I can locate information about the field of education itself.	No	16	3.69	1.01	-1.46	58	.15																																																																																
	Yes	44	4.07	0.84				I feel confident in my understanding that some new information sources are more authoritative than others.	No	16	3.88	1.08	-0.58	58	.56	Yes	44	4.05	0.96	I feel confident that I demonstrate critical thinking in the research process that I use.	No	16	4.13	1.02	-0.44	58	.65	Yes	44	4.23	0.67																																																								
I feel confident in my understanding that some new information sources are more authoritative than others.	No	16	3.88	1.08	-0.58	58	.56																																																																																
	Yes	44	4.05	0.96				I feel confident that I demonstrate critical thinking in the research process that I use.	No	16	4.13	1.02	-0.44	58	.65	Yes	44	4.23	0.67																																																																				
I feel confident that I demonstrate critical thinking in the research process that I use.	No	16	4.13	1.02	-0.44	58	.65																																																																																
	Yes	44	4.23	0.67																																																																																			

One of the mean scores for the confidence in research skills (Question 13) differed in terms of plans to collaborate at the level of statistical significance. Those who planned to collaborate with a TL had a higher mean score ($M = 3.48$, $SD = 1.00$) for the item “I feel confident that I will recognize and make appropriate use of library services in the research process that I use” than those who did not plan to collaborate ($M = 2.63$, $SD = 1.50$). Those who planned to collaborate were more likely to indicate that this statement described them. The mean

difference between the two groups for this item was statistically significant ($t(58) = -2.53, p < .05$).

The next t test for independent samples compared the mean ratings for the survey items in terms of “plan to collaborate with a TL” (yes/no) (Table 8), and two of the mean scores for Question 14 were found to differ at the level of statistical significance. Those who planned to collaborate with a TL had a higher mean score ($M = 4.07, SD = 0.87$) for the item “It is important for me to know how library staff assist my students with their information needs” than those who did not plan to collaborate ($M = 3.50, SD = 1.09$). Those who planned to collaborate were more likely to indicate that this statement described them; mean difference between the two groups for this item was statistically significant ($t(58) = -2.08, p < .05$). Those who planned to collaborate with a TL had higher mean scores ($M = 4.16, SD = 0.93$) for the item “It is important for me to know how the library staff collaborates with me to support my teaching” than those who did not plan to collaborate ($M = 3.19, SD = 1.10$). Those who planned to collaborate were significantly more likely to indicate that this statement described them. The mean difference between the two groups for this item was statistically significant ($t(58) = -3.37, p < .05$).

Table 8: T Test for Independent Samples Comparing the Mean Ratings for the Question 14 Items by Plans to Collaborate with the TL

Survey Item	Plan to Collaborate	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>P</i>
It is important for me to understand why information storage in a central place is important.	No	16	2.88	1.36	-0.55	58	.57
	Yes	44	3.11	1.49			
It is important for me to know how loaning and sharing of materials takes place.	No	16	2.94	1.06	-1.40	58	.16
	Yes	44	3.43	1.24			
It is important for me to understand the kinds of personnel who staff the library and their roles.	No	16	3.19	1.10	-1.69	58	.09
	Yes	44	3.70	1.02			
It is important for me to know how the library staff assists my students with their information needs.	No	16	3.50	1.09	-2.08	58	.04*
	Yes	44	4.07	0.87			
It is important for me to know how the library staff can collaborate with me to support my teaching.	No	16	3.19	1.10	-3.37	58	.001*
	Yes	44	4.16	0.93			
It is important to me that my students be aware of the various library resources and tools available.	No	16	4.00	1.15	-1.85	58	.18
	Yes	44	4.45	0.69			

Given the statistical significance of the difference between the participants who indicated that they would collaborate or were collaborating with the TL and those who had no plans to collaborate or do not need to, it would make sense to inquire why the latter felt no need to collaborate. To answer this question, I cross-referenced each participant’s answer to the relevant question (Question 18) who answered either “no” or “too much going on in my classroom,” in connection with Question 20, to which the participants provided free responses regarding

impediments to collaborating with the TL or utilizing the library's services. Sixteen (26.7%) indicated that they either did not need to collaborate with the TL or did not want to for various reasons.

Seven themes emerged in this regard. Time was the number one reason, being cited by 5 of the 16 respondents as largely responsible for failure to collaborate with the TL. Another reason cited, in this case by an administrator and a mathematics teacher, was the nature of an individual's job role. Three respondents cited lack of knowledge regarding what the library and TL have to offer in regard to services or collaboration and how to fit ideas into their curricula. The other themes, cited by only one respondent each, were lack of planning sufficiently far in advance, low "energy levels" in the case of a teacher near retirement who did "not want to try something new," a desire to collaborate only with teachers with specific subject matter expertise (in this case, mathematics), and the assumption that the library was always booked.

Background Factors that Could Influence Collaboration

A possible contributing factor to collaboration was whether work experience in a field outside education increased or decreased the likelihood of collaborating. On Question 7 of the survey, over half of respondents (51.6%) answered that they had been previously employed in another field. The chi-square test of association results indicated that there was no statistical association between a positive answer and plans to collaborate with a TL. I also wanted to determine whether the school at which this research study was conducted was anomalous with respect to teacher-TL collaboration. Over two thirds (71%) of respondents indicated that they had also worked at a school other than the one at which they were currently employed. The chi-square test of association results indicated that there was no statistically significant difference in

terms of plans to collaborate between those who had and those who had not worked at another school. These results are presented in Table 9.

The literature suggests that teachers and administrators need to be exposed, either through a credentialing program or professional development, regarding how best to utilize library services or collaborate with a TL. Fifty-three of the 62 respondents (85.5%) indicated that they had had no exposure in their coursework to the concept of collaboration with the TL. Six (9.7%) mentioned participating in professional development in the past year led by the researcher in her capacity as TL during which she shared various teaching tools and applications that can be utilized in the classroom. Three (4.8%) indicated that they had been exposed to these issues in some way in the course of their credentialing graduate degree programs. According to one, “As part of my schooling, it was stressed to use other school staff as resources and to let students know that they were available as a resource to them.” Another respondent mentioned that his experience using the library as a college student had prepared him by instructing him as to what was required and helping him to incorporate library resources into his curriculum more effectively.

Table 9: Chi-square Test and Descriptive Statistics for Survey Question 7 by Plans to Collaborate

Previously employed in another field besides teaching	Plan to Collaborate	
	No	Yes
No	11 (37.9%)	18 (62.1%)
Yes	5 (16.1%)	26 (83.9%)

Note. $\chi^2 = 3.64$, $df = 1$, $p = .06$. Numbers in parentheses indicate row percentages.

Another factor that was considered as a possible influence on collaboration between TLs and teachers was the level of education required to be a TL and the additional certification that TLs must undergo in California to obtain the TL credential. The chi-square test of association indicated that there was no statistically significant difference in terms of plans to collaborate

between those who were informed about the steps required to become a credentialed TL and those who were not (see Table 10). Participants were asked in Question 10 to identify items on a list in relation to obtaining the California Teacher Librarian credential. Nineteen (86.4%) checked all the items listed and planned to collaborate with the TL, while 3 (13.6%) checked all the items but did not plan to do so. Twenty-five (65.8%) did not check all of the items listed above and planned to collaborate with the TL, while 13 (34.2%) did not check all of the items listed above and did not plan to collaborate with the TL.

Table 10: Chi-square Test and Descriptive Statistics for Survey Question 10 by Plans to Collaborate

What do you think are the California requirements for teacher librarian certification?	Plan to Collaborate	
	No	Yes
Did not choose all items listed	13 (34.2%)	25 (65.8%)
Chose all items listed	3 (13.6%)	19 (86.4%)

Note. $\chi^2 = 3.01$, $df = 1$, $p = .08$. Numbers in parentheses indicate row percentages.

Roles of the Teacher Librarian

The *t* tests for independent samples were used to compare the mean ratings for the survey items for Question 17, which concerned plans to collaborate with a TL (yes/no) (Table 11). Six of the mean scores for Question 17 differed by plans to collaborate at the level of statistical significance.

Those who planned to collaborate with a TL had a higher mean score ($M = 4.34$, $SD = 0.74$) for the item “TLs facilitate teaching of the school's curriculum” than those who did not plan to collaborate ($M = 3.69$, $SD = 1.13$). Those who planned to collaborate were significantly more likely to indicate that this statement described them. Thus, the mean difference between the two groups for this item was statistically significant ($t(58) = -2.59$, $p < .05$).

Those who planned to collaborate with a TL had a higher mean score ($M = 3.73$, $SD = 0.97$) for the item “TLs participate in developing the school curriculum” than those who did not plan to collaborate ($M = 2.94$, $SD = 1.28$). Thus, those who planned to collaborate were significantly more likely to indicate that this statement described them. The mean difference between the two groups for this item was statistically significant ($t(58) = -2.54$, $p < .05$).

Those who planned to collaborate with a TL had a higher mean score ($M = 4.30$, $SD = 0.79$) for the item “TLs identify needs of the school community” than those who did not plan to collaborate ($M = 3.75$, $SD = 1.12$). Thus, those who planned to collaborate were significantly more likely to indicate that this statement described them. The mean difference between the two groups for this item was statistically significant ($t(58) = -2.09$, $p < .05$).

Those who planned to collaborate with a TL had a higher mean score ($M = 4.48$, $SD = 0.66$) for the item “TLs teach students how to be independent learners” than those who did not plan to collaborate ($M = 3.75$, $SD = 0.85$). Thus, those who planned to collaborate were significantly more likely to indicate that this statement described them. The mean difference between the two groups for this item was statistically significant ($t(58) = -3.46$, $p < .05$).

Those who planned to collaborate with a TL had a higher mean score ($M = 4.34$, $SD = 0.96$) for the item “TLs create instructional materials for teaching and learning” than those who did not plan to collaborate ($M = 3.69$, $SD = 0.87$). Thus, those who planned to collaborate were significantly more likely to indicate that this statement described them. The mean difference between the two groups for this item was statistically significant ($t(58) = -2.37$, $p < .05$).

Those who planned to collaborate with a TL had a higher mean score ($M = 4.61$, $SD = 0.68$) for the item “TLs help students to develop lifelong learning skills” than those who did not plan to collaborate ($M = 4.13$, $SD = 0.71$). Thus, those who planned to collaborate were

significantly more likely to indicate that this statement described them. The mean difference between the two groups for this item was statistically significant ($t(58) = -2.40, p < .05$). There were no other statistically significant differences between the two groups in terms of these survey items.

Table 11: T Test for Independent Samples Comparing the Mean Ratings for the Question 17 Items by Plans to Collaborate with the TL

Survey Item	Plan to Collaborate	<i>N</i>	<i>M</i>	<i>SD</i>	<i>T</i>	<i>df</i>	<i>P</i>																																																																																																																																																																				
TLs provide information resources appropriate to students' information needs and learning tasks.	No	16	4.69	0.60	-1.65	58	.10																																																																																																																																																																				
	Yes	44	4.89	0.32				TLs match the information needs and interests of individual users with appropriate library resources.	No	16	4.63	0.61	-1.88	58	.06	Yes	44	4.86	0.34	TLs develop a collection of information resources that supports instruction and individual interests.	No	16	4.63	0.61	-1.33	58	.18	Yes	44	4.82	0.44	TLs provide leadership in using technology for teaching and learning.	No	16	4.69	0.60	0.15	58	.87	Yes	44	4.66	0.64	TLs facilitate teaching of the school's curriculum.	No	16	3.69	1.13	-2.59	58	.01*	Yes	44	4.34	0.74	TLs participate in developing the school curriculum.	No	16	2.94	1.28	-2.54	58	.01*	Yes	44	3.73	0.97	TLs identify the needs of the school community.	No	16	3.75	1.12	-2.09	58	.04*	Yes	44	4.30	0.79	TLs teach students how to be independent learners.	No	16	3.75	0.85	-3.46	58	.001*	Yes	44	4.48	0.66	TLs plan instructional activities in collaboration with teachers.	No	16	3.88	1.25	-1.92	58	.06	Yes	44	4.41	0.81	TLs create instructional materials for teaching and learning.	No	16	3.69	0.87	-2.37	58	.02*	Yes	44	4.34	0.96	TLs guide teachers in the effective design of instruction.	No	16	3.31	1.13	-1.42	58	.16	Yes	44	3.77	1.09	TLs support the concept of the intellectual freedom of information.	No	16	3.81	1.37	-1.66	58	.10	Yes	44	4.36	1.03	TLs foster collaborative as well as individual inquiry.	No	16	3.81	1.27	-1.53	58	.13	Yes	44	4.30	1.00	TLs help students to develop lifelong learning skills.	No	16	4.13	0.71	-2.40	58	.02*	Yes	44	4.61	0.68	TLs help students to develop critical thinking skills.	No	16	4.13	0.71	-1.03	58	.30
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Correlation Across the Domains

The survey items with the highest ratings of importance related to collaboration with the TL were as follows (in order of the highest to lowest mean rating) (Table 12):

- Collaboration with a teacher librarian would be helpful in identifying a variety of types and formats of potential sources for information (mean rating: 4.25).
- Collaboration with a teacher librarian would be helpful in constructing and implementing effective search strategies (mean rating: 4.22).
- Collaboration with a teacher librarian would be helpful in selecting the most appropriate investigative methods of information retrieval for accessing information (mean rating: 4.17).
- Collaboration with a teacher librarian would be helpful in extracting, recording, and managing information and its sources (mean rating: 4.16).
- Collaboration with a teacher librarian would be helpful in retrieving information online or in person using a variety of methods (mean rating: 4.13).

Table 12: Descriptive Statistics for Questions 15 and 16

Survey Items	<i>N</i>	Min	Max	<i>M</i>	<i>SD</i>
Collaboration with a teacher librarian would be helpful in defining and articulating the need for research in my field of education. (1)	60	1	5	4.02	1.11
Collaboration with a teacher librarian would be helpful in identifying a variety of types and formats of potential sources for information. (2)	61	2	5	4.25	.94
Collaboration with a teacher librarian would be helpful weighing the costs and benefits of acquiring the needed information. (3)	59	1	5	3.85	1.08
Collaboration with a teacher librarian would be helpful in reevaluating the nature and extent of the information needed. (4)	61	1	5	3.82	1.04
Collaboration with a teacher librarian would be helpful in selecting the most appropriate investigative methods of information retrieval systems for accessing information. (5)	60	2	5	4.17	.90
Collaboration with a teacher librarian would be helpful in constructing and implementing effective search strategies. (6)	60	2	5	4.22	.82
Collaboration with a teacher librarian would be helpful in retrieving information online or in person using a variety of methods. (7)	61	2	5	4.16	.93

Table 12: Descriptive Statistics for Questions 15 and 16 Continued

Survey Items	<i>N</i>	Min	Max	<i>M</i>	<i>SD</i>
Collaboration with a teacher librarian would be helpful in extracting, recording, and managing information and its sources. (8)	61	1	5	4.13	1.00
Collaboration with a teacher librarian would be helpful in summarizing the main ideas for extraction of the information that I gather. (9)	60	1	5	3.65	1.14
Collaboration with a teacher librarian would be helpful in articulating and applying initial criteria for evaluating both the information and its sources. (1)	61	1	5	3.52	1.02
Collaboration with a teacher librarian would be helpful in synthesizing main ideas to construct new concepts. (2)	60	1	5	3.27	1.19
Collaboration with a teacher librarian would be helpful in comparing new with prior knowledge to determine the value added, contradictions, or other unique characteristics of gathering information. (3)	59	1	5	3.27	1.20
Collaboration with a teacher librarian would be helpful in determining whether new knowledge has an impact on my values system and taking steps to reconcile differences with various resources. (4)	59	1	5	3.24	1.15
Collaboration with a teacher librarian would be helpful in understanding and interpreting information through discourse with individuals, subject-area experts, and/or practitioners. (5)	61	1	5	3.28	1.29
Collaboration with a teacher librarian would be helpful in understanding many of the ethical, legal, and socioeconomic issues surrounding research in education. (6)	62	1	5	3.56	1.25
Collaboration with a teacher librarian would be helpful in following laws, regulations, polices, and etiquette related to the access and use of information resources. (7)	61	1	5	3.95	1.17
Collaboration with a teacher librarian would be helpful in acknowledging the use of information sources in communicating research in education. (8)	61	1	5	3.74	1.22
Collaboration with a teacher librarian would be helpful in applying new and prior information to the planning and creation of a particular product or performance. (9)	61	1	5	3.51	1.14
Collaboration with a teacher librarian would be helpful in revising the development process for the product or performance for the specific purpose of an assignment. (10)	59	1	5	3.47	1.08
Collaboration with a teacher librarian would be helpful in communicating the product or performance effectively to others for the specific purpose of an assignment. (11)	61	1	5	3.41	1.20
Collaboration with a teacher librarian would be helpful in assisting students to assess their own learning processes. (12)	61	1	5	3.98	1.05

Table 12: Descriptive Statistics for Questions 15 and 16 Continued

Survey Items	<i>N</i>	Min	Max	<i>M</i>	<i>SD</i>
Collaboration with a teacher librarian would be helpful in evaluating efforts to improve student achievement. (13)	61	1	5	3.66	1.18
Collaboration with a teacher librarian would be helpful in following citation policies for crediting resources I utilize. (14)	61	1	5	4.02	1.20

Questions 15 and 16 asked participants to assess the importance for collaborating with a teacher librarian in the successful performance of a specified task. The individual Pearson correlations for these questions indicate that a relationship exists among all of the domains. The researcher averaged across these 23 items to create a total score for perceived helpfulness of collaboration with a TL across a variety of domains. There was a strong positive correlation among the survey items with the highest mean ratings of importance in regards to collaboration with the TL and across these domains. The greatest positive correlations between two variables, $r = .855$, $n = 60$, $p < .001$, related collaborating with the TL in extracting, recording, and managing information and its sources to collaborating with the TL in retrieving information online or in person using a variety of methods. These two roles that are perceived by the participants as the basis for proper collaborative relationships utilizing the TL's skill set in research, retrieval, and management of information resources. There is no Pearson correlation table in this paper due to the nature of the study, a researcher would expect a correlation between the findings and across the variety of the domains that were analyzed for this study.

A *t* test for independent samples was used to compare the mean ratings for the survey items for Question 17, which concerned plans to collaborate with a TL (see Table 13). On average, those who planned to collaborate perceived collaboration with a TL across a variety of domains as more helpful ($M = 3.88$, $SD = 0.75$) than did those who had no plans to collaborate

with a TL ($M = 3.22$, $SD = 1.02$). The difference of 0.65 was statistically significant ($t(58) = -2.70$, $p < .01$).

Table 13: T Test for Independent Samples Comparing the Mean Ratings for the Average of Questions 15 and 16 by Plans to Collaborate with the TL

	Plan to Collaborate	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>Df</i>	<i>p</i>
Perceived Helpfulness of Collaborating with a Teacher Librarian	No	16	3.22	1.02	-2.70	58	.009
	Yes	44	3.88	0.75			

For Question 19, respondents shared their opinions regarding when collaboration with a TL would be beneficial to meet their own information needs and those of their students. This written response was analyzed thematically, and 10 themes emerged from the 62 responses. The theme with the highest response rate corresponded to the fourth-highest-rated domain, which was mentioned earlier. Twenty-two participants (35%) indicated that, in the absence of barriers, it would be beneficial to collaborate with the TL in extracting, recording, and managing information and its sources. This domain captured research projects that teachers like to include in their curricula and the role of the TL in helping to manage sources, such as identifying best practices for creating and managing citations. Eleven participants (17%) were unable to adduce other examples than those mentioned in the survey of measures that could help fulfill their students' information needs. Seven (11%) indicated that it would be helpful to be able to identify the most appropriate method for information retrieval in terms of accessing databases and other reliable online resources, conducting interviews, and analyzing primary and secondary resources (depending of course on the curricular standards and desired outcomes).

Six participants (10%) indicated that they simply want the library to be open for students to access services and technology in the course to complete their school assignments. Five (8%)

expressed a desire to collaborate more with the TL in identifying a variety of types of formats of potential sources for information that students could utilize and access, and this result also corresponds to the highest mean rated domain from Question 15. Three participants (5%) indicated their desire for a school site professional development program lead by the TL aimed at improving teaching practices, while three others (5%) wanted the TL to help students pick out books or to lead reading programs. Another three participants (5%) indicated that it would be beneficial to collaborate with the TL in learning how to construct and implement effective search strategies which means when to use effective Boolean search terms (e.g., AND, OR, and NOT) or how to operate the advance features settings for the various types of search engines. This theme corresponds to the third-highest-ranked domain, which was explored in Question 15. One further response (2%) expressed a desire for the TL to stage a freshman orientation session that would provide an overview of various research strategies, citation systems, issues involving plagiarism, and other background information to help students build their skill sets as digital citizens (2%). Another unique suggestion (2%) was that teachers and students become better informed about retrieving information online or in person using a variety of methods, which relates to the issue of using online as opposed to print resources, this being the fifth-highest-rated domain in Question 15. These results were consistent with those achieved using the Linkert-style questions to rate the importance of collaborating with a TL in the successful performance of a specified task, since the five top-rated domains were evident in the written responses regarding participants' values and needs.

The statistically significant findings indicated that those who better understood the role of the TL and the TL's capacity to provide assistance in a variety of ways related to the 23 domains presented in the survey were more likely to collaborate with the TL. Understanding the TL's

role in teaching and learning thus facilitates collaboration at the high school level. The TL and administrators bear the responsibility of helping teachers better understand how the TL and the library can help enhance teaching practices and student achievement.

Qualitative Data Analysis

As has been seen, 22 of the 62 teachers and administrators who completed the anonymous online survey participated in the face-to-face interviews, though nearly all expressed a desire to take part in this second phase of data collection. In any case, both groups (those who were interviewed and those who were not) were represented in the first, survey, phase. Also, as discussed earlier, the initial collaboration survey was sent to all individuals at the school site, and the last question provided a link to a second survey that could be completed if the participant was willing to do so. The second survey asked respondents' names, so that an incentive could be directed to them thanking them for completing the survey, and whether they would be willing to be interviewed about the proposed topic of teacher to TL collaboration. Thirty-four (56.67%) of the 62 participants indicated that they were available to be interviewed, 16 (26.67%) answered "maybe," 10 (16.67%) declined to be interviewed, and 2 (3.22%) did not answer the second survey.

The twenty-two of the 34 respondents who indicated a willingness to take part in the second phase of data collection were then scheduled for interviews. This process was especially challenging because the interviews were conducted during the final weeks of the 2016-2017 school year, a time of year that during which many activities that take place at any school. As alluded to earlier, several individuals who indicated a willingness to be interviewed failed to provide contact information and so could not be scheduled. All interviews were conducted face-to-face and at the high school site either during the TL's prep period or after school. All

interviews were conducted after the closure of the online survey; all took from 20 to 50 minutes to complete. All but one interview was audiotaped and then professionally transcribed verbatim in order to code, collect, and analyze data; personal notes were taken throughout each interview. One participant withheld permission to be recorded for personal reasons.

As already reported above, the respondents included approximately equal numbers of men and women, and all but one had at least two years' experience at the school; the exception was approaching the end of her first year of teaching. The participants averaged 17 years in education. In terms of racial/ethnic background, 19 were Caucasian (86.4%), 2 Latino/a (9%), and one identified with two or more races (4.6%). Three were administrators (14%) and 19 were teachers (86%). Most the departments at the high school site were represented, the exceptions being Counseling, AARC, Industrial Arts, and JROTC, in each case owing to scheduling conflicts. The breakdown of the department representation for the interviews was: 4 English, 2 Math, 2 Science, 4 Social Science, 1 World Language, 1 PE, 2 Visual and Performing Arts, 1 AVID, 2 Special Education teachers and 3 Administrators. These results are presented in Table 14.

Table 14: Interview Participants' Backgrounds

Participant Name	Gender	Number of Years of Teaching/Administration Experience	Department	Self-Reported Race
Teacher 1	Male	11	Visual & Performing Arts	Caucasian
Teacher 2	Male	28	Science	Caucasian
Teacher 3	Male	6	Science	Caucasian
Teacher 4	Male	27	English	Caucasian
Administrator 1	Male	21	Administration	Caucasian
Teacher 5	Male	30	Social Science	Caucasian
Teacher 6	Female	8	English	Caucasian
Teacher 7	Male	11	Visual & Performing Arts	Latino
Teacher 8	Female	1	Math	Latina
Administrator 2	Female	14	Administration	Caucasian
Teacher 9	Male	19	World Languages	Caucasian
Teacher 10	Female	11	English	Caucasian
Teacher 11	Female	20	Math	Caucasian
Teacher 12	Female	28	AVID	Caucasian
Administrator 3	Female	28	Administration	Latina & Native American
Teacher 13	Female	35	Social Science	Caucasian
Teacher 14	Male	10	Social Science	Caucasian
Teacher 15	Male	20	PE	Caucasian
Teacher 16	Male	25	Social Science	Caucasian
Teacher 17	Female	8	Special Education	Caucasian
Teacher 18	Female	24	Special Education	Caucasian
Teacher 19	Female	20	English	Caucasian

Analysis of the Interview Data

All interview transcriptions and personal notes were read and coded a minimum of four times using *HyperRESEARCH* Qualitative research software. The first review and holistic coding was conducted to provide an overview of the interviews, to determine whether follow-up interviews were needed for clarification, to assess provisionally the overall perspective of

teachers and administrators regarding TLs and collaboration, and to determine the type of coding best suited to sharing and exploring the themes that would emerge from subsequent rounds of analysis. In light of this preliminary assessment, clarification interviews were arranged with two teachers.

In the second round of coding, descriptive coding served to “categorize the inventory, tabular account, summary, or index of the data’s contents” (Saldaña, 2016, p. 104). Through this type of coding, the researcher acquired an organizational grasp of the study, in particular participants’ attitudes toward TLs. Table 15 lists the initial descriptive codes. The researcher also used memoing as a tool to gain insight into the codes and to differentiate between the word choice for each excerpt, an approach that, according to Miles, Huberman, and Saldaña (2014), “contributes strongly to the development/revision of the coding system” (p. 99). Thus, memoing helped with the sorting and understanding of each code through several readings and revisits and with the elapse of between coding cycles. Memoing also represented one way in which the researcher was able to maintain consistency throughout the coding process, which went on over several weeks (this approach was used with the initial list in Table 15 below). One way in which *HyperRESEARCH* was used in conjunction with memoing involved a feature that could add notes to individual codes as reminders for the researcher regarding the nature of each code and the choice of certain verbiage. This flexible coding strategy allowed the researcher to determine the methods and preferences for each specific coding descriptor. In sum, by using memos in the first phase of coding, I enhanced my understanding of the data and ability to maintain continuity (Birks, Chapman, & Francis, 2008).

Table 15: Initial List of Descriptive Codes and Their Frequencies

Start List of Descriptive Codes	<i>n</i>
Administration Actions that Hinder	7
Administration as Facilitators	36
Assumptions of Others	3
Being Prepared	3
Cannot Collaborate with Everyone	10
Common Prep Time	11
Curriculum Issues	14
Department Dynamics	7
Different Perspective/Learn from Each Other	40
Do Not Understand the Benefits	8
Fail Together (Make Improvements After)	19
Feeling of Guilt – Do Not Want to Bother Others	8
Food	1
Goal Setting	17
Growth Mindset	6
Initiating Collaboration – Based on Need	5
Isolation	6
Lack of Communication	5
Lack of Resources	10
Library Research	8
Mentoring	27
Model A Coordination—Library as Warehouse	24
Model B Cooperation—You Teach and then I Teach	5
Model C Integrated Instruction—Share Planning and Teaching	6
Model D Integrated Curriculum—District Planning	1
Opportunities Provided by Administration	25
Overall Benefits of Collaboration—End Result	11
Pathways	1
Personality Traits	
Ego	11
Flexibility	5
Personality Dynamics—Finding Your Niche in a Group	10
Silo—Content Master	13
Preservice Training	11
Professional Development	5
Professional Learning Communities (PLCs)	
Freedom of Choice	12
Misuse of PLC time	5
Overextended—Too Many Responsibilities and Preps	3
PLCs Used Effectively	24
Proximity	13
School Culture	19
Teacher Leadership	1
Technology—Ease of Use	28
Time	
Inhibitor—Lack of or Not Enough Time in the Day	13
Making Time—Valuing Collaboration	15
PLCs—Permitted Time in the Schedule	33
TL as a Leader	2
TL Provides Opportunities	10
Too Much Change—Change Saturation	8
Trust and Value of Other’s Ideas	21
Use of Research to Influence Decisions	6
Value of Library—Positive Past Experiences	2
Value of the TL Skills Set	20

Total: 53 Descriptive Codes Count: 614

Structural coding was used as part of the third and fourth reading installments involving the interview transcripts because “structural coding applies a content-based or conceptual phrase representing a topic of inquiry to a segment of data that relates to a specific research question. The similarly coded segments are then coded together for more detailed coding and analysis” (Saldaña, 2016, p. 98). This coding technique was used to answer the research questions and to group them according to the major themes and sub-themes that emerged after rereading the interviews. This coding process was also done in conjunction with the four-level conceptual framework created by Montiel-Overall and discussed in detail in previous chapters. This level of coding served to explore the applicability of the TLC-III model to the high school level, especially in this specific school setting and to enhance my understanding of my own work setting. The second, third, and fourth readings and reviews of the transcripts and notes were done to identify any themes in the data and then to highlight quotes that supported the themes.

Development of Themes

The starting point for the theme development came after the initial list descriptor had been broken down. Most of the initial list descriptors had both a positive and negative aspect. Proximity, for example, was a common theme in the interviews; it concerns the fact that collaboration can occur on the spur of the moment when teachers and administrators are outside their classrooms and offices observing students. A positive aspect of proximity is that classrooms within the departments and grade levels are sufficiently close for this collaboration to occur; a negative aspect is that proximity can also limit those in outlier classrooms or departments that are spread far apart on campus. In the case of the school at which this research was conducted, the English department and classrooms in which the subject was being taught

were dispersed throughout the campus, impeding spur-of-the-moment collaboration across departments and grade levels.

The initial breakdown into categories revealed the broad scope of the themes, ideas, and quotes from the interviewees for each specific research question. With the *HyperRESEARCH* program, short word descriptors served to consolidate the major themes that emerged. Identifying the excerpts associated with each descriptor was quite easy using the qualitative tool, for which each word descriptor was linked to a number of excerpts coded to fit that field. It was possible to link one excerpt to several descriptors, as occurred repeatedly throughout the coding process. Using the software, clicking on one of the descriptors brought up all of the associated quotes from an interview. These linkages facilitated greatly the process of determining themes compared with hand coding. This specific analysis tool, then, helped to determine the overarching themes and especially the prerequisites for collaboration between high school teachers and TLs based on each participants' personal experiences, words, and narratives.

One major theme emerged, in addition to five sub-themes, during the various stages of coding. All the themes and sub-themes were interconnected, but the central theme was prominent throughout. In the absence of such a theme, there would of course by definition be no sub-themes. The process of arriving at the one major theme and five sub-themes included reading all of the interviews repeatedly, analyzing all of the excerpts, and having a second researcher read through the analysis, coding structures, memos, and literature review. This second party—who had a background in educational research, held a leadership position in higher education, and had qualitative and quantitative coursework experience—validated the themes, including the central theme and five interdependent sub-themes, in a manner that was consistent with Montiel-Overall's TLC-III model, which, again, served as the theoretical

framework for this research study. This major theme was relationships; the five sub-themes were, again, previous experience, logistics, definition of collaboration, leadership, and barriers to collaboration.

Overarching theme: relationships. Relationships, then, was the core theme that emerged from the coding process. Relationships among colleagues and administrators have both positive and negative aspects, as participants made clear at length throughout the interview process. The consistent message as they shared their beliefs, background information, and past experiences was that relationships can solidify the process of collaboration, depending on the school culture, and that trust levels between certificated staff and administrators are important. The first interview question asked participants to define what collaboration meant to them, and many discussed how it was influenced by the relationships that they formed in various ways on campus, such as the mentoring new employees, through professional learning networks within the school—which can also lead to personal relationships—or simply as a consequence of having something in common, such as belonging to the same department or physical proximity. All of these factors played roles in establishing and nurturing relationships among staff members because everyone has the desire to feel part of a group, whether to work on a common goal or just to vent frustrations. Interpersonal relationships matter; they create a framework for mutual learning and for enhancing the capacity of teachers and administrators to impact student learning in positive ways.

When there are trusting symbiotic relationships among staff members, then, collaboration can happen organically. Individuals learn from one another based on need and experience, and this deserves the support of both teachers and administrators as part of a school's culture. Thus, one administrator indicated in an interview that, at least on this school campus, some teachers

assimilated and that collaboration did occur and affected other aspects of the school culture, even if not all of the teachers were involved:

There are pockets where there's some really good groups and again, it's because I can see that they have worked together, they trust each other, they have a really good—not just a professional but some of them I've seen that they have also personal relationships. It's almost like their personal relationship has developed or excuse me, the other way around, that their professional relationship has been so good that now they have formed a personal relationship. There are some pockets out there, but it's not system in place. It's not a system here at the school that I can say this is how this site functions. I would say it's fifty-fifty.

This administrator thus acknowledged that the interrelated phenomena of school culture and relationships helped to determine whether collaboration would take place, observing that it was occurring, but only among some staff. Another administrator acknowledged expressed similar sentiments:

I would say that the culture of this school is one of the huge ones. You develop that culture where we're all working towards a common theme. Sometimes, that work looks different for certain people because we all have different assignments that we need to tackle. If that culture piece is there where it's kind of more of a standard to collaborate, rather than just kind of dump it on somebody, I find that that works the best.

School culture, like other factors, can have positive or negative impacts on relationships among staff members. One art teacher drew attention to the latter:

I think the culture of the school sometimes can be an inhibitor. That culture can come in various ways, but from what I've seen in my 10 plus years of experience, it trickles down from administration, down to the students. So, when the leadership does not instill collaboration, even within their own setting, instructors will see that.

Administrators need to be role models for collaboration, since their relationships with teachers affect how teachers interact and their satisfaction, cohesion, and commitment to the profession (Price, 2012). An administrative team that establishes a school culture in which its members serve as role models for collaboration will have a positive impact on how teachers work together.

Administrators can also be role models in terms of establishing positive collaborative relationships with TLs and knowing how a TL can help each department. When teachers notice administrators working with a TL and sharing their knowledge of the TL's role in the collaborative process, teachers may be more likely to collaborate with the TL in the future, and they in turn can serve as models students.

Another integral aspect of relationships in respect to the collaborative process is trust. Trust levels were discussed in the interviews because one of the interview questions asked participants to share their ideas about trust in the context of collaboration. A majority expressed the opinion that a "high level of trust is needed," especially when a group is working together in a similar content area and on particularly demanding tasks. Trust is necessary for all voices to be heard in a non-judgmental arena. Simply put, collaboration correlates positively with trust within a group. The administrators interviewed were aware of this fact, with one observing:

Knowing that, when we're brainstorming, that's exactly that there are no bad ideas, everybody has that respect for each other and trust each other that we're there for a common goal, and a common goal ultimately is what is it that's benefiting our students. To me, the number one inhibitor would be a lack of relationships and lack of trust within the group.

Trust, then, goes hand in hand with relationships. When groups meet to tackle a problem, they need to feel safe and comfortable sharing ideas. Thus, a social science teacher asserted that "You have to trust that people will listen to you, and you have to trust that if there's something that's just meant for the group, that it stays in the group." An English teacher perhaps put it best, observing that the perception of a lack of trust or judgment within a group forestalls collaboration:

I mean, yeah, a high level of trust, just because you want to make sure that you feel your voice is heard in a respectable way and not judged. I feel like I don't want to collaborate with certain teachers here because I feel like I will be judged. I don't want to put myself in that position so I'd rather not.

Trust takes time; it involves sharing rather than merely receiving ideas and lesson plans.

Establishing norms can help to create a safe framework for sharing and improving on ideas. In the words of a female special education teacher,

I think it takes a lot of trust to get a group of people together, to share ideas and not know if those ideas will be accepted in a positive or negative way. So, I think it's always very important, when you're having a meeting with people, especially if it is a PLC meeting, that there are some norms that are set up, that there is mutual respect. People have the right to say what they want to say. We are not going to be mean, we are not going to be vindictive, we're not going to be malicious. We share, and we share in a way that is constructive and not hurtful. Because when you start opening yourself up to criticism, that's painful, because nobody wants to admit that they have a fault somewhere. We all think of ourselves as being these perfect teachers. And the fact of the matter is, none of us are. And so, I think that you must have a rapport with the people that you're collaborating with. You must have that rapport. Otherwise it just isn't going to work. If someone is constantly judging, if someone is constantly negative in the group, it just does not work.

An administrator agreed in another interview that norms bolster relationships and help groups to focus on the goals of a collaborative effort rather than extraneous thoughts, resentments, and tasks that have the potential to ruin relationships or prevent work from being accomplished, sharing the following story,

One of the things that I have found very, very critical is whenever a new group of people come together, regardless if they're a steward we have at work, but even if there's one or two new members, even one new member to a group makes a difference. I always insist that you should set your norms.

While the group is setting norms, they identify what their core values are and they identify if their core values are matched. Once you set your norms and I always say don't go crazy, five is already too many as far as I'm concerned. Three or four norms and we're good. You should set your norms and have them posted or as you're doing your meetings you have a folder, you have something, or you have your piece of paper and you put it in the middle of the table just to remind yourself about what the norms are.

I knew it sounds silly, but in my experience of facilitating PLCs for the last 13 years I had a group in my previous school that said, like around six weeks into the school year, came to me, the department chair came to me and said, we're having

a really hard time, they're not coming in on time, I don't know what else to do, you're the principal so you need to send it ASAP. Okay, well, is one of your norms to rely on time. Oh, we didn't do norms, we didn't have time for that. We needed to go into, so I offered to facilitate and went back to set up norms. The number one norm was right to the meeting on time, as silly as it sounds, but that's the beginning.

Part of the norms is to set that as silly as . . . and I can say silly as it sounds right on time but that is right on time, then indicates that this is a protected time and this is important time that every member values therefore, they're on time, they're with positive intent. I'm there because my voice is going to . . . I have a way that I'm going to share my voice and I knew that my voice is going to be heard. That's a very basic story, but to me, it's a critical point to begin. I did have that experience with one group that said they don't have time for that and then they struggled and it got better after we revisited and started at that point.

Positive relationships, then, are built within a group when it establishes norms that meet its needs. This one step can reduce the likelihood of easily-managed problems involving the ability of every member to make his or her voice heard.

Teachers need to be given the time to collaborate and solve problems together so that they can reflect on their own personal teaching, which can improve in the right environment. Various participants shared their thoughts and feelings about the concept and power of reflective practices, group problem-solving, and preparedness for meeting with fellow staff members. In the words of a male science teacher,

Planning ahead of time of what's going to happen, what's going to work, what do students need—if we find out that what we are doing is not working, we need to rethink everything to see what we can do to make it work better.

A math teacher observed that reflection can happen collectively within a group regarding decisions made together and individually, but that it needs to be a part of the planning process:

I think as much as there's things you have to do before or to plan for it to make sure to come back and be like, "Oh, how did it go?" or to reflect on it. So maybe if it doesn't happen collaboratively, it will happen individually about how the collaboration went, just having the space.

Both administrators and teachers are needed to create realize common goals and to act as role models. The TL can be a part of the process by sharing and improving ideas and making sure that he or she is non-judgmental when sharing resources that can enhance learning. Thus another English teacher asserted that it is important for the TL to be a neutral party in collaborating and to help expand ideas while not judging what is shared by teachers:

It's been great to have the librarian to collaborate with because it gives me some fresh ideas. You give me so many resources that I didn't know about. You give me technology tools that I didn't know about. It expands my students and my classroom outside of this classroom. I mean we're able to research wise, and you know what I mean? Resources, and tools, and I wish more teachers here would collaborate. Yeah, I think the biggest thing is trust and not feeling judged. I don't want to ever feel like if I share something that they're going to pick it apart and tell me all the things that are wrong with it instead of just working with me on it.

Trust, then, is integral when building relationships, including collaborative ones.

Teachers and administrators collaborate with a TL when doing so is part of the school culture and trust is evident.

Sub-theme: previous experiences. Another theme that emerged through the coding process was the influence, both positive and negative, that a participant's previous experience and interactions with other staff members had on the likelihood of future interactions with others. Such statements as "that is what they always do," "I want to explore other methods, but my department has always done the same thing," "I have tried," and "it is easier to just do what I want to do" shared during the interviews are indicative of the negative ways in which past experiences can impact group dynamics.

Positive interactions among staff members, by contrast, promote the initiation or continuation of collaborative efforts in the future. A male Visual and Performing Arts teacher described one benefit of collaboration:

I think that's one of the big things. And especially just to see how much faster it makes things go. It's much faster and more efficient when you have multiple people working on the same thing because of that I will continue to collaborate.

A male social science teacher echoed these sentiments:

It's not necessarily a new attitude, but it's life for everybody. With that might come more of a desire to work together because you have new teachers who have the need to work together, because, hey, somebody helped me out. Then, who knows, then that person is talking to somebody else and word of mouth is not that same teacher is teaching their department the lesson.

A positive experience has a positive influence on others so as not to not “leave a bitter taste” regarding the idea of working with others.

Previous experiences captured in this data collection effort included mentoring, opportunities provided by administrators to staff to move out of their comfort zone and work at not just grade and content level but with other staff members, library use as a student, and preservice training. If any of these experiences were negative for a teacher or TL, he or she may be more likely to work in isolation.

Mentoring. Mentoring was one concept that participants referred to throughout the interviews. It can take many forms, formal and informal, within a department or across departments. New teachers can be assigned a mentor, or an experienced teacher can show them the ropes of the school culture. Mentoring practices influence how teachers interact and therefore, possibly, the likelihood of collaboration with the TL. For example, the art teacher stated,

When I came here brand new to this school, I had the pleasure of a fellow colleague showing me around. Having an experienced teacher who knows the campus, who knows other staff members, having a person like that guiding a new teacher helps. That's where you see the trust. That's where you see trust being gained. With that in hand, it also sets the pace; it sets the culture of what the school is.

This statement indicates that the mentoring process can give new teachers insight into interactions with the TL. When experienced teachers share with newer staff members that they collaborate with the TL and that doing so is part of the school culture, their likelihood of working with and seeking guidance and help from the TL is impacted.

Experienced teachers can help new teachers find their voice. An experienced teacher can invite a new teacher to a group within the school. A male science teacher described his positive experience being a new teacher and finding guidance from an older teacher.

He did treat me like someone who had an opinion of value, of note. Having a voice is nice. That is valued. It makes you want to collaborate more, and just being open and not judgmental about what you bring to the table I think encourages a collaboration on those ideas.

These mentoring interactions have implications for improving the collaborative process on campus. A female AVID teacher also shared a positive past mentoring experience that made a difference in how she interacted with fellow colleagues and novice teachers: “I think as a new teacher I learned to collaborate by being invited in by my colleagues to groups where maybe I didn't have a lot to contribute initially because I was new, but I saw the process.” New teachers need to seek out these collaborative groups, while experienced teachers need to be aware of the need to include new teachers in them. Having a TL as part of such collaborative groups can help to continue a cycle of collaboration within a school.

Preservice training, including clinical practice experience, impacts how a teacher lays the foundation for collaboration in a first position. The graphic arts teacher shared how collaboration occurred during his preservice training that impacted interactions with his colleagues:

I actually learned while I was going through the credential program. I hate to say we were forced to, but instead of just doing group work, you're encouraged to like, “What do you think about this?” You know, “Can you help me with this?”

What do you think about that?” “I see how you're doing that differently than the way I'm doing it, why is it that you're doing it that way?” So, we are encouraged to collaborate from back in school. But once they get to their sites, I would think that the sites should make it just part of the culture. I think, coming to a site, you should just be expected to collaborate. It should just be part of the routine.

This teacher, then, considered collaboration to be a natural process thanks to his preservice training. Preservice training is of course part of a teacher's past experiences, so it can be a part of a positive process in which collaboration with the TL and other staff members is a priority.

Previous experiences can also have a negative impact on a teacher's willingness to collaborate. If a teacher who is part of group is not heard, that teacher will feel devalued. If a teacher feels that the atmosphere is judgmental, he or she can become isolated or simply leave the school, as several interviewees observed. One experienced female social science teacher explained that

The new people, I think, sometimes they're fortunate enough to have another teacher on site that really takes them under their wing, but I've also seen where new teachers come in with new ideas and they've been ostracized for the new ideas and wanting to bring something else, and that's terribly unhealthy and they become their own island.

Administrators thus need to provide opportunities for all teachers to take part in a collaborative, healthy support system so that no islands or silos form. Negative relationships and group dynamics in the past can impact how teachers interact with a TL. When the campus school culture is full of islands, collaboration of any kind is unlikely to occur.

Logistics. The logistics of the school refer to the ability of administrators to plan and implement efficient systems for promoting student achievement. Logistical considerations that can impact the collaborative process include common prep times for content or grade-level teams, utilization the PLC time given to teachers, proximity of classrooms, provision of

opportunities for collaboration professional development by administrators, and observation and reflection with other teachers.

As already alluded to, scheduling is a perennial issue, for teachers need time to collaborate with one another, and it is up to administrators to work this time into the schedule. Again, effective logistics can involve common prep time for content, grade level, or for general and special education teachers. If the school schedule does not permit collaboration during the common prep periods, then the administration needs to provide other alternative times during the day. The TL needs a flexible schedule too, since he or she has the potential to collaborate with everyone on campus. The high school campus at which the research was conducted provided teachers 30 minutes of PLC time after school on Wednesdays because the daily schedule could not accommodate common prep time.

All participants mentioned in their interviews that the school provided the time to collaborate through these weekly meetings, for which the teachers set the agenda. The administration recognized the effectiveness of the PLC model works and its potential for a positive collaborative process. According to a female administrator,

There're some really good PLCs out there and you can see it because the students are growing. You could see it in their grades. You can see it in the activities that they're doing. Then there are other pockets of grade levels in certain courses where the students are struggling, and those would-be adults that are not really using the collaboration. It's professional learning community where you make time for collaboration. It's not happening. They're treating it as a time to go through an agenda, and that's not collaboration.

Providing professional development for teachers is another aspect of a school's logistics as it seeks to enhance student achievement. Teachers benefit from being able to choose the type of professional development that they believe will best contribute to improvements in their practice. For the academic year during which this study took place, the administration decided to

“have teachers teach teachers.” Thus, a variety of professional development opportunities were made available to teachers that involved learning from one another, with the choice of sessions to attend left up to the individuals. Many of the interviewees expressed the opinion that they had learned new information from this round-robin style of professional development, especially regarding technology. Thus, male Social Science teacher observed that

I think this year they did a fantastic job, as far as having those workshops that all you Google ninjas put on, all in different classrooms all over campus. Making it open for people to come in. Plus, the workshops that we talked about, where I got pulled out of classroom, that was driven through administration, and allowing us to have release time and paying for substitutes. That helped a lot.

Administrators provided the opportunities for teachers to learn from one another, thereby contributing to a positive attitude toward collaboration. Setting up professional learning through which teachers learned from each other benefited everyone involved.

Definition of collaboration. Another theme that emerged was the relationship between participants’ definitions of collaboration and the extent to which they engaged in it. The most common definition was “working with others.” Other definitions that teachers offered included “failing together and then learning from each other’s mistakes, then improving the process,” having “a growth mindset,” “learning from one another,” and “having a different perspective to approach a problem.” Across the 22 interviews, participants stressed their willingness to make time for collaboration, whether or not it is scheduled. A male social science teacher summed it up by saying, “I just have to make time. It has to be a priority, otherwise you’ll never have time.” A female English teacher similarly shared, “I make time to collaborate.” A male World Languages teacher spoke on the topic at great length:

You just have to make it. When it’s important, you’ll find it. Where there’s a will, there’s a way, and when something’s important, and I guess when true reflection and true assessment is at the top, and it’s really about kids, finding time to collaborate is not difficult. When it’s not about real assessment or real kids or

real learning, finding time to collaborate is like a chore. I don't—it's very easy for me to go. I don't do e-mails, and I don't do phone calls. I get up and I go.

There was one outlier, a female math teacher who, though she defined collaboration along the same general lines as the other participants, but also questioned its necessity:

Well, what I think it should be is people in whatever work environment working together, respecting each other, having an open mind, and sharing ideas, bouncing it off of each other, trying new things, and then coming back and seeing whether or not it worked and talking about that; but I have never in my teaching career experienced anything close to that . . . but what pops into my head is I feel like in education, we feel like it's a must. We've got to collaborate because it's supposed to be better. But what if it's not? What if letting a teacher do what works best for them for their style, for their, I guess just style. What if that was the best? But then I think about it and go, "Well, no," but I don't always think it's absolutely necessary. We do it because it's a good word. It's like a buzzword, so we have to, but you know. Two minds are better than one. It makes sense, but if we could just get past our issues, then it could be a big benefit.

The interviewees thus defined collaboration in similar terms and for the most part indicated the need to make time for it, and this would include collaboration with a TL.

Leadership. Various practices and conditions can be put in place that contribute to a collaborative school environment. Administrators set the tone of the school and need to know the value and skill set of the TL. Other conditions that contributed to collaboration, according to the themes that emerged from the interviews, were administrators acting as facilitators and providing opportunities to staff to collaborate and freedom of choice, especially when it came to setting up their own PLCs, the TL providing opportunities to teachers, the use of research in making decisions, valuing and knowing the skillset of the TL, valuing research as a skillset for students to acquire, and simply having access to technology.

Leadership that facilitates collaboration takes place on several levels, including the administration and the department. In the words of a male administrator,

I think it depends on, again, I keep kind of going back to leadership, but I think that's a huge part. The departmental leadership has a big effect, and then the staff

buy in. That, I think, goes hand in hand with the leadership, because if, obviously, if it's poor leadership, you're not gonna get buy in, and vice versa.

A male art teacher shared these sentiments:

Each administration has a style in terms of what collaboration is. Some of it can be just, you know, lip service. Whereas sometimes it's factual, it materializes. I've had principals where it's, "Okay, here's how much we got. What do you guys want to do with this?"

Leadership can contribute when it is truthful and sincere, when leaders are seen more as facilitators than as the dominant voices in the conversation.

Understanding the skills/role of the TL. Collaboration is also facilitated when TLs provide the staff with opportunities to engage in it. All interviewees asserted that the TL did provide the opportunities for learning. Their statements included, "she provides opportunities," "emails were sent to us to share about using a variety of resources," "she was a part of the after school professional development trainings," and "she has reached out to staff numerous times."

The TL is a skilled researcher who helps both students and teachers to refine their abilities to utilize, analyze, and decipher information. Understanding these skills can lead to collaboration; but one interviewee admitted that "I do know that the librarian is highly skilled in research." An administrator had the more informed view that the TL and the library were

kind of giving kids all those different mediums to experience how to access source material and how to do it safely, effectively, and that responsibly is huge. I particularly would hope for more teachers, particularly the ones that have to have the papers written, that they would use some aspect of the library.

Another teacher wanted

to point out the flexibility that the librarian, you in this case, have had with us as a department. I think that, I can't speak for other teachers, but I'm sure you have the same flexibility, if not more, with other departments, or even teachers individually because some of the skills that the students are taught in the classroom, I'm willing to bet, are refined in the library. Students who do not know how to research will come for help in the library. Research skills, you know, what is MLA? Why is MLA important? Why is documenting your work

important? Why is it important to know how to find a book as opposed to finding an article online?

Other ideas about the use of technology for research were mentioned in connection with the TL's role in the classroom: "There is a newness to it that I think, with this technology has come, it's revolutionary in education, it's definitely revolutionary in information and how we find it and how we use it. That's what a librarian is, right?" Combining research skills with technology, the TL can help teachers to acquire and improve skills related to these standards in the manner in which they feel most comfortable.

As discussed earlier, at the school where this study was conducted, PLCs met every Wednesday after school for 30 minutes. The one change that administrators made for the 2016-2017 school year was to give teachers the choice of which PLC they would attend, a move that was supported by teachers and by department and grade-level dynamics involving a failure to share or show improvement in delivery of the curriculum. Also, teachers wanted to work together to tackle classroom and school-wide issues, such as improving the implementation of technology in the classroom and implementing a Positive Behavioral Intervention and Supports (PBIS) program. Many of the participants felt that the ability to choose their collaborators was beneficial. In the words of a female English teacher,

I think they try here with the PLC time, they try to encourage us to collaborate with one another, I think this year went more towards that. I think in the past it was you only met with your grade level, and if you didn't . . . for me, it's hard because my grade level, we don't have the same teaching styles, so I kind of just strayed away and didn't meet up with them at all. I think being able to choose this year has made it a lot better, and I've been able to actually collaborate a lot more this year. The different types of people too, not just my department.

A male teacher shared this sentiment by reporting that "I wasn't asked to be in a PLC, so I found one that I wanted to do."

Technology. Technology was mentioned repeatedly during the interviews and associated with the TL's role as a helpful implementer and a source of knowledge about how resources can be best implemented in the classroom. A male social science teacher acknowledged that, in order to excel and better utilize technology in the classroom, he had had to seek additional guidance,

Most of the time, it was me. I mean, I would ask you a question and you'd say, "But did you know this?" You'd show me different things, resources that I didn't know about. Then sometimes you'll email and show different ideas, so it goes both ways. I think a lot of the time I was chasing you down because I needed a lot of help this year.

The first-year math teacher appreciated the technology and wanted it in her classroom:

The pros, I would say, just that so many people are doing so many different things with . . . I don't know how it was before I came in, but with the Chromebooks coming in, I feel like technology is just . . . I don't know how it was before, but it's huge now and I see snippets of things going on. I was like, "That's awesome."

Using technology within a group has become easier for teachers, since they can share information, resources, lessons created, student samples and other information using tools such as Google Drive and Drop Box. A male PE teacher discussed how his department shared information with each other,

For technology, it was one stop shopping is probably the best answer, and what I mean by that is, if there's a resource that you can go to, or you can get everything you need. It may not be in the same file or folder, but you know it's—here it is, PE, here's the folders, and each one has files. Now I know it's in here, is it logically arranged? We're starting some of that in PE, in the—I think it was Google Drive, not Google Classroom, where we have a shared a folder within the group, and anybody can just dump in there. I haven't dumped anything in yet, but I probably will this summer. I want to start dumping stuff in, and see. . . I think that, if that helps, I think one of the challenges will be organization.

Detractors/Barriers to Collaboration. Numerous factors are at play in collaboration, including barriers and detractors that prevent teachers from collaborating with a TL. Dominant themes in this respect were

- time,
- administrative actions,
- staff members' failure to understand the benefits of collaboration,
- department dynamics,
- lack of communication among staff,
- lack of resources, especially access to reliable information and technology devices,
- egos,
- misuse of PLC time,
- a negative school culture,
- a feeling of overextended among the teaching staff, and
- change saturation.

Time was cited by many participants as a reason for not collaborating. Time is a valuable commodity for school personnel, and the feeling that their time is being wasted impacts how they feel working with others. Comments expressing these sentiments included, "Time is always a huge inhibitor"; "Time, which you probably have heard quite a bit—it's having the time to talk in a relaxed situation"; "Time and—yeah, time"; and "There's never enough time in the day." As one respondent explained at greater length,

I think time. I'm sure that's the common thread. I suppose, I think it would just get, I'll speak for myself, I sometimes get too busy, just locked into my own world. Particularly, later in my career, I don't have the energy to put into things that are only going to be in place for a year or two. I think that would be a big factor for me.

A special education teacher said much the same thing:

Time. Schedules. Time is probably the biggest. For me, it's time. It could be periods not matching up. When I do have the time, it could be the teacher's absent, or that particular teacher doesn't have the time. Especially when I'm looking at IEP stuff, trying to pull meetings together or pull time so we can just

get together and discuss a particular student. When you've got more than two people that you need to speak to, it gets crazy trying to facilitate when is a good time, when can we, we end up having not everybody there, or we end up scheduling far in advance because we can't get everybody there. So, it's really just time, and I think people's schedules. That's the biggest for me."

Time can inhibit schedules, but time can also impact effort, too, as a social science teacher made clear:

Sometimes people—there's not enough time. People are looking for the easiest route and if you've done something for a while and you think it works, it's easy to keep doing it. So, I guess maybe the easy way out? Or people aren't, they're stuck in their ways and they don't see the need to change. They don't see the value of changing.

A female English teacher spoke of "Time. Sometimes there's teachers that aren't on board. There's usually ways to work around that, but that can inhibit the process a bit." Time will always be a factor, but individuals determine how to deal with it, using it either as an inhibitor and excuse or as a way to make the most of a day.

Administrators can provide time for teachers to collaborate, but their actions can also hinder collaboration efforts. As one of the teachers put it, administrative efforts sometimes meant "having contrived assignments that go along with it. And I mean, by contrived, I mean administratively getting a contrived assignment instead of just where they want a result. And collaboration isn't always a result." For the 2016-2017 school year at this high school, PLC groups were required to share their notes from their weekly meetings with the administrators through Google Docs. Administrators were then to make comments or suggestions for the next PLC meeting. According to the interviewee who found the notes to be contrived, administrators

get in the way with trying to direct things, they feel they have to direct things. Their position should just be walking around. And when they've walked around, it's just stopping in, watching, observing, listening, maybe commenting if they feel it's absolutely needed. Or maybe commenting later.

From the perspective of a social science teacher,

Sometimes it seems like some of the inhibitors is administrators having to check off boxes of things that they have to cover, whether it be in staff meetings, in your beginning of the year meetings. I would rather spend time collaborating than listening to one person speak.

A special education teacher was similarly critical:

I don't think they were successfully looking at teacher pairings of, "I think this person's willing and this person's willing." Just because they're willing doesn't mean they can work well together. I wish they looked more at that, and then keeping successful pairings together, and honoring that they need that co-prep, that they need time to collaborate with each other. Even more training.

Administrators can and do make powerful decisions that influence how teachers work together.

Making decisions based on data that have been collected and having difficult conversations can start the process.

Another idea that came up frequently during the interviews concerned the ways in which interactions with peers influence future collaboration and department dynamics, how strong personalities can forestall collaborations, and the misuse of shared time, for instance during PLCs. There were fourteen different departments at the school, each one with its own group dynamics. Some of the interviewees' observations about collaboration did not necessarily carry over to all departments. Thus, a male English complained that

You know, the collaborative efforts on this campus because you've got people who are so into their department and their own thing, they're afraid to give up their . . . maybe the term, very loosely, power, their hold on their control. And that's what makes it different. That's what makes it difficult.

A male social science teacher similarly asserted,

Well, when one person dominates and that is a big inhibitor. They don't want to take advice from anyone else or they don't want to hear anyone else sharing. It could, if you have someone that instead of collaborating, they're there to share their information only. Those aren't fun. Those aren't good.

A male science teacher was even more detailed in his assessment of departmental politics:

Like I just said, checking that ego at the door, and not being too proud about whatever materials you have. Let me actually pull from a different department. I've heard a lot of rumblings from a particular department that there's a lot of issues with possession of worksheets and assessments. Yes. This is very interesting. I'm not going to name any names at all, or even the departments, but I've heard that this department has, I guess PLC has a rep of one person does all the work, one person makes all the worksheets, and makes all the assessments, and the other people take it. That, obviously, has fostered some resentment. Of course, being a science guy, I listen to both perspectives, and I heard out from both of them, and after I did the piecing together, I realized personalities that are like that, there's typically a reason that other people don't collaborate, and they just take.

A female mathematics teacher voiced her frustration:

It's so, so, so awful, and so many of our teacher leaders are just gung-ho and just keep preaching it, and just keep trying. I don't know why they can't look at the data and say, "You know what? You're right." It's egos.

A male world languages teacher cited as counterproductive for collaboration the misuse of time and personal agendas that took precedence over group goals and norms:

Yeah, so the time constraints; I don't like the time constraint, and I guess that's a union imposed thing. It seems counterproductive to me. Also, attendance, timely attendance, people showing up late, and people tending to their own personal agendas rather than on task with the PLC, so people thinking about their babysitter or scheduling, texting and calling and all that stuff.

Administrators would do well to heed the advice of another male social science teacher regarding inter-departmental cooperation:

I think definitely the biggest thing would be to hire the right people. You sometimes can't teach people to be nice, and if you're working with kids and you're working with people, what are you doing if you're not nice? Be nice to people. You'll get more back in return, that's the way I understand it. So definitely that would be huge. And then as far as I like what they've done as far as provided a little choice, so an avenue of escape. You're not forced to work with someone that you cannot collaborate with.

We should be more understanding and we should be able to work with people and hopefully we have people that will, but let's be honest, some people are going to clash. Give them a reason to escape where they don't have to be enemies because they chose a different path. Forcing people doesn't always work. Leaving a meeting with steam in your ears is not bad all the time; sometimes you have to

have more conversation. It is challenging. But if you don't have a mutual respect for someone, it's kind of tough.

The interactions that these teachers experienced and dealt with had the potential to impact their viewpoint, future collaboration efforts, and school culture in general. Administrators, however, can encourage collaboration in a variety of ways and promote relationships among staff, especially when building the relationship between teachers and the TL.

Summary of the Findings

Interviews with 22 study participants revealed one major theme and five interconnected sub-themes regarding how best to foster effective collaborative exchanges between high school teachers and TLs. The major theme emerged in conjunction with *Relationships*, and the sub-themes that emerged were *Previous Experiences*, *Logistics*, *Definition of Collaboration*, *Leadership*, and *Detractors/Barriers That Prevent Collaboration*.

Sixty-two individuals completed anonymous surveys, which revealed that those who are aware of the ways in which a library and TL can assist in implementing the curriculum and improving student learning are more likely to begin or to continue collaborating with a TL. Teachers and administrators can be exposed to the benefits that the TL and library have to offer in a variety of ways. The TL and administrators bear the responsibility of helping teachers to appreciate how the TL and library can enhance teaching practices, student achievement, and the correlation between both practices. It is up to the TL and administrators to decide how to approach and share ideas with the teachers so that each stakeholder can access the library. Collaboration between the TL and administrators is therefore crucial, for it can build trust as a norm within the context of a positive school culture.

Quantitative and qualitative data from this study proved to be consistent with the TLC-III model and framework. Relationships matter, affecting how teachers interact with each other and with the TL. Teachers' understanding of the TL's skill set can foster further collaboration. When teachers and administrators have a history of positive relationships with the library and TL beginning when they were students and extending through preservice training, they are more likely to promote collaboration at their schools. These themes are consistent with Montiel-Overall's TLC-III model and framework, which describes collaboration between teachers and TLs in terms of four levels, namely coordination, cooperation, integrated instruction, and integrated curriculum. Table 16 illustrates how the qualitative and quantitative findings from this mixed-method study answered each research question over the course of this chapter.

Table 16: Summary of Research Questions and Related Qualitative Themes

Research Question	Themes/Ideas
What elements that foster effective collaborative exchanges between high school teachers and TLs?	Relationships Previous Experiences/Mentorships Logistics Definition of Collaboration Leadership Knowledge of the TL's Role and Skillset Value Collaboration Making Collaboration a Priority Leadership Previous Experiences
How do teachers, administrators, and TLs who work in the same high school define collaboration?	Values Collaboration Working with Others Fail Together/Learn from Mistakes
Does an individual's definition of collaboration affect how he or she interacts and collaborates with other teachers or teaching support staff?	Yes
What factors contribute to or detract from teachers' propensity to collaborate with a TL?	Contributing Factors: Relationships, Value of Collaboration, Leadership, Previous Experiences, Logistics, Knowledge of the TL's Role and Skillset, Positive School Culture, Making Collaboration a Priority Detractors/Barriers: Time, Leadership Actions, Staff Members Who Do not Understand the Benefits of Collaboration, Department Dynamics That Do Not Support Collaboration, Lack of Communication Among Staff, Lack of Resources Especially Access to Reliable Information and Technology Devices, Egos, Misuse of PLC Time, Negative School Culture, Teachers Who Feel Overextended, and Change Saturation.

School-wide relationships can have adverse effects as well, for example when school culture is counter-productive, relationships among teachers are few, teachers feel undervalued in their departments, trust is difficult to build, and barriers are evident and used as excuses not to collaborate. Teachers who do not make the time to collaborate can become silos in their

classrooms and forego collaborating with a TL, as a result of which the library fails to grow and comes to be seen as a mere warehouse for books and computers. The TL and administrators need to appreciate the importance of positive relationships involving themselves, teachers, support staff, and other stakeholders for the proper utilization of the library and the TL.

CHAPTER 5: DISCUSSION AND IMPLICATIONS FOR FUTURE RESEARCH

Overview of the Problem

There is more to the teacher librarian than meets the eye. TLs are not just gatekeepers of the library and its books; they serve as, among other things, program administrators, instructional collaborators, information specialists, and community leaders. The role of the TL and library within the school curriculum needs to be better understood by all stakeholders. In California, TLs follow the state's School Library Model Standards, which help officials make coherent decisions regarding the flexible role of TLs in meeting a school's needs. A dialogue between the TL and administrators, principals, and teachers can lead to collective efforts that enhance student achievement and success. True collaboration demonstrates to students that an education system is a working unit. TLs need to promote their abilities and the services of the school library program without assuming that all stakeholders understand their roles within the school community. Likewise, preparation programs for principals and teachers should cover collaboration with TLs.

There is a great deal of literature that documents the impact of TLs in terms of closing the achievement gap and assisting schools in promoting and enhancing collaborative efforts and improving relationships with general education teachers. However, very little research has focused on collaboration involving high school TLs, teachers, and administrations in terms of best practices for promoting collaborative relationships. Instead, most work has looked at academic college librarians in relation to the impact of students' research skills on graduation rates. There is accordingly a pressing need for studies of TLs' leadership and collaborative roles in high school and middle school settings.

As a researcher and TL, I was interested in factors that influence collaboration among teachers and administrators. The overriding question that I wanted to answer was why some high school teachers and administrators chose to collaborate with me and others did not. Copious resources in the form of time and money were expended at my high school in efforts to promote collaboration during PLCs and to identify the resources necessary to improve teaching practices. It was my conviction that having a TL play a role in decision making by sharing knowledge about information resources can improve relationships within a school in a cost-effective manner. Investment in and promotion of the skillset of TLs can help teachers and students to make better use of the variety of library services available and thereby increase usage of a school's library resources. The purpose of this study, then, was to learn more about how I as a TL might improve my practices and interactions with teachers and administrators and to identify enablers factors that facilitate and factors that impede collaboration on campus. By nurturing purposeful interactions, sharing expertise, improving research practices, and making available resources that support the curriculum, TLs promote productive interactions involving themselves, teachers, and administrators.

The overarching research question for this study—which will be reproduced here one more time for the sake of completeness—concerned the elements that foster effective collaborative exchanges between high school teachers and TLs. The following sub-questions grew out of this main idea:

- a) How do high school teachers, administrators, and high school TLs who work in the same school setting define collaboration?
- b) Does an individual's definition of collaboration affect how he or she interacts and collaborates with other teachers or teaching support staff?

c) What factors contribute to or detract from collaboration between teachers and TLs?

For this mixed-method study, teachers and administrators at one high school completed an anonymous survey and participated in semi-structured follow-up interviews during which notes were taken. The study took place in one of San Diego County's 42 public school districts. The surveys and interviews provided insight into how relationships involving TLs, teachers, and administrators facilitate efforts to improve standards of practice and to increase the knowledge and awareness of all stakeholders regarding the effective use of library services.

This chapter summarizes the results, discusses the findings, conclusions, significance, and limitations of the study, and offers suggestions for improving the practices of TLs and for future research. The TLC-III model served as a framework for the analysis, which addressed each research question. The conclusions are based on my informed interpretation of the data and the relevant literature, and my reflections on the implications of the results combine the perspectives of a researcher and a TL. In what follows, then, the quantitative and qualitative findings are summarized, their implications are discussed, and suggestions are made for future research regarding the role of the TL in the high school setting.

Summary of the Findings

The findings from this study were based on data collected through 62 online surveys and 22 in-person interviews with teachers and administrators at a single high school. All interviews were transcribed and coded using a variety of techniques to identify the various themes that emerged. Notes were also taken during the interview process to triangulate the data, and an additional researcher coded the data to verify the consistency of the primary researcher's results. The discussion that follows describes the main theme and sub-themes briefly and then explores in depth the various connections among them.

Implications of the Study

Understanding the role of the TL. The statistically significant findings discussed in Chapter 4 indicate that educators who understand the role of TLs in assisting them in various ways relating to the 23 domains represented in the survey are more likely to collaborate with a TL or other staff member. It is up to TLs and administrators to ensure that teachers understand these benefits.

At the school where the study was conducted, however, this understanding was not as widespread as it could be. Thus, the survey indicated that teachers and administrators alike were not well informed regarding the certification process for TLs; for while many were aware that the TL had classroom experience, few were aware that TLs must complete an additional certificate program. (Specifically, in California, certification for a TL involves at least three years of classroom experience in addition to either a multiple- or single-subject credential.) If teachers were better informed about the rigorous training that is required to become a TL, they might be more willing to take advantage of the relevant, current, and reliable resources that TLs make available.

For the fact is that, as discussed in the literature review, many teachers and administrators are not exposed to what the TL can provide in terms of information literacy, curriculum planning, and utilization of resources. Preservice training is one avenue for incoming teachers to learn how to leverage these resources by incorporating the library into efforts to build literacy skills. In my own experience and that of the participants, however, neither professional development nor additional coursework addressed interacting with a TL. Those relatively new to the profession expressed the opinion that teachers should work with all support staff, and many participants indicated that working with a skilled TL had caused them to assess the position more

positively and increased the likelihood that they would work with the TL again. The teachers called for more professional development so as to understand better how to utilize the TL's skill set when planning and designing new curricula collaboratively. The data indicate that TLs need to advocate for themselves by promoting the library and its role in curriculum development and at the same time working with leadership to ensure that the library furthers the missions of the school and district. A key aspect of this advocacy is for TLs to take part in various groups throughout the school and district.

In this study, teachers and administrators individually typed into text boxes their opinions regarding the role of the TL in the high school setting, and the results of the open-ended survey questions were consistent with the skill sets that were ranked in the Likert-style questions. Participants were clear about the skills that they would like a TL to possess. There does appear to have been a disconnect with respect to teachers' failure to take full advantage of the resources and skills that the TL had to offer. Thus, themes that emerged from the interviews offered insight into why some teachers chose to collaborate with the TL and others did not. The skills that the participants identified as significant in this regard corresponded with the theoretical frameworks of Montiel-Overall and Loertscher. From this perspective, if extensive collaboration is to occur between teachers and administrators, they need to know the positive ways in which the role of the TL can impact their practice and student learning. Once stakeholders become aware of the enormous benefits of collaborating with a TL, they are likely to make collaboration a priority.

Relationships. The establishment of relationships requires trust. In the current educational climate, effective schools have teachers and leaders who solicit and contribute ideas in order to put plans into action. Educators need to pose positive, inquiry-based questions

regarding student performance while building trust and listening to staff, students, and parents. A growth mindset toward learning can promote student achievement by building positive relationships among teachers. It is accordingly crucial to foster a school culture in which all staff members feel that they are part of a team working to promote learning in a safe and nurturing environment. Such a culture does not, of course, emerge overnight, but rather forms when staff members take the time to come together and create clear and concise goals that further their school's overall mission. In this effort, the TL and library can help to cultivate positive relationships in a variety of ways. Teachers and administrators who understand what TLs have to offer are naturally more likely to value and solicit their contributions.

According to Robinson (2011),

goal setting works because it forces decisions about the relative importance about what is important. Goal setting includes deciding what goals to set, gaining the commitment of those responsible for achieving them, and communicating them to all those with an interest in their achievements. (p. 45)

Setting goals helps a team to determine where each member stands and to put all members on the same page. Steps toward a specific goal may vary, but simply having clear and concise goals can boost morale and guide decision-making. Goals need to be discussed, updated, and reviewed to ensure consistency across a team. Putting goals on the shelf will only result in a backlash, especially when a new action plan, set of goals, or review needs to be completed, as staff members, especially those who helped to set the original goals, conclude that their work is undervalued and therefore become less likely to create or to follow a new action plan. Moreover, all staff members are likely to interpret the constant changing of goals as an indication that there is no real need to follow them since the focus is bound to shift again in the relatively near future.

Once goals have been established, for instance by a PLC team, the next step is to assess the resources that are needed and those that are available. The aim here is to ensure that, should

any stakeholders raise concerns about an expenditure or allocation of funds, they can be reassured that the school's goals are being furthered. TLs should be a part of this process, since they are some of the few staff members on a campus who are aware of all of the various information resources currently available. Clearly-defined goals can also help individuals and teams to challenge previous decisions, for instance by questioning whether constantly "throwing money" at the same groups or programs represents an effective use of resources and whether any data are available to support assertions about the effectiveness of such groups and programs in promoting student achievement. Such discussions can also improve the relationship that TLs form with administrators and teachers. Awareness of the capabilities of TLs can help others to appreciate their significance for schools and districts. These types of discussions need not be consigned to PLCs, but must in any case be conducted at a consistent time and place that is known to all staff members.

PLCs were, however, the context in which these issues were dealt with at the high school where this study was conducted. I as the TL enjoyed the flexible nature of my role at this school and worked with several PLCs to provide a variety of resources and tools and shared additional items and knowledge with the group, working collaboratively with a variety of teachers to nurture positive relationships by providing access to relevant and useful information. Thus I collaborated with the technology PLC when that group requested information about tools and resources and with other content-specific PLCs in this regard. Meeting with these individual PLC groups appears to have been beneficial, but the participation of a TL was not requested by all groups or at all meetings, despite the fact that I had ideas to share regarding curriculum planning. Again, time is a key resource for building these types of relationships, but the effort is

worth it, since these relationships, whether positive or negative, determine how the TL and the TL's skill set are perceived on campus.

Administrators, therefore, can nurture collaboration by ensuring that the TL has a flexible schedule that meets the needs of students and teachers alike. Flexible scheduling and a supportive administration promote collaboration by allowing the TL to utilize time more effectively so as to accommodate the various schedules of teachers and administrators throughout the school year.

Definition of collaboration. The participants in this study defined collaboration in similar terms. They also indicated that, when they chose to collaborate, they did so with a select few who shared their teaching styles, goals, content, and grade level. The ability to choose one's collaborators was valued highly by the participants. In any case, 73% of the respondents to the survey indicated either having collaborated with a TL or intending to do so. Various levels of engagement were noted during the collaborative process in a manner consistent with Montiel-Overall's TLC-III model and Loertscher's taxonomies. I in my capacities as TL and researcher daily encountered situations readily identifiable with these theoretical contexts. It has taken time, but more teachers have been seeking my help, asking for resources to improve the delivery of information to their students on a wide range of topics. Again, this effort has taken time and persistence. I learned over the course of this study that the school community as a whole valued collaboration and that individuals who truly wanted to do so found the time; as for those who did not, I also learned that I must not take their disinterest personally since other factors contributed to their choice. At the same time, the findings indicated that TLs should continuously share information, resources, and ways to facilitate and improve implementation of teachers' curricula. They must be persistent in advocating for the library at both the high school and district levels.

Understanding collaboration from the perspectives of the participants in this study helped me to perceive a common thread and viewpoint regarding collaboration and to realize that administrators can help by providing opportunities for teachers to work collaboratively.

Previous experiences. The past of course has implications for the present and future, and this means that past experiences impact our current interactions and our choice of collaborators (if any). Thus, the participants in the survey and interviews acknowledged the significance for their teaching practices of having had and serving as a mentor. Past experiences with other schools and a variety of colleagues had shaped their interactions with their current colleagues, including the TL.

At the high school where this research study took place, the district office had implemented a formal mentorship program, Beginning Teacher Support and Assessment Program (BTSA), which paired teachers new to the field with experienced veterans teaching the same or similar content. Many of the participants in the study, however, discussed their experiences with informal mentorship, that is, with other teachers who had helped them to fine-tune their practice, offered advice for behavior management and for developing and improving lessons, and served as shoulders to cry on. This type of mentorship can be facilitated by the proximity of classrooms or by shared content or grade level. TLs have a role to play in the formal and informal mentoring process. The TL is the one teacher who knows how to obtain information resources suited to the content and grade levels of curricula across departments. TLs can serve as BTSA providers, but they can also mentor informally.

In terms of specific steps, TLs can simply introduce themselves to new teachers in a one-on-one setting and share how the library can help. Establishment of a positive relationship between a TL and a new teacher can promote ongoing use of the library and the skills that the TL

has to offer. Then, in a beginning teacher's second year, he or she will be familiar with the library and will have established a professional relationship with the TL and therefore will be likely to utilize the library in a variety of ways. In subsequent years, this teacher can mentor incoming teachers, including informing them about the ways in which the library and TL can help them. Further, when a teacher who established a positive relationship with a TL in his or her first years becomes an administrator, she or he will be prepared to promote at the department, school, and district levels awareness of the role of the library and TL in the delivery of curricula and in the promotion of student achievement. These relationships, past experiences, and mentorship experiences make a difference. The TL thus needs to advocate for the initiation of and be a part of this process.

Leadership. Leadership is part of the collaborative process. Administrators and teacher leaders need to know the role of the TL in setting goals and in the processes of instruction and curriculum development. As shown in the literature review, the problem of the TL not being consulted or considered as a collaborative partner is not new. Thus in a study by Hartzell (2002) principals judged TLs solely in reference to their own past classroom experiences. TLs can expand the awareness of principals and other stakeholders about their roles through the measures just suggested—mentorship, advocacy, and continually asking questions and presenting shared ideas about how the library can, in addition to serving as a hub for information resources, advance a school's mission, goals, and plans to improve student achievement.

In this context, positive relationships form between the administration and TLs when each group understands how collaboration stands to improve student achievement. Administrators can work to build a library program that enables teachers to utilize all aspects of

the library effectively, thereby making the library part of the conversation when it comes to planning and utilizing resources.

By encouraging classroom teachers to learn more about the role of TLs, administrators can also increase the likelihood that they will make full use of the school library's resources. It is for this reason that TLs need to take part in planning professional development programs—so that they can ensure that teachers how best to work into the curriculum technology, literacy, research, and digital citizenship standards. This process can begin by working out the logistics of offering professional development that meets the needs of the teaching staff while improving relationships involving teachers and TLs. TLs serve as teacher leaders and can thus function as valuable liaisons for teachers and administrators.

Detractors/Barriers. Time—or rather the lack of it—was the detractor most commonly identified in both the survey and the interviews, though many participants also asserted that, when something is important, the time for it will be found. Time can be an excuse not to collaborate, so administrators need to think about collaboration when arranging schedules. The TL can share resources and tools that help staff use time efficiently. Changing attitudes takes time as well, but by continually providing opportunities and resources, the TL can help remove these roadblocks with the help of leadership.

This study provided me as a researcher an opportunity to appreciate the extent to and ways in which relationships and school culture impact collaboration, especially when a TL is involved in the implementation of best practices in research. In the process of conducting this mixed-method study, I shifted my focus from teacher-related factors to librarian-related factors and viewed the problem of practice through a different lens. Approaching collaboration from multiple perspectives gave me insight into what a TL needs to change, keep, or improve upon in

order to keep providing resources and information and making the library part of the conversation when curriculum, technology, literacy, and other school-related skills are discussed.

Implications for Policy

A well-funded and -staffed school library can provide access to informational resources for students regardless of their economic circumstances. Equal access means that no students face barriers to the information that they need to complete assignments, to learn more about their world and other cultures, to make informed decisions, and to improve their literacy skills. Students can obtain and decipher reliable information through a variety of formats that the school library provides and the skills taught by the TL and thereby expand their networks of learning. School libraries are the one classroom in which students can feel safe while exploring their own interests and accessing the information necessary to come up with their own interpretations and findings. Schools can utilize the school library to help bridge the digital divide that separates students. By investing in school library programs, including retaining the services of qualified, full-time TLs, districts can tackle the digital inequality issue, help improve the word gap among younger students, and promote reading interest by making available books in which students feel represented. All in all, students who have access to current and reliable information are prepared to learn digital citizenship, the democratic process of making informed decisions, and to read for information and for enjoyment.

Through the survey and interviews, participants revealed that they were unsure of the role of the TL in the high school setting owing to lack of exposure during previous work experience or preservice training. Research is a significant aspect of the college setting. Preservice teachers learn many aspects of literacy, including lesson planning, behavior management, assessments, and what it takes to create a safe learning space for all students. Teachers cannot do all of this on

their own, so collaboration is a large part of the job when it comes to improving lessons, teaching, and professional interactions. Teacher preparation and administrative programs need to include effective instruction regarding how new teachers and administrators can fully utilize TLs.

There are, however, significant gaps in the research regarding TLs' changing leadership roles in high and middle school settings and in particular how administrators can support collaborative efforts between teachers and the TL. Most California school districts employ TLs only at the high school level, though other states of comparable size and student demographics employ them at the elementary level. As a result, many California students are not exposed to critical research skills until they begin high school. When students have limited support for acquiring and utilizing research and critical literacy skills, their learning is bound to suffer, so employing TLs at both the elementary and middle school levels needs to be seriously considered in California. Other states employ TLs at all three levels because research has shown the benefits of exposing students research skills and various genres of literature and media at an early age.

Suggestions for Future Research

Numerous studies have documented the impact of TLs on student achievement, for instance by helping to close the achievement gap, promoting and enhancing collaboration in schools, and cultivating relationships with general education teachers. There has, however, been relatively little research into the factors that need to be in place in a high school or district setting for TLs to collaborate with other teachers. Logistics are important, as are knowledge of the roles of TLs in the school setting, flexible scheduling, previous experience and coursework, and

professional development opportunities, when it comes to building relationships and increasing awareness of what TLs do and how they can promote collaboration in the high school setting.

In education, leadership is often associated with principals, and there is a gap in the research regarding how TLs, if they were in positions of leadership, would use and implement school library programs. Questions that remain to be answered include whether the presence of TLs in school administration would impact usage and knowledge of school library programs and whether the integration of technology and digital research skills can be enhanced through professional development or the guidance of a leader with a school library background. Furthermore, awareness on the part of stakeholders of TLs' leadership roles, specifically at the high school level, could have positive impacts in terms of preparing students for careers and college. Administrators need classroom experience, and involvement in a mentorship program with a TL as a teacher could help a future administrator to ensure that full advantage is taken of the resources that school libraries have to offer.

Studies are also needed to assess whether the mentoring of new teachers by TLs can increase utilization of the library and TLs' skill sets. As discussed, previous work has demonstrated that school administrators (e.g., superintendents and principals) tend to be poorly informed about school library programs and the roles of TLs, viewing them as mere keepers of books rather than coordinators of information and technology (Hartzell, 2002; Shannon, 2012; Todd & Kuhlthau, 2005b; VanTuyle & Watkins, 2012). Early mentorship has the potential to break the cycle of administrators' ignorance in this regard. In the present study, the participants acknowledged the importance of mentorship for new teachers' improvement in the classroom and in their reflective practices. Those who experienced supportive mentorship felt better prepared to adapt to the changing circumstances of the classroom, and this ability to adapt can

contribute to teacher retention. Since mentorship can have such positive impacts on teaching practices, it makes sense that TLs, who are uniquely positioned to work with all teachers on a campus, play a part in the mentorship process.

Future research is needed in this area owing to the small sample population for this study, especially in respect to the specific needs of various departments. The variation in perceptions of collaborating with a TL across departments and administrators merits further consideration in the context of other high schools, since it suggests possible misconceptions about roles of TLs. Future studies could, for instance, observe in greater detail the practices of teachers and administrators that facilitate collaboration with a TL as well as factors that contribute to the underutilization of school library programs.

For the focus here has been not on the voice, advocacy, or self-image of TLs, investigation of which would require a larger data set of schools that employ TLs. With access to such a data set, future studies could seek to answer such questions as whether TLs' advocacy or self-image can change the attitudes of teachers and administrators regarding use of the library. Similarly valuable would be an exploration of TLs' opinions of themselves and of the potential for a personal growth mindset to increase use of library resources and to promote collaborative practices within a staff or among groups of teachers. Studies of this type could inform TL certification programs.

Limitations

There were several limitations to this study in terms of the data collection methods, namely the survey, interviews, and notes. One limitation was the inclusion of too many Likert-style questions that were overly technical and difficult for the participants. Some of these questions were unclear to the participants owing to the use of librarian jargon rather than

language readily intelligible to teachers and administrators. As mentioned, 10 of the participants stopped taking the survey at Question 15, which asked participants to share their feelings about collaborating with a TL in the performance of a specified task in regard to 9 domains and may have seemed overwhelming. In any case, the statistical analysis and the spot at which these participants stopped suggests that the Likert-style questions should have been simple, in layman's language, and not too numerous. One participant acknowledged in the last follow-up survey question, which asked about the survey itself, that "some questions were a little confusing". This statement indicates that the questions should have been simpler and more direct. Thus the survey could have begun by asking participants to share their current knowledge about the role and skill set of the TL and concluded by asking them to share what they had learned from the survey itself. In a few of their responses, participants indicated that they had been unaware of TLs' roles and capabilities. These responses suggest that the misconceptions of teachers and administrators regarding TLs should be addressed when planning professional development or working to improve communication with school staff.

Question 16, which asked participants to rank their perceptions of the importance of collaborating with a TL in the performance of a specific task, included 14 sub-questions. The 10 participants who were daunted by the 9 sub-questions associated with Question 15 were not able to move forward to the next Likert-style question since they never returned to finish the survey. These incomplete surveys had to be removed from the data analysis. Thus, had the survey been designed differently, the completion rate could have been significantly higher and thus provided additional information for the researcher, especially in the written responses that had the potential to provide thick descriptions of teachers' and administrators' perceptions of the school library program and collaboration with the TL. A clear lesson is that a long series of Likert-style

questions can discourage participants from completing a survey; thus surveys need to be broken up by the style of question and written in easy-to-comprehend language.

Another limitation of the study was that it asked about experiences with an TL at the high school where the study was conducted or at other schools in an effort to determine whether teachers would be likely to collaborate with a TL in the future. Neither the survey nor the interviews, however, collected any personal accounts or stories regarding the participants' backgrounds. Thus, they were only asked, using simple yes or no questions, whether they had or would in the future work with a TL. Those questions provided essential data, but the participants' stories that were missed could have added a narrative dimension to this mixed-method study and provided further insight into the improvement of collaborative practices involving teachers and administrators and more generally into the influence of past experiences on individuals' choices.

The specific interview questions also represented a limitation for this study. They were written to gain additional insight into how teachers and administrators view collaboration and the barriers and enablers relating to it at this at the school where the study was conducted. A great deal of data were collected through the interviews, but the many of the responses concerned collaboration on campus in general. For a similar study at another site, the interview questions should accordingly be focused on collaboration between staff members and TLs and include additional verbiage. The interview questions could thus be simplified to concentrate on collaboration with a TL (why and why not), any barriers to such collaboration, and the role of the administration in promoting collaborative efforts. Such questions are more directly geared to eliciting participants' opinions on these issues.

Though the questions used in this study were validated based on previous research, different and sets of them should have been used for the administrators and the teachers. To be more specific, the data collected from the administrators provided valuable perspectives on one high school, but richer data could have been collected had questions asked about such issues as how administrators viewed the library and TLs' skill set in relation to the curriculum, the place of the library and the TL in their leadership visions, and their past experiences as teachers and leaders with the library and the TL. It would likewise have been informative to determine whether participants learned anything during the survey and whether additional information about the roles and skill set of TLs and the library in student achievement could influence administrators' decisions about whom to consult in formulating curricula. Such interview or survey questions could be geared to various groups of participants in an effort to understand further the role of leadership in guaranteeing libraries and TLs a voice in classroom instruction.

Positionality represents another potential limitation of this study, for the researcher was serving as the TL at the high school at which the study took place. It is therefore possible that the researcher was too close to the subject to interpret and present the results fairly with an unbiased frame of reference. Alternatively, it is possible that the participants felt at ease conversing with me as a TL and researcher, since I could better explain scenarios and past experiences or personalities than a researcher without a personal connection to the school. All participants were given the option to be interviewed by a third party, but none made this choice. They were selected based simply on their willingness to be interviewed and ability to follow directions and provide their names, regardless of whether the TL had collaborated with them in the past. Because the participants were not preselected, I could not anticipate their answers,

whether or not I had previously collaborated with them. A more purposeful sampling technique might provide other insights than those gained here.

In Montiel-Overall's TLC-III framework, the highest level of collaboration relates to integrated curricula at the highest level (Model D), as a TL works with administrators, not necessarily in a specific school setting but at the district level. Further insight might have been gleaned through the inclusion of district administrators in the study, in particular regarding whether the district had plans to incorporate the TL into curriculum planning so as to make better use of library resources by, for instance, helping teachers plan during the proposed PLC time. However, very few data were gathered for this study relating to Model D. The inclusion of district administrators could have provided additional data for determining whether the TLC-III model should include district curriculum planning to which the TL contributes as part of the effort to enhance students' achievement by sharing the resources to which stakeholders have access when it comes to incorporating Common Core Standards and nurturing literacy and digital citizenship skills.

The data that was collected through the surveys and interviews shares with the TL researcher and administrators where the current reality is with staff members in regards to the collaborative culture on campus. The goal is for the TL to work with all teachers and administrators and the TLC-III model helps differentiate between the various levels. The simple yes/no question in the survey that asked participants to share if they plan on collaborating with the TL shares and the reflective written responses from Question 19 that asked what prevents participants from collaborating with the TL shares where the school is in the collaborative nature with the TL. The high school where the study took place shows that there is much to be improved upon, but most the stakeholders are either in Model A or Model B in which the library

is not a thought or is just a room that holds books and desktop computers, or that the TL is the keeper of the books. Through the use of the researcher's personal notes and calendar, there are small pockets of collaboration taking place on campus that are a good representation of Model B and Model C in which there is an aspect of sharing or teaching roles or that the TL is a collaborative partner and teaching colleague. Improvement is needed throughout the campus on building more positive relationships, understanding, and utilizing the TL effectively on campus. This study was able to share with stakeholders their thoughts of the position, if they should or want to collaborate with the TL, and what systems in place at the high school are either enhancing or detracting from this goal.

Significance of the Study

The purpose of this study was to inform the TL researcher, the leadership, and teachers at a California high school about how collaboration was occurring and ways in which it could be improved in terms of including the TL in curriculum planning. The TL as a researcher learned through the data collection and coding processes about stakeholders' misconceptions regarding the position, teachers' perceived needs, and ways to promote the library and its services. Information about how leadership and teachers valued the TL and the library drew attention to the valuable learning opportunities that at least some teachers and students were making use of at the high school. As the review of the literature made clear, the library is one place where students can explore their interests while simultaneously building their proficiency in respect to state curriculum standards. Positive experiences in a school library can impact how students encounter and view public and academic libraries as well. These experiences can thus promote lifelong learning while widening and deepening students' knowledge of a broad range of topics and their exposure to and understanding of other cultures and beliefs.

Relationships was the main theme that emerged over the course of this research study. Simply put, relationships among teachers, leadership, support staff, and students matter. Those among school staff determine the role of the TL in the collaborative process. In Figure 3, the data collected in this study are used to illustrate how negativity on campus and various barriers erected by both teachers and administrators vastly decrease the likelihood of collaboration involving the TL. Barriers take the form of scheduling, lack of opportunities, unfavorable past experiences, unsympathetic procedures, and the view of the school library as a mere warehouse of books for students to check out.

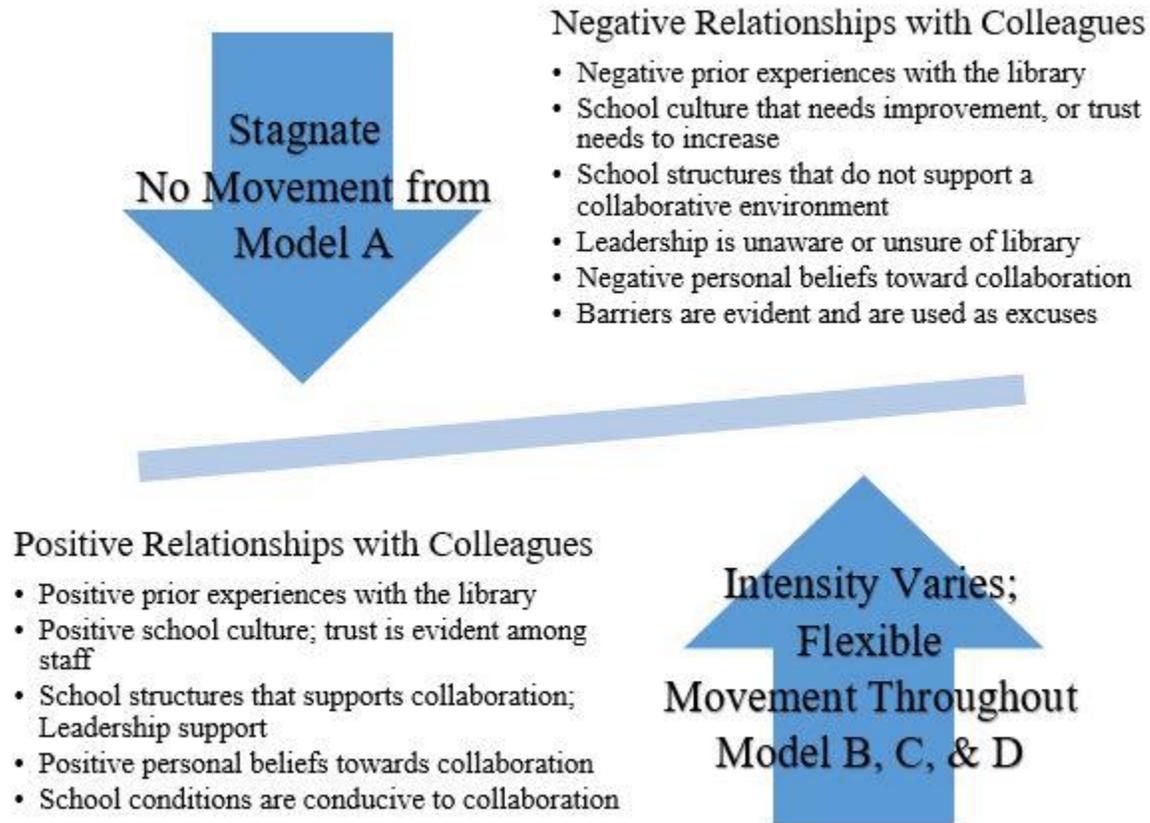


Figure 3: Relationships affecting the TLC-III Model

By contrast, when there is a positive culture on campus that embraces and supports the library and the TL, the resources of the library and the TL’s skill set will be better utilized.

Flexible transitions among the models of Montiel-Overall's TLC-III framework can be expected to occur throughout the school year as intensity levels fluctuate. Other factors are also crucial; thus scheduling must be arranged so as to support collaboration, and time is required to build trust and improve relationships. When a TL shares and improves knowledge skills for both teachers and students, word gets around as the school culture embraces and enhances collaboration. This study has demonstrated that positive relationships are necessary if collaboration is to occur among teachers, administrators, and the TL.

Suggestions for Leadership

There are many areas of future research in how the TLs' leadership roles are changing. This research study was able to fill a gap and provide researchers a further grasp on the practices of collaboration, especially between teachers and TLs at the high school level. The research study had access to a data set that was able to utilize and determine where the school culture and beliefs towards both the position and how to best utilize the skill set of the TL. There is much room for improvement, but building relationships and having leadership be more aware of the role of the TL on this campus, but now there an analysis of data and back stories, leadership can now act on the suggestions.

University educational leadership programs should include information regarding the instructional role of the TL as an enhancement to the curriculum in order to best prepare their graduates for their roles as instructional leaders in their schools. TLs need to take a proactive role by initiating collaboration with classroom teachers, teaching information literacy skills, and raising principals' awareness of the library's contribution to student learning (Mardis & Everhart, 2014; Shannon, 2012). Currently education administration preparation programs offer little to no training or information about how school libraries impact student achievement

(Shannon, 2012). This study might help teacher preparation programs implement some aspect of a collaboration project with pre-service TLs. If teachers are inspired to collaborate and learn during their pre-service trainings then they are more likely to carry those ideas over when they are in the classroom (Latham, Gross, & Witte, 2013; Moreillon, Kimmel, & Gavigan, 2014).

Recommendations for Administrators

One way for collaboration to improve between stakeholders is that all parties need to be aware of the role and skill set of the TL. Better understanding this position will help leadership better utilize the TL while working together on curriculum writing and development, using resources effectively while continually improving technology, digital citizenship, and literacy skills.

Other ways that administrators can better improve collaborative relationships on campus is to recruit and invite the TL to meetings in which curriculum writing or implementing new programs are taking place. The TL can share what resources are available or needed to better enhance the ideas. Additionally, TLs can help plan staff development or help create useful information that can help improve and enhance teachers' research needs which are then transferred in the classroom to students. Staff will see the usefulness and skill set of the TL while the administration is promoting the TLs role in a resourceful way of sharing of information and expertise. This will increase the chances that teachers will most likely collaborate in the future with the TL since administrators have started the process.

Other ways that administrators can help promote or utilize the TL skill set is to learn, research, and read about the profession of school librarianship. As mentioned previously, administration programs do not typically have coursework related to the school library nor about the role of the TL. Administrators need to learn about the position, read the research on the

importance of literacy and research skills and how it is all connected with a positive school library program and how the TL supports and enhances the curriculum. Other ways that administrators can help advocate for the TL and school library program is to have the TL be a part of the school site plan and to have in the plan how the library is to support both students and teachers. School site plans are connected to district goals, and district administrators need to be aware of the position too. Not only is site level advocacy important, but there needs to be a district administrative advocacy for school library programs that are consistent and be a part of LCAP funding.

Mentorships were mentioned by participants as being important and helped shape how they collaborate with others. Administrators need to beware of how important mentorships impact teachers and need to support this learning process for teachers. Recruiting TLs as part of this relationship building booster not only helps improve positive relationships on campus, but builds the foundation of teachers better understand the role and position of the TL and the school library program. TLs are resources of information and a certified teacher, not the keeper of the books and the more knowledge that is available for stakeholders have about the position and the impacts of student achievement, the more likelihood that collaboration efforts and relationships will improve on campus.

Leadership is integral to developing a successful 21st century school library media program. As information literacy and technology skills become central to learning, the TL must lead the way in building 21st century skills throughout the school environment, by becoming an active member of the local and global learning community. The TL can build relationships with organizations and stakeholders to develop an effective school library media program and advocate for student learning (American Association of School Librarians, 2009). Current

research has shown that when a TL participates completely within the school's instructional program, takes on an active leadership role, student achievement is higher (DiScala & Subramaniam, 2011; Lance, Hamilton-Pennell, Rodney, Petersen, & Sitter, 1999; Lance et al., 2000, 2005; Lance et al., 2004; Smith, 2001, 2006; Todd, Kuhlthau, & OELMA, 2004).

Conclusions

A positive school culture that supports collaboration is one in which the teachers feel valued and are provided with time to collaborate with the TL. When teachers, administrators, and TLs are able to learn from one another, collaboration flourishes. This notion is well established in the field of education, being a subject of ongoing study as districts look for ways to improve relationships among all stakeholders. School funding can impact the formation and nurturing of these relationships, including whether time is scheduled for collaboration. Funding for library resources and for TLs, however, is often scarce, and library programs are often cut owing to a lack of knowledge on the part of administrators and teachers regarding how best to utilize the skills of TLs.

Adoption of the CCSS has resulted in increased rigor when it comes to the adoption and usage of digital media literacy while raising expectations for students' research skills. An obvious question, then, is why, since research shows that students' ability to meet state standards depends increasingly on the skill set and training of TLs, the TL still tends to be the most underutilized position on school campuses. The findings presented here suggest that school districts that employ a TL already have the resources necessary to implement the standards. Nevertheless, although these resources were available at the high school at which this study was conducted, they were underutilized by most stakeholders. The leadership, teachers, and TLs accordingly need to promote the sharing of ideas, to be given the time to collaborate, and to

leverage one another's professional expertise. Doing so can create new knowledge and understanding regarding how to make the most of library resources and improve development and implementation of curricula. Such formal and informal structures take shape when opportunities are provided for collaboration and when all stakeholders have an understanding of and experience with the knowledge that TLs provide in terms of advancing student learning. The anonymous surveys provided much-needed insight into how the library and TL can be better utilized, the lack of awareness and misconceptions concerning the TL's role, and practices in place that the school staff considered effective. The completed interviews provided a variety of perspectives as the participants willingly shared their views, both negative and positive, of collaboration. Lessons were learned during the interviews, with teachers and administrators becoming more likely to take advantage of library services and to seek the help of the TL. A TL needs to keep a finger on the pulse of the school so as to ensure that all teachers are well informed about library resources and to maintain the support of administrators in aligning the library with school and district goals. The data collected from the surveys, interviews, and notes for this study thus have implications for practice, policy, and future research opportunities.

Appendix A

Teacher Librarian Collaboration Survey

Dear Participant:

My name is Jeanna Wersebe and I am a graduate student in the Joint Doctoral Program (JDP) in Educational Leadership with UC San Diego and Cal State San Marcos. I am inviting you to participate in a research study of perceptions of collaborative efforts between high school teachers, administrators, and a teacher librarian at a high school site. I have selected you as a possible participant because you are a stakeholder at the institution in which this study is taking place. Please read this form carefully and ask me any questions you may have before agreeing to be in the study. You must be 18 or older to participate in the study.

Why is this study being done?

The purpose of this study is to determine the elements that foster effective collaboration exchanges between high school teachers and Teacher Librarians (TLs) and ways that schools can improve and support on this exchange of ideas. The sub-questions to the study are: (a) How do high school teachers, administrators, and high school TLs who work in the same school setting define collaboration? (b) Does one's own definition of collaboration affect how one interacts and collaborates with other teachers or teaching support staff? (c) What factors contribute to or detract from teachers collaborating (or not) with the TL?

What will happen to you in this study and which procedures are standard of care and which are experimental?

If you agree to be in this study, you will be asked to complete a brief survey about your understanding, motivation, beliefs, research practices in regards to collaboration with teacher librarians.

How much time will each study procedure take, what is your total time commitment, and how long will the study last?

The survey should take approximately 15-25 minutes to complete. If you need to pause the survey, you can resume it later. You can close out of the survey and to continue to work on it later if you return to the survey on the same computer and on the same web browser, and have not cleared your browser cookies.

What risks are associated with this study?

Participation in this study may involve some added risks or discomforts. These include the following:

A potential for the loss of confidentiality: While every effort is made to reduce risk, there exists a possibility of a loss of confidentiality in this study. However, safeguards have been put in place to minimize any risk to you. Teacher confidentiality will be respected throughout this process. Pseudonyms for educational institutions and teachers will be used to minimize the risk of identification. All email addresses, contact lists, and correspondence with participants will be kept confidential and sent from a personal password-protected laptop. Correspondence with participants will be sent individually, not as a group or listserv. All survey participants' names will be anonymized and kept confidential both during and after this study. I will STRIVE TO

MAINTAIN confidentiality BY MAINTAINING AND STORING ALL SURVEY DATA in a UCSD Qualtrics account created solely for the purpose of this research study. In the instance, a participant requests a paper survey, the data will be scanned and saved on a personal password-protected laptop, and the hard copy will be appropriately destroyed. At the end of the study, all electronic documents related to the research study will be organized and placed into a file on the password-protected laptop. After one year, the electronic file will be deleted. Research records will be kept confidential to the extent allowed by law. The CSUSM/UCSD Institutional Review Board may review research records.

A potential for emotional stress, boredom or fatigue: To minimize the impact of emotional stress, boredom, or fatigue, participants are under no obligation to complete the survey. Once started, participants may stop the survey at any time. The survey can be completed from any personal electronic device of your choice and at any time of the day.

Under California law, we must report information about known or reasonably suspected incidents of abuse or neglect of a child, dependent adult or elder, including physical, sexual, emotional, and financial abuse or neglect. If any investigator has or is given such information, he or she may be required to report such information to the appropriate authorities.

Since this is a research study, there may also be some unknown risks that are currently unforeseeable. You will be informed of any significant new findings

What are the alternatives to participating in this study?

The alternative to participating in this study is to not participate. You will not be penalized in any way for not agreeing to participate in this study.

What benefits can be reasonably expected?

There are no direct benefits to participation in this study; however, your participation will help future TLs to interact with teachers more effectively, and it will help administrators to support collaboration between teachers and TLs, while promoting understanding of the needs of all the stakeholders who are involved in the collaborative process at the high school level.

Findings from this research then could be used to inform school leaders, practitioners, and policy makers about the type of supports, professional development, aligned curriculum, and materials that will be needed to support teacher librarians, thus benefiting the field of education and society at large.

Can you choose to not participate or withdraw from the study without penalty or loss of benefits?

Taking part in this study is voluntary. You may choose not to take part or you may leave the study at any time. Leaving the study will not result in any penalty. Your decision whether to participate in this study will not affect your current or future relations with me.

Can you be withdrawn from the study without your consent?

The Principal Investigator (PI) may remove you from the study without your consent if the PI feels it is in your best interest or the best interest of the study. You may also be withdrawn from the study if you do not follow the instructions given to you by the study personnel.

Will you be compensated for participating in this study?

You will receive compensation for taking part in this study. I will present a \$5 Starbucks gift card for a completed survey. The survey is specifically set up to electronically share with me that you have completed the survey, but your name is not associated with the data results that are collected for the purpose of anonymity. Once I receive the notice from Qualtrics that your survey is completed, I will present the gift card to you in person.

Are there any costs associated with participating in this study?

There will be no cost to you for participating in this study.

Who can you call if you have questions?

If you have questions about the study, please call me at XXX or e-mail me at XXX.

If you have any questions about your rights as a participant in this research or if you feel you may be at risk, you can contact the IRB Office at irb@csusm.edu or (760) 750-4029.

By continuing with the survey, you are verifying that you, as a participant, have read this consent information and voluntarily agree to participate in this survey portion of the study. You may print this page for your records. Thank you for your participation.

Teacher Librarian Collaboration Survey

Q2 Gender:

- Male
- Female
- Other

Q3 Race/Ethnicity:

- White
- Black or African American
- Hispanic or Latino/a
- American Indian or Alaska Native
- Asian
- Native Hawaiian or Pacific Islander
- Other (Please type in your response) _____

Q4 What is your highest level of education completed?

- Bachelor's degree
- Bachelor's degree plus teaching credential
- Master's degree
- Master's degree plus teaching credential
- Professional degree
- Doctorate degree
- Other (Please type in your response) _____

Q5 How many years have you been teaching?

- Less than 1 year
- 1-2 years
- 5 years or less
- 6-10 years
- 11 -15 years
- 16-20 years
- 21 years or more

Q6 Current grade level you teach (check all that apply):

- 9th
- 10th
- 11th
- 12th

Q7 Were you previously employed in another field besides teaching?

- No
- Yes. If so, please type what other field you were employed in. _____

Q8 Have you worked at another school?

- Yes
- No

Q9 If yes, did you collaborate with a teacher librarian in any manner?

- Yes
- No
- Does not apply since I have only worked at this high school

Q10 What do you think are the California requirements for teacher librarian certification?

(Check all that apply):

- Three years of teaching experience
- Bachelor's degree or higher in any subject area
- Cleared California teaching credential
- Completion of a commission-approved Teacher Librarian Services Credential program
- All items listed above
- None of these
- I am not sure

Q11 What type of preparation have you had in your coursework or professional development concerning collaborating with teacher librarians?

Q12 What do you expect K-12 teacher librarians to do in the school setting?

Q13 Please respond to the following statements according to your feelings of confidence in successfully performing the specified task. The range is from very high confidence (left) to no confidence (right).

	Describes me extremely well	Describes me very well	Describes me moderately well	Describes me slightly well	Does not describe me	Not sure what this means
<p>I feel confident in my understanding of the structure of information within the field of education research.</p> <p>I feel confident in my ability to identify and use key educational research tools to locate relevant information.</p> <p>I feel confident that I can plan effective search strategies as needed.</p> <p>I feel confident that I will recognize and make appropriate use of library services in the research process I use.</p> <p>I feel confident that I understand the technical and ethical issues involved in writing research in the education field.</p> <p>I feel confident that I can locate information about the field of education itself.</p> <p>I feel confident that I understand that some new information sources are more authoritative than others.</p> <p>I feel confident that I demonstrate critical thinking in the research process I use.</p>						

Q14 Please respond to the following statements according to your feelings of the importance of the specified item. The range is from very high importance (left) to no importance (right).

	Describes me extremely well	Describes me very well	Describes me moderately well	Describes me slightly well	Does not describe me	Not sure what this means
It is important for me, in understanding why information storage in a central place is important.						
It is important for me, knowing how loaning and sharing of important materials takes place is important.						
It is important for me, understanding the kinds of personnel who staff a library is important.						
It is important for me, knowing how library staff assists my students with their information needs is important.						
It is important for me, knowing how the library staff collaborates with me to support my teaching is important.						
It is important for my students, an awareness of different library resources and tools is important.						

Q15 Please respond to the following statements according to your feelings of importance for collaborating with a teacher librarian to successfully perform a specified task. The range is from very important (left) to no importance (right).

	Extremely Important	Very Important	Moderately Important	Slightly Important	Not at all Important	Not Applicable
<p>Collaboration with a teacher librarian would be helpful in defining and articulating the need for research in my field of education.</p> <p>Collaboration with a teacher librarian would be helpful in identifying a variety of types and formats of potential sources for information.</p> <p>Collaboration with a teacher librarian would be helpful in weighing the costs and benefits of acquiring the needed information.</p> <p>Collaboration with a teacher librarian would be helpful in reevaluating the nature and extent of the information needed.</p> <p>Collaboration with a teacher librarian</p>						

	Extremely Important	Very Important	Moderately Important	Slightly Important	Not at all Important	Not Applicable
<p>would be helpful in selecting the most appropriate investigative methods of information retrieval systems for accessing information.</p> <p>Collaboration with a teacher librarian would be helpful in constructing and implementing effective search strategies.</p> <p>Collaboration with a teacher librarian would be helpful in retrieving information online or in person using a variety of methods.</p> <p>Collaboration with a teacher librarian would be helpful in extracting, recording, and managing the information and its sources.</p> <p>Collaboration with a teacher</p>						

	Extremely Important	Very Important	Moderately Important	Slightly Important	Not at all Important	Not Applicable
librarian would be helpful in summarizing the main ideas for extraction of the information I gather.						

Q16 Please respond to the following statements according to your feelings of importance for collaborating with a teacher librarian to successfully perform a specified task. The range is from very important (left) to no importance (right).

	Very Little	Little	Some	High	Very High	Not Applicable
<p>Collaboration with a teacher librarian would be helpful in articulating and applying initial criteria for evaluating both the information and its sources.</p> <p>Collaboration with a teacher librarian would be helpful in synthesizing main ideas to construct new concepts.</p> <p>Collaboration with a teacher librarian would be helpful in comparing new with prior knowledge to determine the value added, contradictions, or other unique characteristics.</p> <p>Collaboration with a teacher librarian would be helpful in determining whether the new knowledge has an impact on my value system and taking steps to reconcile differences.</p> <p>Collaboration with a teacher librarian would be helpful in understanding and interpreting information through discourse with individuals, subject-area experts, and/or practitioners.</p> <p>Collaboration with a teacher librarian would be helpful in</p>						

	Very Little	Little	Some	High	Very High	Not Applicable
<p>understanding many of the ethical, legal, and socioeconomic issues surrounding research in education.</p> <p>Collaboration with a teacher librarian would be helpful in following laws, regulations, policies, and etiquette related to the access and use of information resources.</p> <p>Collaboration with a teacher librarian would be helpful in acknowledging the use of information sources in communicating research in education.</p> <p>Collaboration with a teacher librarian would be helpful in applying new and prior information to the planning and creation of a particular product or performance.</p> <p>Collaboration with a teacher librarian would be helpful in revising the development process for the product or performance for a specific purpose.</p> <p>Collaboration with a teacher librarian would be helpful in communicating the product or performance effectively to others for a specific purpose.</p> <p>Collaboration with a teacher librarian would be helpful in students to</p>						

	Very Little	Little	Some	High	Very High	Not Applicable
<p>assess the learning process.</p> <p>Collaboration with a teacher librarian would be helpful in evaluating the outcome of the collaborative process on student achievement.</p> <p>Collaboration with a teacher librarian would be helpful in following citation policies for credit resources I utilize.</p>						

Q17 Please respond to the following statements according to your agreement with the specified item. The range is from strongly agree (left) to strongly disagree (right).

	Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree
<p>Teacher Librarians provide information resources appropriate to students' information needs and learning tasks.</p> <p>Teacher Librarians match the information needs and interests of individual users with appropriate library resources.</p> <p>Teacher Librarians develop a collection of information resources that supports instruction and individual interests.</p> <p>Teacher Librarians provide leadership in using technology for teaching and learning.</p> <p>Teacher Librarians facilitate teaching of the district and state curriculum.</p>					

	Strongly Agree	Somewhat Agree	Neither Agree nor Disagree	Somewhat Disagree	Strongly Disagree
<p>Teacher Librarians participate in developing the district and state curriculum.</p> <p>Teacher Librarians identify needs of the school community.</p> <p>Teacher Librarians teach students how to be independent learners.</p> <p>Teacher Librarians plan instructional activities in collaboration with teachers.</p> <p>Teacher Librarians create instructional materials for teaching and learning.</p> <p>Teacher Librarians guide teachers in the effective design of instruction.</p> <p>Teacher Librarians support the concept of the intellectual freedom of information.</p> <p>Teacher Librarians foster collaborative inquiry as well as individual inquiry.</p> <p>Teacher Librarians help students to develop lifelong learning skills.</p> <p>Teacher Librarians help students to develop critical thinking skills.</p>					

Q18 Have you collaborated with the teacher librarian on campus? (Check all that apply)

- Yes
- No
- Too much going on in my classroom . . . so most likely I will not.
- I plan on it in the future
- I do not need to

Q19 In the absence of all barriers, in what other examples or situations would it be beneficial to collaborate with a teacher librarian to help to improve your or your students' information needs?

Q20 What would or does prevent you from collaborating with the teacher librarian or utilizing the library services?

Q21 If you could share anything with regard to this research study about collaboration with teacher librarians, what would it be?

Second Survey After Completion of First Survey

Q1 Thank you for taking the time to complete the Teacher and Teacher Librarian Collaboration Survey and providing the opportunity for me to collect data. This particular survey question is specifically set up to electronically share with me that you have completed the survey, since your name is not associated with the data results that were collected. Due to survey completion, and as a thank you, I will present a \$5 Starbucks gift card to you in person. In order to receive your gift card, please type in the text box below your first and last name. If you have any questions, please do not hesitate to ask.

Thanks,
Jeanna Wersebe

Q2 If you would be willing to participate in a personal interview about your perceptions and experiences in regard to the collaborative process or lack of, please click yes. As with this survey, all interview participants' names will be anonymous and kept confidential both during and after this study. Interviews will be around 20 to 30 minutes and a \$10 incentive will be provided for your time. If you have additional questions about the interview process, please contact me either through email or by phone. Providing your name, does not mean that you will be invited to an interview. I will email you additional details if you share that you are interested.

- Yes (1)
- Maybe (2)
- No (3)

Appendix B

Interview Protocol for Teachers and Administrators

Interview Protocol: Adult who either is experienced or new to the teaching field at a set school setting who represents at least one department on specified campus

Time of Interview:

Date:

Place:

Interviewer:

Interviewee:

Position of Interviewee:

Introduction to the interview: The purpose of this study is to understand the perceived value of collaboration at this specific high school and how it uses and understands teacher and teacher librarian collaboration or to determine what barriers are impeding collaboration efforts between the two groups on campus and how administration can help or hinder the process. I am interviewing you as well as two to three teachers from each of the various departments on campus who have been on this high school campus for several years or who are new to gain various perspectives or understandings of the different dynamics that play into the collaboration process (20-30 individuals). I will keep the location of the study and all participants anonymous when writing the report, and I will maintain all data I collect, including this interview, in a locked file and in password-protected computer files. This interview will take approximately 30 minutes. You will have an opportunity to review all the information gathered through this review to assess whether I have recorded the information correctly. You confirmed your participation to the audiotaped interview on the consent form that was provided before you completed the online survey. You have the option to be interviewed by a third party, so you do not feel that you are being coerced into answering questions in a specific way, if you choose this option please share this, and we will make additional arrangements.

[Turn on and test recording device]

Proceed with questions:

1. What does collaboration mean to you?
2. Can you give me some examples of times you collaborated?
3. What are some of the inhibitors of collaboration?
4. What are some of the enablers of collaboration?
5. How do you find time to collaborate?
6. Who initiates collaboration between teachers and teacher librarians?
7. What do you do when collaborators do not share the same world view?
8. What are some of the activities involved in collaboration?

9. What role does administration play in facilitating a collaborative environment?
10. How do new teachers learn to collaborate?
11. What is the process of initiating collaboration?
12. What effects, if any, of collaborative efforts do you see on campus?
13. What are the attributes of collaborators?
14. What level of trust is necessary to collaborate?
15. Is there anything else that you would like to tell/share with me?

Appendix C

Individual Interview Participation E-mail Request

Dear (NAME),

Thank you for your participation in my survey. Your support of my research concerning research to assess teachers' and administrators' perspectives about their experiences with collaboration with the teacher librarian (TL), conceptions of the TL and the specific role the TL plays on their campus. This research also seeks to assist school leaders, instructional coaches, and teacher mentors to better understand the types of supports, professional development, aligned curriculum and materials needed to support teachers in their research skills, digital citizenship and informational literacy needs.

In order to have a deeper understanding about your experiences with collaboration with teacher librarians or lack of, I would like to invite you to participate in an individual interview. You have been asked to participate in this study because you are currently a high school teacher/administrator at the site selected for this study. A maximum of 30 individuals who meet these parameters will be asked to participate in the interview portion of the study. Please read this form carefully and ask any questions you may have before agreeing to be interviewed.

If you agree to participate in the individual interview process, you will be asked to meet with me for a 30-minute interview. This interview will include questions related to your thoughts, feelings, knowledge, about the collaborative process or lack of with a teacher librarian. During this interview, you will also have a chance to share about supports that you find helpful as well as any barriers related to collaborative efforts. This interview can take place on or off your school site, with the time and date to be determined based on your availability. With your permission, the interview will be audio taped and transcribed.

Your confidentiality will be respected throughout this process. The researcher will create a pseudonym for each interview participant. The list of the actual participant's name and their pseudonym will be secured on a personal password-protected laptop. Only the researcher and faculty advisor overseeing the study will have access to this list. All written forms of data from the interviews (hand-written notes, transcripts, data codes) will be scanned and/or saved on the same personal password-protected laptop and then the hard copies will be appropriately destroyed. All data analysis will also be stored on the same personal password-protected laptop. You will be given the opportunity to review the transcribed interview and eliminate any comments or references you feel may be identifiable or have negative connotations. Research records will be kept confidential to the extent allowed by law. The CSUSM/UCSD Institutional Review Board may review research records.

Please respond back to this e-mail letting me know if you are interested in participating in the individual interview portion of my study. I hope to begin interviews for the study before the end of the school year, so I welcome your response to this email by May 15, 2017. It is

possible to arrange interviews after the school year at your convenience too. If you have questions about the study, please call me at XXX or e-mail me at XXX. If you have any questions about your rights as a participant in this research or if you feel you may be at risk, you can contact the IRB Office at irb@csusm.edu or (760) 750-4029.

I hope you will agree to participate and thank you again for your participation thus far in my research study. Interview protocols and a signed consent form will be produced before the interview will take place.

Sincerely,
Jeanna Wersebe
Doctoral Student
UCSD & CSUSM

Appendix D

Interview Consent Form

Dear Teacher or Administrator,

My name is Jeanna Wersebe and I am a graduate student in the Joint Doctoral Program (JDP) in Educational Leadership with UC San Diego and Cal State San Marcos. I am inviting you to participate in a research study of perceptions of collaborative efforts among high school teachers, administrators, and a teacher librarian at a high school site. I have selected you as a possible participant because you are a stakeholder at the institution in which this study is taking place. Please read this form carefully and ask me any questions you may have before agreeing to be in the study. You must be 18 or older to participate in the study.

STUDY PURPOSE:

The purpose of this study is to determine the elements that foster effective collaboration exchanges between high school teachers and Teacher Librarians (TLs). The sub-questions are: (a) How do high school teachers, administrators, and high school TLs who work in the same school setting define collaboration? (b) Does one's own definition of collaboration affect how one interacts and collaborates with other teachers or teaching support staff? (c) What factors contribute to or detract from teachers collaborating (or not) with the TL? (d) What are the conditions that contribute to a collaborative teacher to TL school environment?

NUMBER OF PARTICIPANTS:

If you agree to participate, you will be one of 20 to 30 educators to participate in an interview.

PROCEDURES FOR THE STUDY:

If you agree to be in the study, you will do the following:

This is a mixed-methods study that consists of a survey and an interview. I will select and invite a variety of teachers from different disciplines to participate in an interview after the survey completion date. The interviews will be individual and they will consist of an in-person conversation of approximately 30 minutes in length related to the participant's experience in regards to collaboration or lack thereof with a teacher librarian. I will audiotape each interview with the consent of the interviewee and arrange it in a convenient location and time for the participant. I will not interview all survey participants. If you do not want the interview to be audiotaped, please check the box, but notes will need to be written to collect data needed for the study.

RISKS AND INCONVENIENCES:

Participation in this study may involve some added risks or discomforts. These include the following:

A potential for the loss of confidentiality: while every effort is made to reduce risk, there exists a possibility of a loss of confidentiality in this study. However, safeguards have been put in place to minimize any risk to you. School and teacher confidentiality will be respected throughout this process. The researcher will create a pseudonym name for each interview participant. The list of

the actual participants' names and their pseudonyms will be secured on a personal password-protected laptop. Only the researcher and faculty advisor overseeing the study will have access to this list. All written forms of data from the interviews (hand written notes, transcripts, data codes) will be scanned and/or saved on the same personal password-protected laptop and then the hard copies will be appropriately destroyed. All data analysis will also be stored on the same personal password-protected laptop. Research records will be kept confidential to the extent allowed by law. The CSUSM/ UCSD Institutional Review Board may review research records.

A potential for emotional stress, boredom or fatigue; to minimize the impact of emotional stress, boredom, or fatigue, you are under no obligation to complete the interview. Once started you may also stop the interview at any time.

Since this is a research study, there may also be some unknown risks that are currently unforeseeable. You will be informed of any significant new findings.

SAFEGUARDS:

To minimize these risks and inconveniences, I will take the following measures:

Participants can skip any questions that they feel uncomfortable answering during the face-to-face interview. I will schedule the interviews at a time that is convenient to the participant and in a place, that is private. Participants will be given the option to be interviewed by a third party to express their opinions and thoughts while not feeling coerced to providing certain answers. I will store all the data I collect from both the survey and interview in a password-protected file on a computer, and I will be the only one with access to the data. I will retain the data for up to one year after I complete the research project, after which I will erase all digital files. If there is any breach in confidentiality, you will be notified through email or a paper notice.

CONFIDENTIALITY:

Your responses to the interview will be confidential, since I will assign survey participants randomized ID numbers during the study. There will be no master list of participants' personal information, since the survey will not collect it. I will keep all interview responses confidential. I will STRIVE TO MAINTAIN confidentiality BY MAINTAINING AND STORING ALL DATA in a UCSD Qualtrics account, created solely for this research study.

I may use the results of this study in reports, presentations, or publications, but I will not identify the institution or reveal your name. If you participate in the interview, I will use a pseudonym to protect your identity and delete any names that are used during the interview.

VOLUNTARY PARTICIPATION:

Taking part in this study is voluntary. You may choose not to take part or you may leave stop and leave the interview at any time. Leaving the study will not result in any penalty. Your decision whether to participate in this study will not affect your current or future relations with me.

BENEFITS OF TAKING PART IN THE STUDY:

There are no direct benefits to participation in this study; however, your participation will help future TLs to interact with high school teachers more effectively, and it will help administrators

to support collaboration between teachers and TLs, while promoting understanding of the needs of all the stakeholders who are involved in the collaborative process at the high school level.

INCENTIVES FOR PARTICIPATION:

You will receive compensation for taking part in this study. I will present a \$10 gift card which will be given for a completed 30-minute interview that is prearranged at a convenient place and time between the participant and me.

CONTACT INFORMATION AND SIGNATURES:

If you have questions about the study, please call me at XXX or e-mail me at XXX. You will receive a copy of this form for your records. If you have any questions about your rights as a participant in this research or if you feel you may be at risk, you can contact the IRB Office at irb@csusm.edu or (760) 750-4029.

PARTICIPANT’S CONSENT:

By signing below, you are giving consent to participate in the interview portion for this research study. Please check the option that applies to you before signing:

I give you permission to audiotape my interview.

I do not give you permission to audiotape my interview.

Participant Signature

Printed Name

Date

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