

ABSTRACT

Title of Dissertation: SCHOOL DISTRICT LIBRARY
SUPERVISORS AND THEIR ROLE IN
PROFESSIONAL DEVELOPMENT FOR
BUILDING-LEVEL SCHOOL LIBRARIANS:
A BASELINE STUDY

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The advent and ubiquity of mobile technologies, the Internet, and broadband have allowed people to access, use, and create a seemingly endless amount of information in unprecedented ways. This has led to an information world that is more connected, more complex, and more overwhelming than ever before. For children, learning how to use these 21st century advances is important not only for their current needs in and out of school, but also for their future as they go on to college and enter the workforce. As information specialists, school librarians play a unique role in ensuring students are equipped to access, use, and create information in ways that are meaningful and productive. However, with the ever-changing landscape of technology and the multiple literacies now necessary for children's success, school librarians need to remain current in their knowledge and skills related to these topics.

Continuing professional development (PD) is a way for practicing school librarians to stay up-to-date on digital literacies and information and communication technologies (ICTs) so that they are able to be the information specialists and experts the students in their school communities need.

Using Bronfenbrenner's *Ecological Framework for Human Development* (1977, 1988, 1994) and what the education literature states is effective PD as the foundation, this dissertation first describes the multiple parties responsible for the effective PD of school librarians. It then examines the role that one party responsible in librarians' PD, school district library supervisors, play in the planning and implementation of PD for building-level school librarians through a nationwide survey of 267 library supervisors and semi-structured follow-up interviews with 8 supervisors. School district library supervisors are those individuals who work at the district-level and are generally responsible for creating and providing PD for building-level school librarians. This dissertation is a first attempt at illustrating what PD looks like for school librarians in districts nationwide and to compare what is being done to what the literature says are effective means of PD. Findings show that supervisors are providing PD for their librarians that adheres to at least one or two of the characteristics of effective PD. Supervisors are using the affordances of technology to create avenues and spaces for their librarians to connect and collaborate with each other. Findings also showed that the content of PD sessions were widely varied and ranged from more traditional library skills that focused on traditional literacy and administrative skills to more current topics such as makerspaces and digital literacy. As a whole, supervisors revealed a need to grow in the areas of

providing long-term PD for their librarians and creating a coherent plan for the PD they provided. This study also illustrated several conditions that facilitate effective PD, including having a culture of continued learning with leaders who support this growth and a budget to support these PD activities. These findings provide an initial look into the PD that is offered to school librarians as planned by the district-level library supervisor and the areas in which PD for librarians can be improved.

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A BASELINE STUDY

by

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Chapter 1: Introduction

The great democratizing power of information has given us all the chance to effect change and alleviate poverty in ways we cannot even imagine today...With information on our side, with knowledge a potential for all, the path to poverty can be reversed. Knowledge is power. Information is liberating. Education is the premise of progress, in every society, in every family. (Annan, 1997)

In the “Global Knowledge ‘97” World Bank conference in Toronto, Canada, then United Nations Secretary-General, Kofi Annan, made the case that access to information is foundational to freedom, democracy, development and the fight against poverty and deprivation in this world. He talked about “making information an agent of change and a tool for prosperity” (Annan, 1997). He called for a “global partnership for information” in which all parties work towards “mak[ing] information available to all.” He noted that information is a privilege – “an instant and globally accessible privilege.”

Annan’s words, although spoken two decades ago, are even more true today. The creation of new technologies that are faster, smarter, and more portable than ever before coupled with the concurrent rise and dominance of the Internet has produced a world that runs on the speed of and accessibility to information in all forms. Information and people’s access to it, as Annan proposed twenty years ago, may still be our greatest asset to solving many of the world’s most challenging problems.

There is no doubt the way people communicate and produce and share information has changed drastically since Annan’s speech in 1997 (Burg, 2013; The

New Media Consortium, 2007). Some say we are living in the “age of Information” (Birkinshaw, 2014; Zane, 2015) and that today’s economy is a global- and knowledge-based economy (The Brookings Institution, 2016). Thanks to the Internet and search engines like Google, there is a seemingly endless amount of information people can access on any topic in a fraction of a second by simply typing in a query or keyword into a computer or mobile device. This ability is drastically changing the way humans communicate and live. For many people across the United States, information is available on demand – anytime, anywhere.

The abundance and availability of information places great power within our grasp. But how do we learn to access and use this information in ways that are beneficial and congruent to the kind of world Kofi Annan envisioned in his speech? How do we learn to translate the vast amounts of information available to us into knowledge – knowledge that encourages us to think critically, teaches us to make wise choices as individuals and groups, and empowers us to address what Annan deemed the “global dilemma of squalor amid splendor” in this world? How do we use information to combat the increasing inequalities present in our society?

If information access is a critical component for global development and democracy in individual societies and the world as a whole, it is imperative that we find ways to share information and give access to people who do not yet have access to the information they need (the “information have-nots”) so they are able to make the best choices for themselves, their families, and their communities.

In his speech, Annan emphasized the need for youth to have greater access to information. According to Annan, information empowers the world’s youth to pursue

a better life for themselves and their families. Investing in children by helping them turn information into knowledge not only helps answer their own questions, but may also solve many of the world’s greatest social, economic, and environmental challenges.

For the majority of today’s youth in the United States, this “age of information” is all they know. They have never known a world in which information is not readily available wherever they are and whenever they want it. The information world for the majority of children in the United States is more connected, complex, and overwhelming than ever before.

Yet there are still over 15 million children (about 21 percent) who live in poverty in the United States, which has one of the highest child poverty rates among developed countries in the world (Breslow, 2012; Calfas, 2015; Ingraham, 2014; National Center for Children in Poverty, 2016). Poverty for children has significant impacts on their health, ability to succeed in school, and access to information (National Center for Children in Poverty, 2016; Porter, 2015; Servon & Horrigan, 1997). It contributes to the widening achievement gap between rich and poor students while expanding the digital divide between people with access to the Internet—and the information it holds—and those without access (Porter, 2015; Reardon, 2013; Zickuhr & Smith, 2012). When impoverished children are able to access, use, and create information in the way our society affords, they are able to participate fully as citizens who solve problems and find answers to their questions in ways that benefit themselves and potentially all members of society (Lievrouw & Farb, 2003; McIver,

Jr., Birdsall, & Rasmussen, 2003; Schneider & Curl, 2013; Sturges & Gastinger, 2010).

This more connected, complex, and overwhelming information world calls for a new set of skills to be able to find answers to everyday questions as well as creating solutions to the world's most difficult problems and solving the challenges and issues that await the world in the future. New technological advancements will shape the jobs of the future, jobs which will require skills and knowledge that we are only now considering how to teach our students (Prince, 2016). How do we prepare children for this unknown future? What must we teach them today so they will be successful contributors to society tomorrow? Educators around the world must consider these questions and communicate and collaborate with each other to ensure our students are ready for the future they will encounter after they graduate.

As learning institutions, schools and other education organizations must be prepared to provide each child that enters its doors with a quality education that equips them with the information and skills needed for this global- and knowledge-based society. Teachers, administrators, school librarians, and other educators within the school district and beyond need to make sure their own knowledge about pedagogy, how children learn, and the subjects they teach are current and incorporate the latest best practices. To remain up-to-date, educators need to participate in continual professional learning experiences that equip them with effective ways of teaching content and help them think critically about their own practice and how it impacts their students' learning and understanding. Schools must offer educators

professional development¹ (PD) that allows them to more effectively engage their students and elevate their learning. Educators need to constantly and creatively think about how significant societal changes can be leveraged to enhance the way teaching and learning are conceptualized in unique situations. Effective PD experiences provide educators the opportunity to reflect on their subjects and practice so they are able to create the best learning experiences for the students in their classrooms.

My research explores the various facets of effective PD provided to school librarians by their school districts. A thorough review of the school library literature on PD reveals the gaps in this area of school librarianship research. My aim in this study is to begin to create a picture of what PD for school librarians currently looks like in districts across the United States and to compare it with what the education research shows to be effective PD for educators. In doing so, I hope to draw the attention of those who are invested in the success and growth of the school library profession to this area of study, with the ultimate goal of improving the impact and reach of school library programs on teaching and learning in school communities nationwide.

In working with the Lilead Project², we found that the responsibility for providing PD opportunities and experiences for school librarians falls most heavily

¹ Discussions about the use of the term “professional development” have emerged in education literature as not being an accurate term to use to describe the complexity and nuances that encompass what is generally thought of as “professional development” for educators (Webster-Wright, 2009). Various terms, including “continuing professional learning” and “continuing education,” have also been used to define what is traditionally known as “professional development.” Although these arguments are convincing and prompt critical thinking about the words we use to describe the fullness of what teacher learning is and should be, I will use the term “professional development” (PD) throughout this paper as it is the most common and widely used throughout the literature thus far.

² The Lilead Project is an Institute of Museum and Library Services-funded project that “studies, supports, and builds community among school library supervisors – the individuals who coordinate library and information services in school districts across the country” and have various leadership, personnel, collection development,

on school district library supervisors (The Lilead Project, n.d.-a; Weeks et al., 2016, 2017). In a survey conducted by the Lilead Project in 2012, 100 percent of respondents revealed that they are responsible for providing PD for their building-level librarians (Weeks et al., 2016, 2017).

With this knowledge and an understanding of the importance of continued PD to equip educators in this rapidly changing society, I proposed to find out how school district library supervisors provide effective PD for their building-level librarians and ensure that the librarians in their district are performing the duties of a “future ready”/“21st century” school librarian.³ Specifically, I sought to answer the following questions:

1. What are the characteristics of the PD experiences that district-level library supervisors make available to their building-level school librarians?
2. How do supervisors support their building-level librarians in being able to perform the duties of a future ready, 21st century school librarian?
3. In what ways does the PD provided by the school district library supervisor reflect what the research says are best practices or effective facets of PD?

teaching and learning, and financial duties that pertain to the district’s school library program. See <https://lileadproject.org/> for more information.

³ Much has been written about what a “future ready” or “21st century” librarian or library looks like (Future Ready Schools, 2017; Gerakios, 2016; Gordon, 2015; Holland, 2015; Sullivan, 2011; J. K. Valenza, 2010) and how these libraries and librarians are different from their 20th century counterparts. Several characteristics that define a 21st century or future ready librarian/library are collaborative, flexible, creative, leader and technology. See Chapter 2 for a more in-depth discussion of the foci of 21st century educators. My definition of a future ready or 21st century librarian refers to these characteristics and how they are being fostered through PD experiences.

4. What are the conditions that support or detract from the availability of PD for building-level school librarians?

To accomplish this, I surveyed school district library supervisors who serve in school districts with a student population of 25,000 or more and conducted interviews with a select number of survey respondents for further insights on the PD practices within their districts.

I will now move on to a more thorough discussion of why this research is critical for education today and in the future.

Chapter 2: Background

To elaborate further on the changes that have occurred in our society and why continued professional learning for educators (including school librarians) is vital to a thriving and productive society, I now turn to an exploration of the drivers that caused our world to change in such dramatic ways and take a closer look at several trends that point us in the direction that learning and education are headed now and in the near future.

2.1 Facets of a changing world

There are several technological advancements that have risen to prominence in the past several decades that have forever changed all facets of society – impacting the social aspect in the ways we communicate and collaborate and the economic sector in the ways we conduct business and engage in work. New mobile technologies (such as smartphones and tablets), the Internet, and broadband access have all come about to create the perfect storm in which our society – and most of the developed world – now depend on daily.

2.1.1 New mobile technologies

The beginning of the 21st century has seen an influx of new technologies that have truly changed the way we live and work. One of the most revolutionary technologies of this century so far has been mobile technologies, of which the smartphone has risen to prominence because of its compact size and seemingly unlimited capabilities. The smartphone has afforded people the freedom to access

information and communicate with others in a myriad of ways from virtually anywhere there is a connection to broadband satellite signals.

Like the smartphone, tablets have been in existence since the late 20th century, although they were not as ubiquitous then as they are now due to Apple's iPad release in 2010. Now, there are a plethora of tablets on the market that can do a multitude of tasks, from word processing and playing games to searching the Internet, video conferencing, and more. With its larger screen sizes and an expanding number of applications that run on these devices, newer tablets are able to perform tasks that before only personal computers and laptops could do, making computing from virtually anywhere further accessible.

2.1.2 The Internet

As new mobile technologies have freed people from needing to be wired and tied to a specific place in their computer usage and ability to search for and find information, the Internet is really the source of this treasure trove of information and has ultimately given us the ability to build and organize this massive store of information. The *New Oxford American Dictionary* defines the Internet as “a global computer network providing a variety of information and communication facilities, consisting of interconnected networks using standardized communication protocols” (Stevenson & Lindberg, 2015). This “global computer network” has produced over 4.5 billion Web pages (and more if you include the Web pages contained in the “Deep Web” that are not currently indexed by search engines) (Pappas, 2016). Certainly, the Internet has revolutionized the way we are able to communicate with others. It has

allowed people to easily find, create, and share information and ideas and has also fostered the ability for people to collaborate and communicate across time and space.

2.1.3 Broadband

Another technology that has had huge impacts on society is broadband. If we think of the Internet like a lake or an ocean that contains the “fish” we need and want to eat (i.e. the information we want and need to go about our daily lives), and computers and mobile technologies as the “fishing poles” (i.e. the tools with which we use to access information), then broadband is akin to the bait we need to obtain the “fish” we want.

Broadband access is one of the three key pieces (the other two being the Internet and computers/mobile technology devices) that are required for people to be able to access the Internet in productive and meaningful ways. Without a broadband connection, people are unable to connect to the Internet and tap into the vast amount of resources it provides. They are unable to collaborate, communicate, and share with others who are connected to the Internet. As Senator Cory Booker (D-NJ) noted in a Brookings Institute-moderated conversation discussing the issue of broadband availability nationwide, broadband access is “democratizing” and allows people to fully participate in all sectors of society (Tomer & Karsten, 2015).

The combination of new mobile technologies, the Internet, and broadband have revolutionized the way information is stored, accessed, and shared in our world today. Like people need a body of water full of fish, a fishing pole, and bait to catch fish for their next meal, people today need new computer technologies and access to

the Internet through broadband services to be able to effectively participate and contribute in the digital world.

2.2 21st century skills and knowledge needed in this changing world

In light of changing technological advances and the facets of a rapidly changing social world, schools and districts are being forced to think differently about what they teach their students and how they are preparing them for their present and future success in and out of school. Many schools and districts are placing more emphasis on helping their students become “college and career ready” (Munoz, 2016; U.S. Department of Education, n.d.-a). However, because of this focus, national, state, and local education agencies and school districts are faced with answering the question: “What knowledge and skills do students need to be successful for today’s and tomorrow’s connected world?” Obviously, these skills and knowledge go far beyond being proficient in reading and mathematics on a standardized test given once a year. Education leaders and administrators realize that students now need to learn how to problem solve and think critically and creatively to be able to find and use information to help answer their everyday questions and to be prepared to find solutions to the challenges and problems that plague our world, now and in the future.

Since the turn of the 21st century, many people and organizations have reflected on how the aforementioned innovations have drastically changed the way we live and work and, in turn, what skills and knowledge today’s children need to lead successful and productive lives in the 21st century, and ultimately, the ability of the United States to be a major player and leader in the global economy (Global Digital Citizen Foundation, 2016; Great Schools Partnership, 2016; Institute of

Museum and Library Services, n.d.; National Education Association, n.d.; Partnership for 21st Century Learning, 2007; Thoughtful Learning, 2016). Some of the skills that stand out as being vital to today's learning environments and tomorrow's work cultures are creativity and innovation, critical thinking and problem solving, communication and collaboration, information, media, and technology literacy, and ethics and citizenship. These skills go far beyond the traditional education models that focused on the 3R's – reading, writing, and arithmetic. Now, thanks to breakthroughs in technology and the growing ubiquity of the Internet, businesses and organizations are not just looking for people who know a lot of information or are adept at one skill, but they are looking for people who can think critically, solve problems, and use and communicate information in new and creative ways to move their organizational goals and visions forward (Adams, 2014; Bortz, n.d.; Korn, 2014; National Association of Colleges and Employers, 2017).

In a national survey of the public conducted in 2007, the Partnership for 21st Century Learning (P21) found that today's students need a plethora of skills and competencies in order to compete globally and be successful in this “age of information” (Partnership for 21st Century Learning, 2007). In collaboration with teachers, business leaders, and education experts, P21 created the Framework for 21st Century Learning, which explains the skills and knowledge students need to succeed in all facets of life, from work life to personal life to civic life. A core component of this “Framework for 21st Century Learning” includes what P21 calls the 4Cs – creativity, collaboration, communication, and critical thinking. These skills – as

public, business, and education leaders concur – are needed for successful employment and citizenship in the future.

Similar to P21, the Global Digital Citizen Foundation created a list of skills that students need to survive in this ever-changing world from the many presentations and interactions they had with educators and administrators worldwide over the past several years (Global Digital Citizen Foundation, 2016). In addition to the 4Cs mentioned above, the Global Digital Citizen Foundation also included “ethics, action, and accountability” as essential 21st century skills students need. The Global Digital Citizen Foundation incorporates these skills into 5 fluencies that global digital citizens possess: solution fluency, creativity fluency, collaboration fluency, media fluency, and information fluency. Below I describe in more detail the skills and knowledge that are needed for success in the 21st century.

2.2.1 Creativity and innovation

Sir Ken Robinson said in his TED Talk, “creativity is just as important as literacy” (Robinson, 2006). This statement could not be truer as this world has grown more complicated in its problems and challenges. Creative solutions are needed to solve these complex problems and tackle these challenges. Creativity and innovation are 21st century learning skills that are increasingly present in the students who are prepared for complex and collaborative life and work environments (Partnership for 21st Century Learning, 2015). Creativity is the foundation from which we can thrive in this rapidly moving and changing society (Carson, 2011). All facets of life increasingly require some form of creativity – from creating new business models for

the 21st century economy to imagining solutions to society's most pressing problems to our individual need to juggle all of life's many responsibilities (Carson, 2011).

Creativity is the ability to think differently and envision or imagine things that do not yet exist. It is the ability to question the status quo, look "outside the box" of what is already there, and expand one's thinking to create something original or envision a different reality. According to a research brief on what is known about creativity, Plucker, Kaufman, and Beghetto (n.d.) stated that creativity is encompassed in a work that is both novel and useful.

What immediately may come to mind when one thinks about creativity is the visual and performing arts. However, creativity is not just the fuel for the arts, but it is what enables much of the innovations in science, technology, business, medicine, and virtually all sectors of the economy. As new technologies become available, changes in the ways we currently work and communicate will likely change also. The need for creativity in these environments is critical for the success and advancement of our goals as individuals, organizations, and societies.

2.2.2 Critical thinking and problem solving skills

Critical thinking is the "intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action" (Foundation for Critical Thinking, 2015). It is the ability to take information about a subject from a variety of sources and formulate one's own thoughts and opinions about that subject. According to Tony Wagner, a world-renowned, forward-thinking speaker on education today,

critical thinking is the ability to ask the right questions (Wagner, 2013). Critical thinking is a skill that many employers today seek in new hires (Korn, 2014). According to the Foundation for Critical Thinking, critical thinking is an important skill to foster because the “quality of our [lives] and that of what we produce, make, or build depends precisely on the quality of our thought.” Critical thinking is a skill that does not come naturally to people, it is one that must be cultivated (Foundation for Critical Thinking, 2015).

The world we live in is complex and wrought with a multitude of social and environmental problems. In order for humans to find solutions to solve these problems, as well as our own personal problems and challenges, we need to cultivate the skills and the thinking that will enable us to reach the solutions we desire.

The ability to solve problems is critical for students to master today as, unfortunately, there is no shortage of obstacles and challenges in this world. Being able to effectively come up with solutions to complex and challenging problems is necessary for us to move forward and progress as individuals as well as a society and culture. In addition to creativity, critical thinking skills will help us in facing and tackling these obstacles.

2.2.3 Communication and collaboration skills

Communication and collaboration skills are also present in students who are prepared for the demands of a more complicated society (Partnership for 21st Century Learning, 2015). Communication skills not only refer to a person’s ability to articulate one’s thoughts and ideas effectively in a variety of formats, including written and oral, but the ability to also “listen effectively to decipher meaning,

including knowledge, values, attitudes and intentions” (Partnership for 21st Century Learning, 2015). It is the ability to be able to know how to communicate one’s thoughts and ideas in the most appropriate way and medium for the audience and situation. Effective communication skills in the 21st century include being able to communicate in diverse settings (such as multicultural and multilingual) as our economy and society have become more global and cross-cultural and the need to be able to communicate across cultures and languages becomes more important to governments, businesses, and organizations.

The old adage “two heads are better than one” epitomizes the idea of collaboration. A new mode of the workplace is working in teams. Diminishing are the days in which people work independently of each other on their own projects. The “open floor plan” is a common workspace design that is meant to foster collaboration and communication among workers. Today, collaboration and working with others is a top skill that employers seek and our societal challenges demand (Adams, 2014). Being able to work together in effective, productive, and respectful ways allows us to brainstorm solutions and think of alternate solutions that may not have been thought of otherwise.

2.2.4 Information, media, and technology skills⁴

The Internet has created a world in which information – in an increasing variety of mediums that includes text, visual, and video – is conveniently and

⁴ It is noted that there are other literacies (i.e. privacy, web, visual, data, news, and coding literacies to name a few) that are emerging as a result of our technologically networked world in addition to information, media, and technology literacies. However, I focus on these three new literacies as they are the ones mentioned most in the literature and can be overarching categories for many of the other emerging literacies.

abundantly available for the vast majority of people living in the United States. Because of this 21st century reality, there is a need for people to be able to find, use, and create information in new ways. Information and media literacy combine with digital, visual, textual, and technological literacies to form the concept of multiple literacies, which are the new literacies critical for student success in this information-driven world (American Association of School Librarians (AASL), 2007). P21 (2015) defines information literacy in two strands: (1) being able to access and evaluate information and (2) being able to use and manage information. Media literacy is the ability to analyze and interpret media from various sources and create and communicate using a multitude of media creation tools. Technology literacy means being able to use technology effectively to find, organize, evaluate, and share information as well as understand the ethical and legal issues of using technology to access and use information. As we continue to see the increase of information from multiple channels, there is no doubt that these multiple literacies will continue to be a crucial skill now and in the future and that we will see the emergence of many new literacies.

2.2.5 Ethics and citizenship

In addition to advances in transportation that allow for faster travel and for people to get to faraway places, the Internet has also been a major force in connecting communities, nations, and cultures across the globe. These connections allow for greater collaboration and dialogue across physical and national boundaries. We now live in a world where understanding and working with diverse perspectives and backgrounds is increasingly the norm and, as such, it is imperative that students learn

to work with and alongside many different kinds of people. The Global Digital Citizen Foundation (2016) breaks down global citizenship into several pieces: (1) having personal responsibility for one's learning, (2) recognizing that we are all global and digital citizens, and, therefore, (3) have a responsibility to steward the environment and practice compassion and goodwill towards others. This leads to global citizens who are self-directed, flexible, respectful, and open-minded.

These 21st century skills have many overlapping strands and focusing on one naturally leads to thinking about the others. This is indicative of the society we inhabit and the ways in which work and learning have changed over the past several decades. Inquiry and problem solving have necessitated an interdisciplinary approach to thinking and learning and, thus, the skills we need to be productive and innovative have evolved along the same lines.

2.3 National education initiatives as a response to this changing world

There is no doubt that all sectors of society are grappling with the technological changes we see today and how to utilize these new advances to remain productive and progressive. The field of education has also done work to respond to our changing world by introducing new standards and revising laws that address the skills children need to succeed. In the following sections, I give a brief summary of the most prominent education initiatives and the ways they were meant to address the changes in society and provide solutions to the kind of education children need to be informed, active, and thriving citizens.

2.3.1 The Common Core State Standards

The Common Core State Standards (CCSS) is a national effort led by states beginning in 2009 to give all students, regardless of where they live in the United States, a consistent and equal education that aims to teach them the skills and knowledge they need today to prepare them for the lives they will lead in the future – in college, career, and life (Common Core State Standards Initiative, 2018b). Reflecting on the aforementioned advances in technology, the ubiquity of information access through the Internet and search engines, and the “stagnant” academic progress of our nation’s students compared to our international peers (Common Core State Standards Initiative, 2018a), the creators of the CCSS aimed to raise the bar on the standards for learning and what students are expected to learn and know in each grade from Kindergarten to 12th grade.

With the adoption of the CCSS in 41 states, the District of Columbia, four territories, and the Department of Defense Education Activity (which oversees and operates the 168 accredited schools around the world for school-aged children of military families) as of 2018, teachers now have more flexibility and autonomy in the way they teach content to students (Common Core State Standards Initiative, 2018d). This autonomy allows teachers to “devise their own lesson plans and curriculum, and tailor their instruction to the individual needs of the students in their classrooms.” (Common Core State Standards Initiative, 2018c). Not only does the CCSS focus on critical thinking and problem solving, but there is also more attention paid to personalized, inquiry-based learning and using digital tools to create products of learning, such as written reports and projects, with standards that specifically require

students to research, find and gather information from multiple sources, and integrate the information they find into their learning to demonstrate their understanding in a particular area. Information seeking and use is fully embedded into the CCSS. These new standards provide a unique opportunity for school librarians, the information specialists and leaders in their school communities, to step up and provide these individualized, inquiry-based learning experiences for their students.

2.3.2 The Every Student Succeeds Act

Like the CCSS, the passage of the bipartisan Every Student Succeeds Act (ESSA), signed by President Obama in December of 2015, was set to pave a new course in education in the United States. The ultimate aim of this reauthorized education law was to enable all students, regardless of race, income, disability, home language, or other potentially limiting characteristic, to be prepared for and succeed in college and career. In essence, ESSA aims to continue to close the achievement gap between various demographic groups in the United States.

ESSA builds on the foundation of two previous education bills in our nation's history: (1) the Elementary and Secondary Education Act (ESEA), signed into law by President Lyndon B. Johnson in 1965, and (2) the No Child Left Behind (NCLB) Act of 2001, signed in 2002 by President George W. Bush. The 1965 ESEA was an act "to strengthen and improve educational quality and educational opportunities in the Nation's elementary and secondary schools" (Elementary and Secondary Education Act, 1965). It was created to ensure that children from disadvantaged, low-income neighborhoods and families received the support and resources necessary to have a quality education – the same education that children from wealthier neighborhoods

and families received. Coming 35 years later, the NCLB Act mandated that all states and districts aim for the highest expectations for all their students and desired to hold them accountable for what was taught in schools. It asserted that all students would “meet or exceed the State’s proficient level of academic achievements on the state assessments” by the end of the 2013-2014 school year (Kamenetz, 2014; Klein, 2015).

2.3.2.1 What ESSA promises

Clearly, NCLB has not met its goal of having all students in all schools across the nation reach proficient levels as demonstrated on state tests by the 2013-2014 school year. Under NCLB, the federal government had a lot of control over whether schools were labeled as “in need of improvement,” “under corrective action,” or “restructuring.” NCLB has drastically shifted what is deemed important and focused on in schools, namely standardized testing in English Language Arts (ELA) and math. NCLB emphasized measuring achievement and proficiency, which “exposed achievement gaps among traditionally underserved students and their peers and spurred an important national dialogue on education improvement” (U.S. Department of Education, 2015). ESSA’s goal is to implement procedures and structures that take what we learned from the assessments and measurements of the NCLB era to help students reach higher levels of proficiency.

While NCLB put all the power over how schools are assessed in the hands of the federal government, ESSA shifts the power back to states and local districts to implement programs and strategies they think will work best for their communities (Meier, 2004). Under ESSA, each state was required to submit a consolidated state

plan in 2017 to the U.S. Department of Education (U.S. Department of Education, 2017). These state plans were reviewed and approved in 2017 and 2018 by the Department of Education with most of them slated to go into effect in the 2018-2019 school year. Time will tell if these state plans meet the vision and goals that were set forth in the spirit of ESSA that all students receive a quality education that equips them for today and prepares them for the future.

Education in the United States is at a turning point with the passage of ESSA. The focus has shifted toward 21st century skills and knowledge in a range of literacies, not just traditional literacy, but web literacy, information literacy, media literacy, visual literacy, and critical literacy to make sure students are ready for their futures in college and career (Chung, Bond Gill, & O'Byrne, n.d.; Global Digital Citizen Foundation, 2016; Mozilla Learning, n.d.; Partnership for 21st Century Learning, 2015). The world today requires students to be critical and engaged thinkers who are able to synthesize information in a variety of ways. It requires teachers to be savvy educators who are able to foster the creativity and wonder of learning in students and capture their attention, which is being pulled in so many directions in this fast-paced information world. The CCSS and the ESSA are two initiatives that are set to pave a new course and vision for K-12 education in this "age of information." With these two initiatives comes much opportunity for school librarians and school library programs to play a major role in the learning and teaching happening in all school communities across the nation.

2.4 A golden opportunity for school libraries

Libraries have always been about connecting people to information. In the 20th century, information was primarily transmitted through books, newspapers, magazines, and video. In the 21st century, information is still available to people in these formats, but with the new technological innovations previously mentioned, information is now available in many more formats, especially online through mobile technologies.

School library programs can, do, and should play a vital role in their school communities by facilitating pathways to accessing information in the many channels it is available today, helping students learn the aforementioned 21st century skills they need to enhance their learning and to be college and career ready, and partnering with teachers and other educators to teach the curriculum in creative and engaging ways. Reflecting on the immense amount of information that is available to people now through the “perfect storm” of technological advances, the need to be able to find, understand, and make use of information is essential to being a well-educated, contributing member of society. School librarians are oftentimes the only educators in their school buildings who are specifically equipped in how to teach the information and technology literacy skills that students need to navigate the vast amounts of information available to them each day. They provide a valuable resource to their students and staff in assisting all members of their school community in finding and using information in productive and ethical ways.

School libraries are becoming hubs for creativity, invention, and individualized learning. The Makerspace movement (Samtani, 2013; Weisgrau, 2015)

has made the library a space for exploration and play for students to delve into subjects and ideas, like STEM (Science, Technology, Engineering, and Math) learning, that the curriculum and school day sometimes cannot accommodate. Makerspaces allow for students to practice 21st century skills in a non-threatening, safe, and nurturing environment. It has created spaces in schools where students can learn at their own pace and engage in topics of learning that interest them.

With a shift towards a focus on the 4C skills of 21st century learning, school library programs, through their makerspaces, specific focus on multiple literacies, and increasing emphasis on STE(A)M (STEM plus Arts) learning, can set the standard for what teaching and learning looks like in today's schools.

2.5 A promising opportunity amidst an unfortunate reality

Despite the value that school librarians and library programs bring to the school communities they serve, many schools and districts nationwide have cut or decreased their librarian positions in light of shrinking budgets (Helms, 2015; Mongeau, 2014; Resmovits, 2011; Russon, 2013).

This reality has led the media and the school library community to shout the mantra: "School libraries are in crisis!" (American Association of School Librarians, 2017; Harvey, 2012; Whitaker, 2016). The idea that school library programs and the profession as a whole are being threatened has been the position from which school librarianship has operated over the past several years. This response is directly related to the nationwide reality that school librarians and the programs they lead have been one of the first educators and programs to be cut when funding is tight and districts and schools need to make difficult decisions based on what is best for their students'

success (Helms, 2015; Mongeau, 2014; Resmovits, 2011; Russon, 2013). Even though school libraries are strong and obvious proponents of multiple literacies and individualized learning, under NCLB, because of a direct focus on assessment in ELA and math, the focus and funding were put on these two subjects in traditional classroom settings as opposed to school libraries or other spaces where this learning could also take place. Additionally, because NCLB funding was not properly appropriated, it was under schools' discretion to use their monies in ways that would most likely guarantee their success on the state standardized tests (Neill, 2004). Most often, this meant putting more funding into test preparation materials and less resources and money into subjects and skills that were not tested, including materials and resources to grow and enrich the school library program.

One question becomes quite clear when thinking about these two ideas: (1) the promising value of school library programs and (2) the absence and decline of school library programs in K-12 public schools. This core question is: "Why are librarians and library programs generally not valued within schools and school systems nationwide despite the benefits to learning that school librarianship claims to provide?" If school librarians and the programs they lead have an impact on student achievement, like much of the research shows (Lance & Hofschire, 2012; Lance, Rodney, & Russell, 2007; Lance, Wellborn, & Hamilton-Pennell, 1993; Scholastic, 2008, 2016; Todd, Kuhlthau, & OELMA, 2004 to name a few), why is it that few members of the school community outside of those in the school library profession understand this benefit to students, teachers, and the rest of the school community?

I believe that at the root of this quandary lies a lack of communication and understanding or at least some miscommunication and misunderstanding between those in the school library profession and the key stakeholders in the broader world of education (e.g. district- and building-level administrators and classroom teachers). These misunderstandings and miscommunications may be the case for at least two reasons: (1) those outside of the library field are still holding onto the old, outdated stereotypes of who a librarian is and what he/she does and/or (2) practicing school librarians are not exhibiting the 21st century librarian behaviors the field of school librarianship touts.

With the portrayal of librarians in the media through television and movies, the perceptions of librarians have devolved into inaccurate stereotypes. Images such as “Marian the Librarian” from *The Music Man* or the Nancy Pearl librarian action figure, fully equipped with a book in her hand and the capability to “shush!” at the push of a button, have seeped into mainstream culture to become the prevailing portrayals of a librarian. These false perceptions lead many to believe that this continues to be the mode that librarians currently operate in and, therefore, assume that librarians do not have a relevant role in today’s digital society, nor do they have a role to play in schools that are preparing their students for successful participation in this digital knowledge world (Hartzell, 2002).

Despite the many school librarians who are models of what a 21st century librarian looks like (Hwang Lynch, 2015, 2016; Philpot, 2014), there are those who are still working from a 20th century, traditional mindset of the profession (Luthmann, 2007; McCracken, 2001). This criticism reinforces the stereotypes and flawed

perceptions of who librarians are and what they do on a daily basis. Perhaps the field of librarianship puts too much stock in these stereotypes, but nevertheless, others outside the field of school librarianship will not change their perceptions of those in the field unless school librarians and other school library leaders actually make their work relevant to today's changing world and the communities they serve (Hartzell, 2002; Luthmann, 2007).

2.6 A changing trend?

The passage of ESSA provides some optimism for a changing tide for school librarianship. ESSA includes language that specifically mentions school librarians in discussions of “specialized instructional support personnel,” who were left out of this designation in the original 1965 ESEA bill. ESSA provides more funding for school library programs to build on their services and resources (Vercelletto, 2015). With this language included in ESSA, it is now up to individual states to take up this charge and include school library programs and librarians in their state plans.

The passage of ESSA, with direct mention of school library programs and librarians, and the school librarians' role as information specialist have created a “golden opportunity” for those in school librarianship. The roles and responsibilities of school librarians (i.e. leader, instructional partner, information specialist, teacher, and program administrator) have not changed since the 2009 school librarian standards, *Empowering Learners: Guidelines for School Library Programs*, were released. The 2018 *National School Library Standards* also recognize these roles as vital to the everyday practice of school librarians and, therefore, builds on these roles first articulated in *Empowering Learners* (American Association of School

Librarians, 2018). Moreover, with the massive amounts of information being disseminated through and created on the Internet, school librarians, now more than ever, have a critical role to play in making sure that students are equipped to find, use, and create information in productive and meaningful ways. One way to do this is by ensuring that all school librarians are fulfilling the role of the 21st century information leaders their schools and communities need. This can be accomplished with a continued investment in school librarians' growth and understanding of their changing roles and responsibilities in this age of information through effective and ongoing PD experiences that facilitate positive changes in practice. The next chapter will review the literature that has been written about PD for school librarians and PD for educators (i.e. teachers) in general, as school librarians work in the same context as teachers and, therefore, are subject to the same benefits and limitations as teachers and also have access to similar kinds of PD opportunities.

Chapter 3: Literature Review

Professional development (PD) is a topic that has been discussed and researched in many different fields that have a vested interest in maintaining the knowledge and expertise of those in that field. Medicine, business, and education are just a few, and perhaps the most prolific, spheres in which much thought has gone into researching what makes PD in their fields effective⁵. Each profession has a slightly different definition of PD. In business, PD is defined as the “process of improving and increasing capabilities of staff through access to education and training opportunities in the workplace, through outside organization [sic], or through watching others perform the job. Professional development helps build and maintain morale of staff members, and is thought to attract higher quality staff to an organization” (“Professional development,” 2016). The American Medical Association talks about continuing medical education, which consists of “courses and events that enhance patient care, support professional goals and improve knowledge of the latest developments in areas such as clinical research and practice improvement” (American Medical Association, 2016).

According to The Glossary of Education Reform, PD in education is “used in reference to a wide variety of specialized training, formal education, or advanced professional learning intended to help administrators, teachers, and other educators improve their professional knowledge, competence, skill, and effectiveness” (Great

⁵ The end goal of any kind of PD in education is to improve student learning. Therefore, I use the term “effective” PD throughout this paper to refer to PD that “provides educators with the professional knowledge and craft skills they need to help all students learn at high levels” (Guskey, 2000, p. 209).

Schools Partnership, 2013). Despite the variations in language and terms used to define PD in these various fields, the concept of continued and ongoing learning/education to improve job performance and the quality of service provided by the professional are all present in the aforementioned definitions.

PD is a valuable component in numerous professions because, if done effectively, PD ultimately helps an organization or field achieve its goals; in medicine, this is the care of its patients; in business, it is the satisfied customer and a profit-generating product; and in education, it is the improved learning of students and, in turn, the improvement of schools and districts overall. PD operates under the mindset of continual improvement and learning. No matter how good a person's educational preparation is prior to entry into a field, there are still many things that can be, and need to be, learned once "on the job," especially in a field as dynamic as education (Guskey, 2000).

Effective PD for school librarians is no different, in terms of definition and purpose, than the other fields mentioned above. The primary goal of PD for school librarians is to provide the school librarian with the knowledge and skills he/she needs to be able to teach the 21st century skills that the students in their school needs today and in their futures (e.g. to complete assignments for their classes and to find answers to their daily questions and problems in effective and efficient ways), to be the technology experts and information specialists in their buildings, to collaborate with teachers in his/her school to provide engaging learning experiences for all students, and to lead in these various spheres.

In researching literature focused on effective PD for school librarians, I did a targeted search for PD for school librarians through the university subscribed database “Library & Information Science Source” using the keywords “school,” and “librar*,” and “professional development,” or “continuing education.” This search yielded over 15,000 results. However, a quick overview of these articles’ titles and abstracts revealed that many of them were not about PD for school librarians specifically. Many of the articles focused on PD for other kinds of librarians, from academic and law librarians to librarians in general. Reading about a dozen or so promising articles in this proverbial haystack of search results that speak directly about PD for school librarians led me to a few other pertinent articles that I did not find through my initial database search.

I also conducted a search through the most prominent school library research and trade journals for articles focused on PD or continuing education. Upon doing so, I quickly realized that there is a significant dearth in the research and literature surrounding PD for school librarians or anyone working within librarianship in a K-12 educational context. I expanded my search further to include PD literature from the field of education, a logical extension as school librarianship is practiced underneath the umbrella of this profession and there is much thought and research that has been done on the topic of PD for educators, classroom teachers specifically, in K-12 environments. Because the research on PD in education is broad, I began my search on Google Scholar using the keywords “effective,” “professional development,” and “education.” I also used these keywords to search in the University catalog. From there, I found pertinent articles that led me to key thinkers

and researchers of effective PD in education. Because the literature surrounding PD in education is more extensive and developed than that in the field of school librarianship, I will begin with a review of the literature I found in education.

3.1 Professional development literature in education

As the learning profession, PD is discussed extensively in the field of education. PD has been noted as a means to reform and change in education as teacher learning and gaining new knowledge and expertise are seen as the number one classroom factor that impacts student learning (DeMonte, 2013). Discussions about PD focus on the impacts that it has on changes in teacher practice which then, in turn and ideally, have impacts on student engagement, learning, and achievement.

The field of school librarianship can learn a lot from the PD literature found in education. Research in the past two decades about PD in education focuses on the effects PD programs and experiences have on student engagement and learning, not just the reactions of those who participate in the PD or the various kinds of PD available (DeMonte, 2013; Fishman, Marx, Best, & Tal, 2003; Guskey, 2000, 2002; Yoon, Duncan, Lee, Scarloss, & Shapley, 2007). Archibald, Coggshall, Croft, and Goe (2011) assert that “PD must be delivered in a way that yields direct impact on teacher practice” and it “must clearly relate to student learning” (p. 3).

3.1.1 Facets of effective PD

Based on the PD literature in education reviewed for this research, nine facets of effective PD stood out within the literature. The nine facets are: (1) a school culture with leaders who are supportive of PD; (2) PD that is part of a coherent,

ongoing PD program; (3) evaluation of PD; (4) the PD experience's alignment with the district/state's goals and standards; (5) inclusion of active learning in the PD activities; (6) a focus on core content material; (7) collaboration and the creation of a community of practice (CoP) or professional learning community (PLC)⁶; (8) follow-up and feedback after the official PD session(s) is complete; and (9) long-term PD that lasts over the course of several months or an academic year.

3.1.1.1 School leaders and culture that supports PD

Perhaps an often-overlooked aspect of effective PD is the support and backing of PD programs by district and school leaders and the establishment of an overall culture that enables teachers and staff to flourish as a result of their PD experiences. According to Croft et al. (2010), the school culture and support from school and district leadership helps to enable teachers' learning and their participation in PD opportunities. They state that "school leaders are instrumental in fostering an organizational culture of continuous learning and teamwork through venues such as professional learning communities and professional norms" (p. 8).

Because many PD initiatives stem from a desire to promote school change and improvement, the school climate needs to be such that the teachers and others in the school community are receptive to the PD strategy or initiative that is being implemented (Ferguson, 2006). School and district leadership have a direct role in creating a culture within the school/district that is open and receptive to new ideas

⁶ I use the term professional learning community (PLC) and community of practice (CoP) interchangeably in this dissertation as they are both used in the literature to describe a community of practitioners who want to engage in long-term learning with each other to improve their practice and, ultimately, student outcomes. Professional learning networks (PLNs) is also a term used in the literature to describe these communities of practice within education, however, I do not use it here to maintain consistency and simplicity in terms used.

and PD practices. Hawley and Valli (2007) maintain that many of the design principles for effective PD that they describe “require effective leadership at the school level” where “being a leader would mean being a facilitator of learning” (p. 123-124).

Approaching PD from a complexity theory framework, which stems from an understanding that “various dynamics are at work in social behavior and these interact and combine in different ways such that even the simplest decisions can have multiple causal pathways” (Opfer and Pedder, 2011, p. 378), Opfer and Pedder (2011) explain that changes in classroom practice are dependent on several subsystems at play in the context of teacher practice. One subsystem that influences the ability of teachers to implement the ideas presented through PD experiences is the school and its culture/norms. In a previous work, Pedder (2006) asserts that schools need to take on the processes and practices of a learning organization. Schools that operate from a learning organization perspective “have a balanced reliance on external resources of knowledge and information and the internal resources and capacity within the school itself” (Opfer & Pedder, 2011, p. 391-392).

3.1.1.2 Part of a coherent, ongoing PD program

PD for teachers has been criticized for being ineffective at getting teachers to improve their practices and, in turn, the outcomes for student achievement (DeMonte, 2013; Opfer & Pedder, 2011). The reason for this criticism is that PD has oftentimes relied on “short-term, episodic, and disconnected professional learning for teachers” (DeMonte, 2013, p. 1). The fact that PD has been characterized as episodic, “one-shot” sessions that are disconnected from the everyday work of teachers leads to this

facet of effective PD: sessions that are part of a coherent, ongoing PD program or plan. In order for PD to be effective and make a difference in teaching practices, each PD opportunity should be connected somehow to other PD activities and be consistent with a wider set of PD opportunities offered (Archibald et al., 2011; Birman, Desimone, Porter, & Garet, 2000). Not only should PD fit in with other PD sessions provided to teachers, but it should be consistent with school, district, and state policies and reform goals (Desimone et al., 2002; Desimone, 2009, 2011). In their study of over 1,000 math and science teachers, Garet and colleagues (2001) found that “content focus and coherence have substantial positive effects on enhanced knowledge and skills [of teachers]” and that these “enhanced knowledge and skills have a substantial positive influence on change in teaching practice” (p. 933-934). Additionally, they found that coherence has a positive influence on changing teacher practice that is greater than the influence of enhancing teacher knowledge and skills. They state, “teachers who experience professional development that is coherent – that is, connected to their other professional development experiences, aligned with standards and assessments, and fosters professional communication – are more likely to change their practice” (p. 934). Other research (Lee, 2005; Penuel, Fishman, Yamaguchi, & Gallagher, 2007) concurs with the idea that PD should be coherent with a wider set of PD opportunities and reform goals.

3.1.1.3 Evaluation of PD

“The best way to ensure the quality of professional development is through continuous, ongoing, high-quality evaluation” (Guskey, 2000, p. 275). Thomas Guskey’s words form the basis for the third facet of effective PD. In order to ensure

that PD is not only effective at changing teacher practices in the classroom, but that it also leads toward improving student knowledge and achievement, PD sessions and experiences need to be analyzed and evaluated for these specific outcomes. The evaluation and impacts of PD opportunities provided to school staff should be scrutinized to see if they are meeting the intended outcome that effective PD should produce – that is increased student performance and understanding. Evaluation of PD should analyze what specific skills and knowledge teachers acquired as a result of the PD and how these new skills and knowledge impact teaching and learning as well as the impacts PD has on the school and district culture (Christie, 2009; Hawley & Valli, 2007; Hill, 2009; Lee, 2005).

Guskey has devoted much thought and research to the subject of PD evaluation (Guskey, 2000, 2002, 2009; Guskey & Yoon, 2009). He takes an outcomes-based approach in evaluating PD. He asserts that evaluation of PD should start with a discussion of the specific goals of the PD and then point out the evidence that will best capture the attainment of these goals and how this evidence is going to be collected (Guskey, 2009; Guskey & Yoon, 2009).

3.1.1.4 Alignment with district and/or state's goals and standards

In a discussion about high-quality job-embedded professional development (JEPD), that is PD that takes place within the context of one's work environment, Croft and his colleagues (2010) assert that JEPD should be aligned with the state standards for student achievement as well as other local school district or educational agency's school improvement goals. Other researchers also highlight the importance of PD being aligned to the district's goals and initiatives for student achievement and

the state's standards and assessments (Archibald et al., 2011; Darling-Hammond, Wei, Andree, Richardson, & Orphanos, 2009; DeMonte, 2013; Desimone, Porter, Garet, Yoon, & Birman, 2002; Garet, Porter, Desimone, Birman, & Yoon, 2001; Hawley & Valli, 2007; Sparks & Loucks-Horsley, 1989; Wei, Darling-Hammond, & Adamson, 2010). Hawley and Valli (2007) described ten design principles of effective PD – culled together from a large body of research and expert opinions on what makes PD effective in strengthening teacher capacity and motivation to improve student learning. The first principle states that “professional development should be based on collaborative analyses of the differences between (a) actual student performance and (b) goals and standards for student learning” (p. 120). This puts the focus of PD on students' learning needs and what educators need in order to meet these needs instead of simply focusing on what educators want to learn. Additionally, a report from the National Staff Development Council, in a thorough review of the literature about PD, revealed that PD that is most effective in increasing student learning is connected to school initiatives and goals for learning (Wei et al., 2010).

3.1.1.5 Alignment with district and/or state's goals and standards

Active learning was also mentioned in much of the literature as a contributing factor to what makes PD programs effective. Active learning follows the principles of andragogy (or adult learning) (Fogarty & Pete, 2004; Knowles, Holton, & Swanson, 1998). As Knowles and colleagues point out, because adult learning stems from solving problems in life situations rather than an isolated accumulation of knowledge of a subject, the content of the courses or sessions and the method in which content is presented must be different in the teaching of adults than it is for children and

younger students (Knowles et al., 1998). Quoting Harold Fields from the January 1940 edition of *Journal of Adult Education*, Knowles writes, “lectures must be replaced by class exercises in which there is a large share of student participation...there must be ample opportunity for forums, discussions, debates” (p. 44). As adults, educators learn while engaged in activities that are directly related to their everyday practice, such as observing and being observed teaching a lesson or reviewing and analyzing student work with other colleagues (Archibald et al., 2011; Birman et al., 2000; Croft et al., 2010; Darling-Hammond et al., 2009; DeMonte, 2013; Desimone, 2009, 2011; Guskey & Yoon, 2009; Penuel et al., 2007; Sparks, 2009). Active engagement in activities related to everyday practice, as opposed to traditional “sit-and-get” workshop sessions, are the kinds of PD experiences adult learners want and need (Fogarty & Pete, 2004).

3.1.1.6 Focus on core content material

The sixth aspect of effective PD seen in the research literature is a focus on core content material during PD sessions (Archibald et al., 2011; Birman, Desimone, Porter, & Garet, 2000; Borko, 2004; Darling-Hammond et al., 2009; DeMonte, 2013; Desimone et al., 2002; Desimone, 2009, 2011; Fishman et al., 2003; Garet et al., 2001; Guskey, 2000, 2003; Hawley & Valli, 2007; Penuel, Fishman, Yamaguchi, & Gallagher, 2007; Sparks, 2004; Wei et al., 2010). Instead of focusing solely on peripheral features of teaching and pedagogy, such as classroom management, lesson planning, or general teaching strategies, the PD programs that have the most success in producing student gains in learning and assessment scores also focus their PD activities on making sure educators gain a deeper understanding of the subject matter

they teach and how students approach and learn that particular subject. Archibald and colleagues (2011) say that focusing on core content, including modeling how to teach the content and how students learn the subject matter, is one of the five characteristics of high-quality PD taken from their review of the literature. Similarly, in a study utilizing surveys and case studies with 1,000 teachers, Birman, Desimone, Porter, and Garet (2000) found that “the degree to which professional development focuses on content knowledge is directly related to teachers’ reported increases in knowledge and skills” (p. 30). Borko (2004) also attested to this idea by stating that “to foster students’ conceptual understanding, teachers must have rich and flexible knowledge of the subjects they teach...Professional development programs that include an explicit focus on subject matter can help teachers develop these powerful understandings” (p. 5). If students are to gain a complex and sophisticated understanding of the subjects they are learning, it is imperative that teachers have in-depth knowledge of the subject and a good grasp of how to teach the content well. PD that has a direct focus on content knowledge and ideas for how to teach it well equips teachers to be better able to explain complex and abstract concepts in their classrooms.

3.1.1.7 Collaboration and the creation of a community of practice (CoP)

Building on the concepts of andragogy is the next facet that much of the education literature mentions is an aspect of effective PD: collaboration and the creation of a learning community. A professional learning community (PLC), community of practice (CoP), or whatever phrase you want to use to describe groups of professional colleagues who gather together to discuss issues of practice, flows

directly from andragogy and adult life knowledge and/or experience being a central component in adult learning. Adults come to learning experiences with a wealth of knowledge and experience. Learning from each other is tantamount in importance to (if not more so than) learning from an “expert in the field.” “Strong professional learning communities can foster teacher learning and instructional improvement” according to Borko (2004, p. 6). Using Wenger’s *Communities of Practice* social learning framework to observe and analyze a cohort of alternately prepared new teachers in an urban school district, Cuddapah and Clayton (2011) found that community was a significant theme in the beginning teacher cohort they studied as their study participants grappled with making meaning of their practice and their identities as educators.

Many of the articles suggested that PD and communities of practice are most effective when they are formed around the similarities that teachers share, such as being at the same school, teaching in the same grade, or teaching the same subject (Desimone et al., 2002; Desimone, 2009, 2011; Lee, 2005; Penuel et al., 2007). For instance, Lee (2005) suggests that these similarities allow teachers to continually discuss the concepts that are introduced in more formal PD experiences with others who are trying to incorporate them into the same teaching context. They can talk about PD concepts in light of specific situations with specific students and really work out how more generic PD ideas can be implemented in real school environments. Additionally, Penuel and colleagues (2007) found that the collective participation of teachers from the same department/grade or teachers in the same school had a significant positive impact on teacher knowledge and change in their

implementation of specific science curriculum, like the GLOBE earth-science education program that was highlighted in their study.

3.1.1.8 Follow-up and feedback

Educators need space and time to take the ideas learned in formal PD sessions and incorporate them into their daily practice. They need constructive feedback and follow-up that helps them in their delivery of a topic or certain aspect of their teaching. This idea is seen throughout the literature; research about the attributes of the most effective PD emphasizes PD that incorporates some kind of follow-up or feedback to the initial PD experience (Archibald et al., 2011; Borko, 2004; Cuddapah & Clayton, 2011; DeMonte, 2013; Guskey, 2000, 2002; Guskey & Yoon, 2009; Hawley & Valli, 2007; Sparks & Loucks-Horsley, 1989). Archibald, Coggshall, Croft, and Goe (2011) assert that embedded follow-up and continuous feedback is one of five characteristics of high-quality PD. They cite various studies that concluded follow-up to be of statistical significance in teacher learning. Coupled with ample time and a longer duration for PD experiences, follow-up and feedback provide teachers with more opportunities to practice what they learned through PD, reflect on the outcomes, and revise practice as needed based on the outcomes. Based on the research they reviewed, Sparks and Loucks-Horsley (1989) confidently proclaim that “adequate, appropriate staff development experiences with follow-up assistance that continues long enough for new behaviors to be incorporated into ongoing practice” (p. 54) is a necessary factor of staff development that works.

3.1.1.9 Duration of PD

Learning takes time. This is true for children and it is equally true for adults. According to Birman, Desimone, Porter, and Garet (2000) “effective staff development can be traditional workshops or can be innovative teacher immersion or network activities as long as it has appropriate duration, subject-matter content, active learning, and coherence” (p. 29-30). PD that spans over an extended amount of time has more opportunities to include these other elements that characterize effective PD. In 2009, Desimone proposed a core conceptual framework for studying the effects of PD on students and teachers. This framework included the main features of PD, which includes duration. She states that a sufficient length of time over which the PD takes place and the number of contact hours in PD is required for teachers to grow in their knowledge and, therefore, change the way they teach their students (Desimone, 2009).

In a study by Cuddapah and Clayton (2011), novice teachers participated in a beginning teacher program that met every other week for two hours over one entire school year. These consistent meetings over time allowed for the formation of a collaborative community of educators who built trust among each other, so they could support one another through the difficulties and challenges that come with being a beginning teacher. Additionally, a 2009 National Staff Development Council report analyzed well-designed experimental studies, which revealed that PD programs that “offered substantial contact hours (ranging from 30 to 100 hours in total) spread over six to 12 months showed a positive and significant effect on student achievement gains” (Darling-Hammond et al., 2009, p. 9).

I now turn my attention to what the research literature says about PD in the field of school librarianship.

3.2 Professional development literature in school librarianship

The literature focusing on PD in school librarianship is limited in comparison to the literature on PD in the field of education. My search of relevant literature led me to 29 articles, 4 dissertations, and one book specifically focused on PD for school librarians. Twenty-six of these sources were written within the past 15 years and the remaining 8 were written in the 1980s and 1990s with the exception of one, which was written in 1967.

The early literature on PD for school librarians focused on the changing role of school librarians at the time, their PD needs as a result of the changes in society at the time, and discourse on who is ultimately responsible for meeting school librarians' PD needs. McJenkin (1967) and Cain (1982) address the parties who are responsible for the PD of school librarians. McJenkin, writing in collaboration with school library administrators and school library educators, made a case for the library profession as a whole to stake a claim in the PD of those in the field. She noted that there should be cooperation between schools/districts, school librarians, and library educators in ensuring that school librarians are prepared to do their work in school buildings and referred to different ways that state and local departments of education can (and were) facilitating the growth of their school librarians. She also mentions that library organizations, such as the American Library Association (ALA), should have a vested interest in the continuing education of those in the field. Cain (1982), on the other hand, focused on the role of the individual librarian in understanding

his/her own needs as a professional. She contended that “practicing school library media personnel not only accept individual responsibility for identifying their learning needs, but for them to do so in a skillful and active manner” (p. 110). Cain laid out seven strategies for how librarians can identify their continued learning needs, including being self-reflective, reading professional literature to learn about new trends, and talking with others, whether it be a close friend or colleague, about what they are learning.

The needs of the school library professional were a central emphasis in the literature surrounding PD for school librarians in the final decades of the 20th century. Edwards and Schon (1986) reported on a study in which they investigated the activities that school librarians participated in and which ones they found most valuable to their learning. They reported that librarians rated their district-level meetings as most important. University courses were of least value to them because librarians felt these courses did not focus on the practical, everyday issues of the school librarian. Turner (1988) talks about PD using the term “in-service,” since in-service, according to Turner, is an experience that benefits the entire organization and is “an activity that enables a person to do a better job.” (p. 106) He asserts that in-services are important for school librarians particularly because they are both the givers and receivers of this kind of learning. He then goes on to describe the factors present in in-services that have the best chance of being successful—those that incorporate facets of instructional design. These facets of instructional design that Turner mentioned include: a needs assessment of students, clearly written and available objectives, an understanding of how adults learn, thoughtful selection of

activities and materials, proper implementation of the in-service, and a thorough evaluation of the learning that happened as a result of the in-service and how it is transferred to student learning. Much of what Turner mentioned echoes what the literature in education says is effective PD. Other articles written during this period focus on the needs of school librarians from different states and how each gets their needs met through various forms of PD (Latrobe & Havener, 1997; Swanson, 1988).

After conducting the Lilead Survey, a nationwide survey of school district library supervisors, Weeks and colleagues (2017) considered the differences in the needs of individuals at the district level compared to those of building-level professionals. Weeks and her colleagues noted that these school library administrators wanted more professional development on leadership and administration; integrating and aligning library programs to national standards; advising, training, and motivating their district's building-level librarians; integrating technology into library programs; and strategies for adding digital materials to their current collections. In response to these needs, Weeks and the Lilead Project team created the Lilead Fellows Program with funding from the Institute of Museum and Library Services to meet these needs and create a community of supervisors nationwide. The Lilead Fellows Program used factors that the education research (described above) mention as elements of effective PD (Kodama et al., 2016).

Aaron (1988) departed from the perspective of focusing on the needs of the practicing library professional to focusing on the needs of students. She was writing in anticipation of the 1988 school librarian standards, which were slated to redefine the librarian's role in the school because of its focus on students' need for information

literacy. Despite a shift in focus from librarian needs to student needs and calling for updated and expanded skills, knowledge, and attitudes that required “a variety of formal and informal professional development experiences throughout one’s career” (p. 84), Aaron did not go into specifics of what these PD experiences would look like or entail.

The turn of the century brought a new focus to the literature on PD for school librarians. Instead of concentrating on the PD needs of school librarians or who should be held responsible for their continued learning, much of the literature since 2000 discusses the affordances that new technologies bring to receiving PD year round (Branom, 2012; Cox, 2015; Green & Cifuentes, 2008; Harada, 2001; Harlan, 2009; Kelly & Werthmuller, 2013; Moreillon, 2015, 2016; Perez, 2012; Trinkle, 2009; Young Jr., 2004).

Many articles specifically mention the use of online social networks to create PLCs that can ameliorate the multiple challenges of participating in PD experiences, such as time constraints, budget cuts, and the isolation that librarians often face as the only ones who do what they do in their school buildings and/or districts (Branom, 2012; Cox, 2015; Harlan, 2009; Kelly & Werthmuller, 2013; Moreillon, 2015, 2016; Perez, 2012; Trinkle, 2009).

With the increasing discussions and use of social media, Twitter in particular, to create a PLC, Moreillon (2015) conducted a *netnography* (an ethnographic study conducted solely online) of those who participate in a Texas Twitter chat group, #txlchat, to learn about how this social media platform is being used for professional learning. She joined the chat as a participant observer and, throughout her study, took

field notes of the chat dialogue, disseminated an online survey to all #txlchat participants, electronically interviewed the co-founders and key participants, and analyzed the chat archives. Moreillon found that chat participants were drawn to this group because of the interesting and relevant topics and the sense of belonging and support that was formed among the tweeters. She noted that “this CoP [community of practice] supports practitioners navigating the complexity of school librarianship today and provides them with connections to one another and to the information they need to be successful in their work” (p. 136).

Besides social media, authors mentioned other online tools, such as email, webinars, wikis, blogs, and various websites, to enhance and sustain PD throughout the year (Harada, 2001; Harlan, 2009; Kelly & Werthmuller, 2013; Troutner, 2012). For instance, Harada (2001) described the Partnerships Project in Hawaii, a PD collaboration between teachers and school librarians across the state in which teachers and school librarians worked together to create inquiry units for students. To continue collaboration after a 3-day summer institute, teachers and school librarians used an electronic forum to share their progress and continue to ask questions and post comments. Video conferences and email were also used to disseminate announcements about the project and to give Partnerships Project participants more information on topics brought up in the forum discussions. In her article, Troutner (2012) provides the reader with a plethora of websites that have resources about the Common Core State Standards, using iPads in teaching and learning, and various ideas on how to use Google tools for lessons.

Although discussions about the factors that make PD effective were not abundant in the literature on PD for school librarians, a few authors did mention some of the core elements of effective PD that were discussed in the education literature. Several researchers mentioned the need for flexible or extended PD time so participants can practice the ideas they learned in PD sessions (Brown, Dotson, & Yontz, 2011; Green & Cifuentes, 2008; Harada, 2001; Kodama et al., 2016). Additionally, Brown, Dotson, and Yontz (2011) found that PD that is aligned with the school's goals and mission are attributes of successful PD. Having active learning experiences as a part of PD activities was also mentioned in a few articles as a necessary component of effective PD (Hug, 1988; Trinkle, 2009; Young Jr., 2004). Moreover, Bailey, Teel, and Walker (2007) mention the importance of administrative support, planning, and evaluation in providing a successful PD experience as they described the Librarian to Librarian Networking Summit for North Carolina school librarians.

While the field of school librarianship does consider the continuing knowledge and expertise of its professionals as evidenced in the literature reviewed here, there remains a clear gap in our knowledge of what is currently being done for building-level librarians' PD in school districts across the country. Also unknown are the effective means of providing PD to school librarians that not only improves their ability to perform their unique roles in their buildings, but ensures students are learning the skills and content they need from their librarians to be successful in and out of school. Because of this lack of understanding, we do not know how these district PD experiences affect librarian practice and, therefore, the teaching and

learning that takes place within their schools. This research intends to fill this gap in the literature by looking at the PD that is provided to building-level librarians by their school districts, specifically through the lens of the district-level library supervisor.

Chapter 4: Methodology

4.1 Research Goals and Significance of the Study

The goals of this study were to: 1) begin to identify what school district library supervisors across the United States do in terms of creating and providing PD opportunities for school librarians and 2) whether (or how closely) their actions reflect the characteristics of effective PD as described in the literature.

Based upon a review of the literature, I believe that this research study represents the first of its kind to look into the practices involved in providing PD experiences for building-level school librarians by the library supervisors in the school districts in which the librarians are employed. Knowledge gained from this research will provide an initial view of the PD that is available to school librarians through their districts and compare what is currently being done with what the research shows to be effective forms of PD.

Understanding the current state of PD for school librarians in districts across the U.S. enables us to identify what is and is not being addressed in PD content as well as the ways in which supervisors plan and deliver this content to their librarians. Having a better understanding of the current state of PD for school librarians allows those responsible for the PD of school librarians to see and fill in the gaps of knowledge and skills that exemplify a future ready, 21st century school librarian. Obtaining an initial view of how library supervisors provide for the professional needs of their building-level librarians offers a basis for further research in this area and paints a clearer picture of what effective PD looks like for school librarians.

4.2 Research Questions

This study was guided by the following research questions:

1. What are the characteristics of the PD experiences that district-level library supervisors make available to their building-level school librarians?
2. How do supervisors support their building-level librarians in being able to perform the duties of a future ready, 21st century school librarian?
3. In what ways does the PD provided by the school district library supervisor reflect what the research says are best practices or effective facets of PD?
4. What are the conditions that support or detract from the availability of PD for building-level school librarians?

This chapter provides a discussion about the models from which I am basing this research, a description of the study participants, how I collected data to answer these questions, compliance with ethical standards, the data analysis methods used, and the study's potential limitations.

4.3 A Social-Ecological Model that Fosters Effective Professional Development for School Librarians

To explore the nature of PD and learning in public school districts across the United States and to answer my research questions, I started by modifying a theory and model proposed by Urie Bronfenbrenner (1977, 1988, 1994), a Russian-American developmental psychologist, to build a model, *A Social-Ecological Model of an Ecosystem that Fosters Effective Professional Development for School Librarians* (Figure 1) that identifies the parties responsible for effective PD for school librarians. Using my modified version of Bronfenbrenner's model as inspiration, I

created a new model, *A Map of Responsible Parties for the Effective PD of School Librarians* (Figure 2), that matches the 9 facets of effective PD reflected in the education literature with the parties that have influence in ensuring that each facet is portrayed in the PD offered to librarians. I then used this model to construct a survey questionnaire for district-level school library supervisors in districts throughout the country to learn what they, and ultimately their districts, do for the PD of their building-level librarians. Follow-up interviews were also administered to a small number of survey respondents to gain a more in-depth view of how PD practices are conducted within specific school districts.

To understand the context in which school librarians work and the PD environment they inhabit, I found it appropriate to work from a model that describes the conditions in which effective PD for school librarians can thrive (Figure 1). The model I am using to base my research comes from Urie Bronfenbrenner's *Ecological Framework for Human Development* (Bronfenbrenner, 1977, 1988, 1994). Working from the perspective of a developmental psychologist, Bronfenbrenner was interested in studying all the factors that contributed to a person's development, since most children do not grow up in isolated environments, but in a specific context, place, and time. Bronfenbrenner created a model that looks at child development from the context/environment in which a child is raised and includes all the seemingly tangential, yet potentially impactful, factors that affect a child's development.

Bronfenbrenner's original model (1979) has five subsystems (i.e. places and/or people) that interact with and, therefore, influence the child/individual (at the center of the model): the microsystem, mesosystem, exosystem, macrosystem, and

chronosystem. The first subsystem, and closest in proximity and influence to the individual, is the microsystem. The microsystem includes the people and places that are in direct contact with the individual. This includes such units as the family, school, church, and sports leagues to which the child belongs. The second subsystem is the mesosystem. The mesosystem encompasses all the interactions between all the various units in the individual's microsystem. A child's parents' interactions with his/her school teacher would be an example of the mesosystem. The third subsystem is the exosystem, which is comprised of all the people and places that are not in direct contact with the individual, but have significant impacts on the individual, such as a parent's place of employment. The fourth subsystem in Bronfenbrenner's framework is the macrosystem. The macrosystem includes the cultural values, beliefs, and norms that the players/units in the exosystem and microsystem live in and are indirectly influenced. Individualism, hard work, equality, and honesty are some examples of values that would define the macrosystem of someone living in the United States. The fifth, and final, subsystem is the chronosystem. The chronosystem is comprised of the events in a specific historical time period that may or may not have an impact on the individual. For example, a child growing up during the decades of World War II would have a different outlook on life based on the events and outcomes of the War than someone who lived their childhood in a world of relative peace.

Although Bronfenbrenner's framework is most often used in discussions about child and human development, I adapted his model to explain the PD context in which school librarians exist, understanding that any kind of development, whether personal or professional, does not happen in isolation, but in specific contexts in place

and time. Opfer and Pedder's (2011) work (mentioned previously in the literature review) mirrors that of Bronfenbrenner and highlights the complex context in which PD is situated in the realm of education. In a similar vein to Opfer and Pedder, Figure 1 depicts the context in which a school librarian works. The school librarian sits at the center of the model surrounded by the people in his/her microsystem. These individuals include the building-level principal, other building-level staff, and the school district library supervisor. These people directly influence the PD a school librarian receives within his/her district.

The library supervisor, principal, and other building-level staff's communication amongst each other create the mesosystem. These interactions, when communication among the three parties focuses on PD for the school librarian, have direct impact on the kinds of PD the school librarian receives. Cohesion between the principal and library supervisor as it relates to the role and responsibilities of the school librarian, particularly, can have great benefits for the school librarian's PD experiences.

The next level is the school librarian's exosystem, the local school district in which he/she works. District-level administrators, such as the superintendent, assistant superintendent, content specialists, and members of the school board comprise the individuals at this level. The decisions made at this level, regarding funding and time allocations for PD days/sessions, have direct impacts on the quantity and quality of PD the educators in the school district, including the school librarians, receive. As the model shows, the district library supervisor overlaps the microsystem and the exosystem. District library supervisors hold a unique position

when it comes to the PD of the school librarians. They have a direct relationship with the school librarian in that they communicate with the librarians and directly provide PD for them, but they also encompass a role at the district level and have closer connections and ability to communicate with the individuals at the district level than the school librarian does being at the building level. The actions and decisions made at the district level can have both positive and negative effects on a school librarian's access to effective PD. For example, the board and superintendent's decisions on how much funding to allocate to PD and to which educators in the district the PD funding goes to directly affects the amount of PD a school librarian will be able to take part in throughout the school year.

The macrosystem level comprises all the entities that contribute to the overall values and norms that the individuals in the exosystem and microsystem abide. Values set forth by national library associations, the American Library Association (ALA) and the American Association of School Librarians (AASL), such as the ALA Core Values of Librarianship, guide the attitudes, beliefs, and behaviors of the school district library supervisor and the school librarian, as do the values and norms of the state and local library organizations to which these individuals belong (ALA Council, 2004). Depending on the school librarian and district supervisor's experience in their MLIS (or pre-service) program, this entity may have instilled certain ideals about continuing PD that the librarian and supervisor hold onto as they graduate from these preparation programs and begin work in their school districts. National and state education government agencies and associations (e.g. National Education Association, U.S. Department of Education, and state education departments) also

have a role in influencing the beliefs and processes of school districts. The issues they concentrate on and the funding they make available to local school districts have direct impacts on the topics in which individual districts focus. Societal perceptions of librarians and how people, specifically adults, learn also factor into the effectiveness of PD for school librarians.

The last subsystem, the chronosystem, also has an effect on the PD school librarians receive. In today's society, the effects of the Internet and new technologies play a major role in the possibilities of PD available to school librarians in the 21st century. Use of online tools, such as social media and various websites (as evidenced in the literature review), provides the school librarian with a vast array of resources and ways to grow as a professional.

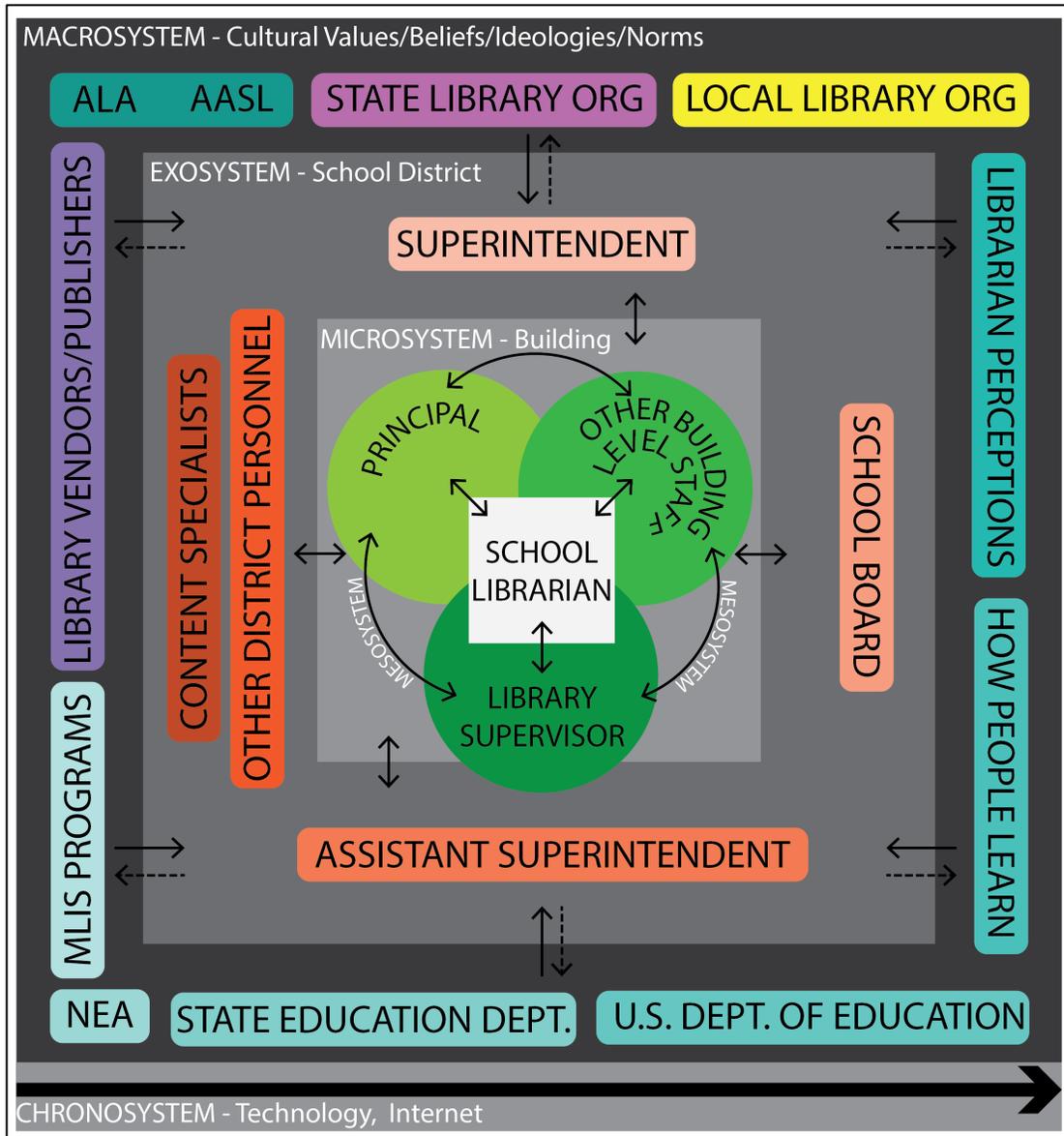


Figure 1. A Social-Ecological Model of an Ecosystem that Fosters Effective Professional Development for School Librarians

Based on the individuals and entities identified in Figure 1 that have an impact on the school librarian's PD, I created a model (Figure 2) that matches the elements of effective PD (based on the review of the literature in the previous chapter) with the people/organizations responsible for its effective deployment. During my review of the PD literature in the field of education, I created a matrix of the themes found in each article/book I reviewed – citing quotations and page numbers that corresponded

to each theme referenced. From this matrix, I was able to ascertain which PD themes were mentioned the most as being an effective method of conducting PD. The elements of PD that the literature identified as positively impacting student learning were: having a school/district culture and leaders who support and encourage staff professional growth, coherence with a broader PD program/plan, evaluation of PD activities, alignment with district and state goals and standards, building in active learning experiences to PD sessions, having a focus on core content, collaboration and creating a CoP or a PLC, follow-up and feedback to PD sessions, and longer-term PD experiences (over time). These top 9 most referred to themes (i.e. those that were mentioned by 10 or more different sources) became the basis for my model. I then matched the individuals/organizations that have a direct role in ensuring that specific feature is included and maintained in the PD available to school librarians from Figure 1 to the 9 facets (or themes) to create the arcs surrounding the pie chart. The colors that represent the different parties in both Figures 1 and 2 are the same to maintain consistency between the two models. Each of the 9 facets of effective PD evidenced from the literature is described below in more detail as it relates to school librarians' PD.

encourages continual, life-long learning needs to be present within our education system – at the district level, and also at the state and national levels. From the perspective of school librarian PD, this means responsibility is placed on many individuals and organizations. The individual school librarian, building-level principal, other building-level staff, district library supervisor, superintendent, assistant superintendent, the school board and state and national departments of education all have a role to play in making sure a culture of professional learning is maintained and supported, not just for school librarians, but for all educators at the building- and district-levels.

4.3.2 Coherence with a professional development plan

School district library supervisors have the advantage when it comes to creating a PD plan for their building-level school librarians. Because they have a more direct relationship with the school librarians in their district than others outside the district who also provide PD for school librarians, they, ideally, have a better sense of what kinds of knowledge and skills their building-level librarians need and more opportunities to provide it to them. They can have a bird's eye view of these learning needs and create PD sessions that build upon each other. I argue that local, state, and national library organizations, MLIS programs, and vendors can provide coherence in their PD offerings as well, however they are more limited due to the distance and time constraints of the PD they offer.

4.3.3 Evaluation of PD activities

Whether or not the PD offered to school librarians was created in-house by the library supervisor or outsourced to a vendor or other organization, evaluation of the PD offered is an aspect that must not be overlooked by those who provide PD to school librarians. Evaluation of any PD program or event generally falls to those who conduct the PD (library supervisors, library vendors, national, state, or local library organizations), but MLIS programs who offer PD and have a vested interest in ensuring the success of the profession and the individuals who serve in the profession can also contribute to the evaluation of PD programs and, hence, suggest ways to improve PD experiences for school librarians.

4.3.4 Alignment with state and/or district goals and standards

The school district library supervisor has primary responsibility and is in a prime position working at the district-level to align whatever PD he/she provides to school librarians with the goals and standards set by the school district. Other providers of PD to school librarians can obviously search for and find the state and district goals and standards for school librarians and make sure their PD experiences align with them. However, the library supervisor is the one individual who can really tailor school librarians' PD to their district and state initiatives because they are able to focus solely on the librarians in their district, whereas other PD providers garner a larger audience for PD that reaches beyond specific districts and states and, therefore, make their programs more generic to be relevant to multiple districts and states.

4.3.5 Including active learning experiences in PD sessions

In addition to focusing on core content, PD providers are responsible for the structure and processes of the PD sessions and activities they lead. This includes incorporating active learning experiences in any PD sessions they offer to school librarians. PD sessions that incorporate active learning experiences are those in which participants have opportunities to practice what they learn in the session, observe others teach, have others observe their teaching, and engage in meaningful discussions about their current teaching practice (Archibald et al., 2011; Birman et al., 2000; Laura M. Desimone, 2009, 2011; Garet et al., 2001; Guskey & Yoon, 2009). Active learning could also be considered as job-embedded PD that “makes a direct connection between learning and application in daily practice, thereby requiring active teacher involvement in cooperative, inquiry-based work” (Croft, Coggshall, Dolan, Powers, & Killion, 2010, p. 2). All the aforementioned groups of people who provide PD to school librarians are responsible for including active learning experiences in whatever PD they provide.

4.3.6 Focus on core content

For the school librarian, a focus on core content would mean a focus on any aspect of literacy/reading, information literacy and/or 21st century skills, including research, inquiry, and communication technologies. The main provider of PD for school librarians within the district is the district library supervisor. They have direct control over what is discussed in PD sessions and whom they bring in to lead these sessions. Outside of the district, other parties have a stake in providing PD for school librarians. These include national library organizations (ALA and AASL), state and

local library associations, MLIS programs that offer continuing professional education courses, as well as vendors or other organizations that are concerned with the continued learning and professionalism of school librarians and have initiatives that focus on this learning.

4.3.7 Collaboration and creation of a professional learning community (PLC) or community of practice (CoP)

The individuals with primary responsibility for facilitating and ensuring that collaborations or PLCs are being created and maintained among school librarians and other educators are the district library supervisors, school librarians themselves, and national, state, and local library organizations. Because school district library supervisors have a bird's eye view of the district's school library program, they know and have contact information for all the librarians throughout the district. They are in the best position to connect new and/or disconnected librarians to other librarians and catalyze relationships that might lead to collaboration and the formation of PLCs. The school librarian him/herself also needs to be willing to collaborate and share knowledge from practice with other librarians. They have to choose to be active participants in collaborations and PLCs in order for the professional community to thrive and be an effective source of PD that enables positive change in practice. To some extent, national, state, and local library organizations have a responsibility to create meaningful spaces and groups where school librarians can come together to share best practices and brainstorm solutions to similar challenges, but it is up to the individual librarian to take the initiative to participate in these activities.

4.3.8 Incorporating follow-up and feedback

Incorporating follow-up and feedback into PD experiences falls under the purview of those who are directly responsible for creating the PD experiences for school librarians. This includes library supervisors, who provide PD for school librarians through the school district, as well as local, state, and national library organizations, MLIS continuing education programs, and vendor-sponsored programs, who also provide PD for school librarians through various conferences and other experiences.

4.3.9 Long-term PD experiences

Like incorporating follow-up and feedback, the people primarily responsible for providing PD experiences that span a longer time frame, months and years as opposed to days or weeks, are those who are directly responsible for providing PD to school librarians and those who make decisions about funding for PD in the district. As the person in the district who has primary responsibility for providing PD to school librarians, the library supervisor has license to plan PD as he/she deems necessary. This could be structured as one-time, independent sessions focused on disparate topics or multiple, connected sessions that build off of each other. The amount of time, whether short-term or long-term, that is allocated for PD for any school employee is dependent upon the funding that is allocated towards this item in the budget, which is the responsibility of the school board, district-level administrators (superintendent and assistant superintendent), and the principal at the building-level.

4.3.10 Final thoughts on theoretical model

As illustrated above in *A Social-Ecological Model of an Ecosystem that Fosters Effective Professional Development for School Librarians* (Figure 1), there are many parties that are responsible for and various components at play in the effective PD of school librarians. This dissertation aimed to understand what one responsible party, the school district library supervisor, does to ensure that his/her district's school librarians are equipped to perform the duties of a 21st century school librarian and to compare what is being done in regard to PD for school librarians to the map in Figure 2. For this study, I specifically chose to focus on the school district library supervisor's role in the continued learning of building-level school librarians because, as Figure 2 shows, they have responsibility and are well-positioned in their districts to incorporate all 9 aspects of effective PD into whatever PD experiences they provide for their building-level librarians.

Ultimately, the model presented in Figure 2 serves as a foundation and starting point for answering this study's research questions. The model reveals specific characteristics of effective PD evidenced by the literature and functions as a kind of "rubric" for evaluating the effectiveness of the PD provided by districts for school librarians. The model in Figure 2 can be seen as a guide to the parties and processes that factor into an effective PD program for school librarians. However, there may be parties within or outside of the district that I am unaware of who play a significant role in the PD opportunities offered to school librarians. Hence, the data that results from answering the research questions serves as a means to also explore the model I created of the parties actually responsible for the various aspects of

effective PD for school librarians and will be able to identify any parties I have overlooked.

4.4 Study Participants

The population I surveyed came from the same population used in the 2012 and 2014 Lilead Surveys: school district library supervisors in public school districts across the United States with a student population of 25,000 or more. The Lilead Survey (<https://lileadproject.org/survey/>) is a national survey of school district library supervisors in large school districts that captured supervisors' titles and job descriptions, roles and responsibilities, demographics, and challenges and needs (The Lilead Project, n.d.-b). In cases where a state did not have a district with 25,000 or more students, the district with the largest number of students was included in this survey sample to garner a national representation of survey findings. Section 4.4.1 explains the process I used to find survey participants in more detail.

I used the same process as that used by the Lilead Survey to find study participants because it surveyed the same population in which I wanted to base this research. The choice to include only larger school districts in the Lilead Surveys was based on the premise that larger school districts would be more likely to have an administrator at the district-level who was responsible for library programs because of the greater number of schools, libraries, and librarians in the district as a whole, as compared to smaller school districts in which there may only be building-level librarians with purview over their own library program (Weeks et al., 2016).

According to the 2012 Lilead Survey, 100 percent of respondents (166 supervisors) stated that they have primary responsibility for providing PD to their

building-level librarians. Respondents also stated that “offering professional development for building-level librarians” is an “extremely important” task in their position, giving this task an average of 3.8 out of 4 in level of importance (Weeks et al., 2017). Lilead Survey respondents also reported that they provided PD for their librarians at least once a month (the mode for all respondents in the 2012 Lilead Survey). Clearly, this task is an important one that falls under the purview of district library supervisors. Therefore, a thorough investigation of what library supervisors do in terms of planning for and implementing PD in their district is an important component in understanding what the PD opportunities and experiences are for building-level librarians and another reason why this population of school district library supervisors was used in this study.

This study used non-random purposive sampling to choose its study participants (Kelley, Clark, Brown, & Sitzia, 2003, p. 264). Non-random purposive sampling was the best sampling method for this specific study because I wanted to make sure that the districts surveyed had someone with the information and knowledge to answer the questions posed in the survey and subsequent interview.

4.4.1 Finding school district library supervisors

School districts that met the study criterion of having 25,000 or more students were located by searching the Institute of Education Science’s National Center for Education Statistics (NCES) “Search for Public School Districts” database (<http://nces.ed.gov/ccd/districtsearch/>). This database houses information from the Common Core of Data, which is “a program of the U.S. Department of Education’s National Center for Education Statistics that annually collects fiscal and non-fiscal

data about all public schools, public school districts and state educational agencies in the United States” (Institute of Education Sciences, n.d.). Education agency officials are responsible for providing this data to NCES. The most current data about school districts that this database included at the time this research was conducted was from the 2014-2015 school year.

In total, I found 296 school districts that met the criteria for inclusion in this study. After this complete list of all public school districts in the U.S. with a student population of 25,000 or more was compiled, a search of these districts’ websites was undertaken to find the name and contact information of the individual (or individuals) in charge of library services at the district-level. In total, I found contact information for at least one person in the district with responsibility (or potential responsibility) for the library program in 286 of these 296 school districts. These individuals were sent an initial email to explain this study and get further verification of the person at the district-level in charge of library services.

4.5 Data collection

I collected data to answer my research questions using two different methods: an online survey and follow-up interviews. One purpose of administering a survey is to obtain information that “cannot be obtained in other ways” (Fowler, 2002, p. 3). Because little research has been conducted on the PD practices for school librarians in districts nationwide, there is scarce data about this topic and, therefore, this information is not available in other places. Online surveys, in particular, as opposed to traditional face-to-face or phone surveys, provide an accessible, relatively inexpensive, and quick way of gathering information from a large group of people,

especially people who are in geographically separated areas, as is the survey population with which I worked (Couper & Miller, 2008; Wright, 2005). Additionally, Buckingham and Saunders (2004) state that “surveys are most useful when you want to summarize facts about a fairly large population” (p. 53). Granted the population I am collecting data about is not in the hundreds of thousands or even thousands, it is a large enough number of people that gathering information in the form of a survey proved to be the best course of action for this particular research study.

In addition to the survey, follow-up interviews were conducted. The purpose of these follow-up interviews was to gain a more detailed picture of the environment in which school district library supervisors provide for the PD needs of their building-level librarians. Maxwell (2013) posits “the purpose for using multiple methods is to gain information about different aspects of the phenomena that you are studying” (p. 102) and to “gain a greater depth of understanding rather than simply greater breadth or confirmation of the results of a single method” (p. 103). A survey can provide a wide breadth of information about the PD practices for school librarians. Coupling a survey of the nature I conducted with follow-up interviews allowed for depth in understanding and a more detailed examination and picture of how school district library supervisors provide for the PD needs of their building-level librarians and address the other factors in the librarians’ PD ecosystem that contribute to or detract from the effective implementation of PD for school librarians.

4.5.1 Survey

4.5.1.1 Survey instrument

Data that detailed what supervisors do in support of their building-level librarians' PD and answered the research questions outlined above were collected via an online survey questionnaire created with Qualtrics, an online survey platform that is provided to students and faculty at the University where this research was conducted. As a vetted and easy to use tool, Qualtrics allows for a variety of question creation options and the ability to display or skip questions as questionnaire logic applies. It also has the features needed to be able to display survey results/data in ways that facilitate data analysis.

4.5.1.2 Survey design

Survey questions consisted of both closed- and open-ended questions (see Appendix A for a full list of survey questions) to capture as much detail as possible from participants without making the survey too difficult or time consuming to complete, and therefore potentially having an adverse effect on the response rate. The survey was created to enable participants to complete it in no more than approximately 30 minutes and included questions such as "Does your district have an overall budget for professional development activities and events?" to "What were the major topics you focused on during the in-person PD sessions you organized this school year?" These questions were formulated with the research questions and 9 facets of effective PD in mind. To ensure all survey questions were applicable and gathered information that answered one or more of the research questions, I created a

map that connects each survey question to the research question(s) it helped to answer (see Appendix B).

Because survey questions are the means of measuring what is being studied and the basis for the reliability of the results, particular attention was paid to the creation of survey questions in this study (Fowler, 2002; Kelley, Clark, Brown, & Sitzia, 2003). Question wording, making sure all respondents interpreted questions in the same way, and framing questions in a way that would lead to standardized answers that were comparable were considered in the creation of this survey instrument. In order to accomplish this, a pilot study (explained in more detail in section 4.5.1.3) and numerous iterations of the survey were completed.

4.5.1.3 Pilot study

As previously stated, to ensure that the survey questions were clear, easy to understand, and interpreted and defined in the same way by all participants (which increases reliability of the survey instrument (Fowler, 2002)) and to measure the amount of time it took to complete the survey, a pilot study was administered with 6 supervisors who were not a part of this study's sample (Kelley et al., 2003; Maxwell, 2013). The people who were asked to participate in the pilot study were chosen because they were also district-level library supervisors who represented districts in different parts of the country, but were not eligible to be a part of the survey population because their district's student population was too small. (See Appendix C for pilot study participation email request.) As a part of this pilot study, I also asked participants to take note of questions that were confusing or difficult to answer for whatever reason, whether it was because of confusing wording of the question or a

question not being applicable to their particular situation, and email me back their thoughts. With one pilot study participant, I was able to walk through the entire survey with her – question by question – to get feedback on which questions were difficult to understand and/or answer and why. The results of this pilot study and feedback from the respondents enabled me to take another look at the survey questions and revise or delete questions that were confusing or not applicable to respondents.

4.5.1.4 Survey dissemination and duration

286 supervisors were sent an initial alert email (see Appendix D) from the researcher a week before the survey window opened that introduced the researcher and the research being conducted and explained what their participation in this research project would entail. Email recipients were given the opportunity to opt out of participation in this study at this time and also to verify their role as district-level library supervisor. From this alert email, I was able to verify that there were 6 more school districts that did not have a library supervisor. Two email recipients chose to opt out of survey participation, two districts required a separate district IRB to be completed before their district would participate in any research, and 8 emails bounced back after the initial alert email was sent. Additionally, there were 9 districts in which I was unable to verify the exact person who was in charge of library services. A second recruitment email (see Appendix E) was sent to the remaining 267 supervisors. This recruitment email included a short introduction of the research being conducted, a unique URL for each supervisor to access the online survey instrument, the survey window timeframe, and approximately how long the survey

would take to complete. After this 2nd email was sent out, 8 more email recipients chose to opt out of the survey, 1 supervisor was out on family leave, and 11 emails bounced back.

The survey was sent out via email in April 2017 and was active for a total of 4.5 weeks. As a means to improve the response rate of survey participants, reminder emails (see Appendix F) were sent to supervisors who had not yet completed the survey at the beginning of Weeks 3 and 4 and a final reminder was sent out 3 days before the close of the survey (Kelley et al., 2003). Additionally, an Amazon gift card raffle was offered to all supervisors who completed the survey as an incentive to obtain as many responses as possible from the survey population (Fan & Yan, 2010; Saleh & Bista, 2017; Singer, Van Hoewyk, Gebler, Raghunathan, & McGonagle, 1999). Survey respondents were asked if they would like to participate in the raffle at the end of the survey. Respondents consented to participation in the raffle by giving their name and email address. Four raffle winners were chosen at random at the close of the survey and sent an email containing a link to their gift card. (See Appendix G.) At the close of the survey window, a thank you email was sent to all supervisors who completed the survey. (See Appendix H.)

The survey was sent out in April because most of the PD that school district library supervisors had planned for the 2016-2017 school year had been completed and the details of the PD they conducted throughout the school year were still fresh in their minds (Fowler, 2002). Additionally, April was far enough away from the end of the school year that supervisors were most likely not overwhelmed with end-of-

school-year duties and responsibilities and, hopefully, had time in their schedules to fill out this survey.

4.5.2 Follow-up interviews

As stated previously, follow-up interviews were conducted with several survey respondents to gather more detailed information about the PD practices for building-level librarians that occurred in their school district.

4.5.2.1 Interview instrument and questions

These interviews were administered via an online communication channel (WebEx) available to students and faculty at the University where this research took place. Interviews were recorded using the recording feature in WebEx and subsequently transcribed to facilitate thorough content analysis.

Follow-up interviews were conducted using a semi-structured interview protocol (see Appendix I) (Bogdan & Biklen, 2007). I decided to use a semi-structured interview protocol because I wanted to have questions that could be asked to all interviewees to catalyze conversation and compare responses, but I also wanted to leave room for other questions to be asked and other avenues of interest beyond the interview questions to be explored. A list of eight questions, with some questions having sub-questions, was created for the interview protocol. Interview questions were created to elicit detailed responses by interviewees and to allow the interviewee to share their expertise and knowledge on this topic (Bogdan & Biklen, 2007; Wang & Yan, 2012).

4.5.2.2 Selecting and contacting interview participants

In the initial email sent to all potential participants explaining this research, I informed supervisors that in addition to a survey I would also be administering interviews. At the end of the survey, participants were asked if they would be willing to participate in a follow-up interview. The survey answers of those who said they were willing to have an interview with me were analyzed using a scoring system that allotted a different number of points to each question depending on the answer given. This scoring system revealed the level of consistency or inconsistency that participants' PD practices and content had with what is known to be effective means of PD for educators as evidenced by the literature (see *Section 4.7.1.1: Creating the survey scoring system* for a detailed description of this scoring system).

From this initial survey analysis, I found the respondents who had the highest scores and those who had the lowest scores. I chose to interview respondents who had the top five scores and the bottom 5 scores. I also chose to include an 11th person who fell within the top seven respondents because her district's library program had been recognized with a national award for their exemplary library program. The number of potential interviewees was chosen as an estimated number of participants that would be needed to reach data saturation (Guest, Bunce, & Johnson, 2006). I emailed these 11 supervisors and received responses from 8 of them agreeing to participate in an interview (see Appendix J for interview request email). Interviewees A through E were the top scorers and Interviewees X, Y, and Z were the low scorers.

Interviews took place in July and August 2017. Each interview lasted approximately 45 minutes to one hour. Table 1 provides an overview of the districts in which interviewees work.

Interviewee	# of students	# of schools	# of certified librarians	FARMS %
A	~45,000	37	20	18%
B	41,000	58	61	46%
C	147,000	170	111	--
D	112,000	165	176	45%
E	~83,600	130	129	60%
X	135,000	220	9	75%
Y	130,000	208	121	68%
Z	31,000	42	48	65%

Table 1. District demographics of interviewees.

4.6 Compliance with ethical standards

Because this study involved the questioning of human subjects, a full Institutional Review Board (IRB) was submitted to the University at which this research was conducted in advance of any surveys/questionnaires being sent out to individuals in the study population or interviews conducted. After submission of all IRB documents, approval was given in advance of survey dissemination. Per IRB plan, individuals were asked to give consent electronically at the beginning of the survey as well as the opportunity to opt out of participation if they chose to do so. No penalty was attributed to those individuals who decided not to participate in this study or participated only partially. (See Appendix K for IRB participant consent form.)

Obtaining IRB approval is an important step in conducting research with human subjects because a researcher should respect every person's autonomy and be mindful of protecting research participants' confidentiality (Kaiser, 2012). IRB approval is a step in the research process that signifies the researcher has taken

precautions to preserve the beneficence, or protection from harm, of research participants and that they are not taking advantage of those who participate in their study.

4.7 Data analysis

4.7.1 Survey data analysis

Initial analysis on the survey data was conducted at the close of the survey period (beginning in May 2017). Each individual respondent's answers were analyzed independent of the other respondents. All answers to each respondent's survey questions were assigned a specific point value based on if the answer supports, does not support, or is neutral in displaying a respondent's/district's adherence to each of the 9 facets of effective PD. (See *Section 4.7.1.1: Creating the survey scoring system* for more information on this scoring system.) A scoring sheet was created for each survey respondent using Microsoft Excel formulas that "grades" each respondent's answers based on the point values assigned to each possible answer with respect to each of the 9 facets. Total scores and scores for each section of the survey (organized by effective PD facet) were calculated and used to compare what is done in each of the respondent's districts in regard to PD for school librarians. As mentioned earlier, participants were chosen to participate in follow-up interviews from the top and bottom scorers to gain perspectives on PD from both ends of the scoring spectrum.

Further analysis of the open-ended survey data was qualitatively coded by hand using Microsoft Word and Excel. Interview transcripts were qualitatively coded using Dedoose, a web-based and accessible computer-assisted qualitative data

analysis (CAQDAS) software program. Dedoose was chosen for its compatibility with the researcher's computer system and its ability to perform the qualitative data analysis needed for this study. Deductive and inductive coding was used to analyze the survey data and interview transcripts. The following deductive codes were used as a starting point for analysis. These codes are based on the review of the literature.

- Coherence with a district PD plan
- Supportive PD culture
- Supportive leaders of PD
- Long-term PD
- Follow-up provided
- Feedback given
- Collaboration among librarians
- Formation of a Community of Practice (CoP)
- Focus on core content
- Active learning experiences
- Alignment with state goals/standards
- Alignment with district goals/standards
- PD Evaluation

Inductive coding was done primarily using descriptive and structural coding methods (Saldaña, 2013). Descriptive coding was used to identify the topics that were discussed in the qualitative data. Structural coding helped group large portions of data into categories for further examination of commonalities and relationships. Appendix

L lists all the codes that were used to describe the data from the open-ended survey questions and interview transcripts.

4.7.1.1 Creating the survey scoring system

The survey had 9 sections that correspond with the 9 facets of effective PD. Each section was of equal worth, in this case 10 points each, as each facet is equally important to the provision of effective PD. Therefore, the total number possible was 90 points.

The survey consisted of three different types of questions: multiple-choice, ranking (or Likert scale), and open-ended. Table 2 shows an example of each type of question.

Multiple-choice question	Ranking/Likert question	Open-ended question
Q6: Does your district have an overall, written professional development plan/program for teachers and other building-level educators (e.g. counselors, specialists, librarians, paraprofessionals, etc.)?	Q30: How often did you provide opportunities for ongoing discussion (or "practice and report" type of activities) after in-person PD sessions?	Q24: What were the major topics you focused on during the in-person PD sessions you organized this school year?
Answer choices: Yes, No, or Not sure	Answer choices: always, most of the time, about half the time, occasionally, or never	

Table 2. Sample questions and answer choices for each type of question from survey.

Although all 9 sections were weighed equally, the distribution of points within each section was based on the type of question and how many questions were in each section. When scoring the multiple-choice questions, respondents who answered "Yes" were given 1 point. Those who answered "No" were given 0 points. An answer of "Not sure" was given 0.5 points. Respondents who answered "Not sure" received 0.5 points because these questions are referring to what the district or state does. The

library supervisor could or could not have this information and so there is a 50 percent chance that the answer could be “Yes” or “No.” I did not want a “Not sure” answer to skew the total points received by a respondent for information the supervisor did not have.

For ranking questions, supervisors were asked to choose between one of five options on a scale from “always” to “never” as in Question 30. (See Table 3.) For these types of questions, the points were allotted in increments of 0.2 points up to a total of 1 point; 0.2 for “never,” 0.4 for “occasionally,” 0.6 for “about half the time,” 0.8 for “most of the time,” and 1.0 for “always.”

Q30: How often did you provide opportunities for ongoing discussion (or “practice and report” type of activities) after in-person PD sessions?				
<i>Always</i>	<i>Most of the time</i>	<i>About half the time</i>	<i>Occasionally</i>	<i>Never</i>
1.0	0.8	0.6	0.4	0.2

Table 3. Sample scoring for ranking/Likert scale survey questions with 5 answer choices.

The only exception to this scoring rubric were questions in the “Long Term PD” category. In this case, there were questions with 4 different answer choices: “single day sessions focused on multiple topics”; “single day sessions focused on the same or similar topics”; “multiple day sessions focused on multiple topics”; “multiple day sessions focused on the same or similar topics.” Answers were given 0.25, 0.5, 0.75, and 1 points, respectively. (See Table 4.)

Q32: Were these summer PD experiences (check all that apply):			
<i>Single day sessions focused on multiple topics</i>	<i>Single day sessions focused on the same or similar topics</i>	<i>Multiple day sessions focused on multiple topics</i>	<i>Multiple day sessions focused on the same or similar topics</i>
0.25	0.5	0.75	1.0

Table 4. Sample scoring for ranking/Likert scale survey question with 4 answer choices.

Each open-ended question was given 1 point if the respondent answered the question and 0 points if they did not answer the question.

The points allotted for each question based on participant responses were then scaled to give an equal weight value for each section, with the total points possible for each category equaling 10. *Category 7: Collaboration and creating a PLC/CoP* gives a good example of how points were evaluated and scaled. For example, Question #27 asks, “In what ways did/do you facilitate communication and collaboration among the librarians in your district?” with a list of seven ways communication and collaboration could be facilitated. First, survey participants were asked if they used a particular method for communication/collaboration, such as a listserv, district-wide face-to-face meetings, or vertical articulation meetings, and prompted to answer with a “yes” or “no” (i.e. multiple-choice). As mentioned earlier, each “yes” answer was given 1 point while a “no” answer was given 0 points. If the answer was “yes,” the supervisor was then prompted to answer a ranking/Likert scale question based on their answer. In the case of Q27, the ranking/Likert scale question was “How effective was this communication/collaboration technique?” and the 5 answer choices were “extremely effective,” “very effective,” “moderately effective,” “somewhat effective,” and “not effective.”

Because I wanted each category to be weighed equally (as each facet is equally important in effective PD), the total number of points that a survey respondent could receive for each category was 10 points. However, each category had a different number of questions and, with the point system used, a different number of points possible. Because of this discrepancy, each survey respondent’s

answers were awarded points as explained above, then divided by the total number of points possible for that category, and finally multiplied by 10 to get the final scaled total for each section. See Table 5 for an example of the scoring system using Question 27.

Q27: In what ways did/do you facilitate communication and collaboration among the librarians in your district?		
	Q27 – Part 1: Did you use this technique?	Q27 – Part 2: How effective was this communication/collaboration technique?
	A28: Multiple choice answer (Yes/No) – possible points	A28: Ranking/Likert Scale answer (Extremely, Very, Moderately, Somewhat, Not) – possible points
a. Listserv	1 point	1 point
b. District-wide face-to-face meetings	1 point	1 point
c. District-wide virtual meetings	1 point	1 point
d. Regional meetings	1 point	1 point
e. Vertical articulation meetings	1 point	1 point
f. Twitter handle for librarians to tweet about what they’re doing in their schools	1 point	1 point
g. Twitter chats focused on a specific topic	1 point	1 point
Q28: Besides the ones just listed, were there any other means you used that you thought were effective in facilitating communication and/or collaboration among the librarians in your district?		
A28: Yes/No (Multiple choice)	1 point	
Q29: [If Q28 is “Yes”] What were these other effective means of facilitating communication and/or collaboration among the librarians in your district?		
A29: open-ended	1 point	
TOTAL POINTS POSSIBLE		16 points
TOTAL POINTS AWARDED		<i>(Points awarded/total points possible) X 10</i>

Table 5. Example of scoring system with questions in *Collaboration/Creation of PLC/CoP* category.

Furthermore, each ranking/Likert answer was allotted a fraction of a point (0.2 to 1 point) depending on how effective the respondent said that tactic was in helping the librarians communicate and collaborate with each other. See Figure 3 for a visual representation of how points were allocated for Question #27a.

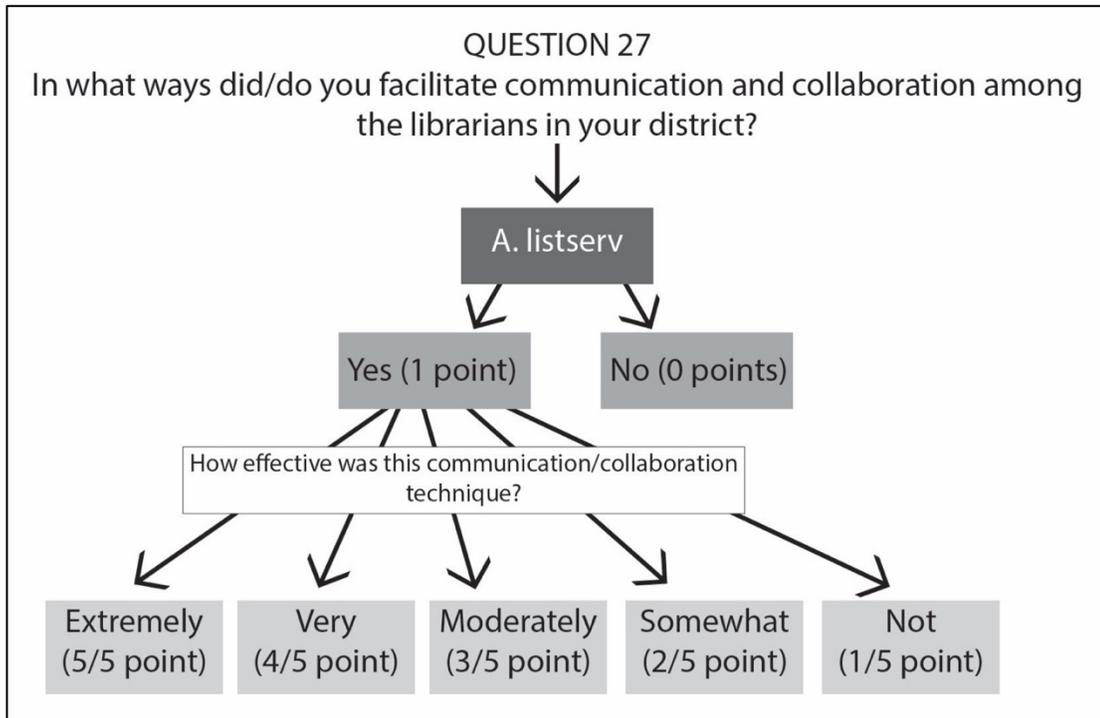


Figure 3. Point allocation for a question with multiple-choice & ranking answer options

4.7.2 Follow-up interview data analysis

To conduct analysis on the follow-up interviews, the audio-recorded interviews were first transcribed using a word processing program (i.e. Microsoft Word) so as to have a written, digital copy of each interview. During transcription, clarifying questions and other researcher comments/memos were noted in the margins of the text. Each interview transcript was emailed to the respective interviewee for review, to answer any lingering questions that emerged during transcription, and to allow interviewees the opportunity to edit or expand upon any of their responses.

Once interview transcripts were returned with edits and approved by the interviewees, coding of the follow-up interviews was done using Dedoose with the initial coding categories previously listed and additional descriptive codes added as the interview transcripts were re-read and patterns emerged (Bogdan & Biklen, 2007; Saldaña, 2013).

4.8 Assumptions of the Study

The research questions I pose for this dissertation assume that certain activities and attitudes are held by the supervisors in the districts that I surveyed and interviewed. Based upon the findings from the 2014 Lilead Survey, 90.7 percent of supervisors have primary responsibility for offering PD to the building-level librarians in their district; therefore, I believed that it was likely that PD is being administered by school library supervisors in all the districts included in my sample.

Another assumption that this dissertation makes is that district-level library supervisors want their building-level librarians to be 21st century library leaders and their libraries to be 21st century spaces for helping students build the 21st century skills and capabilities mentioned in Chapter 2. They want their librarians and library programs to help teachers teach and engage students in inquiry. This assumption is based on the recent focus on “future ready librarians” in our field (<https://futureready.org/>) and the definition of an effective school library program from AASL in the *National School Library Standards for Learners, School Librarians, and School Libraries* which states that the school librarian “supports the development of digital learning, participatory learning, inquiry learning, technology

literacies, and information literacy” (American Association of School Librarians, 2018, 218).

4.9 Potential Limitations

There are several limitations to this study. First, the survey sample does not encompass a complete national representation; the sample does not include districts with supervisors in smaller (less than 25,000 students) school districts. A complete understanding of what is being done for school librarians’ PD in districts nationwide would need to include district-level library supervisors’ responses from all school districts in the U.S. that have a supervisor, not only districts with a specific student population. Additionally, self-selection bias in survey respondents may skew the data results (Stanton, 1998; Thompson, Surface, Martin, & Sanders, 2003; Witmer, Colman, & Katzman, 1999). Depending on their level of perceived success and support in terms of PD within their district, supervisors may have a higher (or lower) likelihood of completing the survey. Also, personal opinions on and tendencies towards completing surveys and questionnaires can have an effect on participating in survey research.

Despite the fact that this study surveyed only larger districts within the United States, at least one district from each state was included in the population. In terms of responses from supervisors in large school districts, the findings described here can be considered representative of the overall population. Additionally, because I included the largest school district in states that did not have any district with a student population of 25,000 or more students, respondents come from school districts in rural, suburban, and urban areas.

Most of the states that were not represented in this dissertation have small school districts with less than 25,000 students and, therefore, were not included in the survey population, which may have affected the response rate from these particular states.

Chapter 5: Findings

5.1 Introduction

The purpose of this study was to investigate the role that school district library supervisors play in the provision of PD for school librarians in districts across the U.S. This research provides an initial snapshot of what the library supervisor is currently doing within school districts to support the PD of their building-level librarians. The research questions I expected to answer through this study were:

1. What are the characteristics of the professional development experiences that district-level library supervisors make available to their building-level school librarians?
2. How do supervisors support their building-level librarians in being able to perform the duties of a future ready, 21st century school librarian?
3. In what ways does the PD provided by the school district library supervisor reflect what the research says are best practices or effective facets of professional development?
4. What are the conditions that support or detract from the availability of professional development for building-level school librarians?

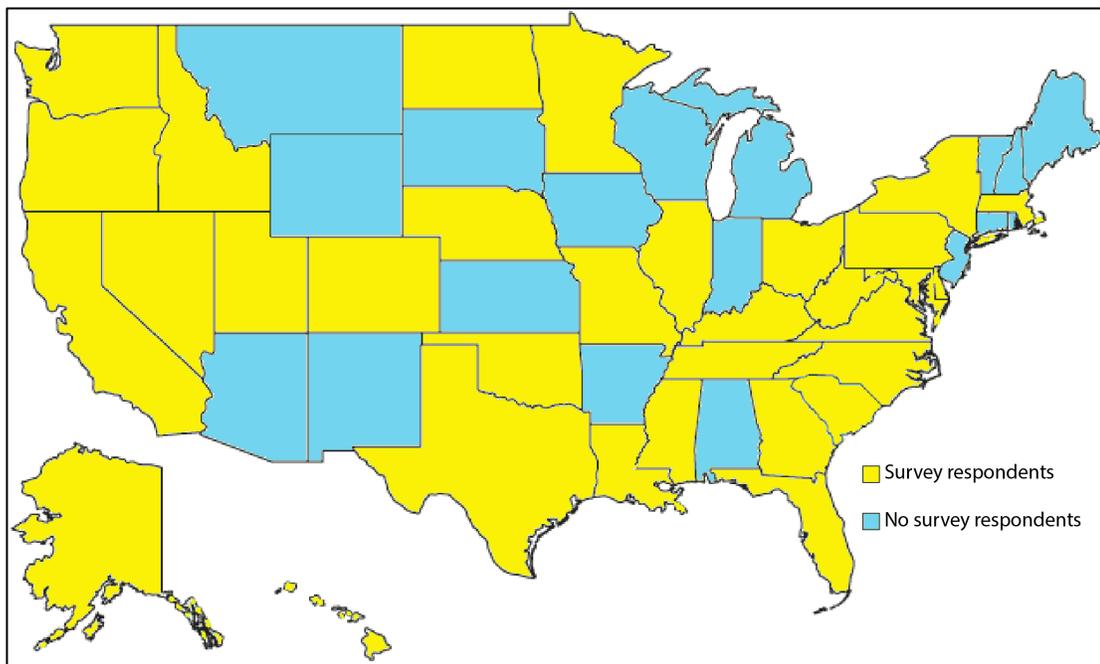
To answer these research questions, I implemented an online survey via Qualtrics that was sent to 267 library supervisors in school districts in all 50 states and the District of Columbia over a 4.5-week timeframe during the months of April and May 2017. I wanted to get an overall sense of what was being done for librarians' professional growth by the school districts in which they were employed. Since research about the

PD experiences of school librarians is limited and therefore unavailable from other sources, a survey was the most appropriate method to collect this data (Fowler, 2002).

Additionally, to gain a more in depth look at what goes on in school districts in regard to PD for school librarians, I chose to conduct interviews with a select number of survey respondents. I conducted 8 virtual interviews via WebEx with supervisors who completed the online survey. These interviews provided a more detailed view of what actually happens in a school district in terms of PD for school librarians than what a survey could describe on its own (Buckingham & Saunders, 2004). The interview data I collected supplements and provides examples of the survey data collected. The supervisors I interviewed were chosen as a result of their scores on a scoring guide I created to compare survey respondents' answers. The interviewees represent the highest and lowest scorers of all survey respondents and, therefore, also represent the outliers of this sample. Five interviewees – A through E – represent the highest scoring survey respondents, while three interviewees – X, Y, and Z – represent the lowest scoring survey respondents. Although Interviewees X, Y, and Z have low overall scores based on my scoring rubric, this does not mean that they did not demonstrate any of the facets of effective PD and, as such, their comments may reflect positive aspects of PD and not just negative aspects. In the same vein, supervisors who had the highest scores do not necessarily provide all the positive comments, nor solely describe effective practices of PD.

A total of 267 individuals were invited to take the survey. Of this number, 76 completed the entire survey. With 11 bounce backs and 8 more email recipients opting out of the survey after this invitation was sent, there were 248 supervisors who

could have potentially completed the survey. The response rate was 31 percent. Supervisors who responded to my survey came from districts in 33 states (see Figure 4) and their districts were as diverse as the states in which they reside. The range in student population in the districts was quite large: 10,500 students⁷ in the smallest district to 320,559 students in the largest district. The average number of students in the districts that responded was 62,300 students. However, more than 50 percent of respondents were from districts that had between 25,000 and 49,999 students. (See district student population breakdown in Table 6.) The number of schools represented in survey respondents' districts mirrors that of their student populations; the number of schools in survey respondents' districts ranged from 13 schools to 351 schools, with the average number of schools being 86 schools. See Table 7 for a summary of the number of schools in respondents' districts.



⁷ Although my survey population was districts with 25,000 or more students, there were some states that did not have a district with 25,000+ students. In these cases, I chose to include the district in those states with the largest number of students. There were three survey respondents who represented the largest district in their state, but had fewer than 25,000 students.

Figure 4. Survey respondents' states.

Student Population	Number of Districts
0 – 24,999	3
25,000 – 49,999	39
50,000 – 74,999	16
75,000 – 99,999	7
100,000 +	11

Table 6. Student population of respondents' districts

# of schools in district	# of districts	Percentage of respondents
0 - 50	25	32.89%
51 - 100	33	43.42%
101 - 150	6	7.89%
151 - 200	6	7.89%
201 - 250	4	5.26%
251 - 300	2	2.63%

Table 7. Number of schools in survey respondents' districts

Respondents also reported the number of certified librarians, besides themselves, in their district. This number also varies widely with a range from zero certified librarians to 262 certified librarians working in a building-level library. Additionally, there was a wide range of students in respondents' districts who participated in the free and reduced meal program (FARMs) in their district. Families who qualify for FARMs must apply for this program and meet specific income earnings. Their applications are reviewed by local school and district officials to determine their eligibility.⁸ Survey respondents work in school districts with a wide range of students who qualify for FARMs ranging from approximately 2,940 students to 203,715 students.⁹

⁸ See <https://www.fns.usda.gov/school-meals/applying-free-and-reduced-price-school-meals> for more information on FARMs in schools.

⁹ While the use of FARMs rates in schools and districts can serve as a general indicator of the relative poverty level of students in a district, it should not be mistaken for the actual poverty level of these students' families. However, since actual SES and poverty rates of students and their families is not widely available, the use of

In the following sections, I will report on the findings from the survey and interviews that address each of my research questions.

5.2 RQ1: What are the characteristics of the professional development experiences that district-level library supervisors make available to their building-level school librarians?

As stated previously, there is no research to date that I am aware of that describes what is being done in school districts to provide for the PD needs of building-level librarians. This first research question is meant to gain a broad sense of what library supervisors do in terms of planning for and providing PD to the librarians in their districts and how they structure their PD activities/sessions throughout the school year. To answer this research question, I analyzed the answers to several questions from the survey. The follow-up interviews I conducted provide support and detail for the various characteristics of PD that library supervisors offer to their librarians. Supervisors revealed that they provide both virtual and face-to-face avenues for PD for their librarians. They also facilitate professional learning communities (PLCs) for their librarians, have a variety of PD session meetings throughout the school year, and provide mentoring opportunities for new and struggling librarians.

5.2.1 Virtual PD experiences

Survey respondents highlighted the affordances that new technologies provide in terms of communicating and collaborating with others. Because of the many challenges that supervisors face in providing robust, personalized, in-person PD for

FARMS rates in schools/districts can be a useful, relative measure. (See: <https://nces.ed.gov/blogs/nces/post/free-or-reduced-price-lunch-a-proxy-for-poverty>)

their librarians, such as the physical size of a district, the number of librarians one has in their district, and just general constraints on one's schedule and time, supervisors drew on many new digital technologies to address the challenges they face. Although almost 100 percent of survey respondents said that they gather their librarians together at district-wide in-person meetings and 64 percent said their librarians meet for vertical articulation meetings (i.e. meetings that allowed elementary and middle school librarians or middle and high school librarians to talk, collaborate, and understand what knowledge students need to succeed at the next level of learning), the majority of them (51 percent) noted that they also use applications like Twitter to share what their librarians are doing within their library programs.

Besides using Twitter to communicate and share new ideas with one another, survey respondents identified numerous other online tools they are using to have continuous conversations and PD opportunities throughout the school year. Survey respondents said that their librarians use their learning management system, whether it be Canvas, Schoology, Google Classroom, It's Learning, or Edmodo, to communicate and share questions and answers with each other as well as sharing new ideas and resources. Survey respondents also noted Google products (Groups, Team, Apps for Education, Docs, etc.) as enabling communication and collaboration among their librarians. Other survey respondents mentioned using Slack, Yammer, Workplace by Facebook and other online collaboration and information sharing tools with their librarians as well.

Interviewees confirmed what supervisors said in the survey pertaining to the use of various technology tools to facilitate PD with their librarians. Interviewee Z

mentioned her use of Google Classrooms: “This year we're using Google Classrooms, so we don't all have to be in the same place at the same time, so that we can comment, share ideas, and discuss how we want to implement what we've learned.” Interviewee E commented that her district puts a lot of material online after they teach something as a way to reinforce the learning that was done in-person. She also said that she has a listserv with all the librarians. She noted that “it's like a professional development online because if they need help with a certain thing, they put it to the whole group and within minutes somebody answers their questions.” Interviewee D described how she makes videos of different ways librarians are effectively making use of every instructional minute they have with students and posts it on their wiki page so that librarians can “actually see how [their] peers manage those things.” In my interview with Interviewee A, she shared how she helped her librarians create SMART (Specific, Measurable, Attainable, Realistic, and Timely) goals for their continued learning and said that she uses Google Forms to help create these goals.

5.2.2 Professional Learning Communities (PLCs)

One type of PD that was mentioned by survey participants, and particularly stood out among the interviewees, was the implementation of PLCs (or a community of practice) among the librarians in the district. Not only were PLCs used to bring together librarians to share best practices and provide solutions to each other's problems, but they were a way to support one another and build a stronger community among the librarians. Fifteen survey respondents mentioned that they either implement PLCs specifically (using the term “PLC” explicitly) among their librarians or they alluded to them in their answers, using terminology such as “cohort

groups,” “providing more opportunity for librarians to share work with each other, discuss their needs and problem-solve,” or “small/regional PD sessions.”

Four of the five interviewees that had the highest scores on their surveys mentioned PLCs or a version of it in some way as I was talking with each of them. Although each supervisor structured their PLCs with their librarians differently, the PLCs all focused on improving practice. Interviewee D described how she put her librarians into groups of 3 or 4 and they all observed each other teaching a lesson and afterwards discussed the instruction using a protocol she and her team created. Interviewee B said that her librarians focus on finalizing their “essential lessons” during their PLC time. The fifth interviewee did not mention having PLCs among her librarians, per se, but she mentioned that she tried to focus on personalized learning and met with each librarian individually to help them create SMART goals to work on throughout the school year. The small size of her district and a small number of librarians afforded her the time and space to do this kind of professional learning with her librarians that the other supervisors I interviewed in larger districts with many more librarians were unable to do.

5.2.3 Various types of PD meetings

One thing that most of the library supervisors who were surveyed reported was the variety in which their PD was offered and implemented. Fifty-three survey respondents (70 percent) said that there is district-sponsored PD for their librarians during the summer. These summer PD experiences were structured in a number of ways that ranged from single day sessions focused on multiple topics to multiple day sessions that focused on the same or similar topics. Survey respondents were given

the opportunity to choose all the options that described the kinds of PD they provided for their librarians. Table 8 shows the kinds of PD sessions survey respondents offered to their librarians during the summer.

	Multiple Topics	Same/Similar Topics
Single Day	30	28
Multiple Day	29	19

Table 8. Structure of summer PD sessions as reported by survey respondents.

Additionally, almost 50 percent of survey respondents said that they provide PD sessions for their librarians that met over several months during the school year. These PD experiences were also provided in a range of structures. Table 9 provides a summary of the kinds of PD that were offered to building-level librarians by those survey respondents who said they hold PD for their librarians during the school year.

	Multiple Topics	Same/Similar Topics
Single Day	16	17
Multiple Day	10	12

Table 9. Structure of PD sessions during the school year as reported by survey respondents.

All of the supervisors that I interviewed mentioned that there is at least one mandatory PD day (or half-day) for their librarians and all staff, usually just prior to the beginning of the school year. However, the way these days are scheduled and the content that is presented varies among the districts. For instance, Interviewee Z had two half-day sessions in which different vendors presented on the services and resources that they provide to the district. Interviewee C shared that in her back-to-school PD day “the morning is the media coordinator-centric [time] where [we] give them information they need” and the afternoon consisted of an unconference where librarians discuss various topics that they were interested in learning more about. In the half-day, 3.5-hour session that Interviewee B had with her librarians, she had

“about 2 or 3 different hour-long pieces of things [the librarians] needed to know.” Interviewee Y talked about how she partnered with different departments within the district, such as ESOL [English for Speakers of Other Languages] and Special Ed., in the PD offerings she would present to her librarians: “one of our presenters was somebody who worked with ESOL and gave our people some tips on how to not only work with the children, but with the parents. And then another year we had somebody talk about autism and how to work with autistic children.” In addition to working with other departments in her district, Interviewee Y mentioned that she would “always partner with the public library on that day. Always.”

5.2.4 Mentoring opportunities for new librarians

An aspect of the PD that survey respondents were not directly asked about, but several interviewees mentioned was the presence of a mentoring program for their new or struggling librarians to give them an additional layer of support for the work they are doing. Interviewee E noted that they have a “mentor program for librarians who need [it], especially [their] new ones.” Interviewee D described her mentoring program: “We have what we call a ‘New Librarians Academy’...[where] they have a couple of unique opportunities...We create a community within the community for them...they get a mentor who’s a current library media specialist and they get to work together after school...It’s really, really personalized to what the library media specialist needs.” Interviewee A implemented a mentoring program for her new librarians in the previous school year. She said that it’s important for librarians to have peers they can talk with at the building-level to ask questions that she may not

have the answers to because, although she worked as a building-level librarian, she has never been a building-level librarian in her current district.

Using various online tools, having various kinds of PD sessions available before and during the school year, and participating in PLCs and mentoring programs were the most frequently mentioned characteristics that stood out among the survey responses and interviews. The following sections elaborate more upon these and other characteristics of PD, such as the content and structure, that school district library supervisors make available to their building-level librarians throughout the school year.

5.3 RQ2: How do supervisors support their building-level librarians in being able to perform the duties of a future ready, 21st century school librarian?

Supervisors have a direct role to play in ensuring that their district's librarians are "future ready" and equipped to be 21st century school librarians. Being future ready means that librarians (and the library programs they lead) are equipped and ready to provide the necessary resources and tools for students to engage in all the 21st century skills mentioned in Chapter 2 and that they are advocating for students and their learning in and outside of the school.

Below are examples of ways that district supervisors are supporting their librarians and library programs to provide the space and instruction needed to prepare their students with the 21st century skills (creativity and innovation, critical thinking and problem solving, communication and collaboration, and information, media, and technology literacy) needed for the work they will do today and in the future. These include PD on the use of makerspaces in the library, inquiry-based learning for

problem solving and personalized learning, and how to use the district’s digital resources for research and learning.

5.3.1 Creativity and innovation

According to the *Oxford English Dictionary*, creativity is “the use of imagination or original ideas to create something” (Oxford University Press, 2018). Creativity is the ability to think “outside the box” in new ways that are different from the status quo and stretch our imaginations as to what is possible. Creativity plays an important role in fostering breakthrough innovations in all fields of study and work. Innovation is the act of taking a creative idea and transforming it into reality, usually to improve on an existing product or make the current work we do easier (Partnership for 21st Century Learning, 2015).

One way that survey respondents are addressing the need to build creativity and innovation skills among the students in their district through PD is by introducing and supporting their librarians in creating makerspaces in their libraries. According to Makerspaces.com (2018), a makerspace is a “collaborative work space inside a school, library or separate public/private facility for making, learning, exploring and sharing that uses high tech to no tech tools.” Makerspaces foster the idea of creating and inventing things by providing raw materials and technology tools to do so. Twenty-one survey respondents (28 percent) specifically mentioned focusing their in-person PD sessions on the creation and implementation of makerspaces in libraries. One survey respondent said that one of her district’s goals was to create innovators, so they are “working towards the inclusion of makerspaces and higher levels of technology integration.” This “Makerspace movement” not only gives students the

ability to think creatively, but it also promotes critical thinking and collaboration skills, also important 21st century skills, which I will address in the next sections.

5.3.2 Critical thinking and problem solving

The Partnership for 21st Century Learning (2015) describes critical thinking as four actions/abilities: reasoning effectively, using systems thinking, making judgments and decisions, and solving problems. Critical thinking is a 21st century skill that requires a person to thoughtfully examine and process information learned and be able to connect it to past experiences and learning to come to one's own conclusions about a particular issue or topic. Problem solving is the ability to be able to come up with solutions to challenges that exist in one's life, community, or other spheres of one's life. Survey respondents provided PD to their building-level librarians on various topics that enable them to teach and support the critical thinking and problem solving skills of their students.

One way that survey respondents are helping their librarians engage their students in critical thinking and problem solving is through the guided inquiry process. According to Beth Holland (2017), guided inquiry is different from the research process because "inquiry requires students to engage in active learning by generating their own driving questions, seeking out answers, and exploring complex problems. Research, though often a component of inquiry, addresses the process of finding answers." Thirteen survey respondents noted that they provide PD on the inquiry process; two respondents specifically noted that they provided PD on the Guided Inquiry Design (GID) process to help their librarians support students in thinking critically and finding solutions to personally interesting problems.

Makerspaces, which 21 survey respondents said they provided PD on, also give students opportunities to think critically in addition to helping them engage in creativity and innovation, as mentioned previously. Moreover, providing information to librarians about coding and “Hour of Code” was mentioned by three survey respondents. Several survey respondents also stated that they provided PD on BreakoutEDU, which takes the concept of an escape room – which, according to Wikipedia, is “a physical adventure game in which players solve a series of puzzles and riddles using clues, hints and strategy to complete the objectives at hand” (“Escape room,” 2018) – and caters the activity to a specific subject or level of students. The BreakoutEDU website claims to “bring the 4Cs [creativity, collaboration, communication, and critical thinking] alive” (BreakoutEDU, n.d.).

5.3.3 Communication and collaboration

Communication skills are the ability to articulate one’s thoughts and ideas in a clear manner. Good communication skills consist not only of speaking well, but also listening well and using multiple forms of media to effectively convey your messages (Partnership for 21st Century Learning, 2015). Additionally, effective communication skills refer to the ability to communicate cross-culturally and in other diverse settings. Collaboration is the ability to work with others in productive and cooperative ways. Survey respondents and interviewees mentioned that they provide opportunities and strategies for their librarians to communicate and collaborate with each other and the teachers in their buildings. However, when it comes to sessions that equip their building-level librarians with methods and techniques on how to engage their students in communicating and collaborating with each other and with a diversity of people,

the data is scant. What was mentioned, however, was the focus on promoting and encouraging librarians to create makerspaces and use activities like Breakout EDU in their libraries, both mentioned in the previous sections, to give students the opportunity to work together and share ideas. Additionally, one survey respondent provided PD on equity and another survey respondent focused a PD session on restorative justice. These sessions, while not directly focused on how to support students in their communication and collaboration skills, enable participants to think about their own perspectives and biases on how different people communicate and how to collaborate with a variety of people, which could spark librarians to bring their reflections and thoughts from these sessions into their practice and teaching.

5.3.4 Information, media, and technology literacy

As mentioned in Chapter 2, information, media, and technology literacies, along with digital, video, and textual literacies, form what is called multiple literacies. Out of the 21st century skills mentioned in this research, information, media, and technology literacy were the most frequently listed topics in which survey respondents provided PD. Survey respondents provided PD to their building-level librarians on the following topics related to these new literacies: digital resources and how to use them for research and learning, the inquiry process, digital citizenship and cyber safety, digital literacy, coding, information literacy, fake news, web searching, and media literacy (see Table 10).

Topic	# of survey respondents	Topic	# of survey respondents
Using digital resources for research & learning	21	Digital literacy	8
Inquiry process	9	Coding	3

Information literacy/fake news	9	Media literacy	3
Digital Citizenship/Cyber safety	8	Web searching	1

Table 10. Information, media, and technology literacy topics focused on during PD by survey respondents

Ten survey respondents also mentioned that they provided PD to their librarians on the Future Ready Libraries framework (see Figure 5), which is an outgrowth of the Future Ready Schools initiative. The Future Ready Schools initiative is aimed at “implementing personalized, research-based digital learning strategies so all students can achieve their full potential” (Future Ready Schools, n.d.). The central component of the Future Ready framework is a personalized student learning environment. In our interview, Interviewee C mentioned that her library team at the district-level is “going to look at the Future Ready Librarian [framework] and use that as [their] process in building the topics [for PD].”

Other topics survey respondents said they were discussing in their PD sessions that relate to supporting future ready librarians and library programs were transforming libraries into Learning Commons that are geared toward a more collaborative and engaging learning environment, discussions about how “libraries – their services and supports – need to evolve for the digital world,” and how they can move their libraries into the 21st century.



Figure 5. Future Ready Librarians framework

5.4 RQ3: In what ways does the PD provided by the school district library supervisor reflect what the research says are best practices or effective facets of professional development?

Based on the PD research identified and described in the literature review, nine facets were found that contribute to effective PD within schools and districts. These nine facets are: (1) leaders who create and support a culture of continual learning and PD; (2) coherence with a PD plan; (3) evaluation of PD activities; (4) alignment with the district and/or state goals and standards; (5) including active learning experiences in PD sessions; (6) a focus on core content; (7) collaboration and the creation of a

community of practice (CoP) or professional learning community (PLC); (8) incorporating follow-up and feedback after the official PD session(s) is complete; and (9) long-term PD experiences. Below I provide findings from the survey, organized by facet of effective PD, with supporting evidence for each facet from the interviews I conducted.

5.4.1 Creating and supporting a culture of continual learning and professional development

In order to have a thriving and effective PD program for librarians or any other educator in a district, one important facet addressed in the literature is the culture of lifelong learning that the leaders create among those in their district and also the support they provide in facilitating professional and continued learning among their teachers, librarians, and other staff.

Capturing the variety of ways district leadership provides support for PD and creates a culture of continued learning can be difficult to measure. In the survey I conducted, I used funding as a means to express the support that district leaders give to professional learning in their district. When asked if their district had an overall budget for PD activities and events, 60 survey respondents (79 percent) said “Yes” their district does have an overall budget for PD activities. Eight respondents (10.5 percent) said “No” their district does not have an overall budget for PD activities and 8 respondents (10.5 percent) said they are not sure if their district has an overall budget for PD. Of those who said “yes” that their district does have an overall budget for PD (n=60), 32 respondents (53 percent) said that PD for school librarians was included in the overall budget. Twenty-six (43 percent) said that PD for school

librarians was not included in the overall PD budget. Two (3 percent) were unsure if PD for librarians was included in the PD budget. Of those who said that librarians were not included in the overall budget for PD in their district (n=26), nine responded that their district has a budget specifically allocated for their librarians' PD. Sixteen said that there was no budget specifically allocated for building-level librarians' PD and one respondent was not sure. The following chart, Figure 6, shows the funding sources for librarians' PD. Collating all this data together, 41 out of the 76 survey respondents (54 percent) have some kind of budget allocated by the district for librarians' PD, while 35 (46 percent) do not have any district-provided funds that support PD for their school librarians.

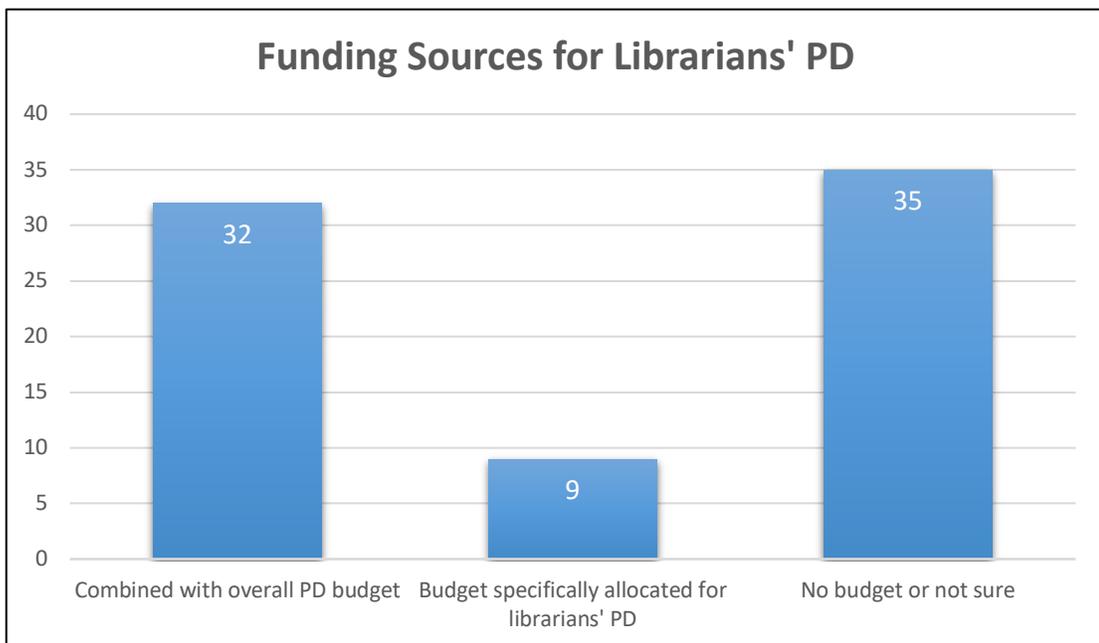


Figure 6. Funding sources for building-level librarians' PD

In addition to questions about the district allocating funds for school librarians' PD to show the support of leaders for PD and a culture of continual learning, I asked supervisors how supportive their school board, superintendent, and

building-level principals were of PD on a scale from “extremely supportive” to “not supportive at all.” Their answers are captured in Figures 7-9.

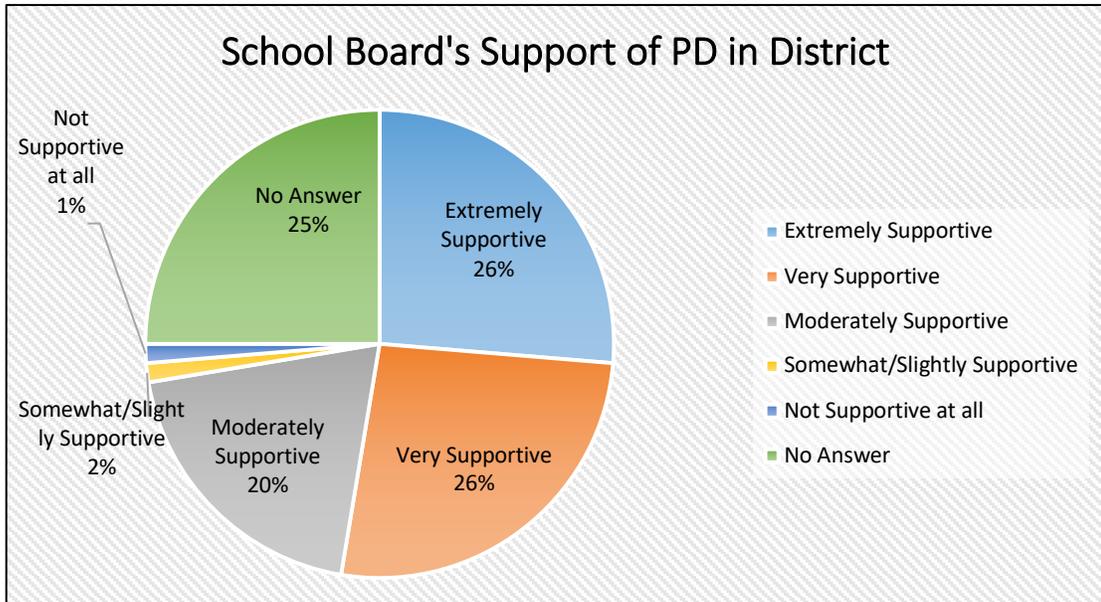


Figure 7. Survey respondents’ perceived PD support from the school board

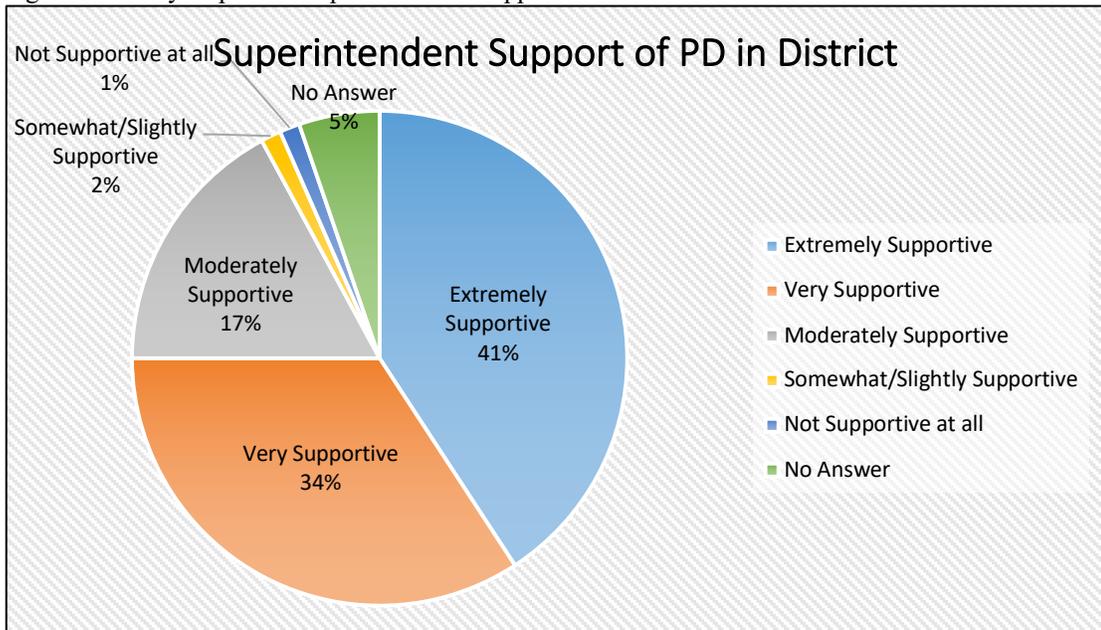


Figure 8. Survey respondents’ perceived PD support from the superintendent

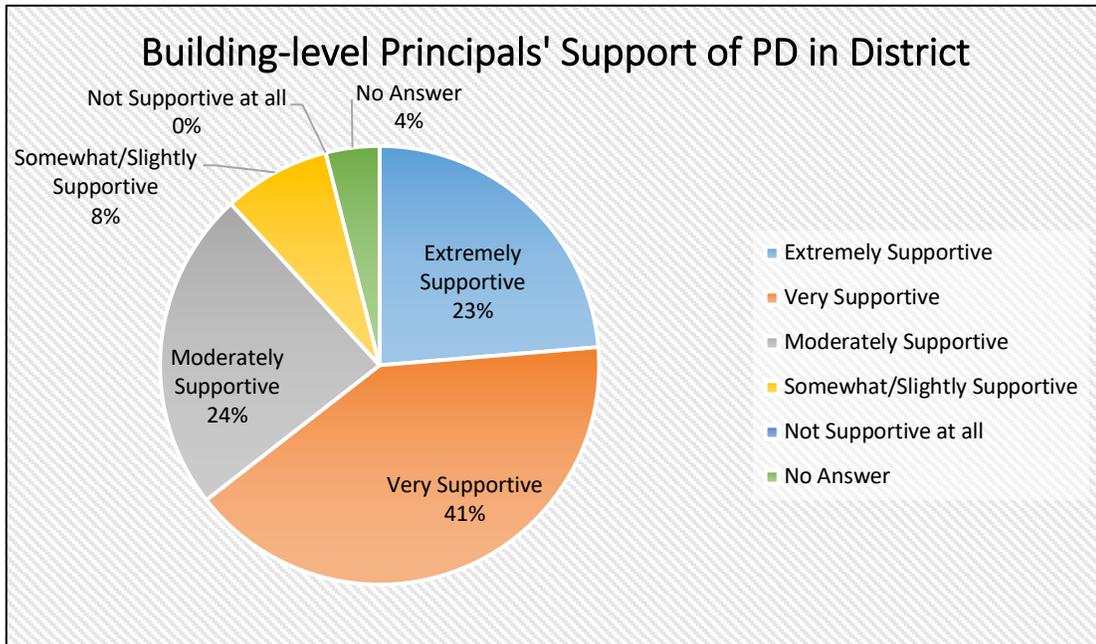


Figure 9. Survey respondents' perceived PD support from building-level principals

When I asked the supervisors I interviewed to further explain why they gave the answers they did about the support of district leaders for PD in their districts, many of them equated support (or non-support) to the time that was given to librarians to participate in PD activities during the regular school day, the budget funds that were provided for overtime pay or to pay for substitutes to cover the library while the librarian participated in PD, or both. Interviewee C stated that “the opportunity to participate [in PD] is really centered around the availability of subs and that is really centered around funding for subs. We were very fortunate to receive Title II funding to support the substitutes.” Interviewee E said that her building-level principals “allow their campus librarians to leave during the school day and come to PD at least once a month. The superintendent supports that as well.” On the opposite end of the spectrum, Interviewee A reported that in her district “not all principals will release [librarians] during the school day to come to the meetings...and that’s because of the way they are scheduled, and they don’t like to get subs for media.”

When speaking more specifically about the culture of a district and the value the district leaders place on professional growth and learning, Interviewee D remarked “Starting at the highest level, just globally...there's sort of the cultural expectation here in [district] that teachers are engaged in professional growth. So, the fact that that's kind of a universal expectation for all teachers enables us to capitalize on those conditions and create opportunities for library media specialists.” Similarly, Interviewee C mentioned a culture of lifelong learning in her district, “I think it's kind of a culture within [our district]. Everybody, whether you're central office or the school, we all engage in professional development and the concept of lifelong learning I do think is something we consistently had strong messaging around.” Interviewee B also remarked that her district has a “long, rich history of professional development” and, when looking at the school calendar, district leaders factor in “the amount of professional development needed before school starts and during the school year and how to best support teaching and learning.”

5.4.2 Coherence with a professional development plan

This second facet of effective PD, coherence with a professional development plan, means that all the PD sessions that are offered throughout a given time frame (e.g. a school year) are connected in some way and likely build upon each other in a logical, ongoing manner that has been thought through beforehand. Having a PD plan ensures that the PD activities offered have a purpose and are not implemented simply as a “filler” or because a topic was interesting. Analysis of survey responses revealed that respondents struggled with providing PD that was coherent with a PD plan – one that was created for all teachers and staff in a district or specifically for school

librarians – as it was the facet with the lowest average score overall (5.6 points out of 10).

When asked if their district has an overall PD plan for teachers and/or other building-level educators (such as librarians, counselors, and para-educators), 34 survey respondents (45 percent) said that their district does have an overall PD plan for teachers and other building-level educators. Nearly one-third (31 percent) said that their district does not have a PD plan for teachers and other building-level educators while almost one-fourth (24 percent) said that they were unsure. Of those who said their district does have an overall PD plan for their educators (n=34), 28 (82 percent) said that they regularly consulted this plan when they create their PD activities for librarians. See Figure 10.

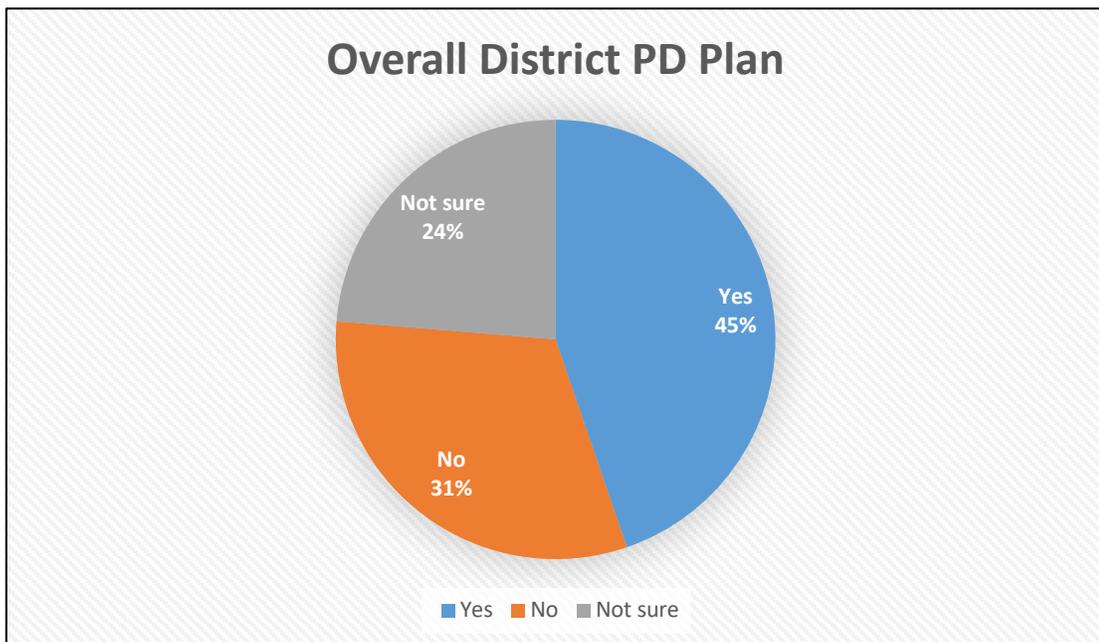


Figure 10. Supervisors with an overall district PD plan

Survey respondents were also asked if their district has a written PD plan *specifically* for school librarians. Only 18 survey respondents (24 percent) answered “Yes” to this question. Fifty-five survey respondents (72 percent) said “No” their

district did not have a written PD plan for their building-level librarians. While only 18 survey respondents said they do have a written PD plan specifically for librarians, all 18 respondents said they align their PD activities and sessions with this plan.

Figure 11 is a graphical representation of supervisors who had a specific plan for the PD they provided for their building-level librarians.

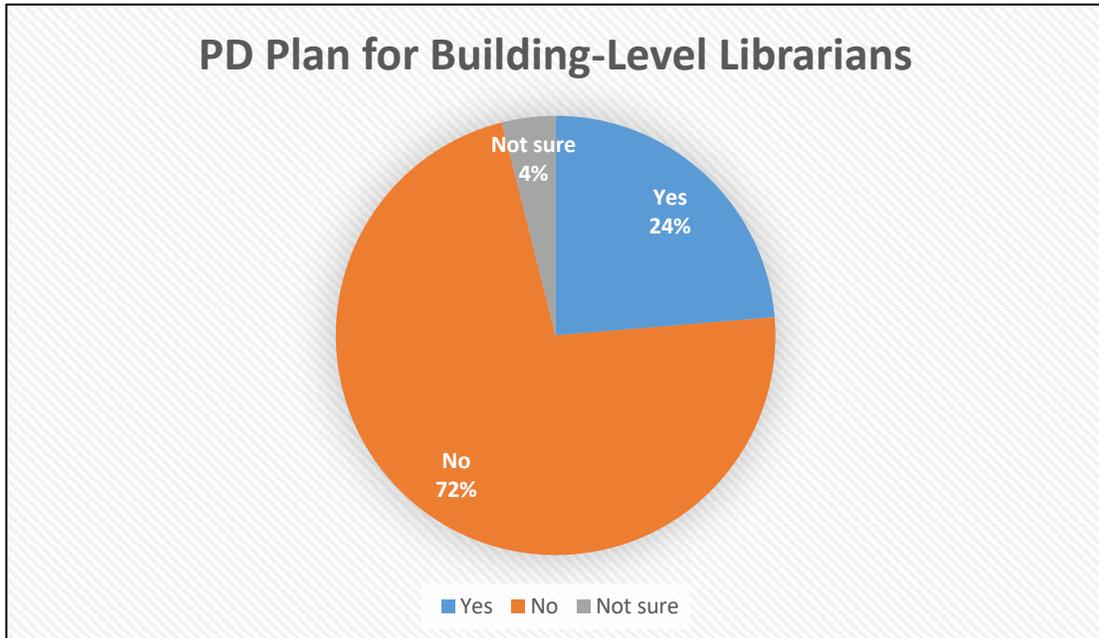


Figure 11. Supervisors who had a PD plan specifically for their building-level librarians

In her interview, Interviewee Z mentioned that her district had a district plan for how to support academic growth through PD that focused on integrated learning and what the roles were for each of the different academic areas. Interviewee D also talked about how she uses a year-long plan to make sure her PD sessions build upon and connect with each other. She stated that her team “designs a continuum of learning so that what [they] do in one month...gets folded into how we move forward” and “when [they] get together a couple of months later, it's not as if that first thing [they had PD on] never happened.”

5.4.3 Evaluation of PD activities

Evaluating the PD activities that are done throughout the school year shows that one is thinking about ways to improve and ensure the quality and relevance of the PD that is being offered. According to the literature, the PD that is provided should have an ultimate end goal of increased student knowledge and achievement (Guskey, 2000). Evaluation of PD should examine whether or not the PD provided aids in meeting these student outcomes. The survey findings report how supervisors collect information about their PD activities and how they are going to improve them in the future.

Supervisors used a variety of means to evaluate the PD activities that they did throughout the school year. Gathering informal feedback via email or in-person after a PD activity was a widely used method for gathering thoughts about the PD offered; 91 percent of supervisors said they used this method. The vast majority of survey respondents (96 percent) who gathered informal feedback via email or in-person following a PD session said this method was “extremely effective,” “very effective,” or “moderately effective.” Another widely used method that almost 82 percent of survey respondents used to gather feedback from librarians was a feedback form (or survey) that was given at the end of the PD session. Most (90 percent) of those who used a feedback form (survey) said it was either “extremely effective,” “very effective,” or “moderately effective” at gathering the thoughts of PD participants after the session ended. Doing on-site visits and observing librarians for changes in their practice based on the PD that was offered was another effective means of evaluating the PD that eight survey respondents said that they did.

Based on the feedback that was provided to them after PD sessions, survey respondents noted that they would change their future PD sessions and activities in a variety of ways. Changes in topic, mentioned by 34 survey respondents, was the most frequently mentioned way that they would change their PD sessions in the future. Six survey respondents said they would have more PD sessions for their librarians to attend, while one said they would have fewer sessions. Nine respondents said that they would make changes in PD duration, when they scheduled their sessions, and where the sessions took place to better accommodate librarians' schedules. Eleven supervisors stated that they would change something about the structure or format of their PD, such as having more collaboration and discussion time for the different levels of librarians or including more active learning experiences. Additionally, eight survey respondents noted that they would change the kinds of PD they had (e.g. adding PLCs, more regional/smaller group PD sessions throughout the year, or doing more site visits).

5.4.4 Alignment with state and/or district goals and standards

State and/or district goals and standards for student learning are focused on student learning and achievement. Aligning PD with the learning goals and standards of the district and/or state demonstrates that the PD activities that are offered also have this ultimate goal in mind and are not simply focused on the things that adults want to learn, which may be trending in education, but are not connected to actual student learning.

Seventy-one survey respondents (93 percent) noted that their district has goals for student learning. Of these 71 respondents, 63 (89 percent) said that they align their

PD sessions with their district goals for student learning. For example, several survey respondents said that their district had a goal of having all their students reading on grade level by the 3rd grade. With this goal in mind, one supervisor “designed and implemented PD that provided strategies for integrating district resources and tools to support literacy and reading motivation.” Another supervisor whose district had a similar goal provided PD that focused on strategies “to help students select books that they will engage with to support literacy acquisition.” One survey respondent’s district had a goal of increasing student engagement, so she decided to have a book study with her librarians of the book, *Worlds of Making* by Laura Fleming, coupled with an “interactive makerspace training on various makerspace activities” to give them ideas for different ways to engage students in learning.

Seventy-two survey respondents (95 percent) said that their state has specific goals and/or standards for student learning. Fifty-five of the 72 respondents stated that they align their PD sessions with these state goals and standards in mind. One survey respondent mentioned that her state has standards that focus on research and information literacy, so she created PD that was centered around research and information literacy, including tools and methods to conduct research and teach information literacy. Another survey respondent indicated that her state has a goal of closing the achievement gap, so one way she tried to support this goal was to focus one of their PD sessions on how to build equity in and among her district’s libraries.

The supervisors I interviewed also shared how they align their PD with the goals of the district. Interviewee D said that her district had an initiative that focused on transforming teaching and learning throughout the district. For her and the library

program that meant creating learner-centered environments and providing PD that engaged her librarians in thinking differently about their spaces and how to make them more learner-centric. Interviewee C also stated that when she makes plans for the PD she offers her librarians she takes a “national, state, district approach” and considers the initiatives that each of these levels are promoting and connects them to her plans.

5.4.5 Including active learning experiences in PD sessions

Adult learners want their learning to be practical and applicable to their daily work (Fogarty & Pete, 2004). They want their learning to be immediately applicable to solving a problem in their work or to improving their practice in some way. Active learning experiences addresses these wants by including activities that engage participants in thinking about and discussing their everyday work and attempting to solve some of the problems that are associated with it. Often called job-embedded professional development (JEPD) in the literature, PD that incorporates active learning experiences uses participants’ everyday practice to provide the backdrop for learning and gaining new skills and knowledge. Survey respondents were asked several questions that indicated their incorporation of active learning experiences in the PD they provided to their librarians.

Seventy-five of the 76 survey respondents indicated that they foster discussion among their librarians during PD sessions with 44 (58 percent) stating they always try to foster discussion among PD participants, 27 (36 percent) stating they foster discussion most of the time in their PD sessions, and 4 (5 percent) saying they foster discussion in their PD sessions about half the time. Likewise, 71 respondents (93

percent) said that the PD they offered to their librarians had immediate and practical uses in librarians' daily work; 37 (49 percent) said their PD always had immediate and practical uses in librarians' daily work and 34 (45 percent) said their PD had immediate and practical uses in librarians' daily work most of the time. Furthermore, 55 survey respondents (72 percent) indicated they had a mix of whole group and small group break out activities – 33 (43 percent) answering they always have a mix of whole and small group activities and 22 (29 percent) saying they have a mix of whole and small group activities most of the time. Fifty-two survey respondents (68 percent) also expressed that the PD sessions they led during the school year engaged participants in working together to solve problems. While the vast majority of survey respondents indicated they always or most of the time provide a variety of active learning experiences for their librarians, they did not provide PD experiences that allowed for librarians to observe each other's practices; only 2 (3 percent) said they always have PD experiences that allow for this kind of observation and 13 (17 percent) said they provide this time for observation most of the time. Forty-seven (62 percent) indicated that they "occasionally" or "never" allow their librarians to observe each other teach. Survey responses are expressed in Figure 12.

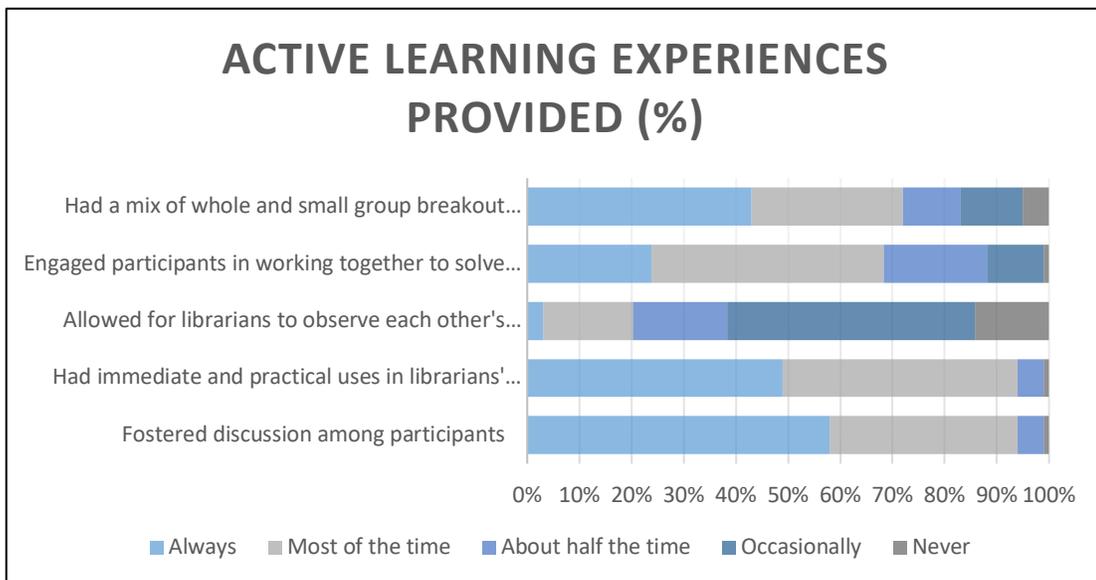


Figure 12. Active learning experiences that survey respondents provide for their librarians.

Overall, however, survey respondents scored fairly high in this category with an average score of 7.6 out of 10. An example of what supervisors are doing in regard to providing these active learning experiences where participants reflect and have discussions on their actual teaching practices can be seen from Interviewee D. She noticed that her librarians “had work to do around instruction.” She also noticed that classroom teachers were participating in “learning walks” where they would go to different classrooms and observe good instruction in their specific content areas. After seeing these “learning walks,” she created similar communities of practice among her librarians “where [the] secondary library media specialists are working in small cohorts of three or four peers who are geographically close, and they’ve been doing a combined, kind of, learning walk experience. So, they set up a time to watch each other teach. They have a debrief beforehand, they watch a lesson, and then they use a debriefing protocol after.” They would rotate who they observed so that they

observed and provided feedback for everyone in their small cohorts over the course of a semester.

5.4.6 Focus on core content

The education PD literature discusses content in terms of the subjects that are taught in school, like science, social studies, or math. The content that school librarians need to focus on is somewhat more nebulous than the traditional subjects that are taught in school and encompasses a different kind of skillset and knowledge; school librarians’ “content” areas focus on reading and 21st century skills and include such topics as information, media, and information and communication technology (ICT) literacy, and information ethics. This “core content” includes such topics as research, inquiry, and technology (Martin, 2011; J. Valenza, 2010).

There was a plethora of topics that survey respondents focused their PD sessions on in the summer and throughout the school year. Table 11 is a list of the most frequently mentioned topics survey respondents focused on during their in-person PD sessions. Figure 13 is a word cloud that showcases the topics that were discussed during the PD sessions for librarians, many of them focused on the different 21st century skills, but many focused on traditional library and literacy skills also.

In-Person PD Topic	# of Survey Respondents
Makerspaces	21
Collection Development	12
Future Ready Libraries/Librarians	10
Curriculum/Lesson Planning	10
Digital Literacy	8
Digital Resources	7
Research databases	7
Digital Citizenship	7

librarian is as valuable as learning from an “expert in the field.” On average, survey respondents provided opportunities for collaboration among their school librarians; as a whole group, supervisors had an average score of 8.7 out of 10 on the questions related to this facet of effective PD. School district library supervisors provided time for their building-level librarians to participate in these collaborative experiences in various ways.

Seventy-four supervisors, almost 100 percent of survey respondents, reported that they had district-wide face-to-face meetings that brought together librarians to have discussions around a specific topic. 62 of these 74 respondents said having district-wide face-to-face meetings were either “extremely effective” or “very effective.” In terms of holding virtual district-wide meetings, only 15 survey respondents (21 percent) said they host them for their librarians and only 9 of these 15 said they were “extremely effective” or “very effective.” Additionally, respondents were less likely to hold regional meetings for their librarians who work in the same geographical region of their district, as only 23 (32 percent) said they have regional meetings and only 13 said they were either “extremely” or “very” effective. However, forty-seven survey respondents (64 percent) said they do hold vertical articulation meetings where librarians who work at different levels (high, middle, and elementary) can talk with one another about what skills and knowledge their students need to succeed and how they can better prepare students for the next level of learning, but only 30 of them said that this practice was “extremely” or “very” effective. Using Twitter to communicate the things that librarians are doing in their schools was used by 38 survey respondents (51 percent), but only 20 of these 38 found Twitter to be

“extremely effective” or “very effective” for communication among their building-level librarians. Fifteen survey respondents also attempted to hold Twitter chats with their librarians to share knowledge about a specific topic, but only 5 (33 percent) of them found the technique to be “extremely” or “very” effective. Additionally, listservs were used by 32 survey respondents (43 percent) to facilitate communication and collaboration among librarians. However, like the other techniques, not all supervisors found them to be “extremely” or “very” effective; 20 out of the 32 survey respondents rated listservs as an “extremely” or “very” effective technique for communicating and collaborating.

When asked if there were other effective means of facilitating communication and collaboration among the librarians in their district, in addition to the ones mentioned above, survey respondents noted many other ways that they connect with their librarians and foster community among them. Many of these other effective means involve online methods. Survey respondents mentioned that they use various learning management systems, such as Schoology, Google Classroom, Edmodo, and Canvas, to connect and collaborate with their librarians. Survey respondents also noted Yammer, Zoom, Padlet, and Slack as platforms that they and their librarians use to communicate with each other. Email has also been a way that supervisors and their librarians communicate; one survey respondent stated that “plain old email has been highly effective.”

In her interview, Interviewee B explained that in her district, because they have librarians with a wide range of experience and tenure as a librarian, there is a wealth of knowledge and skill that everyone can learn from: “you put 5 people

together and it pulls out the best of everyone. I think it makes all teachers better by being able to be together to have those conversations.” Similarly, in describing what PD she has for new librarians in her district, Interviewee D talked about “meet-ups” she would organize, in which there is no formal agenda, just a space for librarians to bring all their questions and have a conversation around those questions.

From the survey and interview data it is apparent that supervisors use both in-person and virtual methods to facilitate collaboration and communication among their librarians.

5.4.8 Incorporating follow-up and feedback

The eighth indicator of effective PD is incorporating follow-up and/or feedback on the PD that is offered throughout the year. Follow-up/feedback refers to the continuing discussion, reflection, and sessions about a PD topic that was introduced or addressed in a previous PD session or activity. Like having long-term PD experiences, incorporating follow-up and feedback into a PD session or plan indicates an understanding by the PD provider that learning is a process and requires time and space to ensure that the material taught is internalized and put into practice by the learner.

Figure 14 shows how often survey respondents provide opportunities for their librarians to have ongoing discussions and follow up/feedback about the things they learned in PD sessions. Most survey respondents said they provide these opportunities for their librarians; only 7 percent of supervisors said they never provide these follow-up opportunities for their librarians, but the frequency of these opportunities varies among survey respondents.



Figure 14. Percent of survey respondents who provide their librarians with opportunities for ongoing discussion (feedback/follow-up types of communication).

According to several supervisors with whom I conducted follow-up interviews, much of the follow-up provided after in-person PD sessions was done using online technologies, such as Zoom or LibGuides. One supervisor, Interviewee D, talked about how she used a wiki to allow her librarians to follow-up with what was done during the in-person PD: “we have this philosophy that everything we do needs to be...rewound. The practitioner needs the opportunity to go back and revisit any of the learning they’ve had. So while it doesn’t stand in for the face-to-face and what really happened in the room as we did the professional learning, [the wiki] is a resource and an archive of as much as we can curate there so that [librarians] can search.”

Additionally, in-person visits to librarians at their school buildings was another way supervisors and the district library team provided follow-up and feedback on things that were previously learned in a PD session. In her interview,

Interviewee B described that she has 2 library media coaches, one full-time and one half-time, whose primary jobs are to be “out and about in buildings doing that one-on-one follow-up professional development...It’s one-on-one and it’s one-by-one.”

Follow-up was the third lowest scoring category out of all nine facets of PD scores from the survey with an average score of 6.3 out of 10. One supervisor I interviewed had a sense that this was an area in which their district’s PD for librarians needed to grow. When asked how she would like to see their current PD change in the next year, Interviewee B replied, “that’s what I would try to do differently, is [librarians] learning something new, having time to work with whatever it is after [they]’ve had time to talk about it. Then coming back in another month or even two months, revisiting that same topic and getting deeper into that same thing.” However, she also commented that she wasn’t sure if this idea was realistic or not.

5.4.9 Long-term PD experiences

The ninth indicator of effective PD is having long-term PD experiences that extend over a period of time and are not just “one shot” workshops or sessions that are disconnected from one another. PD that spans several weeks, months, or even an entire academic year allows for the facilitation of the other elements that characterize effective PD. This longer time frame allows for reflection, discussion, and feedback that are more likely to lead to positive changes in one’s praxis (Birman et al., 2000; Garet et al., 2001; Penuel et al., 2007).

Fifty-three survey respondents (70 percent) stated that their district provides opportunities for librarians to participate in PD experiences that take place during the summer. Of the supervisors who said their librarians have opportunities to participate

in summer PD (n=53), 48 said that their summer PD opportunities occur over multiple days.

In terms of long-term PD sessions that met over several months throughout the school year, only 37 survey respondents (49 percent) said that they lead or provide these PD opportunities. Of these 37 respondents who do provide ongoing and consistent PD opportunities throughout the school year, 22 of them said their PD opportunities occur over multiple days.

5.5 RQ4: What are the conditions that support or detract from the availability of professional development for building-level school librarians?

There are several conditions that enable or prevent PD for teachers, librarians, and other staff from occurring within a district that district library supervisors mentioned in the survey and interviews I conducted. Below I discuss several of these circumstances.

5.5.1 Number of librarians in district

When there are few librarians in a district, it is highly unlikely that there will be PD provided for them. Even in a district that has some building-level librarians, specific PD for them may not exist. In a district where only 8 of the 230 schools have a building-level librarian, Interviewee X mentioned that they “did have professional development for librarians when [their] schools had librarians...[but] that really went by the wayside as librarians were disappearing from the schools.” Besides just not having any or many librarians in the district, another hindrance to the availability of PD for school librarians is not having full-time librarians at each individual school.

Interviewee Y stated that many of the problems she has with obtaining funding and support for librarian PD comes down to the fact that most of the librarians in her district work part-time at each school they serve. They may be employed full-time in her district but split their time during the school year between two schools.

5.5.2 Budget allocated for PD

Another hindrance to providing PD for librarians is not having any funding allocated at the district-level for PD purposes. Funding for PD is generally needed to hire substitutes to cover the librarians' classes, if they have any, and to have someone run the library while the librarian participates in a PD session during the school day. Interviewee Y expressed this need for substitutes as a main reason PD for librarians does not occur: "I lost my funds for substitutes two superintendents ago and it has never been replaced in my budget."

Another reason funding is needed for PD is to provide the librarians who participate in PD after the school day or during the summer (non-contractual periods of the school day and year) payment for the hours they work. Interviewee D said that the new librarians were paid a stipend for attending the voluntary question and answer sessions they had about school librarianship.

Also, when more funds are available, more PD can be done. Interviewee Y spoke of getting her librarians trained on a new way of creating lessons digitally. She said they were able to introduce it to 32 of her librarians right away because there was money available at the end of the year that her department had given her to provide this training.

5.5.3 Established culture of life-long learning

Having a culture in which people, especially those in leadership positions, not only value, but are engaged in, continuing education and learning is an indicator that PD is encouraged and made available to all staff within the district. Several of the supervisors I interviewed whose surveys indicated a high level of exhibiting the facets of effective PD specifically mentioned that their district has a culture or history of life-long learning and PD was just an expected aspect of being an educator in that district. Interviewee D indicated that in her district there is “sort of the cultural expectation...that teachers are engaged in professional growth...[which] enables [her and her team] to capitalize on those conditions and create opportunities for library media specialists.” Similarly, Interviewee B noted that her district has a “long, rich history of professional development.” Interviewee C also commented that “it’s kind of a culture within [our district]. Everybody, whether you’re central office or the school, we all engage in professional development and the concept of lifelong learning...is something we consistently have strong messaging around.” Interviewee E mentioned that her team members at the district level, specifically, “have tried very hard at creating a culture of learning in [their] librarians, a culture of caring and being members of a library team.”

I found that if everyone in the district, especially principals at the building-level, does not have the mentality that all members of the school community need PD to do their jobs well, librarians may not be able to attend PD sessions that are created specifically for them. Interviewee E stated that the building-level principals in her district “allow their campus librarians to leave during the school day and come to PD

at least once a month.” Interviewee Y lamented over the fact that principals, because her district has site-based management, oftentimes do not allow their librarians to attend the PD that she makes available because they want to keep their librarian on campus for the entire school day instead of allowing them time to leave to attend PD at another location.

5.5.4 Time/schedule changes, cancellations, or constraints

Another hindrance to the availability of PD for school librarians are changes in the dates or times that PD is scheduled to occur throughout the school year. Sometimes this change or cancellation of PD is due to forces outside of anyone’s control, like the weather. As Interviewee C noted, “in theory we have a February [PD] date that is also set aside for us. In 8 years we’ve had that professional development day not once because of snow.” Other times the PD that supervisors schedule for their librarians is changed because district leadership makes the decision to change it. Interviewee Y recalled that, in the past, even when the dates for PD had been scheduled in advance, her district’s leadership decided, based on looking at the test data, that there needed to be an all-district PD focused on a particular topic and would require everyone to attend that instead of the specific PD that was arranged for specific content areas and/or levels, including the librarians. She said that the PD would “usually change too close to the event to allow [her] significant time to reschedule.”

5.6 Conclusion

The findings in this study give an overarching, bird's-eye view of what is being done by library supervisors in school districts as it relates to offering PD for their building-level librarians. District library supervisors provide PD opportunities for their librarians in a variety of ways. One major commonality identified by almost all the supervisors who participated in this study was the use of technology in facilitating community and collaboration among the librarians and as a means of enhancing the in-person PD sessions in which the librarians participated. Also, there were similarities and differences in the way PD was scheduled and organized throughout the year; some had PD sessions that lasted one day while others had PD sessions that took place over several days. According to the interviewees, they held both mandatory sessions (usually at the beginning of the school year) and voluntary sessions (usually during the school year).

One aspect of the PD offered by supervisors that is most disparate is the topics that survey respondents choose to focus on in their PD sessions. Even though many of the topics covered in PD sessions could be organized into a few overarching categories, there were nearly 150 different topics that survey respondents addressed in their PD to their librarians. These topics ranged from focusing on traditional library skills (e.g. catalog management, book talks, collection development, and book repair) to enabling 21st century or future ready skills (e.g. implementing Makerspaces, creating a Learning Commons, and teaching information and digital literacies).

Additionally, these findings give examples of the ways in which supervisors are offering PD that is congruent with what the literature says is effective PD.

Although none of the supervisors are planning for and implementing PD that incorporates all 9 facets of effective PD perfectly, most supervisors I surveyed were strong in at least one or two of the facets. (See Appendix M.)

Furthermore, interviewees gave more insight into the reasons why providing PD for school librarians in their district is either feasible or challenging. In addition to time and money being a big factor that contributes to the availability of PD for librarians, having a culture of learning among the leadership and staff plays a significant role in the success of PD in a district.

Chapter 6: Discussion

This study was conducted to obtain an initial view into the world of the PD that is provided to school librarians by their district-level supervisors and to begin to paint a picture of what PD looks like for building-level librarians in districts across the United States. This study builds upon the Lilead Survey (<https://lileadproject.org/survey/>), a longitudinal survey that captures the demographics, roles and responsibilities, challenges, and needs of school district library supervisors across the U.S.

The findings in this study revealed many interesting things about how PD for school librarians is conducted. The most compelling things that this research revealed were the lack of long-term PD experiences for librarians, the ways that supervisors are using the affordances of technology to foster learning and community despite time and budget constraints, and how the absence of a PD plan may hinder PD and the growth of one's library program. In this chapter I will discuss these and other key findings and share my insights about what I found through this research.

6.1 Characteristics of PD experiences available for school librarians

As the literature review uncovered, there is little research or knowledge surrounding the various aspects of PD, such as content, format, and structure, which school district library supervisors provide for their building-level librarians. Through the first research question in this study, I aimed to understand the characteristics of PD that is offered to librarians by their supervisors. In this section, I consider the most prominent characteristics revealed through the survey and interview findings.

6.1.1 Using technology in new and creative ways to foster and enhance effective PD

The data revealed the ubiquity of technology use in fostering and supporting PD in virtually all the districts that were represented in this survey. Despite there still being 34 million Americans (10 percent of the total U.S. population) without broadband connectivity speeds that meet the FCC's benchmark (25 Mbps for downloads/3 Mbps for uploads) in the communities in which they live and work (Federal Communications Commission, 2016), connectivity to the Internet was not something that was cited as a problem for survey respondents and interviewees. Quite the opposite, actually. Many supervisors were using the affordances of the Web to connect with their librarians when face-to-face meetings were not feasible and to share information with them to help them do their jobs better. Considering the challenges that supervisors face in providing effective PD for their librarians, the Internet may be a partial solution to some of their most pressing obstacles, such as time and money, to providing quality PD throughout the school year.

Technology, including the Web and other online tools, has proven to be a powerful tool that educators can use for communication, collaboration, teaching, and learning (Purcell, Heaps, Buchanan, & Friedrich, 2013; U.S. Department of Education, n.d.-b). Although online PD is not a substitute for meeting in-person, nor should it ever be a substitute, it can be, and is, a supplement that supervisors incorporate into their overall PD for librarians, especially for times in between face-to-face sessions. As I mentioned in the previous chapter, survey respondents are using a wide variety of online tools and social media platforms to have continuous conversations throughout the school year with their librarians and to provide timely

follow-up and feedback on the topics that were discussed during the in-person PD sessions. Currently, these online platforms are used mostly to provide needed information to the librarians or to ask and answer librarians' questions about a certain aspect of their practice from the collective group. However, there were a few respondents who gave examples of unique ways of using online tools to provide more effective and personalized PD for their librarians. For instance, Interviewee D mentioned that she created a video of one of her librarians making effective use of instructional time in her library. She posted the video on their district's library wiki page so that all the other librarians could see a good example of how their peers are creatively solving problems without having to physically visit someone else's library. A possible extension of this could be to videotape and create and post a gallery of best practices on her wiki page that showcases librarians in her district who are doing creative and innovative things in their programs, specifically addressing some of the things about which librarians expressed frustration or trouble. This would be a way to give other librarians ideas on what they could possibly be doing in their own programs to improve teaching and learning in their buildings from other librarians in the same district, bypassing the challenges of requesting leave to visit another school or finding a substitute to cover the library in the librarian's absence. Likewise, there might be other ways to use the learning management system to which the district subscribes to enhance and continue professional learning outside of the mandatory PD days scheduled throughout the school year so that librarians are encouraged to continually learn and apply what they learn into their own practice. When asked what she would do if her district was bigger and had more librarians, Interviewee A

mentioned how she could do video check-ins or meetings with her librarians since she would not have enough time to visit each of her librarians in person throughout the year. This would give her an alternate way to touch base with all her librarians “face-to-face” instead of using valuable time driving around the district to each school.

It is useful to ask how supervisors can continue to use the online tools that are currently available to them in different and creative ways to enable effective PD practices and solve the challenges that prevent PD from taking place. Perhaps, library supervisors could use the Lilead Fellows Program (<https://lileadproject.org/the-lilead-fellows-program/>) as a model for their PD. In the Fellows Program we found that adult learning works best when there is a mix of both in-person and virtual PD. The Fellows Program hosts an in-person meeting at the beginning, middle, and end of the program with short 5- or 6-week online courses in between the face-to-face meetings. School district library supervisors are in a prime position to create a version of this dual-pronged means of PD with their building-level librarians. They could couple the in-person meeting they already hold with smaller regional meetings (of which 32 percent of survey respondents said they already do) and provide online PD sessions in between, so that librarians could receive continual support and PD throughout the year instead of only on these special PD days.

6.1.2 Implementing various types of PD sessions

This study provides detail into the structure and characteristics of PD that is offered to building-level librarians in districts across the U.S. Survey respondents noted that they provide PD for their librarians in the summer and during the school

year in a variety of ways, from single day sessions focused on multiple topics to multiple day sessions focused on the same or similar topics.

As stated previously, this study is an extension of the results that were found through the 2012 and 2014 Lilead Surveys. When you examine the overall numbers/percentages in the Lilead Surveys of those who said they offer PD experiences for their librarians, the results look very positive; 97.6 percent of Lilead Survey respondents in 2012 and 94 percent of survey respondents in 2014 mention that they provide PD for their librarians at least quarterly. However, when taking a closer look at the structure and format of the PD that is provided, as found in this study, only 50 percent of survey respondents stated that they provide long-term PD experiences for their librarians that met over several months during the school year and 70 percent of this study's survey respondents said that their district sponsors PD for their librarians during the summer when school is not in session.

Additionally, when you consider long-term PD (i.e. PD that extends over a period of time, is part of a cohesive PD plan, and includes sessions that build upon the learning done in previous sessions), the numbers do not look nearly as promising. Only twenty-five respondents (33 percent) mentioned that they offer single day PD sessions to their librarians throughout the school year that focuses on either multiple or the same/similar topics and only 19 survey respondents (25 percent) said they have multiple day sessions that focus on either multiple topics or the same/similar topics throughout the school year. So, despite nearly 100 percent of Lilead Survey respondents stating they provide PD opportunities for their building-level librarians at least quarterly throughout the year, the results from this study indicate that the type of

PD sessions that are offered fall short in meeting the criteria for what is effective long-term PD.

This study's results open the window a little more to the structure and characteristics of the PD that is offered in school districts across the U.S. Simply stating that PD exists in a district is important, but the quality, quantity, and duration of this PD is equally, if not more, important to building librarians' knowledge and skills and, thus, their ability to impact student learning and achievement. There is still much to be uncovered about the details of the PD experiences of school librarians. For instance, this study did not clearly indicate whether the single day sessions were held regularly throughout the school year (e.g. one day a month or bimonthly) or just once during the entire year. Future research would need to be conducted to find out more about the structure of librarian PD sessions in these districts and if they are truly following an effective model of PD by providing long-term learning experiences that impacts practice and, ultimately, student learning.

6.1.3 Professional learning communities (PLCs) to support ongoing professional learning

One method of effective PD that the literature mentions is being able to collaborate with peers, specifically by creating a PLC or CoP to reflect on practice and problem solve challenges faced (Borko, 2004; Cuddapah & Clayton, 2011). In larger school districts, like the ones in this study, collaboration among librarians proves somewhat challenging due to numerous obstacles, such as a district's large geographic size or a larger number of librarians. In light of these challenges, many supervisors are using the affordances of technology to make sure their librarians are

communicating and collaborating with each other. In addition to using communication technologies to connect librarians with one another, these challenges can also be mitigated by forming smaller groups of job-alike peers to support each other and grow in their practice. In addition to having in-person and virtual PD sessions that connects all the librarians throughout the district, having these smaller cohorts of librarians, either geographically co-located or working with the same level of students, can make meeting together to collaborate on instruction, lesson planning, and general practice more feasible and frequent in a large district. When there is a smaller number of people in a group, time can be maximized and focused on the specific needs of each member participating in the PLC, thus making it more meaningful and productive for everyone involved. There is also a greater sense of responsibility on each of the members of the group to participate and contribute to the group's learning and growth when the group is smaller (Lipson Lawrence, 2002).

One interesting finding was that 4 out of the 5 supervisors I interviewed who had the top scores from their survey responses provided some method for their librarians to connect with one another in smaller groups to collaborate, share ideas, and problem solve issues related to their practice, while the three supervisors I interviewed who had the lowest survey scores did not have this support in place in their district. The fifth supervisor who had one of the highest scores on their survey responses did not have a system for her librarians to work in small PLC groups, but rather chose to work individually with her librarians on personal learning plans. In addition to working with them to create SMART goals, she drove to each of their schools to meet with them and observe them during instruction. She was able to give

this highly personal PD because her district is relatively small with a smaller number of librarians. She did note that if her district was any larger, however, she would have to rethink the way she offered her personalized PD; she mentioned having to switch to a more technology-based format where she and her librarians could have video conferences as opposed to in-person meetings. Please see Section 6.3.1.1 for further discussion about COPs/PLCs.

6.2 Supporting future ready, 21st century school librarians

The second research question in this study explored how school district library supervisors support their building-level librarians in being able to perform the duties of a 21st century, future ready librarian. Having librarians who are equipped to teach and model 21st century skills (e.g. creativity and innovation, problem solving and critical thinking, and media, digital, and information literacies) as defined by the Partnership for 21st Century Learning, NEA, and others to their students is imperative because students today need to be knowledgeable about more than the subjects traditionally taught in schools to be prepared for their futures (Global Digital Citizen Foundation, 2016; Great Schools Partnership, 2016; Institute of Museum and Library Services, n.d.; National Education Association, n.d.; Partnership for 21st Century Learning, 2007; Thoughtful Learning, 2016). Although important, knowing the traditional literacies – reading, writing, and arithmetic/math – are not enough to succeed in today’s world; mastering multiple literacies is crucial for success and living in our current culture as well as preparing for the future. Children need to learn and practice 21st century skills that directly relate to living and working in today’s highly interconnected, technologically-savvy world. It is appropriate that librarians

take the lead in helping their students become information literate and able to think critically and creatively about information in all its forms. As the information specialists in their schools, librarians are in a prime position to take on the role of leader and expert in teaching these skills to students. Keeping up with all the ways that the school library program can foster 21st century skills and learning is a daunting, but necessary, responsibility. This section discusses what supervisors did to prepare their librarians to carry out this critical role in their schools.

6.2.1 School librarians' core content

The content of PD is the primary way that library supervisors prepare their librarians to teach and foster 21st century skills among the students with which they work. One of the most interesting things the survey data revealed was the kinds of topics the respondents focused on during their PD sessions. Even though many supervisors offered PD sessions that enabled librarians to foster 21st century skills and competencies in the students they work with, many survey respondents offered PD sessions that centered around traditional library administrative and literacy skills, which included topics such as conducting an inventory, collection development, weeding, book repair, and book talks.

In addition to focusing on various 21st century skills, many supervisors found that traditional literacy and library administrative skills were necessary knowledge that librarians needed in their daily work and therefore incorporated “traditional” library skills into the PD sessions they offered to their librarians along with more “modern” topics. For example, supervisors led PD sessions that discussed the administrative duties of a building-level librarian, such as collection development

procedures, cataloging, doing an inventory of a collection, and budgeting. Supervisors also led PD sessions that focused on more “traditional” library lessons or teaching, such as book talks, reading, literacy, copyright, and fair use. These multiple foci on helping librarians be prepared to support students and teachers, whether through traditional means (e.g. conducting an inventory of the collection or how to build a culture of literacy throughout the school) or through more contemporary means (e.g. sharing/reviewing the online resources provided through the district or helping librarians create and maximize makerspaces in their libraries) is a unique position school librarianship currently finds itself.

This finding clearly reveals the nature of this current multiplicity in our field of the “traditional” librarian, who focuses on such things as readers advisory, book processing, promoting reading with book talks, and reading comprehension strategies, and the “modern” librarian, who focuses on incorporating such things as Makerspaces, STEM/STEAM learning, and coding into their library programs.

6.3 Adherence to effective PD practices

Through the literature review done for this research, I identified 9 strategies or facets of PD that helped educators in being more effective in their teaching. Research Question 3 explored the ways that the PD provided by the school district library supervisor reflect what the research says are best practices or effective facets of PD.

In terms of adhering to what the literature says are effective means of PD, supervisors are incorporating many of these best practices into the PD that they provide for their librarians. Survey responses indicated that all respondents are strong in at least one or two of the nine facets of effective PD. (See Appendix M.) There is

certainly room to improve, however, in how supervisors plan, structure, and offer their PD, and especially in how supervisors map out the PD that is offered throughout the year in a cohesive plan, thus ensuring that their librarians have opportunities to learn throughout the entire school year, not just at the beginning of the school year when they have their mandatory back-to-school PD day(s).

Overall, the category that survey respondents showed most adherence to in their execution of PD for building-level librarians was providing time and opportunities for their librarians to communicate, collaborate, and build community with one another through various methods, such as through district-wide face-to-face meetings, vertical articulation meetings, and their district's online learning management system. Supervisors also aligned the PD they offered to their librarians with the district's and/or state's goals and standards for learning. Supervisors and their districts displayed average adherence (i.e. an overall average score between 7 and 8 for all survey participants) to 3 of the 9 facets: providing active learning experiences during PD sessions, evaluating their PD activities, and having school leaders and a culture that supports PD. Supervisors and their districts struggled to various degrees (with scores below a 7) in demonstrating 4 of the facets of effective PD to their librarians: incorporating follow-up and feedback to librarians after PD sessions, having a plan created ahead of time to base PD sessions and activities, having long-term PD that spans throughout the entire school year, and focusing on core content (although the core content of librarians has shown to be somewhat nebulous and changing. See Section 6.2.1). The bar graph in Figure 15 shows survey respondents' combined average score for each facet of PD. In this section, I will focus

on several of these findings and their implications for school librarianship now and in the future.

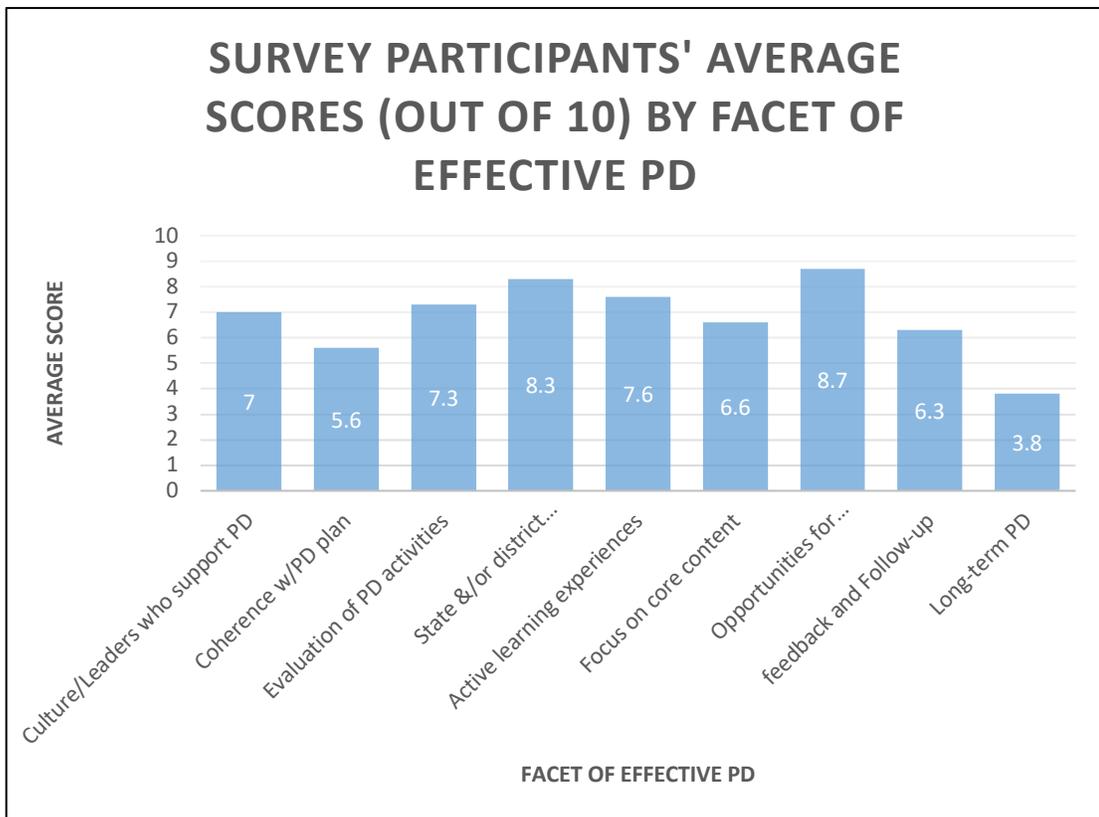


Figure 15. Survey participants’ combined average scores by facet of effective PD (out of 10 points).

6.3.1 Supervisors’ adherence to facets of effective PD

According to the survey responses, providing opportunities for their librarians to connect and communicate with each other and aligning PD with the district’s and/or state’s goals and standards for learning were the most prevalent of the nine facets of effective PD reported by the survey respondents.

6.3.1.1 Collaboration and creation of a PLC/CoP

At its core, a CoP has these three elements according to the literature: 1) the community: interactions and learning that occurs between the people in the group who want to “collaborate over longer periods of time to share and exchange ideas,

find solutions and build knowledge”; 2) the domain: a “common interest in a subject or problem;” and 3) the practice: all members of a CoP are practitioners who share ideas, experiences, and expertise to improve their practice (Kirschner & Lai, 2007, p. 128; Wenger, 1998). Based on this definition of CoPs alone, the activities that survey respondents’ librarians engaged in can be defined as CoPs. However, more in-depth study and systematic evaluation of these meetings would need to be conducted to determine the overall effectiveness these activities had on changing and improving librarians’ practice, which is the ultimate goal of PD.

Having district-wide in-person meetings can indeed foster communication, collaboration, and community among librarians, especially among those who have been in a district for a number of years and know each other well. While 99 percent of survey respondents maintained that they hold district-wide face-to-face meetings for librarians to come together and discuss certain topics and 84 percent of them said these meetings were “extremely” or “very” effective, I still wonder, however, if these meetings were as effective as they say they were, especially in districts with a large number of school librarians. Additional research is needed to determine whether or not these large, whole district meetings offered once or twice throughout the school year have the same effect on improving practice as smaller, more consistent meetings, such as a PLC/CoP, every month or so would. It would be interesting to compare the outcomes of these district-wide meetings with the outcomes of PLCs to see if there is the same level of learning and connection to everyday practice in both these methods of PD. I anticipate that there would be a marked difference in the impacts each of

these methods has on librarians' learning and their ultimate implementation of various practices in instruction and administering of the library program.

Something else to consider that was revealed through this study is that with the usage and ubiquity of online communication technologies ever increasing, there are numerous ways to foster collaboration and community virtually. Considering the challenges of time and money, it is not surprising that supervisors used online channels to promote communication and collaboration among their district's librarians. Many supervisors stated that they are using their district's online learning management systems to encourage discussion and share resources with their librarians throughout the school year. Even though survey respondents revealed their use of many different online tools to communicate and collaborate, this communication and collaboration happens mostly asynchronously as only 15 survey respondents (21 percent) said they had district-wide virtual meetings and only 9 of these 15 said they were "extremely" or "very" effective. This finding reveals that there may be some ways that online technologies are helpful in fostering communication and collaboration between colleagues and some ways in which they may not be.

In terms of building a PLC among librarians where they can think critically and grow in their practice, it is interesting to think about using information and communication technologies (ICTs) as a vehicle for promoting PLCs. The fields of education and school librarianship have contributed much thought around the idea of using ICTs as a means to facilitate professional growth (Brooks, 2010; Lock, 2006; Moreillon, 2015, 2016; Trinkle, 2009; Branom, 2012; Cooke, 2012). The goals of a

virtual PLC are essentially the same as that of a traditional, in-person PLC – to improve individuals’ own practice while helping others improve theirs (Lock, 2006). It is a mutually beneficial endeavor that aims to support all members of the group. Similar to the literature on traditional face-to-face PLCs, articles that focused on online PLCs are mainly of a theoretical nature (Fontainha & Leary-Gannon, 2007; Hanson-Smith, 2013; Lock, 2006). From a theoretical lens, PLCs are seen as an answer to building educators’ collective capacity and expertise in the classroom, which serves to improve student learning and their overall achievement. However, not much empirical research has been conducted to study the effects and/or efficacy of online PLCs in K-12 environments. It would be interesting to delve deeper into how the supervisors surveyed and interviewed for this study structure and maintain virtual PLCs for their school librarians and if these methods are achieving its intended goals of improved teaching and learning within the district.

Using PLCs – traditional and online – as a means of PD in education has been a topic of discussion for many years (Schlager & Fusco, 2003), but their practical impacts are still yet to be studied and evaluated. Scholars’ reflections on the theory of PLCs in education are substantial, but knowing if they work in practice to improve teaching and pedagogy is yet to be explored in depth. The idea of building these online CoPs that are as effective as in-person communities of practice is an area that could be expanded upon in future research. (See Chapter 7: Future Research for more thoughts on this idea.)

6.3.1.2 Alignment with district/state goals/standards

Another facet of effective PD that supervisors showed adherence to was having PD that aligned with the educational goals and learning standards of the district and/or state. The fact that this facet of effective PD was adhered to by supervisors who took the survey is not surprising. At a time when education is rife with discussions on standards and making sure standards are adhered to and met, supervisors would be remiss not to take the goals and standards for learning into account when preparing PD for their building-level librarians.

6.3.2 Facets in which PD for librarians can grow

There is always room for improvement in any of the facets of effective PD mentioned in this research, but there are some facets in which PD for librarians have a clear need for growth. This section discusses the two facets that were the least prevalent of the nine facets of effective PD among the survey respondents.

6.3.2.1 Long-term PD

One area in which survey respondents struggled was maintaining long-term PD for their librarians. The education literature makes many references to the duration of PD, specifically the number of hours that participants are engaged in professional learning experiences at consistent intervals throughout the year and how hours engaged in PD impact teacher learning and, in turn, student success and achievement. As noted in the literature review, Darling-Hammond and colleagues suggested that teachers need between 30 and 100 hours of professional learning spread out over a semester or school year to improve their skills to impact students' learning (Darling-Hammond et al., 2009). Additionally, Hawley and Valli (2007)

stated that “professional development should be continuous and ongoing, involving follow-up and support for further learning, including support from sources external to the school that can provide necessary resources and new perspectives” and that “extensive opportunities to learn over time contribute to teacher effectiveness” (p. 128-129). Although survey respondents noted that they do, indeed, provide PD for their librarians (all but one survey respondent said they provided PD for their building-level librarians during the 2016-2017 school year), the consistency and ongoing nature of the PD provided throughout the year is lacking; only 37 survey respondents (49 percent) said they provide PD for their librarians that extended *over several months* throughout the school year. Of these 37 survey respondents, less than half (17) said these PD experiences were single day sessions focused on the same or similar topics and only 12 had multiple day sessions focused on the same or similar topics.

The data I collected does not indicate how many hours these sessions totaled or how the material presented in the sessions built upon previous learning and PD experiences. It is possible that the multiple day sessions could have amounted to several full work days engaged in PD and may have exceeded the lower end of this PD spectrum (i.e. 30 hours), but it is unlikely that the total number of hours comes close to the higher end of this spectrum (i.e. 100 hours) suggested by Darling-Hammond and her colleagues, even for the supervisors who claimed to provide the most extensive amount of PD for their librarians.

To be clear, between 30 and 100 hours of PD is not a magical numeric target that PD providers need to reach for the PD to have “done its job” of providing

participants with the skills and tools needed to support student learning so that students achieve everything they need to succeed in school and life. Even so, it is evident from the literature that a longer duration of PD is included as an aspect of effective PD because the more time educators spend in PD, the more likely it is that they will have opportunities to engage in the other aspects that account for effective professional learning. For instance, they will have more time to implement what is learned in PD sessions and receive feedback on a particular practice or engage in continual discussions and critical reflections with others about their practice and modifying their practice as needed.

Looking at this from a different angle, there were some studies in the education literature that found that duration of professional learning experiences did not make a difference to student learning, but what mattered was that the PD was “well organized, carefully structured, clearly focused, and purposefully directed” (Guskey, 2009, p. 230). This leads me to another category in which survey respondents struggled: having a plan for how they are going to lead their librarians in professional learning throughout the year.

6.3.2.2 Coherence with a PD plan

When asked if their district had an overall PD plan for all educators in their district, fewer than half of survey respondents (45 percent) said that their district does have an overall, written PD plan. Of the supervisors whose districts did have a PD plan (n=34), 28 said that the PD sessions they provided for their librarians aligned with the district’s overall PD plan. This still leaves 48 survey respondents (63

percent) who do not consult any PD plan – one they created or otherwise – when creating and planning the PD they provide to their building-level librarians.

Only 18 respondents (about one-fourth of the supervisors surveyed) said they have a specific PD plan for their building level librarians that they use to plan and prepare the PD experiences they offer to their librarians throughout the year. Over three-fourths of the supervisors surveyed do not have a written PD plan specifically for their building-level librarians or are unsure if a plan exists. One supervisor noted this as something she needs to change as she thinks about PD for the following year: “I need more of a plan so one [PD session] leads into another and I’m not scrambling for PD. It’s not good when I scramble.” Another supervisor noted that it can be a challenge to create and follow a year-long PD plan “in a rapidly changing dynamic k-12 environment.”

These results are somewhat alarming and cause me to question the value of the PD that is being offered if there is no specific, “well organized, carefully structured, clearly focused, and purposefully directed” plan for what librarians will learn over the course of the year (Guskey, 2009, p. 230). How effective can one’s PD activities be if there has been limited thought and consideration beforehand of what you want participants to learn and for what purpose? If there is no plan for providing PD to their librarians, are supervisors addressing the areas in which school librarians need and want to grow to be able to better support the teaching and learning in their school buildings? How would PD for librarians be different if supervisors created a yearly PD plan for the learning their librarians would experience that year?

Not having a PD plan in place for the school year is not a definite road to failure. However, having one creates a clearer roadmap to accomplishing the goals and outcomes for participants' learning and growth, which not only benefit the librarians and their practice, but also the students and teachers with whom librarians work with on a daily basis.

6.4 Conditions that support or detract from PD for building-level school librarians

The fourth research question focused on conditions in the district that support or detract from PD for school librarians. There are several conditions I mentioned in the findings that support or detract from the availability of PD for building-level school librarians in their districts. Below I share further thoughts concerning these conditions.

6.4.1 Money matters

Four of the 8 supervisors I interviewed mentioned having a budget or funding that was either a part of the larger PD budget or specifically set aside for particular PD opportunities for school librarians. Even though the supervisors I surveyed and interviewed are finding other, creative ways of providing the needed professional learning for their librarians, such as using various kinds of online applications and tools, in light of the reality of shrinking budgets and funding for PD experiences, there is no substitute for the richness and quality of learning that one receives when colleagues meet in an in-person, face-to-face environment. This kind of PD requires money, either to pay for substitutes to cover the library while the librarian attends PD or to reimburse librarians for their time outside of regular contractual school hours.

Additionally, in any company or organization, funds must be allocated for the continued learning of their employees if that organization wants to grow and compete in the global economy (Garton, 2017). Investments should be made into the human capital that comprises an organization. According to Gary Becker, an economics and sociology professor at the University of Chicago, human capital is comprised of the education, training, and health of the individual worker (Becker, 2008). He states that college graduates are oftentimes not fully prepared to do the jobs they are trained in college to do. In these cases, on-the-job training becomes a valuable indicator of increasing human capital and the outputs of those workers (Becker, 2008). In a school district, whose mission is to prepare their students for successful participation in society and the economy, the growth and learning of their in-service teachers and other educators is crucial for them to be able to accomplish these goals.

Continued learning for school librarians is particularly important because of the unique expertise, knowledge, and opportunities for learning they provide to their school communities. As information specialists, school librarians are specifically trained to help students and staff find, use, and create information wisely and ethically. Staying abreast of the ways information is disseminated, used, and created in society is imperative to help children think critically about information and its impact on all aspects of society. Additionally, through PD, school librarians are able to take time to reflect on how their spaces and programs can be used to complement and extend what is being done in the classroom and ignite and foster students' independent learning that they may not have otherwise. Perhaps most importantly, continued learning for school librarians through PD experiences is critical because the

nature and speed of information has been changing so rapidly. As the “facilitator” of information in a school community, school librarians must understand the nuances of what these changes mean for teaching and learning today and how they need to adapt and leverage the library program to meet the needs of those in the school community.

Moreover, key elements that adult learners want (and need) in their learning are collaboration with their peers and connections to their daily work (Fogarty & Pete, 2004). Three of the 9 facets of effective PD that emerged during the review of the PD literature in education—collaboration and creation of a professional learning network, including active learning experiences, and creating and supporting a culture of continual learning—directly point to the importance of these aspects of andragogy, or adult learning. These kinds of experiences can be accomplished to an extent in an online environment, either synchronously or asynchronously, but the learning and engagement people experience in an in-person setting is very difficult to replicate online. For there to be a true professional learning community, trust, respect, and the support among participants are characteristics that need to be present (Stoll, Bolam, McMahon, Wallace, & Thomas, 2006). Combining in-person PD sessions with virtual sessions can facilitate this sense of trust, respect, and support better than just having PD online in a virtual community. We found this to be true in the Lilead Project. In wanting to create community and sharing through a virtual PLC for school district library supervisors, we initially created a website to foster this mutual sharing and learning. However, we discovered that having only an online space for PD and community-building was insufficient; people needed to know each other personally

before they felt comfortable engaging in meaningful and effective PD in an online atmosphere.

6.4.2 Culture of learning in district

Another important, yet not surprising, finding was the influence that the district's overall culture had on the availability of PD opportunities for librarians and the rest of the staff. Four of the five interviewees who had the highest survey scores specifically noted that their district had a culture of continued learning and that their leaders valued and made sure all their staff were involved in professional learning throughout the year. I do not think this is a coincidence. The desire to grow and improve on practice is something that must be cultivated within a district. It does not just happen without intentional effort by district and school leadership. The administration at the district and building levels – the leadership within a district – play a significant and primary role in the PD that is made available to staff members. Leadership within a school or district influences this learning culture among the staff members (Stoll et al., 2006). If the leaders value and encourage learning, PD will most likely be a mandatory expectation for everyone. Leaders are the ones who ultimately set the tone for the culture in a district or school environment. Going back to the *Social-Ecological Model of an Ecosystem that Fosters Effective Professional Development for School Librarians* (Figure 1), this is where you can see more clearly how the entities in the exosystem impact the availability and quality of the PD that school librarians have in their districts. A culture of learning has to be ingrained at all levels of the school district, from the superintendent and other district-level

administration to the principals, teachers, and other building-level staff members for there to be effective PD.

6.5 Conclusion

A final goal of this study was to compare the *Social-Ecological Model of an Ecosystem that Fosters Effective Professional Development for School Librarians* with the survey and interview findings to see if there are other individuals or entities that have an influence on the PD opportunities that building-level school librarians have available to them and, therefore, should be included in the model. One interview respondent mentioned receiving Title II funding which allowed her to offer PD to her librarians. Thinking about funding and where money comes from to provide PD, it would be wise to add the federal and state government, particularly the law-making branches of government, to the model as entities that have the responsibility and decision-making power to create laws and mandates for PD to take place within local school districts. Much of the funding that supports PD in districts comes directly from the money set aside by these state or federal laws. Understanding where funding for PD originates from is also something that would be interesting to investigate further in future research as the availability of funding is what fuels much of the PD that is provided to librarians and others in a school or district.

Lastly, while this discussion of findings from this research seems to pose more questions than it answers, I would argue that these questions are vital as we think about how to move school librarianship forward for the betterment of everyone in our school communities. The findings revealed many interesting avenues for future

research. In the next chapter, I will highlight some ideas for ways that the topics discussed here can be explored further.

Chapter 7: Future Research

The findings presented in this study represent an initial view into what school district library supervisors do in terms of providing PD opportunities for their district's building-level librarians. Because this research was the first, as far as I am aware, to document the PD made available to school librarians by their districts, there are still many questions (as the previous chapter showed) that can, and should, be answered in regard to effective PD for school librarians. In this chapter, I will explain the various pathways that future research into PD for school librarians can take to give us a more complete picture of what PD for school librarians looks like in districts across the U.S. The overarching goal for these various research pathways is to understand what is and is not being done in regard to providing effective PD for school librarians to ensure that librarians are receiving the continued education they need to fully support the students, teachers, and school communities they serve each day.

This study highlighted specific aspects of PD for school librarians that would benefit from further exploration. One area that could be explored more is the use of technology in facilitating PD. The results in this research study pointed out that library supervisors are using technology, information and communication technologies (ICTs) in particular, in various ways to engage their librarians in continued learning when meeting in-person is too difficult, time consuming, or unbudgeted. From this study, we know more about what kinds of ICTs are being used to facilitate communication and collaboration among librarians, but more research could be done to look at how these different technologies and applications are being

used in school districts nationwide to provide PD when meeting in person is not an option. Questions that could be answered include: What technologies work best in facilitating each facet of effective PD? What are the challenges in using technology for PD?

When it comes to envisioning what a 21st century, future ready school library program and librarian look like, it seems that both traditional and modern elements of librarianship must be considered. Today's librarians and library programs are in a place where they need to recreate their identity and purpose to fit the needs and goals of the school communities they serve as well as the overarching plans of the district. The PD that library supervisors offer to their librarians is shaping this new identity that will set a new path for what school librarianship may look like now and in the future – that is, a blending of the “traditional” foci of literacy and the enjoyment of reading and learning with the “modern” skills of information and digital literacies, problem solving, creativity, and critical thinking.

Therefore, another area of PD for librarians that this research shed light on was the content of the PD being offered. As the survey data showed, there are many topics that library supervisors focus on in their PD sessions for librarians. These topics can be grouped into either “traditional” library topics or “modern” library topics. Future research could center on further defining the content that district library supervisors make available through their PD by surveying districts not represented in this study.

The position that school librarians are in as they grapple with the multiple roles and identities they take on in their schools leads to several connected and critical

questions that have important implications for the future of our field: 1) What should librarians be teaching to their students?; 2) Do librarians have a “core content” they should be teaching?; 3) What is our field’s “core content”?; 4) What role do/should librarians play in their school communities?; and 5) How do librarians balance the emphasis on both “traditional” and “modern” library practices? Gathering information from supervisors in more school districts across the U.S. may not only help our field get a broader and better sense of the content that is being taught to in-service librarians, but might also enable us to begin a nationwide conversation about the content that school librarians working in schools need to know to best instruct and support those in their school communities and, ultimately, what role school librarians must play in their schools.

Extending the focus on the content of school librarians’ PD further, document analyses could be conducted on available materials from PD sessions provided for school librarians in districts across the U.S. to see what similarities and differences in content and themes emerge across districts. These document analyses could then be compared by district, state, and even region. This would give us further insight into what is being taught to school librarians through their district-sponsored PD.

Another approach to identifying the content that is being taught to in-service school librarians would be to observe PD sessions in action as they take place within districts, possibly as a single or multiple case study. This research method could also be used to study the structure of in-person PD sessions and how supervisors use the dedicated PD time they have with their librarians to accomplish various goals. This method of research could also include document analysis or interviewing PD

participants. Interviewing PD participants would allow researchers to explore the perspectives of another important individual in the ecosystem of school librarians' PD: the school librarians themselves. In interviewing school librarians about their experiences and takeaways in participating in PD, researchers could connect what is being taught in PD to librarians' practice. They also could begin to measure the effect of what librarians are doing has on teaching and learning in their buildings. As Smith & Gillespie (2007) note, individual educator factors, such as teacher motivation, self-efficacy, and reflectiveness, play a distinct and critical role in teachers making changes to their pedagogy and practice in the classroom.

A document analysis could also be done on the PD plans for those who said they have and follow one for their librarians' PD. This analysis would provide more detail into the PD that supervisors say they provide to their librarians. Questions to consider could include:

- How are these PD plans similar to/different from each other?
- Are the sessions that supervisors plan connected to each other in some way? Is there an overall topic that these PD sessions are all focused?
- How many hours are librarians engaged in PD throughout the year? and How does the number of hours librarians are engaged in PD throughout the year affect and/or change their practice?
- What do the sessions look like? How are the activities structured? Are there whole group and small group sessions?

After document analyses are complete, interviews could also be conducted with supervisors to understand their rationale and thinking for why they structured the PD in the ways they did and to clarify any questions the document analyses raised.

As the *Social-Ecological Model of an Ecosystem that Fosters Effective Professional Development for School Librarians* shows, there are more parties in the school district and beyond that have a role and stake in providing PD for school librarians and ensuring its effectiveness. This research focused on just one stakeholder role – the school district library supervisor. However, to get a more complete view of the PD ecosystem for school librarians, it would be necessary to study the other parties in this model. Once we are able to see what each party does and how they contribute in facilitating effective PD for school librarians, we would be able to create more detailed models of what effective PD for school librarians looks like. Future studies could look at the other parties/entities in the ecosystem and their connections to and influences on the school librarian's PD experiences and opportunities.

Another area of research that could be explored is to understand what conditions allow PD for librarians to thrive. Future research could examine the districts that seem to be excelling at providing PD for their librarians, starting with the districts from which supervisors who had a high score on the survey are from. There are numerous factors that go into creating and maintaining a conducive environment for continued learning in a school system. Understanding these factors and how they can be introduced and cultivated in a school or district so that all members of the educational team can grow and thrive in their practice and knowledge

of teaching and learning would enable schools and districts to work towards these kinds of environments for the advancement of everyone in the community. Research questions that could be considered include: What district and/or school characteristics play a role in the success of PD for school librarians and other teaching staff? How could these kinds of environments or activities be replicated in different districts?

The use of CoPs or PLCs by survey respondents and interviewees in this study was an interesting finding and is an area in which more research could be undertaken. As noted in the Discussion chapter, there has been a lot of theoretical articles about the benefits of PLCs, but few empirical studies that show its actual effects on teacher learning and pedagogy. School library researchers could fill this gap and engage in research that delves deeper into the effectiveness of PLCs as an in-person or online method for professional learning and growth. This could be done through interviews with district supervisors on their rationale for creating PLCs among their librarians and how they organize and manage them, interviews with PLC participants to understand what they learn and contribute to their PLC, observations of PLCs in action, or through analyzing evaluations of working PLCs by the participants. Research questions that could be examined include: 1) How are PLCs (in-person and online) affecting librarians' praxis?; 2) What are the characteristics of school librarian PLCs in districts across the U.S.?; and 3) What are the differences in PLC implementation across districts and how does the implementation affect librarians' practice?

As this was a baseline study to begin an examination of the PD practices that school district library supervisors provide for their building-level librarians, statistical

data analyses could be conducted on the survey data to compare various aspects of the PD activities to see if there is a statistical difference between large and small school districts or districts with more or fewer certified librarians.

This baseline research study is just beginning the work that needs to be done to study PD as it relates to school librarians in U.S. public schools. This research shed light onto various aspects of PD for school librarians, such as the conditions in which PD for librarians can thrive and the characteristics of PD that supervisors make available to their building-level librarians. Yet, there are many different avenues this research can take from here. Future research should address PD for school librarians from both the theoretical and practical lenses. From whatever lens PD for school librarians is studied, the overarching goal and purpose is to improve the knowledge, skills, and overall practice of building-level librarians so that they are empowered, enabled, and equipped to meet the information and technology needs of the students, teachers, staff, and community they serve and prepare the next generation with the skills they need to thrive today and in the future.

School librarianship is at a crossroads and has been for several years. While we do not want to minimize the librarian's important role in promoting reading and literacy skills, we also need to acknowledge the changing society in which we live – one that creates, finds, and uses information in vastly different ways than we ever have in the past and is calling educators to reevaluate and rethink the skills and competencies we teach our students today. How our field chooses to balance, navigate, and own these various roles and how we encourage the professionals in our

field through ongoing PD will have marked positive or negative effects on school librarianship, teaching, and learning, now and well into the future.

Appendix A: Survey Questions

1. Are you the primary person in charge of providing professional development (PD) for your district's building-level librarians? (Yes/No)
 - a. [If "Yes" is selected] go to Q2.
 - b. [If "No" is selected] "Who is the primary person in charge of planning and providing PD for building-level librarians in your district? What is their title and contact information?"

The following questions are in reference to the current 2016-2017 school year.

A. District Demographics

Student Population

of schools (elementary, middle, and high)

of certified librarians

Title I/FARMS rate

B. Culture/leaders who support PD

2. Does your district have an overall budget for professional development activities and events?
 - a. Yes
 - b. No
 - c. Not sure
3. [If previous answer is "yes"] Is **professional development for school librarians** included in the larger budget for PD overall?
 - a. Yes
 - b. No
 - c. Not sure
4. [If previous answer is "no"] Does your district have a budget that is specifically allocated for professional development for **school librarians** that is not included in the district's overall PD budget?
 - a. Yes
 - b. No
 - c. Not sure
5. On a scale of 1-5 (and don't know), in general, how supportive of PD are the following entities in your district? (Scale: (1) not supportive at all; (2) somewhat/slightly supportive; (3) moderately supportive; (4) very supportive; (5) extremely supportive)
 - a. Superintendent
 - b. Building-level principals
 - c. School board

C. Coherence with a PD plan

6. Does your district have an overall, written professional development plan/program for teachers and other building-level educators (e.g. counselors, specialists, librarians, paraprofessionals, etc.)?
 - a. Yes
 - b. No
 - c. Not sure

7. [If previous answer is “yes”] Is this PD plan regularly consulted to inform the PD that is offered by your district throughout the school year?
 - a. Yes
 - b. No
 - c. Not sure

8. [If Q6 is “yes”] Were the individual PD sessions that you provided for school librarians in alignment with the overall district PD plan?
 - a. Yes
 - b. No
 - c. Not sure

9. Does your district have a written professional development plan specifically for building-level school librarians?
 - a. Yes
 - b. No
 - c. Not sure

10. [If previous answer is “yes”] Were the individual PD sessions that you provided for school librarians in alignment with this specific PD plan for school librarians?
 - a. Yes
 - b. No
 - c. Not sure

11. From where did you get ideas for the topics you covered this year in your PD sessions? (check all that apply)
 - a. Talk with OTHER DISTRICT-LEVEL LIBRARY SUPERVISORS
 - b. Talk with BUILDING-LEVEL LIBRARIANS and hear where they want more support
 - c. Talk with BUILDING-LEVEL ADMINISTRATORS to find out what they need from their librarians
 - d. From NATIONAL PROFESSIONAL ASSOCIATIONS (e.g. ALA, AASL, ISTE, etc.)
 - e. From STATE PROFESSIONAL ASSOCIATIONS (e.g. state school library association, etc.)
 - f. From LOCAL PROFESSIONAL ASSOCIATIONS (e.g. district school library association, etc.)
 - g. Reviewing the DISTRICT STRATEGIC PLAN/PRIORITIES
 - h. Reviewing STATE STANDARDS for student learning

- i. Reading SCHOOL LIBRARY JOURNALS/PUBLICATIONS for trending topics
- j. Other (please specify)

D. Evaluation of PD Activities

12. What means did you use to evaluate the PD sessions you provided this school year? [Double Matrix: (1) Did you use this technique? Yes/No; (2) How effective was this evaluation technique? Extremely/Very/Moderately/Somewhat/Not]
- a. Feedback forms/surveys/questionnaires from attendees
 - b. Interviewing PD attendees
 - c. Interviewing PD attendees' supervisors (i.e. principals or other building-level administrators)
 - d. Informal feedback (via email, comments after sessions)
13. Besides the ones just listed, were there any other effective means you used in evaluating the PD sessions you provided?
- a. Yes
 - b. No
14. [If previous answer is "Yes"] What were the other effective means of evaluating the PD sessions you provided for your building-level librarians?
15. [If Q12 and Q13 "yes" is selected anywhere] Based on the feedback from the evaluations you received from your PD sessions this year, do you plan to make any changes to future PD sessions (e.g. changes in topic, frequency, participants, etc.)?
- a. Yes
 - b. No
16. [If previous question is "Yes"] What changes will you make to your future PD sessions/offerings based on the evaluations you received (e.g. changes in topic, frequency, participants, etc.)?

E. Alignment with state and/or district goals/standards

17. Does your state have specific state goals/standards for student learning?
- a. Yes
 - b. No
 - c. I don't know
18. [If previous answer is "yes"] Are the PD sessions you provide for building-level librarians aligned with Common Core and/or state goals and standards for student learning?
- a. Yes
 - b. No

19. [If previous question “Yes” is selected] Please briefly describe a PD session that you provided for your building-level librarians that was aligned with the state’s goals and standards for student learning.
20. Does your **district** have goals for student learning?
- Yes
 - No
 - I don’t know
21. [If previous question is “Yes”] Are the PD sessions you provided for building-level librarians aligned with these district goals for student learning?
- Yes
 - No
22. [If previous question “Yes” is selected] Please briefly describe a PD session that you provided for your building-level librarians that was aligned with the district’s goals for student learning.

F. Active Learning Experiences

23. The PD sessions I led/organized this school year: [Likert Scale: Never, Occasionally, About Half the Time, Most of the Time, Always]
- Fostered discussion among the participants
 - Had immediate and practical uses in librarians’ daily work
 - Allowed for librarians to observe each others’ practices
 - Engaged participants in working together to solve problems
 - Had a mix of whole group and small group breakout activities.

G. Focus on Core Content

24. What were the major topics you focused on during the in-person PD sessions you organized this school year?
25. Did you send out a newsletter or blog post regarding library services in your district with links to or information on current trends and topics in school librarianship?
- Yes
 - No
26. [If previous question “Yes” is selected] Please list three of the most important topics discussed in your newsletter/blog.

H. Collaboration/creation of a PLN or COP

27. In what ways did/do you facilitate communication and collaboration among the librarians in your district? [Double Matrix: (1) Did you use this technique? Yes/No; (2) How effective was this communication/collaboration technique? Extremely/Very/Moderately/Somewhat/Not]
- A listserv

- b. District-wide face-to-face meetings (i.e. meetings that brought together librarians to have discussions around a certain topic)
 - c. District-wide virtual meetings
 - d. Regional meetings
 - e. Vertical articulation meetings (i.e. meetings that allowed elementary and middle school librarians or middle and high school librarians to talk and collaborate, etc.)
 - f. Twitter handle for librarians to tweet about what they're doing in their schools
 - g. Twitter chats focused on a specific topic
28. Besides the ones just listed, were there any other means you used that you thought were effective in facilitating communication and/or collaboration among the librarians in your district?
- a. Yes
 - b. No
29. [If previous answer is "Yes"] What were these other effective means of facilitating communication and/or collaboration among the librarians in your district?

I. Follow-up/feedback

30. How often did you provide opportunities for ongoing discussion (or "practice and report" type of activities) after in-person PD sessions? (Likert Scale: Always, Most of the time, About half the time, occasionally, Never)

J. Long term

31. Did building-level librarians have opportunities to participate in district-sponsored PD activities that met **during the summer of 2016?**
- a. Yes
 - b. No
32. [If previous answer is "yes"] Were these **summer PD experiences** (check all that apply):
- a. Single day sessions focused on multiple topics
 - b. Single day sessions focused on the same or similar topics
 - c. Multiple day sessions focused on multiple topics
 - d. Multiple day sessions focused on the same or similar topics
33. [If Q31 is "yes"] What were the three most important topics you focused on during these **summer PD sessions?**
34. Did you lead/provide any PD experiences for your librarians that met over several months **during the school year?**
- a. Yes (1)
 - b. No (0)

35. [If previous answer is “yes”] Were these PD experiences **during the school year** (check all that apply):
- Single day sessions focused on multiple topics
 - Single day sessions focused on the same or similar topics
 - Multiple day sessions focused on multiple topics
 - Multiple day sessions focused on the same or similar topics
36. [If Q34 is “yes”] What were the three most important PD topics you focused on **during the school year**?
37. [If Q34 is “yes”] How effective were the **PD experiences that met over several months during the school year** in providing opportunities for librarians to:
[Likert Scale: Extremely effective, Very effective, Moderately effective, somewhat/slightly effective, Not effective at all]
- Learn new knowledge or skills
 - Put into practice a new skill or knowledge learned
 - Evaluate the work they did during the PD sessions
 - Revise the work they did throughout these PD sessions
38. Please add any additional comments about how you provide PD for your building-level librarians.

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Thank you for participating in this survey. If you would like your name to be entered in a raffle to win one of 4 \$25 Amazon gift cards, please click “Yes” below and provide your name and contact information in the space provided.

If you would be willing to participate in a short 30-60 minute follow-up interview to discuss more about the professional development opportunities you and your district provide for building-level librarians, please click “Yes” below and provide your name and contact information in the space provided.

## Appendix B: Survey Questions-Research Questions Map

|                  |                                                                                                                                                                                                                | Research Questions                                                                                                                                                                                       |                                                                                                                                                                      |                                                                                                                                                                    |                                                                                                                             |   |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|---|
|                  |                                                                                                                                                                                                                | 1. What are the <b>characteristics of the PD experiences</b> that district-level supervisors make available to their building-level school librarians? (format/structure)                                | 2. How do supervisors <b>support their building-level librarians</b> in being able to perform the duties of a future ready, 21st century school librarian? (content) | 3. In what ways does the PD provided by the school district library supervisor <b>reflect what the research says</b> are best practices of effective facets of PD? | 4. What are the <b>conditions that support or detract from the availability of PD</b> for building-level school librarians? |   |
| Survey Questions | Culture/Leaders who support PD                                                                                                                                                                                 | 1 Are you the primary person in charge of providing professional development (PD) for your district's building-level librarians?                                                                         |                                                                                                                                                                      |                                                                                                                                                                    |                                                                                                                             |   |
|                  | 2 Does your district have an overall budget for professional development activities and events?                                                                                                                |                                                                                                                                                                                                          |                                                                                                                                                                      | X                                                                                                                                                                  | X                                                                                                                           |   |
|                  | 3 [If previous answer is "yes"] Is <b>professional development for school librarians</b> included in the larger budget for PD overall?                                                                         |                                                                                                                                                                                                          |                                                                                                                                                                      | X                                                                                                                                                                  | X                                                                                                                           |   |
|                  | 4 [If previous answer is "no"] Does your district have a budget that is specifically allocated for professional development for school librarians that is not included in the district's overall PD budget?    |                                                                                                                                                                                                          |                                                                                                                                                                      | X                                                                                                                                                                  | X                                                                                                                           |   |
|                  | 5 On a scale of 1-5 (and don't know), in general, how supportive of PD are the following entities in your district?                                                                                            |                                                                                                                                                                                                          |                                                                                                                                                                      | X                                                                                                                                                                  | X                                                                                                                           |   |
|                  | Coherence with a PD Plan                                                                                                                                                                                       | 6 Does your district have an overall, written professional development plan/program for teachers and other building-level educators (e.g. counselors, specialists, librarians, paraprofessionals, etc.)? |                                                                                                                                                                      |                                                                                                                                                                    |                                                                                                                             | X |
|                  | 7 [If previous answer is "yes"] Is this PD plan regularly consulted to inform the PD that is offered by your district throughout the school year?                                                              |                                                                                                                                                                                                          |                                                                                                                                                                      | X                                                                                                                                                                  | X                                                                                                                           |   |
|                  | 8 [If Q6 is "yes"] Were the individual PD sessions that you provided for school librarians in alignment with the overall district PD plan?                                                                     |                                                                                                                                                                                                          |                                                                                                                                                                      | X                                                                                                                                                                  |                                                                                                                             |   |
|                  | 9 Does your district have a written professional development plan specifically for building-level school librarians?                                                                                           |                                                                                                                                                                                                          | X                                                                                                                                                                    |                                                                                                                                                                    | X                                                                                                                           |   |
|                  | 10 [If previous answer is "yes"] Were the individual PD sessions that you provided for school librarians in alignment with this specific PD plan for school librarians?                                        |                                                                                                                                                                                                          | X                                                                                                                                                                    | X                                                                                                                                                                  |                                                                                                                             |   |
|                  | 11 From where did you get ideas for the topics you covered this year in your PD sessions? (check all that apply)                                                                                               |                                                                                                                                                                                                          | X                                                                                                                                                                    |                                                                                                                                                                    |                                                                                                                             |   |
|                  | Evaluation of PD activities                                                                                                                                                                                    | 12 What means did you use to evaluate the PD sessions you provided this school year? (check all that apply)                                                                                              |                                                                                                                                                                      | X                                                                                                                                                                  | X                                                                                                                           |   |
|                  | 13 Besides the ones just listed, were there any other effective means you used in evaluating the PD sessions you provided?                                                                                     |                                                                                                                                                                                                          | X                                                                                                                                                                    | X                                                                                                                                                                  |                                                                                                                             |   |
|                  | 14 [If previous answer is "yes"] What were the other effective means of evaluating the PD sessions you provided for your building-level librarians?                                                            |                                                                                                                                                                                                          | X                                                                                                                                                                    | X                                                                                                                                                                  |                                                                                                                             |   |
|                  | 15 [If Q12 and Q13 "yes" is selected anywhere] How did/will these evaluations inform the future PD sessions you organized?                                                                                     |                                                                                                                                                                                                          | X                                                                                                                                                                    | X                                                                                                                                                                  |                                                                                                                             |   |
|                  | 16 What changes will you make to your future PD sessions/offering based on the evaluations you received (e.g. change in topic, frequency, participants, etc.)?                                                 |                                                                                                                                                                                                          |                                                                                                                                                                      |                                                                                                                                                                    |                                                                                                                             |   |
|                  | Alignment w/state/district goals/standards                                                                                                                                                                     | 17 Does your state have specific <b>state goals/standards</b> for student learning?                                                                                                                      |                                                                                                                                                                      |                                                                                                                                                                    |                                                                                                                             | X |
|                  | 18 Are the PD sessions you provide for building-level librarians aligned with <b>state goals and standards</b> for student learning?                                                                           |                                                                                                                                                                                                          | X                                                                                                                                                                    | X                                                                                                                                                                  |                                                                                                                             |   |
|                  | 19 [If previous question "Yes" is selected] Please briefly describe a PD session that you provided for your building-level librarians that was aligned with the <b>state's goals and standards</b> .           | X                                                                                                                                                                                                        | X                                                                                                                                                                    | X                                                                                                                                                                  |                                                                                                                             |   |
|                  | 20 Does your <b>district</b> have goals for student learning?                                                                                                                                                  |                                                                                                                                                                                                          |                                                                                                                                                                      |                                                                                                                                                                    | X                                                                                                                           |   |
|                  | 21 [If previous answer is "Yes"] Are the PD sessions you provided for building-level librarians aligned with these <b>district goals for student learning</b> ?                                                |                                                                                                                                                                                                          | X                                                                                                                                                                    | X                                                                                                                                                                  |                                                                                                                             |   |
|                  | 22 [If previous question "Yes" is selected] Please briefly describe a PD session that you provided for your building-level librarians that was aligned with the <b>district's goals for student learning</b> . |                                                                                                                                                                                                          | X                                                                                                                                                                    | X                                                                                                                                                                  |                                                                                                                             |   |
|                  | 23 [Active Learning Experiences]The PD sessions I led/organized this school year.                                                                                                                              | X                                                                                                                                                                                                        |                                                                                                                                                                      | X                                                                                                                                                                  |                                                                                                                             |   |

|                  |                       |                                                                                                 |                                                                                                                                                                                             |   |   |   |   |  |
|------------------|-----------------------|-------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|---|--|
| Survey Questions | Focus on core content | 24                                                                                              | What were the major topics you focused on during the in-person PD sessions you organized this school year?                                                                                  |   | X | X |   |  |
|                  |                       | 25                                                                                              | Do you send out a newsletter or blog post regarding library services in your district with links to or information on current trends and topics in school librarianship?                    |   | X |   |   |  |
|                  |                       | 26                                                                                              | [If previous question "Yes" is selected] Please list three of the most important topics discussed in your newsletter/blog.                                                                  |   | X |   |   |  |
|                  | Collaboration         | 27                                                                                              | In what ways did/do you facilitate communication and collaboration among the librarians in your district? (check all that apply)                                                            | X |   |   | X |  |
|                  |                       | 28                                                                                              | Besides the ones just listed, were there any other means you used that you thought were effective in facilitating communication and/or collaboration among the librarians in your district? | X |   |   | X |  |
|                  |                       | 29                                                                                              | [If previous answer is "yes"] What were these other effective means of facilitating communication and/or collaboration among the librarians in your district?                               | X |   |   | X |  |
|                  |                       | 30                                                                                              | How often did you provide opportunities for ongoing discussion (or "practice and report" type of activities) after in-person PD sessions?                                                   | X |   |   | X |  |
|                  |                       | 31                                                                                              | Did building-level librarians have opportunities to participate in district-sponsored PD activities that met <b>during the summer of 2016</b> ?                                             | X |   |   | X |  |
|                  |                       | 32                                                                                              | [If previous answer is "yes"] Were these <b>summer PD experiences</b> (check all that apply):                                                                                               |   |   |   | X |  |
|                  |                       | 33                                                                                              | [If Q31 is "yes"] What were the three most important topics you focused on during these <b>summer PD sessions</b> ?                                                                         |   | X |   | X |  |
|                  | Long Term             | 34                                                                                              | Did you lead/provide any PD experiences for your librarians that met over several months <b>during the school year</b> ?                                                                    | X |   |   | X |  |
|                  |                       | 35                                                                                              | [If previous answer is "yes"] Were these PD experiences <b>during the school year</b> (check all that apply):                                                                               | X | X |   | X |  |
|                  |                       | 36                                                                                              | [If Q34 is "yes"] What were the three most important topics you focused on <b>during the school year</b> ?                                                                                  |   | X |   | X |  |
|                  |                       | 37                                                                                              | [If Q34 is "yes"] How effective were the <b>PD experiences that met over several months during the school year</b> in providing opportunities for librarians to:                            | X |   |   | X |  |
| 38               |                       | Please add any additional comments about how you provide PD for your building-level librarians. |                                                                                                                                                                                             |   |   |   |   |  |

## Appendix C: Pilot Study Participation Request Email

Dear [name of supervisor]:

Hi, my name is Christie Kodama. I am a doctoral candidate at the University of Maryland's iSchool working with Ann Weeks. I am emailing you to solicit your help in my dissertation research on the professional development that school district library supervisors plan and provide for their building-level librarians. In order to understand what supervisors do to support their librarians' professional growth, I am conducting a nationwide survey with follow-up interviews with select survey respondents.

To ensure consistency in meaning and interpretation of my survey questions, I am wondering if you would be willing to spare some time in your busy schedule to pilot the survey for me. It has 34 questions with a mix of closed- and open-ended questions. What I would like to find out in this pilot study is an estimate of how long it takes to complete the survey and to see if there are any questions that don't make sense or are unanswerable for any reason.

In essence, I am hoping you will:

- Take the survey to see how long it takes to complete and
- Participate in a Skype or WebEx call to give me your thoughts on any difficult to answer questions or other issues.

Thank you so much for considering. I hope the school year is going well.

Christie Kodama  
Doctoral Candidate  
College of Information Studies  
University of Maryland, College Park  
ckodama@umd.edu

## Appendix D: Initial Survey Alert Email to Research Participants

Subject: PARTICIPATION REQUESTED: Study of School Librarians' PD Opportunities

Dear [name of district library supervisor],

My name is Christie Kodama and I am a doctoral candidate at the [University of Maryland, College Park](#) in the [College of Information Studies \(iSchool\)](#). My dissertation research focuses on the professional development (PD) that district-level library supervisors provide for their building-level librarians. This research study flows from my work with Ann Weeks on the Lilead Project (<http://lileadproject.org/>) [and in learning about the role that supervisors play in ensuring that the students, staff, and school communities in their district are equipped with quality school library programs and librarians at every level.](#)

In order to understand the PD that the district-level supervisors provide for their building-level librarians, I am surveying district library supervisors across the U.S. On Tuesday, April 25, 2017, you will receive an email with a personal link to the online survey. The personal link is a way of tracking responses and will be used as a means to keep your name and district confidential. Supervisors who complete the survey will also have a chance to win one of four \$25 Amazon gift cards.

The survey should take approximately 15-30 minutes to complete. If you are unable to finish the survey in one sitting, your answers will be automatically saved at whatever point you exit the survey window. You can return to the survey at any time to continue where you left off by using the link that will be provided to you.

In addition to the survey, you may be asked to participate in a follow-up interview to talk more about the professional development opportunities you and your district provide for building-level librarians. The purpose of these interviews will be to gain a better picture of the environment in which school district library supervisors provide for the professional development needs of their building-level librarians. These interviews will be administered by phone or via an online communication channel and last approximately 30-45 minutes.

If you believe you have received this email in error and are not the supervisor of library services for your district, please let me know and provide pertinent information so that I may update my records accordingly.

Thank you for your consideration. Your participation in this study will provide the field with a better understanding of the district library supervisor's role in ensuring that school librarians are prepared to be the 21<sup>st</sup> century librarians their students and school communities need. If you have any questions or comments, please do not hesitate to email me ([ckodama@umd.edu](mailto:ckodama@umd.edu)) at any time.

If you do not wish to participate in this study, please respond to this email stating that you would like to opt-out.

Thank you,  
Christie Kodama  
Doctoral Candidate  
College of Information Studies  
University of Maryland, College Park  
ckodama@umd.edu

## Appendix E: Recruitment Email to Research Participants

Dear [name of district library supervisor],

My name is Christie Kodama and I am a doctoral candidate at the [University of Maryland, College Park](#) in the [College of Information Studies \(iSchool\)](#). Hopefully you received an introductory email from me explaining my research, but if not I am writing to you because I am conducting my dissertation research on the professional development opportunities district-level library supervisors make available for their building-level librarians and would appreciate it if you would consider participating in my research.

In working with Ann Weeks on the [Lilead Project](#) for the past 3½ years, I believe in the value and importance of your position in the district as a leader and change agent for school libraries, as well as for student learning. Recognizing the unique and central role you have in providing professional development for the librarians in your district, I would like to understand more about how you support building-level librarians in their professional growth.

This survey will be open for 3 weeks, from today April 25, 2017 to Tuesday, May 16, 2017.

All the information you need to access and complete this survey is below.

Here is a link to the survey: [\[URL\]](#)

This link is uniquely tied to this survey and your email address. Please do not forward this message.

The survey should take approximately 15-30 minutes to complete. If you are unable to finish the survey in one sitting, your answers will be automatically saved at whatever point you exit the survey window. You can return to the survey at any time to continue where you left off by using the above link.

Upon completion of the survey, you will have the chance to enter into a random drawing for one of four \$25 Amazon gift cards.

Additionally, you may be asked to participate in a follow-up interview to talk more about the professional development opportunities you and your district provide for building-level librarians. The purpose of these interviews will be to gain a picture of the environment in which school district library supervisors provide for the professional development needs of their building-level librarians. These interviews will be administered by phone or via an online communication channel and last approximately 30-45 minutes.

If you have any difficulties or questions about the survey or your participation, please feel free to contact me at any time.

Thank you for your consideration and for all the work you do at the district-level to allow school library programs the opportunity to help students be successful in this information-saturated world we live in today.

If you do not wish to participate in the survey, please click on the following link: [\[opt out link\]](#)

Sincerely,  
Christie Kodama  
Doctoral Candidate  
College of Information Studies  
University of Maryland, College Park  
[ckodama@umd.edu](mailto:ckodama@umd.edu)

## Appendix F: Survey Reminder Email

Subject: REMINDER: School Librarian PD Survey

Dear [name of district library supervisor],

Your response to the School Librarian PD Survey is still needed! Your participation in this study is crucial to obtaining a national view of what you and your school district is doing in regard to professional development for your building-level librarians.

The survey closes on Tuesday, May 16, 2017.

All the information you need to access and complete this survey is below.

**And here is a link to the survey: [URL]**

This link is uniquely tied to this survey and your email address. Please do not forward this message.

The survey should take approximately 15-30 minutes to complete. If you are unable to finish the survey in one sitting, your answers will be automatically saved at whatever point you exit the survey window. You can return to the survey at any time to continue where you left off by using the above link.

Upon completion of the survey, you will have the chance to enter into a random drawing for one of four \$25 Amazon gift cards.

If you have any difficulties or questions about the survey or your participation, please don't hesitate to contact me at any time.

Thank you for your participation!

If you do not wish to participate in the survey, please click on the following link: [opt out link]

Sincerely,  
Christie Kodama  
Doctoral Candidate  
College of Information Studies  
University of Maryland, College Park  
[ckodama@umd.edu](mailto:ckodama@umd.edu)

## Appendix G: Gift Card Winner Email

Subject: CONGRATULATIONS!

Dear [name of district library supervisor],

Thank you for taking the School Librarian PD survey. I am pleased to inform you that you are one of the winners of the Amazon gift card drawing. This gift card is for you to use in any way you like. You should have received a separate email from Amazon with your e-gift card. Please let me know if you do not receive it for any reason.

I sincerely appreciate your willingness to take part in my dissertation study by sharing insight into how you provide professional development for the librarians in your district. My goals for this research are to begin to create a picture of what professional development looks like for school librarians in districts nationwide and to compare what is being done in PD for school librarians to what the literature says are effective means of PD. In doing these things, I also hope to bring more attention to this area of study to those who are invested in the success and growth of the school library profession with the ultimate goal of improving school library programs and the reach of their impacts on teaching and learning in school communities nationwide.

Again, thank you so much for your participation in my research.

Sincerely,  
Christie Kodama  
Doctoral Candidate  
College of Information Studies  
University of Maryland, College Park  
ckodama@umd.edu

## Appendix H: Survey Participation Thank You Email

Subject: Thank you for taking the School Librarian PD survey!

Dear [name of district library supervisor],

Thank you so much for taking the School Librarian PD survey. Your responses will enable me to form a better understanding of what is currently being done in school districts nationwide in regard to school librarians' professional development and continued learning and share it with the broader school library profession. It will shed light on the ways that supervisors provide for and support the growth of their librarians in being able to help students be equipped with the 21<sup>st</sup> century skills they need to thrive in school and in their futures. In doing these things, I also hope to bring more attention to this area of study to those who are invested in the success and growth of the school library profession, with the ultimate goal of improving school library programs and the reach of their impacts on teaching and learning in school communities nationwide. This research would not be possible without your responses.

I know you are busy and that your time is limited and very valuable. I truly appreciate the effort you put into thoughtfully completing this survey. I also want to announce the four winners of the Amazon gift card drawing; there was one winner from districts in Colorado, Louisiana, Oregon, and Texas.

Thank you also for the hard work you do at the district level and with your building-level librarians to ensure that students are learning the information literacy skills they need for their future success.

Sincerely,  
Christie Kodama  
Doctoral Candidate  
College of Information Studies  
University of Maryland, College Park  
[ckodama@umd.edu](mailto:ckodama@umd.edu)

## Appendix I: Interview Script and Questions Protocol

*These questions are designed to obtain more information on the environmental factors that enable or limit district supervisors in providing professional development for building-level librarians.*

### **Introduction**

First of all, thank you for your willingness to participate in this interview with me.

This interview is a part of my dissertation research on the professional development that is provided to building-level school librarians. The purpose of this interview is to gain a deeper understanding of the environment in which school district library supervisors (or those in charge of professional development for school librarians) provide for the professional development needs of their building-level librarians.

You may opt out of participating at any time during the study or choose not to answer any questions posed to you. Your participation is not required and is completely voluntary.

I would like to record this interview for reference purposes only and to facilitate transcription of your responses. Would it be ok if I recorded this interview?

Also, before anything is reported on this study, you will have the opportunity to review the transcript of this interview to insure that you agree with all that it contains and that it in no way misrepresents your statements. After all reporting on this study is finished, all recordings and transcripts will be completely destroyed. This will occur no later than ten years from today.

If you have any questions about your participation, you may ask them now or at any time.

### **START RECORDING**

#### **Interview Questions**

1. You said that your superintendent is **very** supportive of PD in your district, the building-level principals are **somewhat** supportive, and your school board is **very** supportive in terms of professional development. Could you please describe a little more about how these administrators and stakeholders show their support for PD in general, and for PD for school librarians specifically? (Follow-up to Survey Q5)\*\*
2. (for those with a “Yes” answers to Survey Q9) Could you tell me more about what your PD plan for school librarians entails?
  - a. (follow up question) Would you be willing to share this plan with me so I can see what a PD plan looks like?
3. What kind of follow-up did you do with your librarians after in-person PD sessions?

- a. (follow up question) How effective do you think this follow-up was in accomplishing your goals and objectives for professional development?
4. Can you tell me more about how your district-sponsored PD is structured? (e.g. pre-service days prior to beginning of school) What does the day(s) look like?
5. Can you talk about how your PD experiences throughout the year were structured for your librarians?
6. Are librarians involved in PD in your district because they are members of the staff, or because there is specific training for them?
  - a. (follow up question) Are they required to participate in PD as staff members?
  - b. (follow up question) What does professional development for staff (teachers, specialists, etc.) look like in your district?
7. How would you like to see the current professional development you provide for school librarians change in the next school year?
  - a. Based on what you did this year for PD, how are you going to change the PD for librarians for next year? Talk some more about this. What did you learn from the PD you did this year that will improve your PD for next year? Takeaways, reflections. (Q16)
8. (Last question) Is there anything else about what you do in terms of PD for building-level librarians that you would like to share?

### **Exit**

Thank you for your time and participation in this study. I'll be sending you a transcript of this interview and you will be given the time to edit any of your responses. It is possible that in the next month I may contact you by email for another brief interview. This will be to clarify some of your responses and ask any additional questions. This interview should last no longer than 15 minutes. Finally, I would like to remind you that all of your responses during this interview will be kept completely confidential. Your name will never be associated with your responses, including with other individuals in your school district. Additionally, your school and school district will never be mentioned by name in the study.

Again, thank you for participating. If you have any questions at any time, you may contact me by phone at (xxx) xxx-xxxx or email ([ckodama@umd.edu](mailto:ckodama@umd.edu)).

## Appendix J: Interview Request Email

SUBJECT: REQUEST FOR INTERVIEW: Study of School Librarians' PD Opportunities

Dear [supervisor name],

Thank you so much for taking the School Librarian PD survey. After initial analysis of everyone's responses, I would like to ask if you would be available to participate in a short, 30-45 minute interview with me to discuss your responses and how you provide PD for your building-level librarians in more detail.

I know you are busy and that your time is limited and very valuable, however would you be available for an interview during the week of July 10<sup>th</sup> or July 17<sup>th</sup>? If you are unable to speak with me during these two weeks, please let me know if there is another day and time after August 1<sup>st</sup> that might be possible. I truly appreciate your willingness to participate in an interview with me. Thank you.

Sincerely,  
Christie Kodama  
Doctoral Candidate  
College of Information Studies  
University of Maryland, College Park  
ckodama@umd.edu

## Appendix K: IRB Participation Consent Form

|                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Project Title</b>                   | School District Library Supervisors in the Ecosystem of Professional Development for Building-Level School Librarians                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Purpose of the Study</b>            | This research is being conducted by Christie Kodama, a doctoral candidate, at the University of Maryland, College Park. I am inviting you to participate in this research project because you are a school district library supervisor in a school district with a student population of 25,000 or more or a library supervisor in the largest school district in your state. The purpose of this research project is to understand the professional development (PD) experiences and opportunities that you (with others in your district) provide for your district's building-level librarians. I hope that this research will shed light on various aspects that influence the kind of PD school librarians are receiving from their districts.                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Procedures</b>                      | <p>You will be asked to fill out a 34-question online survey. Survey questions will focus on how you (and/or others in your district) plan for librarian PD; what kinds of topics and issues are focused on in PD sessions/activities and why; how you evaluate the efficacy of the PD you provide, in addition to other topics. The survey should take approximately 30-45 minutes to complete. If you do not have time to complete the survey in one sitting, your progress will be saved and you may return to the survey at a later time.</p> <p>Additionally, you <i>may</i> be asked to participate in a follow-up interview to talk more about the professional development opportunities you and your district provide for building-level librarians. The purpose of this interview will be to gain a picture of the environment in which school district library supervisors provide for the professional development needs of their building-level librarians. At the close of the survey window, I will contact you via email to participate in an interview. The interview will be administered by phone or via an online communication channel and last approximately 30-60 minutes.</p> |
| <b>Potential Risks and Discomforts</b> | The risks from participating in this research study include the possible inconvenience of answering questions posed in a survey and (possibly) a phone/online interview.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Potential Benefits</b>              | There are no direct benefits to you as a participant in this research. However, the results of this survey may help the investigator learn more about the professional development opportunities and experiences provided for school librarians in their districts and the similarities and differences between district's PD opportunities. This research will provide the broader school and library community with an idea of what kind of PD is being conducted in school districts and inform potential ways to make PD experiences for librarians more effective for student learning.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Confidentiality</b>                 | Any potential loss of confidentiality will be minimized by storing electronic data on a password-protected computer and any print data in a locked office space at the University of Maryland. Only the investigators                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

|                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                        | <p>(myself and my advisors) will have access to the survey and any demographic data.</p> <p>If I publish a report or article about this research project, your identity will be protected to the maximum extent possible. However, your information may be shared with representatives of the University of Maryland, College Park or governmental authorities if you or someone else is in danger or if we are required to do so by law.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Compensation</b>                    | <p>Upon completion of this survey, you will be given the opportunity to participate in a raffle for one of four \$25 Amazon gift cards. If you choose to participate, your name will be entered into the raffle and winners will be chosen at the close of the survey window.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Right to Withdraw and Questions</b> | <p>Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.</p> <p>If you decide to stop taking part in the study, if you have questions, concerns, or complaints, or if you need to report an injury related to the research, please contact the investigator:</p> <p style="text-align: center;">Christie Kodama, Doctoral Student Investigator<br/>College of Information Studies, University of Maryland<br/>4105 Hornbake Building, South Wing<br/>4130 Campus Drive<br/>College Park, MD 20742-4345<br/>E-mail: <a href="mailto:ckodama@umd.edu">ckodama@umd.edu</a></p> |
| <b>Participant Rights</b>              | <p>If you have questions about your rights as a research participant or wish to report a research-related injury, please contact:</p> <p style="text-align: center;"><b>University of Maryland College Park<br/>Institutional Review Board Office<br/>1204 Marie Mount Hall<br/>College Park, Maryland, 20742<br/>E-mail: <a href="mailto:irb@umd.edu">irb@umd.edu</a><br/>Telephone: 301-405-0678</b></p> <p>This research has been reviewed according to the University of Maryland, College Park IRB procedures for research involving human subjects.</p>                                                                                                                                                                                                                                                                                                                             |
| <b>Statement of Consent</b>            | <p>Your electronic signature indicates that you are at least 18 years of age; you have read this electronic consent form or have had it read to you; your questions have been answered to your satisfaction and you voluntarily agree to participate in this research study. You may print a copy of this consent form.</p> <p>If you agree to participate, please click “I Agree/Consent” below.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Signature and Date</b>              | <p><b>I AGREE/CONSENT</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

|  |  |  |
|--|--|--|
|  |  |  |
|  |  |  |

## Appendix L: List of Qualitative Codes Used

**Q37: What changes will you make to your future PD sessions/offerings based on the evaluations you received (e.g. changes in topic, frequency, participants, etc.)?**

1. Topics
2. Aligning to district/state mandates
3. How to increase attendance
4. Frequency
5. Greater differentiation
6. Create a PD plan
7. Who leads PD
8. Type of session
9. Model of PD
10. Structure/Format of PD
11. Schedule changes
12. Use technology
13. Use different platform
14. Get funding for subs
15. Provide more “soft” support
16. Create a “best practices manual” – seeking out PD on own

**Q47: What were the major topics you focused on during the in-person PD sessions you organized this school year?**

1. Library-specific skills/training
2. Library Plans
3. Connecting to standards
4. Copyright/Fair use
5. Future Ready Libraries/Librarians
6. Digital Resources
7. State Regulations
8. Collection development
9. Advocacy
10. Best practices
11. Pedagogy
12. Technology
13. Coherence w/district initiatives
14. Inquiry
15. Makerspaces
16. Creativity
17. Being innovative
18. Digital Citizenship
19. Digital Literacy
20. Curriculum/Lesson planning
21. Collaboration

22. Collaboration w/Public Library
23. Collaboration w/classroom teachers
24. Evaluation
25. Coding
26. General MS Office tech
27. Data Privacy
28. Assessment
29. General literacy
30. Information Literacy
31. Media Literacy
32. Google
33. Evidence-Based Practice (EBP)
34. Learning Management Systems (LMS)
35. STEM/STEAM
36. Team building
37. Budget stuff
38. Early childhood education
39. FAME (Fine Arts/Music Education) topics
40. Design thinking
41. Co-teaching
42. Equity
43. Restorative justice
44. Meeting needs of diverse population
45. Gaming

**Q53: What were these other effective means of facilitating communication and/or collaboration among the librarians in your district?**

1. Technology
2. Social media
3. PLCs
4. Surveys
5. Committee work
6. Monthly informal networking at coffee shops
7. Personal Network/bridge
8. Monthly local school librarian org meeting
9. Cohort/Grade Level (ES, MS, HS) meetings

**Interview Codes**

1. ACTIVE LEARNING EXPERIENCES
  - a. General
  - b. Job-embedded learning
2. ADVOCATING FOR LIBRARY PROGRAMS
3. ANDRAGOGY
4. CHALLENGES TO PROVIDING PD

- a. "Not enough time"
  - b. Budget issues
  - c. Discrepancies b/t depts
  - d. General
  - e. Large # of librarians
  - f. Loss of librarians in district
  - g. No vision for libraries in district
  - h. PD cancellations/schedule changes
  - i. Physical space issues
  - j. Support from admin
  - k. Time/schedule constraints
  - l. Unresponsive librarians
5. COLLABORATIONS
  6. COMMUNICATION
    - a. Communicating with admin
  7. COMMUNITY BUILDING
    - a. General
    - b. Group meetings
    - c. PLCs
  8. CREATIVITY IN PD
  9. CULTURE IN DISTRICT
    - a. Origins of specific PD practices
  10. DISTRICT FOCUS
  11. DISTRICT PROTOCOL FOR PROVIDING PD
  12. DISTRICT STRUCTURE
    - a. Fixed vs. flex scheduling
    - b. Funding/Budget
    - c. General
    - d. Hiring cert librarians vs. paras
    - e. Librarians at multiple sites
    - f. Librarians in all buildings
    - g. No school board
    - h. Site-based management
  13. DISTRICT-LEVEL LIBRARY TEAM
  14. DISTRICT-LEVEL SUPPORT
    - a. Funding for PD
    - b. Principals
    - c. School board
    - d. Superintendent
  15. FUN IN PD
  16. FUNDING FOR PD
  17. LIBRARIAN MOTIVATION TO LEARN
  18. PARTNERSHIPS
    - a. Community organizations
    - b. Working with bookstores
    - c. Working with public library

- d. Working with vendors
- 19. PD BENEFITS
- 20. PD CONTENT
  - a. "Time for reflection"
  - b. Asking what librarians want in PD
  - c. Curriculum
  - d. Knowing what librarians need
  - e. Need for PD
  - f. New Ed. Tech
  - g. PD Documents
  - h. Planning content for PD
  - i. Response to district initiatives
  - j. What librarians want in PD
- 21. PD CULTURE IN DISTRICT
  - a. History/Culture of PD
  - b. Philosophy of PD
- 22. PD EVALUATION
  - a. "Hated it"
  - b. General
  - c. Librarian responses to PD activities
- 23. PD FACILITATORS
  - a. Budget
- 24. PD FOLLOW-UP
  - a. General
  - b. Using tech
- 25. PD GOALS
  - a. Fulfilling role as "central"
  - b. More time to collaborate
- 26. PD PLAN
- 27. PD RECIPIENTS
  - a. Non-certified staff
  - b. Pre-service librarians
- 28. PD STRUCTURE
  - a. Back-to-school PD day(s)
  - b. End of school year
  - c. Future Ready Library framework
  - d. Librarians leading PD
  - e. Library visits
  - f. Mandatory vs. voluntary
  - g. Mentoring program
  - h. On the fly
  - i. PD Days
  - j. PD days during school year
  - k. Summer PD
  - l. Visit and observe
- 29. PEER PRESSURE TO CHANGE

- 30. PERCEPTIONS ON SUCCESS OF PD
- 31. PERSONALIZED LEARNING
  - a. "Just-in-time" PD
  - b. "Self-propelled" PD
  - c. Personalized learning
  - d. SMART goals
- 32. PHILOSOPHY OF PD
- 33. SUPERVISOR ROLE IN PD
  - a. "Being visible" for people
  - b. "Coach"
  - c. "Mentor"
  - d. Be "Forward thinking"
  - e. Creating "standard of practice"
  - f. Evaluating progress
  - g. Facilitating principal communication
  - h. General support
  - i. Leading PD sessions
  - j. Personal PD
  - k. Relationship building @ district level
  - l. Relationship building with librarians
  - m. Supporting librarians
  - n. Talking to principals
- 34. TECHNOLOGY
  - a. Facilitating PD
  - b. Interactive
  - c. Online learning

## Appendix M: Survey Respondents' Scored Answers by Facet

|                                | CAT 1                                 | CAT 2                                             | CAT 3                             | CAT 4                                        | CAT 5                                | CAT 6                        | CAT 7                       | CAT 8                      | CAT 9                                  |  | TOTAL<br>Indiv.<br>Score | TOTAL<br>Indiv.<br>% |
|--------------------------------|---------------------------------------|---------------------------------------------------|-----------------------------------|----------------------------------------------|--------------------------------------|------------------------------|-----------------------------|----------------------------|----------------------------------------|--|--------------------------|----------------------|
| <b>Part<br/>icipa<br/>nt #</b> | <b>Cult<br/>ure/<br/>Lead<br/>ers</b> | <b>Coh<br/>eren<br/>ce<br/>w/P<br/>D<br/>Plan</b> | <b>Eval<br/>of<br/>PD<br/>Act</b> | <b>Goal<br/>/<br/>Std<br/>Align<br/>ment</b> | <b>Acti<br/>ve<br/>Lear<br/>ning</b> | <b>Core<br/>Cont<br/>ent</b> | <b>Coll<br/>ab/P<br/>LN</b> | <b>Foll<br/>ow-<br/>Up</b> | <b>Lon<br/>g-<br/>Ter<br/>m<br/>PD</b> |  |                          |                      |
| 1                              | 3.0                                   | 6.7                                               | 7.8                               | 6.7                                          | 8.0                                  | 10.0                         | 8.5                         | 6.0                        | 6.0                                    |  | <b>62.6</b>              | <b>70%</b>           |
| 2                              | 9.0                                   | 6.7                                               | 8.0                               | 10.0                                         | 9.2                                  | 5.0                          | 8.5                         | 6.0                        | 3.3                                    |  | <b>65.7</b>              | <b>73%</b>           |
| 3                              | 3.8                                   | 6.1                                               | 8.8                               | 10.0                                         | 7.2                                  | 10.0                         | 9.0                         | 10.0                       | 0.0                                    |  | <b>64.9</b>              | <b>72%</b>           |
| 4                              | 8.3                                   | 6.7                                               | 7.8                               | 10.0                                         | 7.6                                  | 10.0                         | 8.3                         | 8.0                        | 8.8                                    |  | <b>75.4</b>              | <b>84%</b>           |
| 5                              | 4.2                                   | 3.3                                               | 7.2                               | 5.0                                          | 6.4                                  | 10.0                         | 0.0                         | 4.0                        | 2.5                                    |  | <b>42.6</b>              | <b>47%</b>           |
| 6                              | 10.0                                  | 3.3                                               | 7.0                               | 10.0                                         | 7.6                                  | 10.0                         | 9.6                         | 10.0                       | 2.8                                    |  | <b>70.4</b>              | <b>78%</b>           |
| 7                              | 8.3                                   | 3.3                                               | 8.6                               | 10.0                                         | 8.8                                  | 5.0                          | 9.3                         | 2.0                        | 5.7                                    |  | <b>61.1</b>              | <b>68%</b>           |
| 8                              | 6.8                                   | 3.9                                               | 0.0                               | 10.0                                         | 5.2                                  | 5.0                          | 10.0                        | 6.0                        | 2.6                                    |  | <b>49.5</b>              | <b>55%</b>           |
| 9                              | 6.7                                   | 6.7                                               | 7.3                               | 10.0                                         | 7.6                                  | 10.0                         | 8.8                         | 4.0                        | 0.0                                    |  | <b>61.1</b>              | <b>68%</b>           |
| 10                             | 7.7                                   | 3.3                                               | 7.7                               | 10.0                                         | 6.8                                  | 5.0                          | 6.3                         | 4.0                        | 2.1                                    |  | <b>52.9</b>              | <b>59%</b>           |
| 11                             | 5.2                                   | 5.6                                               | 8.3                               | 10.0                                         | 8.4                                  | 5.0                          | 9.5                         | 6.0                        | 5.0                                    |  | <b>63.0</b>              | <b>70%</b>           |
| 12                             | 10.0                                  | 7.2                                               | 8.2                               | 10.0                                         | 6.8                                  | 10.0                         | 9.0                         | 10.0                       | 5.5                                    |  | <b>76.7</b>              | <b>85%</b>           |
| 13                             | 10.0                                  | 7.2                                               | 7.8                               | 6.7                                          | 7.6                                  | 5.0                          | 10.0                        | 6.0                        | 0.0                                    |  | <b>60.2</b>              | <b>67%</b>           |
| 14                             | 5.8                                   | 6.7                                               | 8.4                               | 10.0                                         | 9.2                                  | 10.0                         | 9.1                         | 8.0                        | 6.3                                    |  | <b>73.6</b>              | <b>82%</b>           |
| 15                             | 4.6                                   | 3.3                                               | 8.3                               | 5.0                                          | 9.2                                  | 10.0                         | 9.1                         | 4.0                        | 8.0                                    |  | <b>61.5</b>              | <b>68%</b>           |
| 16                             | 6.5                                   | 3.3                                               | 8.8                               | 6.7                                          | 8.0                                  | 5.0                          | 10.0                        | 8.0                        | 6.2                                    |  | <b>62.5</b>              | <b>69%</b>           |
| 17                             | 5.0                                   | 7.2                                               | 8.3                               | 10.0                                         | 7.2                                  | 10.0                         | 9.0                         | 8.0                        | 0.0                                    |  | <b>64.7</b>              | <b>72%</b>           |
| 18                             | 9.0                                   | 3.9                                               | 8.4                               | 1.7                                          | 8.0                                  | 5.0                          | 9.7                         | 6.0                        | 0.0                                    |  | <b>51.6</b>              | <b>57%</b>           |
| 19                             | 7.5                                   | 10.0                                              | 7.3                               | 10.0                                         | 8.0                                  | 5.0                          | 9.2                         | 4.0                        | 5.0                                    |  | <b>66.0</b>              | <b>73%</b>           |
| 20                             | 6.5                                   | 6.1                                               | 8.3                               | 10.0                                         | 7.6                                  | 5.0                          | 9.6                         | 10.0                       | 8.6                                    |  | <b>71.7</b>              | <b>80%</b>           |
| 21                             | 7.3                                   | 3.3                                               | 7.3                               | 6.7                                          | 6.8                                  | 10.0                         | 8.7                         | 2.0                        | 2.5                                    |  | <b>54.6</b>              | <b>61%</b>           |
| 22                             | 4.6                                   | 6.7                                               | 7.0                               | 10.0                                         | 6.8                                  | 5.0                          | 8.3                         | 4.0                        | 5.3                                    |  | <b>57.7</b>              | <b>64%</b>           |
| 23                             | 7.7                                   | 6.7                                               | 7.3                               | 10.0                                         | 7.6                                  | 5.0                          | 9.7                         | 8.0                        | 5.7                                    |  | <b>67.7</b>              | <b>75%</b>           |
| 24                             | 10.0                                  | 10.0                                              | 8.5                               | 6.7                                          | 8.8                                  | 10.0                         | 5.7                         | 8.0                        | 2.5                                    |  | <b>70.2</b>              | <b>78%</b>           |
| 25                             | 9.0                                   | 3.3                                               | 7.8                               | 5.0                                          | 6.0                                  | 5.0                          | 10.0                        | 4.0                        | 0.0                                    |  | <b>50.1</b>              | <b>56%</b>           |
| 26                             | 9.0                                   | 6.7                                               | 8.3                               | 10.0                                         | 6.8                                  | 5.0                          | 8.7                         | 10.0                       | 0.0                                    |  | <b>64.4</b>              | <b>72%</b>           |
| 27                             | 4.7                                   | 10.0                                              | 8.3                               | 10.0                                         | 8.4                                  | 10.0                         | 6.8                         | 8.0                        | 6.3                                    |  | <b>72.5</b>              | <b>81%</b>           |
| 28                             | 8.7                                   | 3.3                                               | 7.7                               | 6.7                                          | 5.6                                  | 10.0                         | 9.8                         | 4.0                        | 5.0                                    |  | <b>60.7</b>              | <b>67%</b>           |

|    |      |      |      |      |     |      |      |      |     |  |             |            |
|----|------|------|------|------|-----|------|------|------|-----|--|-------------|------------|
| 29 | 8.7  | 6.7  | 7.0  | 5.8  | 6.4 | 5.0  | 8.3  | 4.0  | 2.5 |  | <b>54.4</b> | <b>60%</b> |
| 30 | 10.0 | 6.7  | 7.3  | 10.0 | 9.6 | 5.0  | 8.8  | 8.0  | 6.2 |  | <b>71.4</b> | <b>79%</b> |
| 31 | 3.5  | 5.0  | 8.0  | 0.0  | 9.2 | 10.0 | 9.7  | 10.0 | 3.9 |  | <b>59.3</b> | <b>66%</b> |
| 32 | 1.0  | 3.3  | 7.0  | 10.0 | 8.0 | 10.0 | 9.3  | 6.0  | 2.9 |  | <b>57.5</b> | <b>64%</b> |
| 33 | 7.7  | 4.4  | 7.7  | 10.0 | 7.2 | 10.0 | 10.0 | 4.0  | 2.6 |  | <b>63.5</b> | <b>71%</b> |
| 34 | 9.7  | 3.3  | 7.0  | 10.0 | 8.8 | 5.0  | 8.0  | 10.0 | 0.0 |  | <b>61.8</b> | <b>69%</b> |
| 35 | 6.5  | 0.0  | 0.0  | 3.3  | 2.0 | 0.0  | 0.0  | 2.0  | 2.9 |  | <b>16.7</b> | <b>19%</b> |
| 36 | 9.0  | 6.1  | 7.3  | 3.3  | 8.0 | 10.0 | 8.8  | 6.0  | 5.0 |  | <b>63.5</b> | <b>71%</b> |
| 37 | 9.7  | 10.0 | 8.6  | 10.0 | 9.2 | 10.0 | 9.7  | 6.0  | 1.8 |  | <b>74.9</b> | <b>83%</b> |
| 38 | 10.0 | 3.3  | 7.3  | 6.7  | 6.8 | 5.0  | 7.8  | 2.0  | 3.9 |  | <b>52.7</b> | <b>59%</b> |
| 39 | 8.8  | 10.0 | 8.8  | 10.0 | 9.2 | 10.0 | 9.3  | 8.0  | 5.0 |  | <b>79.0</b> | <b>88%</b> |
| 40 | 5.5  | 3.9  | 7.7  | 10.0 | 7.6 | 5.0  | 9.0  | 8.0  | 5.8 |  | <b>62.5</b> | <b>69%</b> |
| 41 | 4.3  | 9.4  | 8.8  | 10.0 | 9.2 | 10.0 | 9.7  | 4.0  | 5.0 |  | <b>70.4</b> | <b>78%</b> |
| 42 | 10.0 | 4.7  | 10.0 | 10.0 | 8.8 | 10.0 | 9.5  | 8.0  | 5.0 |  | <b>76.0</b> | <b>84%</b> |
| 43 | 8.3  | 3.3  | 7.3  | 10.0 | 8.0 | 10.0 | 8.4  | 6.0  | 6.2 |  | <b>67.6</b> | <b>75%</b> |
| 44 | 7.0  | 6.7  | 7.0  | 10.0 | 6.8 | 5.0  | 9.7  | 6.0  | 5.2 |  | <b>63.4</b> | <b>70%</b> |
| 45 | 3.7  | 5.6  | 8.5  | 10.0 | 6.8 | 5.0  | 8.8  | 6.0  | 1.8 |  | <b>56.1</b> | <b>62%</b> |
| 46 | 3.0  | 3.9  | 8.3  | 8.3  | 8.4 | 5.0  | 10.0 | 8.0  | 5.1 |  | <b>59.9</b> | <b>67%</b> |
| 47 | 10.0 | 3.3  | 8.7  | 3.3  | 6.0 | 10.0 | 7.5  | 6.0  | 2.5 |  | <b>57.3</b> | <b>64%</b> |
| 48 | 9.3  | 3.3  | 8.8  | 10.0 | 9.2 | 5.0  | 9.2  | 8.0  | 2.9 |  | <b>65.7</b> | <b>73%</b> |
| 49 | 4.0  | 3.3  | 0.0  | 10.0 | 7.2 | 5.0  | 8.2  | 10.0 | 1.8 |  | <b>49.5</b> | <b>55%</b> |
| 50 | 6.3  | 6.7  | 8.0  | 10.0 | 7.6 | 5.0  | 8.0  | 6.0  | 4.5 |  | <b>62.0</b> | <b>69%</b> |
| 51 | 7.5  | 6.7  | 7.7  | 10.0 | 7.6 | 5.0  | 8.7  | 6.0  | 4.8 |  | <b>63.9</b> | <b>71%</b> |
| 52 | 9.3  | 6.7  | 7.0  | 6.7  | 8.4 | 5.0  | 5.0  | 8.0  | 3.2 |  | <b>59.3</b> | <b>66%</b> |
| 53 | 9.0  | 6.7  | 7.3  | 10.0 | 7.6 | 5.0  | 8.7  | 8.0  | 1.8 |  | <b>64.1</b> | <b>71%</b> |
| 54 | 7.5  | 6.7  | 6.7  | 10.0 | 8.0 | 5.0  | 10.0 | 10.0 | 3.0 |  | <b>66.8</b> | <b>74%</b> |
| 55 | 10.0 | 6.7  | 7.7  | 10.0 | 7.2 | 10.0 | 9.2  | 6.0  | 5.8 |  | <b>72.5</b> | <b>81%</b> |
| 56 | 1.7  | 3.3  | 0.0  | 10.0 | 8.8 | 5.0  | 10.0 | 4.0  | 3.0 |  | <b>45.8</b> | <b>51%</b> |
| 57 | 9.0  | 3.9  | 8.8  | 6.7  | 8.0 | 5.0  | 9.2  | 8.0  | 2.1 |  | <b>60.6</b> | <b>67%</b> |
| 58 | 3.9  | 4.7  | 7.3  | 6.7  | 5.6 | 5.0  | 7.7  | 4.0  | 3.0 |  | <b>47.9</b> | <b>53%</b> |
| 59 | 8.3  | 3.9  | 8.4  | 10.0 | 8.4 | 5.0  | 9.0  | 6.0  | 4.6 |  | <b>63.6</b> | <b>71%</b> |
| 60 | 6.5  | 9.4  | 9.5  | 10.0 | 7.6 | 10.0 | 10.0 | 4.0  | 3.0 |  | <b>70.1</b> | <b>78%</b> |
| 61 | 8.8  | 6.1  | 7.7  | 10.0 | 8.0 | 5.0  | 9.5  | 8.0  | 2.9 |  | <b>65.9</b> | <b>73%</b> |
| 62 | 10.0 | 3.3  | 7.5  | 10.0 | 8.0 | 5.0  | 9.0  | 6.0  | 5.0 |  | <b>63.8</b> | <b>71%</b> |
| 63 | 1.3  | 3.9  | 6.5  | 6.7  | 5.6 | 5.0  | 8.7  | 4.0  | 7.0 |  | <b>48.6</b> | <b>54%</b> |
| 64 | 5.9  | 3.9  | 6.8  | 6.7  | 6.8 | 5.0  | 9.2  | 6.0  | 3.2 |  | <b>53.4</b> | <b>59%</b> |
| 65 | 7.7  | 10.0 | 7.5  | 10.0 | 7.2 | 5.0  | 9.6  | 8.0  | 0.0 |  | <b>65.0</b> | <b>72%</b> |
| 66 | 7.7  | 10.0 | 9.0  | 10.0 | 9.2 | 5.0  | 10.0 | 8.0  | 5.3 |  | <b>74.1</b> | <b>82%</b> |

|         |            |            |            |            |            |            |            |            |            |  |             |            |
|---------|------------|------------|------------|------------|------------|------------|------------|------------|------------|--|-------------|------------|
| 67      | 7.7        | 3.3        | 8.0        | 10.0       | 9.2        | 5.0        | 10.0       | 8.0        | 5.4        |  | <b>66.6</b> | <b>74%</b> |
| 68      | 9.0        | 10.0       | 7.7        | 10.0       | 8.0        | 5.0        | 9.7        | 4.0        | 2.5        |  | <b>65.8</b> | <b>73%</b> |
| 69      | 9.0        | 3.9        | 6.3        | 10.0       | 10.0       | 10.0       | 5.0        | 8.0        | 8.3        |  | <b>70.5</b> | <b>78%</b> |
| 70      | 2.3        | 7.2        | 7.3        | 5.0        | 7.6        | 5.0        | 9.3        | 8.0        | 5.5        |  | <b>57.2</b> | <b>64%</b> |
| 71      | 5.2        | 3.9        | 0.0        | 3.3        | 7.6        | 5.0        | 10.0       | 2.0        | 2.9        |  | <b>39.8</b> | <b>44%</b> |
| 72      | 5.8        | 3.9        | 7.3        | 6.7        | 7.6        | 5.0        | 9.8        | 4.0        | 2.9        |  | <b>52.9</b> | <b>59%</b> |
| 73      | 6.2        | 6.1        | 7.0        | 5.8        | 6.0        | 5.0        | 8.5        | 4.0        | 0.0        |  | <b>48.6</b> | <b>54%</b> |
| 74      | 7.7        | 3.3        | 7.3        | 3.3        | 4.4        | 0.0        | 9.0        | 4.0        | 3.6        |  | <b>42.6</b> | <b>47%</b> |
| 75      | 10.0       | 10.0       | 8.5        | 10.0       | 8.0        | 5.0        | 8.8        | 6.0        | 9.3        |  | <b>75.6</b> | <b>84%</b> |
| 76      | 3.9        | 4.7        | 8.3        | 6.7        | 8.4        | 5.0        | 8.5        | 4.0        | 2.9        |  | <b>52.4</b> | <b>58%</b> |
|         |            |            |            |            |            |            |            |            |            |  |             |            |
| AV<br>G | <b>7.0</b> | <b>5.6</b> | <b>7.3</b> | <b>8.3</b> | <b>7.6</b> | <b>6.6</b> | <b>8.7</b> | <b>6.3</b> | <b>3.8</b> |  | <b>61.3</b> | <b>68%</b> |

**70% 56% 73% 83% 76% 66% 87% 63% 38%**

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