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The 21st century school teacher librarian: Trends in the Iowa school library survey data over the last decade

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Abstract
The purpose of this study is to explore the Iowa School Library Survey data at ten year intervals to describe differences in professional teacher librarian staffing levels, time spent supporting reading guidance, and time spent in collaboration with other teachers. Raw data was examined from the 2003-2004 and 2013-2014 School Library Surveys. Although 1034 surveys were completed in 2003-2004, and 681 were completed in 2013- 2014, this study only analyzed data for the 339 schools with accurate entry both years. The researcher verified data through a process of close reading and comparison across multiple factors eliminating responses with incomplete or incorrect data entry until only accurate data remained. The average hours and percent of time spent by teacher librarians on the tasks of reading guidance and collaboration for these years was then calculated.

The average teacher librarian (TL) hours assigned per school during 2003-2004 was 25.7 and decreased to 18.8 during the 2013-2014 school year; while the amount of time spent performing extra duties also decreased from .9 in 2003-2004 to .7 in 2013- 2014. There were three questions from the survey used to analyze collaboration by average hours per week and percent of the TL weekly time per school: identifying materials and planning decreased from 2.1 hours (8.3% time) in 2003-2004 to 1.5 hours (7.9% time) in 2013-2014; teaching students cooperatively decreased from 2.1 hours to 1.7, however the percent of time increased from 8.4% to 9.1%; and providing information skills instruction to students decreased as well from 4.8 hours (18.7% time) to 3.1 hours (16.5% time). One extra question in 2013-2014 was about teaching appropriate uses of technology. The average time spent in 2013-2014 was 1.4 hours (8.2% time). Thus, the teacher librarian weekly staffing level per building clearly decreased across schools, yet within the fewer hours assigned per building, TLs' total percent of time spent as a collaborative partner increased from 35.4% in 2003-2004 to 41.7% of TL weekly hours in 2013-2014. Two final questions from the school library survey were analyzed for the average time spent providing reading guidance: the average hours per week reported in 2003-2004 was 2.7 (10.6% time), and this decreased to 2.2 hours during the 2013-2014 school year, but increased to 11.7% time. Although the increased percent of TL time spent on reading guidance is positive, the decreased average TL hours per school, along with the increase of average enrollment from 400 students in 2003-2004 to 414 in 2013- 2014, resulted in a decrease from .008 to .006 hours per week per student. This equates to less than 1 minute per week per student to provide guidance in reading choices. In conclusion, teacher librarians in this sample of schools with complete survey responses for both years are devoting a larger percent of time to the instructional and collaborative areas analyzed in this study, however they have less time on average per school, which leads to less time available to help students overall.

THE 21ST CENTURY SCHOOL TEACHER LIBRARIAN: TRENDS IN THE IOWA SCHOOL LIBRARY SURVEY DATA OVER THE LAST DECADE

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teacher librarian weekly staffing level per building clearly decreased across schools, yet within the fewer hours assigned per building, TLs' total percent of time spent as a collaborative partner increased from 35.4% in 2003-2004 to 41.7% of TL weekly hours in 2013-2014. Two final questions from the school library survey were analyzed for the average time spent providing reading guidance: the average hours per week reported in 2003-2004 was 2.7 (10.6% time), and this decreased to 2.2 hours during the 2013-2014 school year, but increased to 11.7% time. Although the increased percent of TL time spent on reading guidance is positive, the decreased average TL hours per school, along with the increase of average enrollment from 400 students in 2003-2004 to 414 in 2013-2014, resulted in a decrease from .008 to .006 hours per week per student. This equates to less than 1 minute per week per student to provide guidance in reading choices. In conclusion, teacher librarians in this sample of schools with complete survey responses for both years are devoting a larger percent of time to the instructional and collaborative areas analyzed in this study, however they have less time on average per school, which leads to less time available to help students overall.

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"Studies consistently show that higher test scores result when school librarians are involved with instruction, and the correlation is positive especially regarding disadvantaged students who often do not have access to resources and computers in their homes. By providing students equal guidance and access to print and digital resources, school librarians help close the gap between privileged and at-risk students."

--School Library Impact Studies (Gretes, 2013, p. 3)

Justification

History of School Libraries

Having a qualified teacher librarian and comprehensive school library program have been shown to help students achieve more. Michie and Holton (2005) conducted a study through the National Center for Education Statistics (NCES) on the history of public school libraries nationally and broke it down by state. The authors found that in Iowa between 1953 and 2000 the number of public schools decreased tremendously from 5,775 to 1,485 due to consolidation. However, as schools consolidated, those that remained were more likely to have school libraries. As a result of the school consolidations between 1953 and 2000 and the movement toward larger schools, the percent of schools with libraries grew from 25% to 99%. Similarly, the NCES showed that in 2000 nearly all schools (1,485) had a librarian (1,413), however no indication of the FTE or full time equivalent of these librarians was provided in the study (Michie & Holton, 2005).

Krueger (2015) compiled information from the Iowa Department of Education, Bureau of Planning, Research and Evaluation Basic Educational Data Survey (BEDS) with data that differed from the Michie and Holton (2005) numbers. Krueger showed that in 1990 there were 625 full-time librarians and 79 part-time across Iowa; however, by 2014 this number had decreased to 465 full-time librarians and 71 part-time, a 26% decline in the number of full-time librarians. Naturally, the student population in Iowa schools rose and fell during the same interval, however the average number of students served per teacher librarian steadily increased from 773 students per teacher librarian in 1990 to 1030 in 2014, an increase of 25%. Understandably, the number of public schools also decreased during this time, due to consolidations of districts and of school centers. Building level information was available only from 2000 until 2014; the number of public schools decreased from 1,531 to 1,385, an 11% decrease (Krueger, 2015). Clearly, the decline in teacher librarians (26%) far exceeds the decline in number of Iowa schools (11%) and is out of synch with the increase in student population (25%) (Krueger, 2015).

Funding of School Libraries

School library funding has changed significantly since school libraries were instituted in many schools in the 1960s. Initially, the National Defense Education Act (NDEA) funded school library resources. The NEDA was passed in 1958 to help improve the education in the United States to train the workforce and help meet defense needs in the United States. Congress then developed the Elementary and Secondary Education Act of 1965, which provided $100 million nationally for school libraries. It was developed to help improve the quality of life in America. Sixteen years later, the Education Consolidation and Improvement Act (ECIA) of 1981 was created. This Act consolidated

32 categorical programs into block grants that were used to fund numerous items. Unfortunately, how each school district allocated the block grant was at its discretion, and therefore libraries were placed in competition with other items that needed to be funded in a school (Michie & Holton, 2005).

Current Roles of the Teacher Librarian

Similar to changes in requirements, the roles of the teacher librarian have also changed throughout the years, along with many other aspects of the education field. Ballard (2009) created a sample job description for what a current teacher librarian position should include. The sample job description discusses the responsibilities of the five different roles of a teacher librarian. The first role is to be a leader. This is demonstrated by creating a space that fosters creativity, problem solving, and openness for new ideas. The teacher librarian also shows his or her leadership by being an active leader in the school. The teacher librarian has the responsibility to share his/her expertise with both students and staff as well as serve on multiple teams in the school (Ballard, 2009).

The second role of a teacher librarian is to be an instructional partner. This role is demonstrated by taking an equal part in the instructional process with the teacher. Collaboration and implementation of activities to promote reading and being a lifelong learner are important. Being a part of planning professional development for staff is also a way that a teacher librarian can demonstrate the instructional partner role (Ballard, 2009).

The third role of a teacher librarian is to be an information specialist. Demonstrating leadership along with expertise in technology and information resources is

a responsibility of this role. The teacher librarian must help students and staff find and use information and technology appropriately. Using and modeling the proper strategies of research and understanding copyright and fair use laws are important for a teacher librarian in order to better serve the students and staff (Ballard, 2009).

The fourth role of a teacher librarian (TL) is to be a teacher. This role means the teacher librarian should empower and support students in their learning. A teacher librarian helps students to embrace the world of knowledge that is given to all. In this role the TL has a responsibility to help students to build on past knowledge and to assess the work of each student, as well as the student's peers (Ballard, 2009).

The fifth role of a teacher librarian is to be a program administrator. This role has many different responsibilities. One responsibility is to continually improve the program through effective management of the library. Scheduling the library and allowing room for flexibility is important. Budgeting, organizing, developing, and implementing are a few words to help describe the role of the teacher librarian as a program administrator (Ballard, 2009).

Consequences of Understaffed School Libraries

If a library is understaffed, there may be negative consequences for students and instruction. AASL (2014) discusses aspects that help to make a school library successful. One of these is employing at least one full-time certified teacher librarian along with the help of trained associates. The number of certified teacher librarians needed depends on multiple aspects such as the services provided, size of library, and the total number of students and teachers served by the library. The teacher librarian and student/teacher ratio is very important and helps to provide the library program as defined in the *Empowering*

Learners: Guidelines for School Library Programs (AASL, 2009). The number of trained associates is important as well and often varies from building to building depending on each school and its needs.

Krueger and Donham (2013) studied professional staffing levels in rural schools with high-poverty levels. They discovered that many school boards and administrators have to make financial decisions that are data-driven. Due to these decisions, school libraries in rural districts do not see as much school funding. Iowa has many rural districts. These are places where students may not have Internet access at home and have limited public library resources. Students in these places were found to lack information-literacy skills. The researchers examined students from schools that had a higher teacher librarian staffing level and compared them to those who had a lower staffing level in the school library. It was found that students in the higher staffed schools performed better in information literacy skills than those with lower staffing. Thus, the consequence of understaffed school libraries is lower student achievement in critical information literacy skills.

School Library Impact Data

Lance and Hamilton-Pennell (2002) conducted research in Iowa to make a connection between the School Library Media Program and student achievement. Through their study they were able to examine many aspects of the school library program including staffing hours, reading guidance, and collaboration. Through their study it was found that if a library was well staffed, reading guidance was being conducted, collaboration was taking place, and students had higher academic achievement. Since this study in 2002 showed the many benefits of a well functioning

school library program, a survey has been conducted annually. However, no research has been conducted to analyze the areas specific to the instructional functions of teacher librarians. Therefore, this research paper evaluates the instructional functions of the teacher librarian in order to see the conditions in Iowa school libraries over the past 10 years, specifically in relation to staffing levels, reading guidance, and collaboration between the librarian and other teaching staff.

Problem Statement

Although Iowa conducts an annual School Library Survey, the summaries of data from it provide only a current data point. Educators lack data that shows trends over time, trends that may exhibit how reductions in professional staffing levels affect student reading guidance and teacher collaborative support.

Purpose

The purpose of this study is to explore the Iowa School Library data at ten year intervals to describe differences in professional teacher librarian staffing levels, time spent supporting reading guidance, and time spent in collaboration with other teachers.

Research Questions

1. Over the last 10 years, what trends can be seen in teacher librarian staffing levels in Iowa's school libraries?

2. Over the last ten years, what trends can be seen in the amount of time Iowa Teacher Librarians report spending as a collaborative partner through the creation and implementation of curriculum?

3. Over the last ten years, what trends can be seen in the amount of time Iowa Teacher Librarians report as devoted to providing student reading guidance?

CHAPTER 2

LITERATURE REVIEW

The purpose of this study is to explore the Iowa School Library data at ten year intervals to describe differences in professional teacher librarian staffing levels, time spent supporting reading guidance, and time spent in collaboration with other teachers. The literature review specifically focused on these three areas based on the research questions. Research conducted before the current study fell under these categories: correlation between the teacher librarian role and student achievement, collaboration between the teacher librarian and classroom teacher, and the teacher librarian's professional role in reading guidance.

Correlation Between the Teacher Librarian and Student Achievement

Rodney, Lance, and Hamilton-Pennell (2002) conducted a correlational study that linked student achievement to school library programs in Iowa. The authors accounted for numerous aspects of libraries, including staffing, staff activities, quality of resources, and usage of the library. One aspect was the staffing of the library. This included the hours the library was open, the total number of staff working in it, as well as the amount of time they worked. Another aspect that was analyzed was what the staff did which including the amount of time spent preparing and teaching in collaboration with a classroom teacher, implementing reading incentives and activities to motivate students, and managing computers and computer networks. A third aspect evaluated was the type of information resources that were available to students including print material, magazine subscriptions, audio, and video materials. A fourth aspect analyzed was the usage of the library, including individual and group visits. A final aspect that was

evaluated was the reading scores of students in grade 4, 8, and 11. This study was conducted with 169 elementary schools, 162 middle schools, and 175 high schools. Rodney, Lance, and Hamilton-Pennell found that overall improvements in staffing, as well as improvements to the collection, led to better reading test scores.

The Scholastic Research Foundation (2016) reviewed the Iowa study, along with studies from 24 other states and 1 province, to evaluate the connection between the school library and student achievement. The first edition of this study was conducted in 2004, with updates in 2006, 2008 and 2016. Through examination of these 25 states and 1 province, it was found that there was a trend in the information findings. This trend showed schools that were well staffed and trained, as well as having adequate resources that were up-to-date, yielded better reading scores overall.

Gretes (2013) combined the studies discussed in the 2008 edition of *School Libraries Work!* with a number of other studies, and created a summary of the findings. The study was conducted to find the overall impact that school libraries had on students and to help current and future libraries. He evaluated more than 60 studies from 22 states. The evidence-based findings showed that well equipped libraries led to higher student achievement. The staff had an impact as well. Full-time librarians that were certified and whom had well trained support staff led to higher student achievement. Gretes discovered that if all of these elements exist, students not only read more, but they also learn how to effectively process information and use it to help them perform better academically. Along with these student achievements, the above studies also showed that the factors that impact learning include the library collection, both the size and range of material, as well as the role of the librarian.

Collaboration Between the Teacher Librarian and Classroom Teacher

The next group of studies illustrates that teachers and school librarians collaborate with each other to strengthen students' understanding of both content and information literacy skills. Lance, Rodney, and Schwarz (2010) further explored the teacher librarian and teacher collaboration in Idaho, to better understand perceptions as well as how often it occurs. The survey included 668 classroom teachers, 176 principals, and 146 teacher librarians. The authors explored the value and frequency of collaboration, analyzed connections between the state assessment of Idaho and collaboration, and made connections between student reading scores, language arts scores, and teacher and teacher librarian collaboration. The Idaho administrators saw a value in the collaboration between teachers and teacher librarians. Researchers found a correlation between the collaboration and students scoring higher on the state assessment. However, researchers also found that this collaboration did not happen frequently, and in some schools, it was rare. The study concluded with the recommendation to increase the frequency of collaboration because it was shown to have a positive effect on a student's education.

Similar to the Idaho study, Montiel-Overall (2010) created a case study to further investigate how librarians and teachers collaborated to develop and implement curriculum. Montiel-Overall knew that information existed about collaboration, "However, almost no information is available about educators' awareness of the role of librarians as collaborative partners in developing and implementing curriculum" (p. 32). The case study evaluated "educators' perceptions of teacher and librarian collaboration (TLC), how participants collaborated and whether differences within the disciplines affected his or her collaboration, and levels of collaboration attained" (p. 37). In

conclusion, researchers found that the meaning of collaboration and the role of the 21st century school librarian was misunderstood by many teachers and administrators. The study suggested that collaborating in "new situations (e.g., new to a school, beginning to collaborate with new teachers, or working with teachers with different content backgrounds)" required considerable effort (p. 48). This effort helped bring awareness to the teacher librarian's collaboration and the impact it had on students' learning. Montiel-Overall's research confirmed findings from prior studies that collaboration is a process that can be difficult. One aspect of collaboration Montiel-Overall found to be difficult was shared thinking. Shared thinking, especially during the initial stage, requires a large amount of time and commitment. However, the study also suggested that more information needs to be investigated to further help "the education community learn about ways that a librarian can work with them (e.g., other than traditional resource development" (p. 49).

The prior study provided suggestions for working with teachers of different content areas. Many times the reading and language arts department teachers are naturally inclined to collaborate with the teacher librarian, however all content area teachers may indeed need to collaborate with the teacher librarian. Rawson (2014) conducted a study on the "collaboration between school librarians and science teachers" (p. 20). Rawson found that although collaboration has been shown to be effective in K-12 schools, collaboration was less common among science teachers and librarians. Articles were reviewed to find out what research had been conducted and what the overall findings were. Both the teacher librarian and many science teachers shared the same concerns and process skills. The biggest piece missing from the idea of collaborating

regarded each professions' content area, along with the professional's expertise. Rawson discovered that, "There are at least four areas of overlapping needs and skills where science teachers/ school librarian collaboration could be particularly fruitful: traditional literacy instruction, information literacy instruction, technology integration, and connecting science to students' daily lives" (p. 26). Thus Rawson showed that the more that each profession understood about the other position, the more that collaboration between the two professions could take place. The two professions began to see what each profession could do in each field of expertise to help the other and the students to succeed.

The above group of studies about the collaborative role of the teacher librarian showed a correlation between higher levels of collaboration and higher student test scores (Lance, Rodney, & Schwartz, 2010), yet also demonstrated that collaboration is a complex process in need of further research about how to collaborate (Montiel-Overall, 2010; Rawson, 2014). These studies show the value and complexity of collaboration, whereas the current study seeks to describe trends in levels of collaboration with teachers, as reported by Iowa teacher librarians.

The Teacher Librarian's Professional Role in Reading Guidance

A teacher librarian has many different roles. In addition to a role as a collaborative partner, another role is to aid students in reading guidance. Todd and Kuhlthau (2004) created a study to review the "Student Learning through Ohio School Libraries research study" (p. 1). The study in Ohio was conducted in 39 schools that had effective libraries. The school libraries that participated in this survey had to meet 8 different requirements

and "involved 13,123 students in Grades 3 to 12, and 879 faculty" (p. 1). The study was designed to analyze how school libraries benefited students. The study also evaluated faculty and student's perceptions on how the library helped in the school system. One part of this study posed the question "How helpful is the school library to you with your general reading interests?" (p. 12). Through careful examination of the study, Todd and Kuhlthau discovered that this study followed the same pattern as shown in other research: School libraries help to support a wide range of reading interests. Students' comments during the study included that the librarian was helpful to students by making reading fun and enjoyable, by increasing vocabulary, and through reading interventions. School libraries were places where students embraced a love of reading and found books with which they could connect. A total of 76.7% of students stated that the library was a place that fostered his or her love of reading, and "74.9% of the students said that the school library helped them with his or her writing" (p. 12). The faculty response was found to be even more positive in nature and yielded higher percentages in all areas surveyed.

In another study, Carlson (2010) studied how the library program helped fourth graders with their reading goals. This research used both qualitative and quantitative methods to explore the circumstances surrounding the fact that School C had fourth grade students not meeting expected goals in reading. The research involved about 50 fourth grade students who attended School C. Field notes represented student behaviors and interviews with students and teachers in the fourth grade about reading behaviors and goals. Displays of books were created, book talks were conducted with a variety of genres, and a reading club was developed during research time in the library. These actions have

helped to increase the weekly reading goals of the fourth graders in the study and by the end of the study 95% of those observed met their reading goals.

Also focusing on fourth graders, Bingman (2014) created a case study around a summer reading program. The purpose of the study was to prevent regression over the summer. There were seven students in the program. The case study was conducted through student surveys and notes on observations during the summer program. Through the case study, participants read more books during the summer program time than were read after it ended. The group setting seemed to lead to more discussions and therefore kept students more engaged. Providing structured time helped influence students to read more. Book talks from multiple genres, as well as instant access to books, led the students to make good book choices. Research by Bingman (2014), Carlson (2010), and Todd and Kuhlthau (2004) illustrated the teacher librarian's role in reading guidance and how it impacted students' learning. The current study describes trends in levels of reading guidance reported by Iowa teacher librarians.

Summary

Numerous studies have established the correlation between the presence of an effective teacher librarian and higher student achievement. The teacher librarian's position has been shown to have a direct impact on student achievement in numerous states where librarian positions were supported (Gretes 2013; Rodney, Lance, and Hamilton-Pennell, 2002; Scholastic Research Foundation, 2016). Research has also shown that collaboration between the teacher librarian and classroom teacher can have a positive impact on students in multiple content areas (Lance, Rodney, & Schwartz, 2010; Montiel-Overall, 2010; Rawson, 2014). Also, the teacher librarian's professional role in

reading guidance helps to shape young readers in multiple ways (Bingman, 2014; Carlson, 2010; Todd & Kuhlthau, 2004). Despite this collected knowledge, Iowa trends have not been closely examined since the Rodney, Lance, and Hamilton-Pennell (2002) research study. Therefore, the current study examines trends in the Iowa teacher librarian position over the past decade in three areas: staffing levels, time spent in collaboration, and time spent providing reading guidance.

CHAPTER 3

METHODOLOGY

Many research studies have shown the benefits of having a qualified librarian in a school. The Iowa Department of Education compiles quantitative data annually that may be used to compare libraries to those that are similar in size. The purpose of this study is to explore the Iowa School Library data at ten year intervals to describe differences in professional teacher librarian staffing levels, time spent supporting reading guidance, and time spent in collaboration with other teachers. The research questions include: Over the last ten years, what have been the trends in 1) teacher librarian staffing levels in Iowa's school libraries, 2) the amount of time Iowa's Teacher Librarians report spending as a collaborative partner through the creation and implementation of curriculum, and 3) the amount of time Iowa Teacher Librarians report spending on providing reading guidance?

Research Design

In order for the researcher to understand the changes taking place over the past decade, existing data were analyzed through a descriptive study. Wildemuth (2009) states that a descriptive study may be conducted for numerous reasons. One of these reasons is that a phenomenon may need to be understood in greater depth in order to use the findings to improve a program's design. In this study, the existing Iowa School Library Surveys were analyzed and information extracted based on the research questions. Wildemuth states one reason for using this data is that it already exists. Existing data can be "a more accurate representation of the phenomenon of interest than data collected through self-reporting" (p. 158). This can be especially true because, as Wildemuth points out, the existing set was collected without a specific research focus meaning that

the data is natural or "unguarded" (p. 159). As the researcher and a teacher librarian, I hope this data analysis may be useful to teacher librarians in understanding this phenomenon of levels of collaboration and reading guidance and that this understanding may be used to advocate for improved programs.

Procedure

The Iowa School Library Surveys from the past decade were collected from the Iowa Department of Education website. This data is derived from surveys that were distributed to librarians through the Area Education Agencies and the Iowa School Library Leadership Team. The participant sample in this study includes all of those who participated in the Iowa School Library Survey during the 2003-2004 school year and during the 2013-2014 school year. The survey summaries and raw data from these ten year intervals were reviewed, and those with complete responses were analyzed to identify trends in Iowa school libraries.

Data Analysis

First I analyzed the Iowa School Library Surveys from the years 2003-2004. I also viewed surveys from 2004-2005 to see whether there were noticeable differences. Given that there were not, I determined the data from 2003-2004 was viable. Notably, this represented the third year the survey was given annually, since 2001-2002. This provided a ten year interval to the most currently available data at the outset of this analysis, from 2013-2014. Furthermore, the 2003-2004 survey took place five years prior to enforcement of legislative change to reinstate the requirement for teacher librarians and school library media programs into the Code of Iowa, completed in the 2006 session (State Library of Iowa & Iowa Department of Education, 2007), and the subsequent

ending of the two-year waivers in the 2008-2009 school year. Accordingly, the 2013-2014 survey represents data at an interval of five years after the waivers ended.

Second, I read through the survey questions for the years stated. Then I determined which survey questions from 2003-2004 and 2013-2014 should be evaluated based on teacher librarian instruction having to do with collaboration and reading guidance. Some questions were asked in more than one way, so I evaluated responses to multiple survey questions in order to gather data to inform my research questions. Fortunately survey questions in this category have remained consistent through the years the survey has been given. The wording of the questions used did not change. The only minor change was the addition of two questions in the section of the survey to record hours per activities. The new questions in the 2013-2014 survey asked for hours teaching the appropriate use of technology and managing other technologies in the library.

To address research question 1, "What have been the trends in teacher librarian staffing levels in Iowa School Libraries over the last ten years," the following three Iowa School Library Survey questions were evaluated: "Library media specialist hours, Hours spent outside the library teaching in a classroom," and "Extra school duties unrelated to school library services such as study halls, monitoring restrooms, lunch, etc." Each of these survey items addresses an aspect of teacher librarians' work schedules.

Related to research question 2, "What have been the trends in the last ten years in the amount of time Iowa Teacher Librarians report to spend as a collaborative partner through the creation and implementation of curriculum," the following three Iowa School Library Survey questions were evaluated: "Hours spent weekly identifying materials for and planning instruction, Hours spent weekly providing information skills instruction to

students—individually or in groups (e.g., locating information, citations, copyright/plagiarism, evaluating Internet sources, note-taking), and Hours spent weekly teaching students cooperatively with teachers."

For my research question 3, "Over the last ten years, what have been the trends in the amount of time Iowa Teacher Librarians report spending on reading guidance," the following two Iowa School Library Survey questions will be evaluated: "Hours spent weekly implementing reading and literacy incentive activities for students and/or promoting reading guidance (e.g., reader's advisory services, book talks, book clubs, storytimes, author visits, puppet shows,)" and "Number of students in the school." This data will be analyzed to help understand the amount of individual reading guidance time available for the students and schools in the survey.

Next I analyzed response rates of the survey data in comparison to the Iowa Department of Education, Public School Building Directory listing of the number of schools in Iowa, compiled by Krueger (2015); 1,034 schools (69%) responded out of 1,491 schools in the state for the 2003-2004 school year, and 681 schools (49%) replied out of 1,385 schools in Iowa for 2013-2014.

However, not all responses included complete data for all questions. The researcher verified data through a process of close reading and comparison across multiple factors in order to eliminate incomplete or incorrect data entry until only accurate data remained. The final sample included 339 schools with complete data. The researcher calculated the average hours spent by these teacher librarians on the tasks of reading guidance and collaboration and evaluated the percent of time on these tasks. The selected questions were examined to explore the relationship between time spent in

reading guidance, time spent in collaboration, and teacher librarian hours. This analysis

explores how cuts in teacher librarian hours may have affected time spent with students

in reading guidance and with teachers in collaboration.

Assumptions and Limitations

This research uses data from an existing annual Iowa School Library Survey. It

assumes that respondents have completed the Iowa Area Education Agency (AEA)

School Library Survey accurately and that some data points may change throughout the

years. This research also assumes that not all schools returned the Iowa AEA School

Library Survey each year over the past decade. Finally use of existing data precludes the

ability to ask follow-up questions for clarification purposes.

CHAPTER 4

FINDINGS

The school library program is an important aspect of a school and student achievement.

The teacher librarian job description can differ from school to school. The purpose of this

study was to explore the Iowa School Library Survey data at ten year intervals to describe

differences in professional teacher librarian staffing levels, time spent supporting reading

guidance, and time spent in collaboration with other teachers.

Preparation of the Data Set

When preparing for this research, many steps were taken to verify the data. The first step

was to extract the questions from the school library survey that were previously

determined and explained earlier. In the 2003-2004 school years the raw data did not

include the questions at the top of each column and instead had letters with numbers.

Each summary was evaluated to determine what questions matched the raw data set

columns. The question was then added to the appropriate column. Additionally, the

research questions from this study were typed next to the survey question, in the format

R1, R2, and R3 to help during later analysis. The next step was to search the data from

2003-2004 and 2013-2014 to find individual entries with inaccurate or incomplete data.

For example, the rows that showed the school librarian worked more than 40 hours a

week were highlighted in pink. In the directions for the most recent years, it was stated

not to exceed 40 hours in represented time. It was difficult to decide whether to instantly

delete this data. Some of the larger schools have more than one librarian in a building,

and there is no column available to state this. This could be why some recorded their

hours in this manner. Given the directions and since variations could not be verified, it

was deleted. Likewise the incomplete data and data showing all zeros was highlighted in yellow. This way careful attention could be made to this particular data at a later time. The data that had zeros reported in the TL total hours column was kept for further analysis. Some librarians could hold K-12 positions and not report to a given building on a weekly basis. Data was deleted throughout where the TL hours in all areas did not match the teacher librarian total hours. After this process the total schools included for analysis in 2003-2004 decreased from 1,034 respondents to 937 with data that appeared to be accurate. The 2013-2014 data was apparently entered accurately as teacher librarian hours in individual activities all matched total hours indicated; thus 681 schools were analyzed. As the survey changed throughout the years, so did technology and the ability to collect more accurate data. This may have also been a factor on the survey, as some schools had multiple reportings for the same building in the 2003-2004 school year with different hours reported on each.

The next step was to create a matched set of data consisting of schools' responses from both years. The researcher looked for those school buildings that did not report in both the 2003-2004 and 2013-2014 years. Many different discoveries were found during this step. Some schools had reported in 2003-2004 by school communities, and in 2013-2014 it was required to report by buildings. These schools were deleted. Other schools replied for the elementary school, middle school, or high school in 2003-2004 and reported for a different building in 2013-2014. Since it was not the same exact building, these responses were omitted. Some schools seemed to have changed names. For example, some had the school listed as junior/senior high during one survey and responded as middle school during the other year. Since it was difficult to tell if these buildings had the same grade

levels, the schools were deleted. In 2003-2004 there was not a district column for schools to enter a response. Due to this, some schools could not be matched due to numerous schools having the same name in different districts. This was especially true when it came to schools with presidential names. All of the schools with the same name in both years were counted, however if schools with the same name reporting during the two years could not be matched by the researcher, the data was deleted. A final item during this step, was to match the rows by school building. For example a school may have had their high school and elementary school order show in one way in 2003-2004, but the opposite in 2013-2014. If this was the case one of the school buildings was moved up or down in the google sheet to make all buildings match verbatim, as matched pairs. Another step was completed to anonymize the schools. All of the school building names were deleted and replaced with school A through school MM. Another final review of the data was completed to evaluate if some schools having inaccurate data had been missed and if so, they were removed from further analysis. After this, 339 total school buildings remained to be analyzed. Next the data was organized by research question to which it applied. All of the column titles that matched were extracted from the survey raw data and were placed into a new Excel sheet beside each other for easier comparison. All of the information analyzed represents a sample of the schools that responded in both the 2003-2004 and 2013-2014 school years. It is not a sample that represents all of Iowa's schools. The results may arguably represent some of the most consistently staffed school libraries in the state because in order to be included, data had to have been entered for both years. Schools reporting were those schools that continued to staff the library both years with a professional teacher librarian (TL). Results are limited by voluntary

participation. This means that only the schools that had a TL and who were dedicated to taking the survey for both years remained represented.

Trends in TL Staffing Levels

What have been the trends in teacher librarian staffing levels in Iowa School Libraries over the last ten years? The column comparisons for 2003-2004 and 2013-2014 were averaged. From this the average hours school libraries were staffed by a professional teacher librarian for 2003-2004 was 25.7 hours, and 2013-2014 showed an average of 18.8 hours. The hours columns were analyzed further, and the researcher noted the majority of schools showed a decrease in hours, however some schools increased. Many of the schools exhibiting an increase did so by only a small number of hours despite also indicating an increase in the number of students enrolled. There were a few schools that had reported zero hours in 2003-2004 and showed almost a full-time status librarian in 2013-2014, even though their student populations did not increase drastically.

The first part of this analysis explored the extra duties assignments of a teacher librarian such as bus duty, lunch duty, etc. The average time teacher librarians spent weekly doing extra duties outside the library for 2003-2004 was .9, and in 2013-2014 it decreased to .7. The majority of schools had an decrease in time spent with extra duties although the amount of time that their duties were decreased was very minimal. There were schools where the TL had a large number of extra duties and others where the TL did not have any at all, a situation that remained consistent throughout the ten year span.

The final part of this analysis analyzed the average hours spent teaching as a classroom teacher in another curricular area. In some instances, this portion of the survey

was submitted by TLs who may not have been employed full time as a TL. Some districts may have employed the TL as a teacher in another content area to compensate for a less than full time teacher librarian position. In 2003-2004 the average hours spent teaching as a classroom teacher in another curricular area was 1.1 with a range from a minimum of 0 hours to a maximum of 33 hours. This average had increased to 1.5 by 2013-2014, with a range from 0 to 40 hours. These hours were reported as time separate or above and beyond the reported teacher librarian hours. Upon further analysis of the two different years there was different information observed. Some schools previously showed the TL working as a classroom teacher for zero hours with increased hours during the 2013-2014 school year. Some of the schools had increased by many hours and others by only a few. Other schools, however showed hours teaching in the classroom in 2003-2004 school year as being higher than that of the 2013-2014 school year. Some schools reported the same exact amount of time during both years. This included many schools where TLs did not teach at all in the classroom.

Table 1

Average Teacher Librarian Hours Per Week

Research Question 1	2003-2004 Average Hours*	2013-2014 Average Hours*
TL Hours Per Week	25.7 (s=15.1)	18.8 (s=15.2)
Extra Duties	.9	.7
Teaching in a Classroom	1.1	1.5

*Standard deviation is in parentheses

Trends in Weekly Collaboration Hours

Research question 2 asked, what have been the trends in the last ten years in the

amount of time Iowa Teacher Librarians (TL) report to spend as a collaborative partner

through the creation and implementations of curriculum? Three survey questions were

analyzed and the average hours and the percent of time TLs spent in this activity are

found in Table 2. Consistent with the decrease in TL hours overall, the average hours the

teacher librarian spent identifying materials and planning with teachers also decreased

from 2.1 in 2003-2004 to 1.5 hours in 2013-2014. Likewise, the percent of time spent on

these tasks out of the overall percent of time each teacher librarian had in that school also

decreased from 8.3% to 7.9%.

Table 2

Average Time Per Week Collaborating with Classroom Teachers

Research Question 2	2003-2004 Average Hours*	2003-2004 Percent Time of 25.7 hours	2013-2014 Average Hours*	2013-2014 Percent Time of 18.8 hours
Identifying materials and planning	2.1 (s=2.2)	8.3%	1.5 (s=2.5)	7.9%
Teaching students cooperatively	2.1 (s=3.3)	8.4%	1.7 (s=3.5)	9.1%
Providing information skills instructions to students	4.8 (s=4.5)	18.7%	3.1 (s=4.0)	16.5%
Teaching appropriate	Not asked in the 2003-04	N/A	1.4 (s=2.7)	8.2%

uses of technology	survey			

*Standard deviation is in parentheses

Upon further analysis of the survey question regarding identifying materials and planning, many schools showed decreases in their hours similar to the average decrease in overall TL hours shown, though many were not by large amounts. Some schools decreased their hours spent identifying materials and planning by a large number of hours while others increased hours in the area. The highest number of hours reportedly spent each week on identifying materials and planning during both years was ten hours and the lowest was zero. None of the schools with 10 hours reported in 2003-2004 maintained those hours in 2013-2014. While analyzing the teaching students cooperatively question, the data showed a decrease in TL average hours spent co-teaching but an increase in percent of time spent in this activity. The researcher found that during the 2003-2004 school year the largest number of hours spent fulfilling this portion of their job was 22. This same school reported zero hours in the 2013-2014 school year. In 2013-2014 there were 20 hours reported as the largest amount of time spent performing this portion of a teacher librarian's role. This was interesting because the average showed that more time was spent during the 2003-2004 school year than the 2013-2014 school year by .4 hours. However, while analyzing that information as a whole, although there were zeros reported in 2013-2014 it was clear that the majority of the schools showed an increase in time spent teaching students cooperatively with the classroom teacher.

The final survey question for research question 2 involved the amount of time spent working with students on information skills. The average number of hours decreased

from 4.8 during the 2003-2004 school year to 3.1 in 2013-2014. While analyzing this information it was noted that although the majority of teachers reported spending hours every week on information skills, more teachers reported a larger portion of their time (18.7%) being devoted to it in 2003-2004, as compared to 16.5% time in 2013-2014.

Trends in Weekly Reading Guidance Hours

Research question 3 asked, what have been the trends in the last ten years in the amount of time Iowa Teacher Librarians report to spend in reading guidance? The enrollment of the schools analyzed and the time spent on reading guidance per week for each school was placed into an Excel sheet. A formula was created to find the total time the TL spent per week per school on reading guidance. The time spent per week was then averaged to find the average time spent amongst all of the schools. From this it was found that although there was more time spent on average working with reading guidance, the average enrollment increased, and therefore there was less time spent per week per student on reading guidance. During the 2003-2004 school year the average was .008 hours per week per student, and in 20013-2014 it was .006, or less than one minute per week per student.

Table 3

Average Time Per Week Implementing Reading Guidance

Research Question 3	2003-2004 Average Hours*	2003-2004 Percent Time of 25.7 hours	2013-2014 Average Hours*	2013-2014 Percent Time of 18.8 hours
Implementation of reading and literacy incentive activities	2.7 (s=3.4)	10.6%	2.2 (s=3.3)	11.7%

and/or promoting reading guidance				
Enrollment	400	N/A	414	N/A
Average report of time per student	.008	N/A	.006	N/A

*Standard deviation is in parentheses

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

The final sample of schools analyzed in this study was schools that completed Iowa

School Library Survey data for both the 2003-2004 and 2013-2014 school years.

Participation in the survey was voluntary. Since only those schools submitting accurate

data for both years were reviewed, the data included here is not a representation of the

state as a whole. It represents 339 of the schools in Iowa.

The average teacher librarian (TL) hours assigned per school during 2003-2004 was 25.7

and decreased to 18.8 during the 2013-2014 school year; while the amount of time spent

performing extra duties also decreased from .9 in 2003-2004 to .7 in 2013-2014. There

were three questions from the survey used to analyze collaboration by average hours per

week and percent of the TL weekly time per school: identifying materials and planning

decreased from 2.1 hours (8.3% time) in 2003-2004 to 1.5 hours (7.9% time) in 2013-

2014; teaching students cooperatively decreased from 2.1 hours to 1.7, however the

percent of time increased from 8.4% to 9.1%; and providing information skills instruction

to students decreased from 4.8 hours (18.7% time) to 3.1 hours (16.5% time). One extra

question in 2013-2014 asked about time spent teaching appropriate uses of technology.

The average time spent in 2013-2014 on this area was 1.4 hours (8.2% time). Thus, the

teacher librarian weekly staffing level per building clearly decreased across schools, yet

within the fewer hours assigned per building, TLs' total percent of time spent as a

collaborative partner increased from 35.4% in 2003-2004 to 41.7% of TL weekly hours

in 2013-2014.

Two final questions from the school library survey were analyzed for the average time that was spent providing reading guidance; the average hours per week reported in 2003-2004 was 2.7 (10.6% time), and this decreased to 2.2 hours during the 2013-2014 school year, but increased to 11.7% time. Although the increased percent of TL time spent on reading guidance is positive, the decreased average of TL hours per school, along with the increase of average enrollment from 400 students in 2003-2004 to 414 in 2013-2014, resulted in a decrease from .008 to .006 hours spent per week per student. This equates to less than 1 minute per week per student to provide guidance in reading choices. In conclusion, teacher librarians are devoting a larger percent of time to the instructional and collaborative areas analyzed in this study, however they have less time on average per school, which in turn leads to less time available to help students overall. This study did not investigate the specific areas potentially neglected as a result of this necessary re-prioritization of duties enacted by teacher librarians across Iowa in response to their reduction in overall hours of employment in a TL position.

Conclusions

This analysis of Iowa School Library Survey data across ten year intervals proved an effective way to understand trends over time for those schools that had complete data from both years. The study yielded several findings about the limitations of this survey data and possibilities for its future study. Some larger schools may not be represented in the data due to the absence of a means for reporting having multiple librarians in one building. Another concern is the lower response rate of 49% to the survey in 2013-2014 and the possibility that some of those libraries having a librarian just once every week or once a month may not have filled out the survey at all for their schools. This made it

impossible to examine the state as a whole. Also, since the school library survey was only available for two years prior to the 2003-2004 survey, the reporting may not be completely accurate due to the data entry system itself. Many schools' data were eliminated from this study as a result.

Even though the results reported here may not be representative of the state as a whole, there are many things to learn from this research. Teacher librarians overall are showing diligence in their efforts to provide greater time with student instruction and interaction. The American Associations of School Librarians (2009) emphasizes the importance of the teacher librarians' role as a teacher and instructional partner and the importance it has on helping students succeed. This seems to be of great importance to many of the teacher librarians who participated in the school library survey. Although teachers are dedicating more hours to instruction and reading guidance, both good aspects of the current circumstances, more students are enrolled in the schools now than there were 10 years ago. Therefore, on average there is less of a teacher librarian's time available per student than there was 10 years ago.

Furthermore teacher librarian hours per building for those included in this study are lower overall in 2013-2014 than they were in 2003-2004 Yet, even more concerning is that many schools do not have any librarian services offered at all, as noted in the earlier reporting of the 26% decline in the number of teacher librarians in Iowa from 1990 to 2014 (Krueger, 2015). Many of these schools are not represented in the analysis reported on here because they did not have data completed in both years' surveys to make such analysis possible. This trend is concerning given Scholastic (2016) has compiled research that shows great evidence that a school library can help raise a student's ability

to achieve. It takes the trifecta of the school library, the program offered, and the teacher librarian to make this happen (Scholastic Research Foundation, 2016).

Recommendations

This survey has developed over time, and new survey administration technology appears to have improved the accuracy of the information collected. This researcher would like to see a column added to the Iowa school Library Survey that asks if the teacher librarian is serving in multiple buildings in his or her district and/or in other districts and if so how many other buildings the TL serves (potentially reported on separate building level surveys). This would help to show how extensive and diffuse the teacher librarian's position might be. In smaller more rural schools, this could lead to the discovery of more information as well as introduce more lines of inquiry into the status of the profession and its relation to student success.

Another recommendation I have is to add a question that explores scheduling for the library program such as whether the library operates on a flexible or a fixed schedule. Some teacher librarians may work 40 hours and have a set time with students. Other teacher librarians may have a more flexible schedule and may be able to go into the classroom to make connections with teachers and students. This difference could be a very interesting point of analysis revealing the great variation that is obscured in the mere mention of time spent on particular tasks. Also, if the library operates on a fixed schedule it would be interesting to see how long classes are and how much contact time with each class this provides.

Future Studies

A future study of relevance could compare the data from the top high schools in Iowa as nationally ranked by *U.S. News and World Report* and the school library survey data. How do the top ranked schools fair in terms of library staffing? This comparison could be borne out using questions such as the following: Are the schools that are successful also the ones that have a full-time librarian? Do they all have more hours devoted to certain aspects of their job? Do all of the schools that are high performing seem to have similar data reported? Are their collections large and new? Is the circulation of books much larger in highly ranked schools than among those that are not ranked? Along with this it would be interesting to review nationally ranked high schools in comparison with the Iowa Department of Education Public Reporting website. Closely examining the College Career readiness portion of the report and in turn the hours of their TL's and how they spend their time could provide additional insights into best practices for school library programs.

Another interesting study could consider schools with data for more than one building and compare them with each other. It would be thought provoking especially in relation to those schools which have only one librarian per district, covering multiple buildings, to analyze questions such as the following: Where are the majority of the TL's hours being spent? Is there a majority of schools without a librarian in one or more of their buildings, or is the librarian's time spread evenly in these districts?

Finally, additional research questions that could be investigated through future studies of the survey data include the following: On what aspects of the job do teacher librarians spend the majority of their work days? What part of the job receives the least

attention? There are many things that we can learn from the Iowa School Library Survey, and this researcher believes we will learn much more from future surveys.

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