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EXAMINING TEACHER PERCEPTIONS ON CHANGE IN SECONDARY SCHOOL LIBRARIES TO PROMOTE INFORMATIONAL LITERACY

by

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Bachelor of Science, Minnesota State University Moorhead, 2002
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A Dissertation

Submitted to the Graduate Faculty

of the

University of North Dakota

in partial fulfillment of the requirements

for the degree of

Doctor of Philosophy

Grand Forks, North Dakota
May
2018

This dissertation, submitted by Sarah Crary in partial fulfillment of the requirements for the Degree of Doctor of Philosophy from the University of North Dakota, has been read by the Faculty Advisory Committee under whom the work has been done and is hereby approved.

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This dissertation is being submitted by the appointed advisory committee as having met all of the requirements of the School of Graduate Studies at the University of North Dakota and is hereby approved.

Grant McGimpsey
Dean of the School of Graduate Studies

May 4, 2018
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Department	Educational Leadership
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Sarah Crary
March 20, 2018

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ABSTRACT

Libraries in schools are changing from a place to check out books to providing access to information from a multitude of media. The specific changes needed in school libraries and the method to accomplish those changes, specifically from the perspective of teachers, is an area of research with few empirical studies. The purpose of the study was to use Fullan's Change Theory (2007) initiation phase to identify how ready teachers are to engage in changing the way information literacy skills are taught. The researcher investigated teachers' perception with openness to change. The researcher analyzed teachers' perceptions about collaborative roles between a school librarian and a teacher regarding information literacy. The researcher also conducted interviews with librarians.

The researcher used the explanatory sequential mixed-methods design to analyze teacher perceptions with a quantitative survey and librarian reactions with qualitative interviews. The population was comprised of approximately 1,200 secondary education teachers in the Eastern Dakota Conference of North Dakota, with 109 participants completing the survey. Participants completed an online survey. The survey results were then used to develop interview questions for three librarians regarding their perceptions of survey data results.

Classroom teachers indicated a belief that teaching information literacy skills was the role of school librarians. However, grades, assessments, and content-related information were the role of the teacher. The classroom teachers and school librarians

both reported collaboration by dividing the lesson instead of working together on standards, planning, and assessments. The school librarians were encouraged by the openness to collaboration reported by teachers but discouraged that teachers it did not include all areas of information literacy skills. According to the data, a key step to successful implementation of change is including individual teacher input on potential changes instead of telling teachers what changes they must implement.

Keywords: information literacy, librarians, teachers

CHAPTER I

INTRODUCTION

In an eight-hour day, a teacher will spend five to six hours teaching anywhere from one to six different classes. Teachers will use the remaining two hours to write lesson plans with differentiated lessons, grade papers, serve on committees, meet with students to reteach a lesson, or to possibly help them with a social-emotional issue. Many teachers do not complete their grading or lesson planning in those two hours and often take the work home. Innovations in technology have placed a wealth of knowledge at the fingertips of students. Students simply ask Google or Siri on Apple to find answers to questions such as the capitals of countries, rulers from the past, and what the equation is for the volume of a cylinder. The explosion of technology surpasses the amount of time a classroom teacher has to explore the technology. A gap is created in which students want to use the new technology, but teachers do not have enough time to collaborate with school librarians to learn it and integrate it into their lessons (Stubeck, 2015; Varlejs & Stec, 2014; Branch, 2006). As the classroom teacher grapples with this technology, school leaders need to understand the issue and support teachers by providing the time needed to create challenging lesson plans as well as the technological support to enhance lessons that utilize information literacy skills.

Statement of the Problem

The American Association of School Librarians (AASL) noted that students are exposed to an overwhelming amount of information while researching and are required to determine if the information is valid and reliable before using the sources (Latham & Gross, 2008). Students need information literacy skills to navigate through information to determine what is valid, reliable, and research based. It is not clear who is responsible for teaching these skills between the school librarian and the classroom teacher. Researchers have examined who ought to teach information literacy skills, but this specific research was completed from the librarian perspective and does not include the teacher perspective (Latham & Gross, 2008).

According to Olszewski (2014), many school librarians, in collaboration with teachers, must help students master common core standards. The author does not provide a description of what that collaboration looks like or how to initiate the change in a culture that fosters this collaboration. According to Montiel-Overall (2005), a definition of collaboration for the school librarian does not exist. In fact, the characteristics that describe it are not agreed upon. Woodward (2012) explained that collaboration should not appear like the librarian coming in monthly or yearly to teach a skill or concept while the teacher is uninvolved, working on another task such as grading. The collaboration should involve both the teacher and librarian working together to create the lessons as well as co-teaching it (Woodward, 2012).

One obstacle in true collaboration is the master schedule and finding enough time to collaborate (Stubeck, 2015). In some elementary schools, for example, the students only have a 30-minute timeframe once a week set aside for library time (Stubeck, 2015).

The researcher, a high school principal, notes that her teachers have two class periods for preparation to collaborate with their department, write lessons for classes they teach, grade papers, meet with students, and communicate with parents. Adding required time to collaborate with the school librarian is difficult. In addition, the school librarian's time at the researcher's school is split between the middle school and high school.

A gap exists in the current research on information literacy skills in secondary education. Many articles on the topic were written from the perspective of librarians (Stubeck, 2015; Shannon, 2012a; Francis & Lance, 2011, Montiel-Overall & Jones, 2011; Darrow, 2009). In Johnston's dissertation (2011), the author noted that there was little evidence and limited resources regarding librarians as leaders in integrating technology. Montiel-Overall and Jones (2011) expressed a similar problem in that there is a "paucity of empirical evidence specifically related to teacher and school librarian collaboration" (p. 50). Kovalik, Yutzey and Piazza (2012) found little research on information literacy in the K-12 grade school setting. Montiel-Overall and Jones (2011) also noted the need for future research on teachers' perspectives on how and who should teach information literacy skills.

According to a study by Gross, Latham, and Armstrong (2012), 87.7% of college freshmen scored below the proficient range for their information literacy skills. In response to this situation, some PK-12 school libraries shifted from a place to simply check out books to a place of gathering information from many different resources (Moreillon, 2013b; Woodward, 2012; Baule, 1999). Other PK-12 schools were opting to no longer have a physical library or librarian. Rather they offered online resources to their students in this growing age of technology (Darrow, 2009). Todd (2008) noted that

school librarians need to prove their worth and value through empirical evidence or they may face elimination. As schools analyze the purpose of the librarian in light of the changing demands, educators should be cognizant of how best to determine if change is needed as well as how to initiate a change.

In addition to the lack of empirical research, the role of libraries and librarians appears to be changing in education. Some of the changes were a result of educational shifts on what students need to be able to do (Bleidt, 2011). The "What's Hot, What's Not" survey by International Reading Association Annual Survey (2013) found that teaching and learning for comprehension was key (Moreillon, 2013b). School librarians can assist with this not only through book fairs but also through collaboration with teachers to co-teach lessons that promote information literacy (Moreillon, 2013b). Other changes to the library and school librarian were a result of the shift of resources being available online versus a physical copy and librarians no longer needing to curate a physical collection (Moreillon, 2013b; Woodward, 2012; Baule, 1999). In some schools, there were no longer physical libraries and/or librarians (Darrow, 2009). Darrow (2009) argued that in order to meet 21st Century demands, libraries needed to evolve into a technology hub. The physical space needed to provide access, collaboration, and furniture to promote activity and interaction in addition to helping students (Darrow, 2009). With all the educational changes occurring, if researchers do not continue to study the skills students need, such as information literacy, then no one will understand how the job description should evolve for librarians (Bleidt, 2011).

Purpose of the Study

The purpose of this study was to use Fullan's (2007) Change Theory, specifically the first step, initiation of change, to examine teacher readiness to engage in changing the way information literacy skills are taught. The research included evaluating teachers' perception of their openness to change and understanding what obstacles they believed impede change to help assess their readiness. The research also included teachers' perceptions on what they believed the collaborative roles should focus on between a school librarian and a teacher regarding information literacy. Finally, the perceptions of three current librarians were integrated into the study as well. These perceptions were then used to gauge if a change was needed and how to use Fullan's (2007) Change Theory to initiate the change.

Theoretical Framework

Teacher perceptions of the role of school librarians in teaching information literacy skills need to be used to guide changes in schools. In deciding how to best initiate change, Fullan's (2007) Change Theory provides a framework. Fullan's (2007) Change Theory is a threefold process: initiation, implementation, and institutionalization. Initiation is defined as "the process that leads up to and includes a decision to adopt or proceed with change" (Fullan, 2007, p. 69). After beginning the process of change, participants move to implementation which "involves the first experiences of attempting to put an idea or reform into practice" (Fullan, 2007, p. 69). After successful implementation comes institutionalization where the group will decide to make that change a part of the system or discard it (Fullan, 2007). This study focused on the first step of initiation through teacher perceptions.

Significance of the Study

As noted before, this topic has limited existing research, especially from the perspective of the teacher (Stubeck, 2015; Francis & Lance, 2011; Johnston, 2011; Montiel-Overall & Jones, 2011; Darrow, 2009). Therefore, significance of the research results lies in helping to build empirical research on this topic in regard to secondary education. An analysis of how teachers would like to change the collaboration between school librarian and teacher regarding information literacy skills is included. The results support a plan for school districts to initiate collaboration. There was evidence that students with strong information literacy skills perform better in reading comprehension exams (Moreillon, 2013a; Gross, Latham & Armstrong, 2012; Achterman, 2008). This study provided a way to initiate change using Fullan's (2007) Change Theory to teach more information literacy skills.

Research Questions

The following research questions guided the researcher:

1. How do teacher perceptions vary on librarian roles regarding teaching information literacy skills? (Descriptive)
2. What are teachers' levels of openness to change? (Descriptive)
3. What differences exist among teachers (gender, core/non-core, grade level taught) regarding librarian roles in information literacy skills? (ANOVA)
4. How does openness to change predict teacher expectations for teaching information literacy skills? (Multiple Regression)

5. What are school librarians' reactions to teacher perception results of teaching information literacy skills?

Researcher's Background

The researcher is a high school principal in North Dakota. She earned her Master's degree in Education Leadership and her Bachelor's degree in Social Studies Education. She leads and serves on accreditation teams for visits with AdvancEd Accreditation in North Dakota as well as other states. The researcher's school has one librarian to serve both middle and high school and is currently looking to implement 21st Century learning with a focus on information literacy skills and utilize a personal learning device for each student.

Definitions and Acronyms

The following definitions and acronyms are used in this study.

- 21st Century Skills are skills of inquiry, technology, access to information, and integration of the information with learning that students need to be successful (Teel, 2010).
- American Association of School Librarians (AASL)
- Collaboration is "when educators co-design, co-plan, co-teach, and/or co-assess curriculum-based lessons or units of study" (Moreillon, 2008, p.2).
- Eastern Dakota Conference (EDC) is comprised of the following school districts located in the eastern portion of North Dakota: Devils Lake Public, Fargo Public, Grand Forks Public, Shanley Parochial, Valley City Public, Wahpeton Public and West Fargo Public.

- Information Literacy is “the ability to access, evaluate, and use information effectively and ethically” (Latham & Gross, 2008, p. 1).
- Information, Communication, and Technology Literacy (ICT) is when students are taught to identify information needs and to access, evaluate, manage, integrate, create, and communicate information (Francis & Lance, 2011).
- Independent learning is when students are taught to pursue information related to their personal interests, to appreciate literature and other creative expression, and to generate knowledge (Francis & Lance, 2011).
- Social responsibility is when students are taught to recognize the importance of information in a democratic society, practice ethical behavior in regard to information and technology, and to share information and collaborate in its use in groups (Francis & Lance, 2011).
- School Librarian is the term used for school librarians, library media specialists, information specialists, or media specialists. The American Association of School Librarians prefers the term “teacher-librarian,” however, the researcher will use school librarian to avoid confusion between teacher and teacher-librarian (Montiel-Overall & Jones, 2011).

Delimitation

The study was limited to secondary education teachers in Class A schools in North Dakota who participate in the Eastern Dakota Conference.

Summary

Chapter I provided an explanation of the need to use Fullan's (2007) Change Theory, specifically the first step, initiation of change, to examine teacher readiness to engage in changing the way information literacy skills are taught. Chapter I also provided the statement of the problem, purpose of the study, theoretical framework, significance of the study, research questions, definitions and acronyms, and the delimitation. Chapter II provides a literature review of existing research on Fullan's Theory of Change, the evolution of education, information literacy and the impact on student learning, school librarians as leaders, perceptions of libraries and information literacy, and the collaboration of classroom teachers and school librarians. Chapter III provides an explanation of the research questions, pilot study, participants, survey instrument, data collection, and data analysis. Chapter IV provides the results of the study. Chapter V provides conclusions, discussion, summary, limitations, recommendations, and possible future research.

CHAPTER II

LITERATURE REVIEW

Student success, before the Industrial Revolution, was based on the ability to memorize and recall the information taught by the teacher (Montiel-Overall, 2007; Dewey, 1915). However, after the Industrial Revolution of the late 19th and early 20th centuries, the goals of education began to evolve. According to O'Sullivan and Dallas (2010), "businesses and higher education leaders are looking for students with the ability to evaluate and analyze information and to use this information to solve real-world problems" (p. 1). There are differing opinions on the shift in education to teach information literacy skills that are needed to solve real-world problems. Information literacy is defined as "the ability to access, evaluate, and use information effectively and ethically" (Latham & Gross, 2008, p. 1). How the change needs to come about is not agreed upon by education professionals.

This chapter introduces the theoretical framework of Fullan's (2007) Theory of Change, as well as summarizes the literature on how education has evolved into a constructivist approach. This chapter will also define information literacy skills and discuss the impact information literacy has had on student learning. It will address the change in the role of the school librarian and current perceptions of information literacy skills. The chapter will conclude with an explanation of the change to collaboration between school librarians and teachers.

Theoretical Framework: Fullan's Theory of Change

Fullan's (2007) Change Theory provides a framework on how to initiate change. Fullan's (2007) Theory is a threefold process: initiation, implementation, and institutionalization. Initiation is defined as "the process that leads up to and includes a decision to adopt or proceed with change" (Fullan, 2007, p. 69). After beginning the process of change, participants move to implementation which "involves the first experiences of attempting to put an idea or reform into practice" (Fullan, 2007, p. 69). After successful implementation comes institutionalization where the group decides to make that change a part of the system or discard it (Fullan, 2007).

Fullan (2007) notes several factors needed to help create change. The first is a desire for new educational outcomes. For example, higher education may push that incoming freshmen students know a set of skills before admission, thus PK-12 would be responsible for changing curriculum to teach the skills. Fullan (2007) notes that advocacy from administration and teachers is another factor. The central office, led by the superintendent, may guide the school district towards a new initiative (Fullan, 2007). The classroom teacher can be an advocate for change as well if school districts allow them to be (Fullan, 2007). For example, teachers may see a need for students to learn new skills and propose a change in curriculum to incorporate those skills. Once a group advocates for change, the school district may need to determine if there is a need for the change and then work both top-down from the central office as well as bottom-up from the teachers (Fullan, 2007).

Fullan (2007) notes dilemmas in the initiation phase of change. Since schools have so many various stakeholders, change can occur from different starting points. With

so many voices, it can be hard to correctly determine if the change is wanted by many or simply wanted by a loud minority. Ultimately, no one model of change will fit for schools (Fullan, 2007).

Once a change has been initiated, the organization moves to the next step of implementation. Implementation "involves the first experiences of attempting to put an idea or reform into practice" (Fullan, 2007, p. 69). In a school setting, the changes in implementation may require revising materials currently used or finding new resources, using new teaching methods, shifting the beliefs of stakeholders, and developing shared goals (Fullan, 2007). In a PK-12 setting that wants to increase collaboration of teachers, it may mean defining what collaboration is for the school to develop shared goals and common beliefs on collaboration. It may also mean researching and finding new instructional strategies to foster collaboration. Finally, it may mean a school working together to create a new schedule with the goal of collaboration. A school may be in the implementation stage for three or more years before moving to the next stage of institutionalization.

Institutionalization is where the group decides to make that change a part of the system or discard it (Fullan, 2007). A school reviews all the changes and determines if the changes will result in a positive learning experience for students. Depending on the data collected, a school may make these changes more permanent and part of the school culture, or the school may decide to not pursue change.

The research focused on the initiation step of Fullan's (2007) Change Theory to examine teacher readiness to engage in changing the way information literacy skills are taught. In order to create the most successful change in a school setting, it is necessary to

gather input from teachers and determine their beliefs on the issue before implementing a change (Fullan, 2007). The researcher gathered information on the beliefs of teachers specific to how open teachers are to change and collaboration, impediments to change and collaboration, who should teach information literacy, and how teachers want a change to occur in a school. The literature review provides more information on where to begin to initiate a change.

Evolution of Education From Objectivist to Constructivist Teaching

In order to determine what change is needed in education, the evolution of education should be considered. After all, it is hard to determine what change is needed without knowing where schools and curriculum started and where they are going. In the early 1880s, learning occurred through shaping behavior with positive reinforcement (Moore, 2011; Montiel-Overall, 2007). In other words, the teacher would model what the desired response was, and the students were expected to mimic it. The students who properly mimicked or copied the response earned the positive reinforcement of high marks on the assessment. Knowledge was viewed through the objectivist lens meaning it was true and existed outside of people (Montiel-Overall, 2007). As the United States embraced the Industrial Revolution, the educator John Dewey began to promote a different view on education.

John Dewey began to shift the belief that knowledge was true and existed outside of people to the belief that learners needed to think about knowledge versus memorizing it (Knoll, 2015; Dewey, 2008; Montiel-Overall, 2007; Dewey, 1915). The ideas from Industrial Revolution entered the United States, and Dewey believed that in light of this, students should think, talk, and experiment while learning (Dewey, 2008; Montiel-

Overall, 2007; Dewey, 1938; Dewey, 1915). In the late 1900s, learning was influenced by the cognitive approach of psychology which sought to understand how a person thinks, understands, and interprets information (Dewey, 2008; Montiel-Overall, 2007; Dewey 1938; Dewey, 1915). For example, it became important to understand the student's thought process to reach an answer and how the student understood the problem and research it (McMaster, Espin & van den Broek, 2014; Montiel-Overall, 2007). Education shifted from objectivism to constructivism which integrated the impact the person and their experiences had on the knowledge (Montiel-Overall, 2007). This shift placed an emphasis on why information literacy skills were important for students to learn as these skills emphasized finding solutions to real-world problems.

Since the learning in each community will vary according to the culture of the area, an authoritarian style of teaching or objectivist learning goals do not always work. The cultural model places culture at the center of learning and teaching (Montiel-Overall, 2007). Students use their culture and the culture of their community to process and interpret the world around them to problem-solve (Montiel-Overall, 2007). The cultural model encourages collaboration as it brings together multiple perspectives and is closely related to the world students live in (Montiel-Overall, 2007). Therefore, the cultural model follows John Dewey's desire for education to teach students through self-discovery rather than rote memorization (Dewey, 1915). The culture model also requires teachers to teach through the lens of culture. As each teacher may have a different culture and viewpoint, collaboration will help to provide more input into a lesson. Collaboration needs to include support for all stakeholders in a relationship of working together where each person has a role (Howard, 2010).

Information Literacy Impact on Student Learning

As education evolves and critical thinking skills increase in importance, the need for information literacy skills increases. Information literacy is "the ability to access, evaluate, and use information effectively and ethically" (Latham & Gross, 2008, p. 1). Several studies indicated a positive correlational relationship between student learning and school librarians and libraries (Gross et al., 2012; Bleidt, 2011; Francis & Lance, 2011; Moreillon, 2009; Achterman, 2008; Scott & Plourde, 2007). A study in 2008 revealed that student access to books and libraries impacted how well they will perform in reading (Bleidt, 2011). Several studies found more access to the library is needed including the use of technology and the ability to utilize resources after hours (Bleidt, 2011; Moreillon, 2009; Achterman, 2008). This greater access to the library and technology resulted in better student performance for middle school students on English language arts and social studies exams (Achterman, 2008). High school students achieved higher scores on exams with better library hours and technology, plus a larger collection and budget (Achterman, 2008).

The American Association of School Librarian (AASL) standards provide direction to school librarians to improve reading comprehension (Moreillon, 2009). The school librarian should be the leader and advocate for a physical space that is inviting for students to accomplish a variety of work from studying to collaborating with other students (Moreillon, 2009). The school librarian needs to collaborate with teachers to ensure curricular needs are meet, advocate for alternative texts for students to meet different reading levels, co-teach and co-plan lessons, and help connect teachers from different disciplines if they have topics that overlap (Moreillon, 2009). A study found that

many teachers did not teach research skills associated with information literacy because they believed it was covered in another course (Kovalik et al., 2012). Another study found that the students with access to a librarian had better information literacy skills (Smalley, 2004).

In addition to physical access and larger collections, information literacy skills are important for student learning (Bomar, 2010). Students are faced with sorting through numerous resources online and many stop at the first website they find to use as a resource without evaluating it well (Bomar, 2010). The librarian ought to help students find resources beyond a website and evaluate it based on when it was written, the author's credibility, and balance of topics (Bomar, 2010; Scott & Plourde, 2007). This thorough understanding will aid students in understanding how to defend their stance because they can find resources that are credible and discredit those that are not.

Gross et al. (2012) conducted a study on the impact of information literacy skills on freshmen college students. Those identified with low information literacy skills: a) were less likely to seek out help on assessments, b) were more likely to be content with their lower skills, c) could not correctly identify the expertise level of someone from whom they sought assistance, d) failed to know when they needed additional information on an assignment, or e) failed to recognize if the additional information was relevant or correct (Gross et al., 2012; O'Sullivan & Dallas, 2010). Fabbi (2015) found that the incoming freshmen who had taken higher level courses in high school tended to have stronger information literacy skills and were subsequently more successful in college. Another study found that many students who utilized self-taught information literacy skills in college, such as using Google to find resources, lacked the ability for critical

thinking (Kovalik et al., 2012). Secondary educators need to help teach these skills to increase student performance and better prepare students for college (Allen, 2007).

School Librarians as Leaders

The role of the school librarian is evolving. This evolution includes the demands of teaching information literary. The most recent standards released by the American Association of School Librarians (AASL) include five roles for school librarians "…leader, instructional partner, information specialist, teacher, and program administrator" (Moreillon, Cahill, & McKee, 2012, p. 2). The explosion of technology has impacted the job description of the school librarian (Boyer, 2015). Boyer (2015) asserted that the job description for a school librarian should include: a) be knowledgeable about online resources, b) lead one-to-one initiatives, c) be a member of technology teams, d) assist with learning management systems, and e) collaborate with teachers to co-teach lessons using the aforementioned skills. Todd (2015) explained seven principles for school librarians which consist of a role that "is primarily that of teacher, co-teaching with classroom teachers to develop curriculum standards." (p. 11). In order to help school librarians achieve these skills, Pickett (2013) wrote that school librarians should create library advisory committees to help guide the library so that students, teachers, and other stakeholders have an equal voice in decision-making. These changes to the role of school librarians call to question if they are trained and prepared for it.

Studies on college program requirements and professional development for school librarians revealed large gaps (Moreillon et al., 2012; Shannon, 2012b). Shannon (2012b) gathered information regarding the college training of school librarians. Shannon (2012b)

collected demographic information on 203 programs that were both non-accredited and accredited through the American Library Association (Shannon, 2012b). The findings indicated a wide array of programs due to differing opinions on if the school librarian should be a certified teacher or should have a master's degree (Shannon, 2012b). In examining a stratified random sample of state conferences across the country, an unbalanced offering of sessions was available for school librarians (Moreillon et al., 2012). The session descriptions in the catalog revealed that the training was heavy on the roles of teacher, program administration, and information specialists but lacked in training on how to be a leader (Moreillon et al., 2012).

Due to the declining enrollment in these programs and the high number of school librarians retiring, a shortage will emerge for qualified school librarians. This shortage may require changes to the current programs (Shannon, 2012b). Currently, North Dakota allows school librarian employment if the person is licensed to teach in North Dakota, according to the Educational Standards and Practice Board. Additionally, the person must either have a Library Media Specialist degree or be enrolled in a Library Media Specialist program (NDCC 67-11-04). However, there is no requirement that a school have a school librarian (NDCC 15.1). Given the leadership demands, the gap in professional development and inconsistent program requirements of a school librarian nationwide, the steps need to be taken to determine what support teachers need regarding information literacy skills.

Educators' Perceptions of Librarians and Information Literacy

A study of new teachers and librarians on information literacy skills revealed a low understanding of information literacy skills (Stockham & Collins, 2012; Montiel-

Overall & Jones, 2011). The survey found that only 16% of librarians felt that teachers understood what information literacy skills are. Thirty-three percent of the teachers believed they themselves did not know what information literacy skills were, yet 89% of school librarians believed that these skills are important (Stockham & Collins, 2012). Montiel-Overall and Jones (2011) found that one third of the teachers believed they were teaching information literacy skills in their class even though they were unsure how to define the skills.

Francis and Lance (2011) conducted a study on the perception of school librarians teaching information literacy skills. The results indicated that school librarians rated their lessons higher than teachers rated the same lessons for the success of teaching information literacy skills (Francis & Lance, 2011). In the same study, school librarians were more likely to rank themselves as excellent when the teacher invited them into the classroom to teach or co-teach frequently or if the school librarian thought the teacher or administration liked them or viewed them as a technology solver (Francis & Lance, 2011). Finally, Francis and Lance (2011) found that if administration valued information literacy skills, the administration rated the school librarian more favorably (Francis & Lance, 2011). The study did not provide an analysis of how well the information literacy skills were taught though, leaving a gap in determining if school librarians were accurate in their self-rating.

School administrator approval is critical for school librarians and their programs to be successful (Shannon, 2012a). Shannon (2012a) found that most school administrators do not fully understand the value of the school librarian as it is not a part of their administration courses. Many administrators found the interpersonal skills of the

school librarian to be more important than their knowledge of resources to acquire for the library or their information literacy skills (Shannon, 2012a). Given teachers' limited understanding of information literacy skills and the data showing the positive impact of learning these skills on academic performance, the need for collaboration between teachers and school librarians could not be stronger. Additionally, the need for an effective method to rate the success of teaching these skills is crucial (Stockham & Collins, 2012; Montiel-Overall & Jones, 2011).

Collaboration: Librarian and Classroom Teacher

The literature frequently mentions collaboration between the school librarian and teacher, yet authors have not clearly explained what the collaboration should look like. The definition of collaboration varies significantly from source to source and appears to be largely missing for school librarians (Montiel-Overall, 2005). Authors vary in their definition from including reciprocity to dialogue to joint planning (Montiel-Overall, 2005). The AASL places an emphasis on supporting student learning and improving curriculum (Montiel-Overall, 2005). The most comprehensive definition found by the researcher is by Moreillon (2008) who states that "collaboration occurs when educators co-design, co-plan, co-teach, and/or co-assess curriculum-based lessons or units of study" (p. 2). This definition was used in this study.

In two different studies, it was reinforced that teachers view collaboration in the traditional sense of dividing a lesson and assigning topics to be taught independently of each other (Gavigan & Lance, 2015; Montiel-Overall & Jones, 2011). Montiel-Overall & Jones (2011) surveyed 194 elementary teachers to further understand how teachers perceive collaboration. They found that surveyed teachers viewed collaboration in the

traditional sense of having the school librarian find resources versus collaborating on learning goals and lesson planning (Montiel-Overall and Jones, 2011). Gavigan and Lance (2015) studied 917 teachers and their perceptions on collaboration and found that the teachers leaned toward more traditional roles of collaboration. In the study, teachers ranked the roles of school librarians and found their top roles were reading motivator, teacher, instructional resources manager, technology troubleshooter, and technology instructor (Gavigan & Lance, 2015). Meyer (2010) also reinforces that teachers and librarians collaborate to provide support for one another but do not collaborate from start to finish on a lesson. Gavigan & Lance (2015) also surveyed 273 administrators who ranked librarian roles with reading motivator, instructional resources manager, and co-teacher as the most important roles. The administrators ranked the roles of tutoring at-risk students, designing curriculum, and managing a website as the least significant roles.

Lance, Rodney, and Schwarz (2010) surveyed administrators, teachers, and school librarians to determine their value of collaboration and how frequently it occurred. Administrators viewed collaboration as very important with about 90% responding that it is essential or desirable (Lance, Rodney and Schwarz, 2010). Forty-one percent of the teachers and 48.1% of the school librarians indicated that they did not initiate collaboration (Lance et al., 2010). According to Lance et al. (2010), the low level of collaboration reported has a negative impact on Reading and Language Arts scores; therefore, administrators need to work on increasing the frequency of collaboration.

Studies show the desire for collaboration, so the question at hand is why isn't collaboration happening in classrooms? Branch (2006) believes that some people avoid collaboration because they fear: a) looking unintelligent in front of their colleagues, b)

giving up control, c) that collaboration in teaching may take too much time, and d) it may not result in completing the curriculum. Another study also showed that obstacles to collaboration included a teacher's unwillingness to give up class time and control, difficulty in finding time to meet with the school librarian, and an unwillingness to reveal the limited information literacy skills possessed by the teacher (Varlejs & Stec, 2014).

Despite these obstacles, Branch (2006) noted that collaboration may result in positive improvements in lessons that may lead to greater understanding of the material. Additionally, a study by Montiel-Overall and Hernandez (2012) of elementary teachers and school librarians found that providing professional development on collaboration helped foster more co-planning collaboration. According to their study, colleges were not training teachers or school librarians in collaboration techniques (Montiel-Overall & Hernandez, 2012). The professional development taught teachers and school librarians how to create lessons where they both developed the objective and lesson plans together (Montiel-Overall & Hernandez, 2012). The test group's perceptions on collaboration changed to defining it in terms of co-planning as opposed to the traditional way of having the school librarian teach a defined component of the lesson (Montiel-Overall & Hernandez, 2012).

Moreillon (2008) created a case study of 14 pre-service teachers for grades K-8 to include collaboration as part of their college learning objectives to determine the impact when they would begin teaching. The study began with integrating collaboration into the pre-service teacher training for the final two years. The study then followed the teachers through student teaching and their first year of teaching. Moreillon found that including collaboration in teacher training impacted the teacher's desire to collaborate with the

librarian to a higher degree. The amount of support the teachers received for collaboration during student teaching and their first year of teaching greatly impacted how frequently collaboration occurred (Moreillon, 2008). Student teachers also felt overwhelmed with the amount of work they needed to do which resulted in going to the school library for resources versus co-lesson planning with the school librarian. For both student teachers and first year teachers, the flexibility of the master schedule impacted how much they collaborated. Several of the teachers also found that the school librarian had set curriculum they wanted to teach during the library time, so the teacher would often leave and collaboration would not occur. Moreillon found that pre-service training is a step towards fostering collaboration, but other obstacles exist such as lack of qualified school librarians and a fixed schedule. Moreillon (2013a) completed a follow up study of 10 teachers and six school librarians that focused on the factors of collaboration. Moreillon, found that in order to collaborate, the group needs a common goal, willingness to be flexible, trust, risk-taking behavior, and willingness to change. A study in California also found that increased collaboration needed to happen with schools using open communication, flexible scheduling, established goals, and dedicated curriculum time (Martin, Garcia, & McPhee, 2012). Moreillon (2013a) asserted that these skills needed to be taught during pre-service training, and schools needed to foster the role of a school librarian as a leader and a partner to teachers.

Summary

While research exists on school librarians and their role in teaching information literacy, there are still unanswered questions. In addition, many of the articles focused on elementary education and the perspective of school librarians. The teacher perspective

needs to be included. Chapter III explains the methodology used by the researcher to study this topic.

CHAPTER III

METHODOLOGY

Purpose of the Study

The purpose of this study is to use Fullan's (2007) Change Theory, specifically the first step, initiation of change, to examine teacher readiness to engage in changing the way information literacy skills are taught. The research design was explanatory sequential mixed-methods design, which allowed for the quantitative survey of teachers to be the primary focus and the follow-up quantitative interviews of school librarians to be flexible and focused on the results from the surveys. The research included evaluating teachers' perception of their openness to change and understanding what obstacles they believed impede change to help assess their readiness. The research also included teachers' perceptions on what they believed the collaborative roles should focus on between a school librarian and a teacher regarding information literacy. Finally, the perceptions of three current librarians were integrated into the study as well. These perceptions were then used to gauge if a change was needed and how to use Fullan's (2007) Change Theory to initiate the change.

Research Questions

The following research questions guided the researcher:

1. How do teacher perceptions vary on librarian roles regarding teaching information literacy skills? (Descriptive)

2. What are teachers' levels of openness to change? (Descriptive)
3. What differences exist among teachers (gender, core/non-core, grade level taught) regarding librarian roles in information literacy skills? (ANOVA)
4. How does openness to change predict teacher expectations for teaching information literacy skills? (Multiple Regression)
5. What are school librarians' reactions to teacher perception results of teaching information literacy skills?

Pilot Study

A pilot study of the survey was conducted in the spring of 2017. The survey was anonymously administered to 27 secondary education teachers at Sullivan Middle School and Shanley High School in Fargo, North Dakota. The participants were selected for the purpose of testing the instrument for validity, reliability, and identification of any weaknesses in the instrument. Responses were only used to provide feedback on the instrument due to the researcher's job as principal of one of the schools. The pilot survey consisted of 67 items. The pilot study also helped to reinforce which statistics to run on the data. The researcher gained Institutional Review Board (IRB) approval prior to administering the pilot study. After making necessary modifications to the quantitative survey, the survey was then administered to the pilot participants. The pilot group received the survey via email to avoid any unintended pressure from having the researcher in the room, as the researcher is also an administrator at the school. The participants in the pilot study were asked to complete an informed consent waiver in

order to participate in the survey. All results indicated that no changes were necessary from the development of the survey for the final survey.

Participants

The participants for the study included all secondary education teachers in the Eastern Dakota Conference of North Dakota. Approximately 1,200 secondary education teachers in North Dakota comprised the population. Of the 1,200 teachers, 109 responded. Participant selection was limited to the Eastern Dakota Conference (EDC) Class A schools: Grand Forks, Devils Lake, Valley City, Wahpeton, Fargo, and West Fargo. Shanley High School was excluded due to a conflict of interest as the researcher is the principal of the school. The researcher meets professionally with the high school principals regularly thus allowing access to teachers from these schools for recruiting.

Table 1. Participant Survey: Participant Demographic Information for Final Survey.

Characteristics	*N*	%
Gender		
Female	71	74.7
Male	24	25.3
Age		
21-29	24	22.0
30-39	17	15.6
40-49	25	22.9
50-59	14	12.8
60+	8	7.3
Ethnicity		
White/Caucasian	91	96.8
American Indian	1	1.1
Highest Level of Education		
BA/BS	29	30.5
Specialist Degree	3	3.2
MA/MS/M.ED	62	65.3
PhD/Ed.D	1	1.1

Table 1 cont.

Major Subject Area Teaching Assignments		
English Language Arts	24	22
Mathematics	9	8.3
Science	12	11
Social Studies	9	8.3
Foreign Language	5	4.6
Physical Education/Health	2	1.8
Fine Arts (Band, Choir, Art)	5	4.6
Career and Technical (Ag, Business, FACS, Computer, Trade and Engineering)	13	11.9
Other	26	23.9
Core Subject[a]	50	45.9
Non-Core Subject[b]	50	45.9
Years of teaching experience		
1-5	25	22.9
6-10	13	11.9
11-20	25	22.9
20+	24	22.0
Grade Level Taught[c]		
6	28	25.7
7	36	33.0
8	36	33.0
Middle School	24	22.0
9	52	47.7
10	61	56.0
11	61	56.0
12	61	56.0
High School	49	45.0
Both Middle and High	22	20.2

a: Core Subjects includes English Language Arts, Mathematics, Science and Social Studies

b: Non-Core Subjects includes all courses not included in core subjects

c. Grade Level Taught Subjects may be part of multiple grades

Procedures

For the final survey, participants were recruited through an informational email sent to the principals of each school. The principals then shared it with their staff. The participants received the survey through email. Completion of the informed consent

waiver preceded the survey. If they did not complete the waiver, the survey ended. The survey was administered in the spring of 2017. All responses were anonymous. The data was analyzed using SPSS software.

After the survey was administered and analyzed, the researcher conducted interviews with three librarians from the same schools as the survey participants. The interviews lasted approximately 30 minutes each. Consistent with the explanatory sequential design method, the interview questions focused on gathering their response to the survey data. School librarians viewed Tables 1-6 during the interview. (Creswell, 2014, 2015; Creswell & Plano Clark, 2011). During the interviews, the researcher took notes on what the librarians stated. The data will be summarized in later chapters to share their perceptions.

A mixed method approach was used in this study, which consisted of a quantitative survey and qualitative interviews to determine the differences in perceptions of teachers and librarians regarding openness to change in teaching literacy skills. The quantitative survey is the primary focus of the study used to analyze the perception of teachers. The researcher used the explanatory sequential mixed-methods design because it allowed for the follow-up qualitative interviews to be flexible and focus on the results from the quantitative survey (Creswell, 2007, 2014, 2015; Creswell & Plano Clark, 2011). The explanatory design had the advantages of being simple to create and complete. Any missing data from the survey could be supplemented by the interviews (Creswell & Plano Clark, 2011). The researcher also used this design to overcome the limitation of not including librarians on the survey and the limited number available from which to draw valid data (Creswell, 2014, 2015). Although this method did utilize fewer

participants for the interviews, the primary focus of the study was on teacher perception (Creswell, 2014. 2015).

Final Survey

The quantitative survey contained 67 questions designed to determine teacher perceptions regarding their openness to change. The survey had seven demographic questions. The demographic questions were designed to gather information such as age and gender as well as content and grade levels taught.

Survey Instrument

Openness to change was measured through the use of four subscales designed by other authors and the researcher. Each of the subscales utilized a five-point Likert scale with 1 corresponding to *strongly disagree* and 5 with *strongly agree*.

Openness to Change: General

The first subscale measured the participants' level of openness to change. The questions can be found in Williams' (2015) unpublished dissertation on *Examining Openness to Pedagogical Change Among Secondary Mathematics Teachers: Developing and Testing a Structural Model*. However, the questions were modified slightly to fit this survey. The original survey was math specific; whereas, the researcher's survey includes all disciplines. Therefore, where the original survey used the word math, the researcher's survey used the word subject to be more encompassing. Two of the original questions were also omitted as the content of the question was only applicable to math teachers. The researcher's survey included eight questions. Four of the questions were reverse coded. The subscale included questions such as "I try to adapt my instructional

approaches to follow current best practices," and a reverse coded question "I prefer to teach my subject the way it was taught to me."

Table 2. Student Survey Participant Descriptive Statistics Including Percentage of Some Form of Agreement (strongly agree and agree), Mean and Standard Deviation

Openness to Change: General

Question Number	Question	% of Agreement	*M*	*SD*
q8	I prefer to teach my subject the way it was taught to me. (R)	24.2	3.39	1.10
q9	I try to adapt my instructional approaches to follow current best practices.	93.4	4.19	.67
q10	I do not want to change the way I teach my subject. (R)	8.7	3.65	.93
q11	I am quick to embrace new methods for teaching my subject.	74.8	3.66	.89
q12	Pressure to change my strategies makes me want to leave teaching. (R)	18.5	3.68	1.08
q13	I enjoy trying new ways of teaching my subject.	88.0	4.14	.76
q14	I am afraid to change the way I teach my subject. (R)	6.5	4.05	.76
q15	Gaining new knowledge about teaching my subject is invigorating.	85.0	4.25	.78

Openness to Change: Collaboration

The second subscale was designed to gather teacher perceptions of openness to change through collaboration. The original survey came from Church's (2010) research on *Secondary School Principals' Perceptions of the School Librarian's Instructional Role.* The survey was designed for school librarians. The survey consisted of six items; none were reverse coded. The questions were designed to determine if collaboration was part of the school librarian's role. Two questions were deleted because the scope of the

Table 3. Student Survey Participant Descriptive Statistics Including Percentage of Some Form of Agreement (strongly agree and agree), Mean and Standard Deviation.

Openness to Change: Collaboration (Librarian)
The school librarian should collaborate with teachers to

Question Number	Question	% of Agreement	*M*	*SD*
q16	teach students information literacy skills in the context of content curriculum.	84.9	4.01	.68
q17	plan lessons, which integrate information literacy into curriculum.	71.0	3.78	.68
q18	teach lessons that integrate information literacy into the curriculum.	74.4	3.79	.74
q19	evaluate student work from lessons which integrate information literacy into the curriculum.	47.7	3.41	.76

Openness to change: Collaboration (Teacher)
The teacher should collaborate with the school librarian to

Question Number	Question	% of Agreement	*M*	*SD*
q20	teach students information literacy skills in the context of content curriculum.	87.2	4.01	.69
q21	plan lessons, which integrate information literacy into curriculum.	80.3	3.90	.70
q22	teach lessons that integrate information literacy into the curriculum.	83.7	3.94	.69
q23	evaluate student work from lessons which integrate information literacy into the curriculum.	79.1	3.83	.79

questions was unrelated to the topic of the researcher's survey. The researcher also asked each participant if that same form of collaboration was part of his or her job as a teacher.

For example, the original survey asked if the school librarian "should collaborate with teachers to plan lessons which integrate information literacy into curriculum." The researcher asked the same questions but changed the beginning to "the teacher should collaborate with the library media specialists."

Openness to Change: Impediments

The third subscale was designed to gather data on the impediments to change. The researcher created this set of questions. Two of the questions were reverse coded. This scale included a total of eight questions including: "The knowledge of the school librarian encourages collaboration" and "My course curriculum makes implementing information literacy skills difficult." In understanding what prevents teachers from utilizing the school librarian, the researcher gained insight into how to initiate possible changes. The impediments results were viewed individually as well as combined to determine the best way to initiate possible changes.

Teacher Expectations

The fourth subscale gathered input from teachers as to whose role teaching information literacy skills ought to be: the school librarian, the teacher, or a combination. The original survey came from Church's (2010) research on secondary school principals' perceptions of the school librarian's instructional role. The original survey had 12 questions, but the researcher divided two of the questions in order to avoid compounding the variables. The first half of the survey contained 14 questions in regard to the school librarian's role, and the second half of the survey contained 14 questions that focused on the teacher's role. An example is "The school librarian should teach students how to evaluate information for accuracy and reliability before using it for research." This

question was then asked again but the words "school librarian" were replaced with "teacher."

Table 4. Student Survey Participant Descriptive Statistics Including Percentage of Some Form of Agreement (strongly agree and agree), Mean and Standard Deviation.

Openness to change: Impediments
Collaboration is difficult because of

Question Number	Question	% of Agreement	*M*	*SD*
q24	the lack of a school librarian	13.0	1.96	1.02
q25	the lack of knowledge of the school librarian	16.7	2.08	1.08
q26	my prep periods are spent grading assessments and/or lesson planning.	83.6	3.96	.82
q27	the tasks required by administration.	51.8	3.36	1.02
q28	the personality of the school librarian.	13.1	1.83	1.15
q29	my course curriculum makes implementing information literacy skills difficult.	36.4	2.79	1.26
q30	the number of different courses I teach.	54.7	3.17	1.26
q31	the fear of appearing not as smart as the school librarian.	4.7	1.60	.83
q32	it takes too much time and prevents me teaching all the standards.	32.2	2.62	1.13
q33	I worry that the school librarian will not fulfill his/her role so I will have to do all the work.	9.5	1.86	1.00

Table 5. Student Survey Participant Descriptive Statistics Including Percentage of Some Form of Agreement (strongly agree and agree), Mean and Standard Deviation.

Question Number	Question	% of Agreement	*M*	*SD*
Teacher Expectations: (Librarian)				
The school librarian should teach students to use				
q34	printed materials for research. (1)	90.0	4.11	.60
q35	electronic subscription database, which contain journal articles for research. (2)	91.2	4.26	.61
q36	information found at free Websites for research. (3)	90.0	4.25	.63
The school librarian should teach students how to				
q37	locate information contained in print sources. (1)	91.3	4.13	.62
q38	locate information contained in electronic sources. (2)	93.8	4.28	.62
q39	evaluate information for accuracy and reliability before using it for research. (3)	91.3	4.28	.69
q40	take notes and how to organize information to be used in a report, paper, or project. (4)	57.5	3.48	1.06
q41	respect intellectual property (avoid plagiarism, cite sources, respect copyright laws). (5)	94.9	4.37	.62
q42	practice ethical behavior by following acceptable use policy guidelines in their use of information. (6)	97.6	4.39	.54
The school librarian should				
q43	have access to standardized student test data. (1)	56.3	3.54	.83
q44	use standardized student test data as he/she develops information literacy instruction. (2)	56.3	3.46	.83
q45	provide staff development for teachers in areas such as effective searching on the Web. (3)	77.6	3.84	.91
q46	provide staff development for teachers in areas such as effective use of electronic subscription databases. (4)	83.8	3.96	.83
q47	provide staff development for teachers in areas such as intellectual property and copyright. (5)	83.8	3.96	.80
Teacher Expectations: (Teacher)				
The teacher should teach students to use				
q48	printed materials for research. (1)	92.5	4.15	.62
q49	electronic subscription database, which contain journal articles for research. (2)	87.6	4.14	.69
q50	information found at free Websites for research. (3)	89.9	4.14	.66

Table 5 cont.

Question Number	Question	% of Agreement	*M*	*SD*
The teacher should teach students how to				
q51	locate information contained in print sources. (1)	90.1	4.09	.70
q52	locate information contained in electronic sources. (2)	93.7	4.16	.57
q53	evaluate information for accuracy and reliability before using it for research. (3)	91.3	4.20	.62
q54	take notes and how to organize information to be used in a report, paper, or project. (4)	90.1	4.21	.71
q55	respect intellectual property (avoid plagiarism, cite sources, respect copyright laws). (5)	96.3	4.30	.54
q56	practice ethical behavior by following acceptable use policy guidelines in their use of information. (6)	95.0	4.29	.60
The teacher should				
q57	have access to standardized student test data. (1)	96.3	4.74	.57
q58	use standardized student test data as he/she develops information literacy instruction. (2)	91.3	4.44	.76
q59	provide staff development for teachers in areas such as effective searching on the Web. (3)	45.1	3.16	1.32
q60	provide staff development for teachers in areas such as effective use of electronic subscription databases. (4)	43.8	3.14	1.32
q61	provide staff development for teachers in areas such as intellectual property and copyright. (5)	46.3	3.18	1.29

Openness to Change: Communication

The fifth subscale focused on the teachers' preference on how changes in the school are communicated with them. The researcher created the subscale. The section included eight questions using a Likert scale. The participants were asked whether or not they prefer a certain method of communication, such as a faculty meeting or an email. For example, "When administration wants to initiate a change, rank how you prefer they gather input: faculty meetings, department chair meetings, survey sent to all teachers, and individual department meetings." The questions allowed data to be gathered on what form of communication may foster or inhibit an openness to change. This data guides the researcher's recommendations on how to initiate change.

Table 6. Student Survey Participant Descriptive Statistics Including Percentage of Some Form of Agreement (strongly agree and agree), Mean and Standard Deviation.

Openness to change: Communication

Question Number	Question	% of Agreement	*M*	*SD*
When administration wants to initiate a change, rate how you prefer they gather input.				
q62	Faculty meetings	60.5	3.46	1.24
q63	Department chair meetings	54.3	3.33	1.16
q64	Survey sent to all teachers	81.5	3.96	.94
q65	Individual department meetings	79.0	3.95	1.02
When administration wants to initiate a change, rate how you prefer they communicate their ideas with the staff.				
q66	Faculty meeting	80.3	3.93	1.08
q67	Department chair meetings	56.8	3.46	1.17
q68	Survey sent to all teachers	42.0	3.17	1.30
q69	Individual department meetings	78.8	3.99	1.04

Table 7. Measures of Internal Consistency.

Subscale	Question Numbers	Cronbach's Alpha
Openness to Change: General	q8-15	.70
Openness to Change: Collaboration (Librarian)	q16-19	.78
Openness to Change: Collaboration (Teacher)	q20-23	.94
Openness to Change: Impediments	q24-33	.68
Teacher Expectations (Librarian)	q34-47	.83
Teacher Expectations (Teacher)	q48-61	.83
Openness to Change: Communication	q62-69	.73

Internal Consistency

The internal consistency results indicate that most of the individual questions may be combined in to larger constructs as Cronbach's Alpha is equal to or greater than .70. The openness to change construct for impediments has a Cronbach's Alpha of .68. This construct is more difficult to combine because the questions teachers to evaluate impediments from a wide variety of areas from their own teaching schedule to the quality of the school librarian. The low Cronbach's Alpha reveals that the impediments teachers face is a complex issue explained by a variety of issues.

Data Analysis

Descriptive statistics were presented in tabular format in Chapter III and narrative format in Chapter IV to identify differences in teacher perceptions on school librarian roles regarding teaching information literacy skills. Descriptive statistics seek to explain the population in the study. In this study, these statistics include gender, age, ethnicity, highest education level, subject taught, years of experience, and grade(s) taught. Descriptive statistics were used to determine the level of teacher openness to change.

Again, the researcher analyzed the answers per demographic area with percentages, frequencies, and means of teachers who are more open to change and share certain characteristics such as degree earned. The descriptive statistics will help to answer the following research questions: a) Do teacher perceptions vary on librarian roles regarding teaching information literacy skills?, and b) What are teachers' levels of openness to change?

Analysis of variance (ANOVA) statistics were used to test if there is a statistically significant difference between two or more groups' means such as age, ethnicity, highest education level, subject taught, years of experience, and grade(s) taught (Warner, 2013). A *t* test was used for gender and education as there were only two groups for each. All participants answered either male or female, creating only two groups. Although education had four possible groups for participants to choose from, two of the groups had too small of a sample to be reliable for testing, thus they were combined with other groups to form two groups, undergraduate degree and graduate degree. Ethnicity was not used for any tests as only one participant responded with a different ethnicity than the rest. ANOVA statistics were presented in narrative and tabular format for any statistically significant differences found. ANOVA statistics reveal information such as teachers with less than five years of experience on average believe that school librarians should be primarily responsible for teaching students how to respect intellectual property; whereas, teachers with 15 or more years of experience on average believe that both teachers and school librarians should be responsible. The ANOVA statistics helped to answer the research question: "What differences exist among teachers regarding librarian roles in information literacy skills?"

Finally, multiple linear regression was used to determine what combinations of factors best predict teacher perceptions of school librarians for teaching information literacy skills (Warner, 2013). Multiple linear regression revealed helpful information regarding the differences in subscales. For example, the subscales of impediments to change, role of communication, and the level of education may be more significant predictors of a teacher's openness to change than the subscale on perception of openness. The multiple linear regression results helped to answer the research question: How does openness to change predict teacher expectations for teaching information literacy skills?

Three interviews were conducted to help provide answers for research questions five and six. The interviews were approved by the IRB. Each interview lasted approximately 30-45 minutes. The researcher composed handwritten notes during the interview versus recording and transcribing the interviews. This practice is consistent with explanatory sequential mixed-methods design as the interviews provided supplemental information to help fill in gaps. The interviews also served the purpose of overcoming the limitation of not including librarians in the survey information. Since only three school librarians were interviewed, most of the information will be shared in narrative form to provide the librarians' responses to the qualitative survey.

Summary

The proposed mixed method study focused on a quantitative analysis of teacher perceptions to the findings with a qualitative inquiry of librarians' perceptions. The results from the survey are presented in Chapter IV.

CHAPTER IV

RESULTS

The purpose of the study was to analyze Fullan's (2007) Change Theory, specifically the first step, initiation of change was utilized, to examine teacher readiness to engage in changing the way information literacy skills are taught. The survey was administered to secondary education teachers in the EDC of North Dakota. Descriptive analysis of the variables in the survey was utilized. Next the descriptive data was used to evaluate teacher openness to change. Finally, *t*-test, ANOVAs, and multiple regression analysis were completed to understand the relationship between variables.

Research Questions

The following research questions guided the researcher:

1. How do teacher perceptions vary on librarian roles regarding teaching information literacy skills? (Descriptive)
2. What are teachers' levels of openness to change? (Descriptive)
3. What differences exist among teachers (gender, core/non-core, grade level taught) regarding librarian roles in information literacy skills? (ANOVA)
4. How does openness to change predict teacher expectations for teaching information literacy skills? (Multiple Regression)

5. What are school librarians' reactions to teacher perception results of teaching information literacy skills?

How Do Teacher Perceptions Vary on Librarian Roles Regarding Teaching Information Literacy Skills? (Descriptive)

The first area of analysis explored if teacher perceptions vary on librarian roles regarding teaching information literacy skills. In analyzing the descriptive survey results for the construct of teacher expectation, teachers had several common perceptions as indicated by small standard deviations. Over 90% of the teachers agreed (with mean scores over 4 on a 5 point Likert scale and standard deviations under .70) that school librarians should teach students how to do the following: a) use printed materials for research, electronic subscriptions, and website information, b) successfully locate and evaluate printed and online materials, c) avoid plagiarism, and d) follow the acceptable use policy of the school.

In the construct regarding collaboration, teachers responded with higher agreement that teachers should collaborate with school librarians as opposed to school librarians collaborating with teachers. Regarding teaching information literary skills in the context of content curriculum, there was higher agreement for teachers to collaborate with school librarians (87.2%) rather than having the school librarians be responsible for the collaboration (84.9%). Regarding planning lessons that integrate information literary skills into the curriculum, there was also higher agreement that teachers should collaborate with librarians (80.3%) rather than having the school librarians initiate the planning (71%). Finally, there was high agreement that teachers should collaborate with school librarians (83.7%) in teaching lessons that integrate information literacy into the

curriculum as opposed to school librarians (74.4%) collaborating with teachers. There was a large difference in responses to who should evaluate student work from lessons that integrate information literacy into the curriculum. Teachers indicated 47.7% agreement that school librarians should collaborate with teachers to evaluate student work from lessons integrating information literacy whereas 79.1% agreed that teachers should collaborate with school librarians. Although from a different construct, teachers responded with significantly higher agreement that teachers (90.1%) should be responsible for teaching students how to take notes on organizing their information for a paper or project as opposed to school librarians (57.5%) having this duty.

In examining responses for the teacher expectation construct, some differences were detected in the results. Respondents had a 40% higher agreement that teachers (96.3%) should have access to standardized student test data; whereas, only 56.3% agreed that school librarians should have this access. In addition, respondents indicated 91.3% agreement that teachers should be responsible for using standardized student test data to develop information literacy instruction, but only 56.3% responded that school librarians should have this same role.

In the teacher expectation construct concerning professional development, other differences emerged. Participants responded with 77.6% agreement that school librarians should provide staff development for teachers in areas such as effective Web searching, but only 45.1% agreed that teachers should provide this same training. Participants also agreed (83.8%) that school librarians should provide staff development for teachers in areas such as effective use of electronic subscriptions, but only 43.8% agreed that teachers should provide this same training. Finally, 83.8% of responses agreed that

school librarians should provide staff development for teachers in areas such as intellectual property and copyright, and 46.3% indicated that this should be a task for teachers to provide.

What Are Teachers' Levels of Openness to Change? (Descriptive)

The second area of analysis was examining teachers' perceptions of openness to change. Teachers responded with 93.4% agreement (*M*=4.19) that they were open to adapting instructional approaches to following best practices. Teachers also responded that they were open to embrace new methods for teaching their subject (74.8% agreement, *M*=3.66). They responded that they enjoy finding new ways to teach their subject (88.0% agreement, *M*=4.14). The teachers indicated that learning new information about teaching was invigorating (85.0% agreement, *M*=4.25). The participants also indicated low responses for the reverse code question. Only 6.5% of the teachers agreed that they feared change, and 18.5% agreed that the pressures to change how they teach would force them out of teaching. It may be inferred that teachers are open to learning new methods of teaching, best practices, and ways to improve their teaching, and they do not feel burdened by this learning. It is also possible that those teachers who answered the survey are more open to change revealing a possible sampling bias.

What Differences Exist Among Teachers Regarding Librarian Roles in Information Literacy Skills?

***Test of Group Differences*.** An independent sample *t*-tests (Table 8) were conducted to compare teacher collaboration in male and female conditions. There was a

significant difference as females were more willing to collaborate with school librarians than males to create, teach and evaluate lessons integrating information literacy skills.

Table 8. Comparison of Gender on Openness to Change: General, Collaboration, Impediments, Expectations and Communication.

	Independent Variables								
Dependent Variable	Female *n*	Female *M (SD)*	Male *n*	Male *M (SD)*	Possible Range	Mean Difference	*t*	*df*	*p*
General	68	3.94 (0.44)	24	3.60 (0.58)	1-5	.34	3.05	90	.003
Collaborate (Librarian)	64	3.79 (0.50)	22	3.61 (0.68)	1-5	.18	1.32	84	.19
Collaborate (Teacher)	64	4.03 (0.53)	22	3.59 (0.88)	1-5	.44	2.21	26.33	.36
Impediments	63	2.50 (0.55)	22	2.59 (.59)	1-5	-.09	-.63	83	.53
Expectations (Librarian)	58	3.98 (0.43)	22	4.14 (0.36)	1-5	-.16	-1.72	44.16	.09
Expectations (Teacher)	58	4.03 (0.44)	22	4.02 (0.50)	1-5	.01	.05	34.35	.96
Communicate (Gather)	59	3.76 (0.67)	22	3.44 (0.66)	1-5	.32	1.93	37.87	.06
Communicate (Share)	59	3.71 (0.71)	22	3.43 (0.72)	1-5	.28	1.56	37.17	.13

Note: differences in group size reflect missing data

An independent sample *t*-test (Table 9) was conducted to compare impediments to change in core subject teacher (English, social studies, science and math) and non-core subject teacher conditions. There was a significant difference in the scores for core subject teachers (M=2.38, SD=0.51) and non-core subject teacher (M=2.71, SD=0.55) conditions t=-2.78, p<.007. There was significant difference as non-core subject teachers experienced more impediments to collaboration than core subject teachers.

Table 9. Comparison of Core and Non-Core Teachers on Openness to Change: General, Collaboration, Impediments, Expectations and Communication.

Dependent Variable	Independent Variables: Core *n*	Core *M (SD)*	Non-Core *n*	Non-Core *M (SD)*	Possible Range	Mean Difference	*t*	*df*	*p*
General	44	3.79 (0.51)	43	3.89 (0.47)	1-5	-.09	-.88	85	.38
Collaborate (Librarian)	43	3.71 (0.62)	39	3.79 (0.50)	1-5	-.08	-.64	80	.52
Collaborate (Teacher)	43	3.86 (0.79)	39	4.00 (0.51)	1-5	-.14	-.97	72.5	.34
Impediments	43	2.38 (0.51)	38	2.71 (0.55)	1-5	-.33	-2.78	79	.007
Expectations (Librarian)	38	4.02 (0.40)	38	4.05 (0.45)	1-5	-.04	-.39	74	.70
Expectations (Teacher)	38	4.03 (0.49)	38	4.04 (0.44)	1-5	-.003	-.03	74	.98
Communicate (Gather)	38	3.66 (0.62)	39	3.68 (0.75)	1-5	-.02	-.14	75	.89
Communicate (Share)	38	3.55 (0.58)	39	3.74 (0.75)	1-5	-.19	-1.16	75	.25

Note: differences in group size reflects missing data

ANOVA. An ANOVA (Table 10) was conducted to compare the main effects of teaching middle school, high school, or both and the effect on how teachers want information gathered for making a change. An analysis of variance showed that the effect of teaching middle school or high school on gathering information for change was significant, $F(2,78)=7.42$, $p<.001$. Post-hoc T-tests using a Tukey alpha adjustment revealed middle school teachers ($M= 4.11$, $SD= 0.62$) were impacted more by how information was gathered for change than high school teachers ($M=3.49$, $p<.001$, $SD= 0.59$). It also revealed that middle school teachers ($M= 4.11$, $SD= 0.62$) felt more impacted by how information was gathered for change that those teaching both middle and high school ($M=3.57$, $p<.02$, SD= .0711). Middle school teachers appeared to be

more concerned about how a school includes different perspectives in gathering information on making changes.

Table 10. One-Way ANOVA Table Testing the Effect of Grade Level Taught on Gathering Information for Change.

	SS	*df*	*MS*	*F*	*p*	η^2
Between Groups	5.87	2	2.93	7.42	.001	.16
Within Groups	30.82	78	.29			

No two-way ANOVAs were significant in interaction

How Does Openness to Change Predict Teacher Expectations for Teaching Information Literacy Skills? (Multiple Regression)

Correlations. Correlational statistics (Table 11) were also utilized in order to understand the relationship among the various constructs. Correlational statistics were also used to predict teacher expectations for teaching information literacy skills.

The general openness to change construct was positively correlated with teacher openness to collaborate with school librarians construct (*r*=.26). The openness to change construct was negatively correlated with the impediments to collaboration construct (*r*=-.26) indicating that the more open a teacher is to change the less likely they are to perceive and be impacted by impediments to collaboration.

The openness to change construct focusing on teacher belief that librarians should collaborate with teachers was strongly positively correlated with teacher openness to collaboration with school librarians construct (*r*=.52). The construct of teacher belief that librarians should collaborate was positively correlated with teacher expectations of the school librarian's role in teaching information literacy skills (*r*=.40).

The impediments to collaboration construct was strongly negatively correlated with the openness to change: sharing information about change construct (*r*=-.26). Teachers who responded with a desire for shared information on changes also responded with less perceived impediment for collaboration.

The construct on how teachers want information gathered regarding possible changes in the school was strongly positively correlated with the construct on how teachers want information shared regarding changes (*r*=.80).

Finally, the construct on teacher expectations for school librarians in teaching information literacy skills was positively correlated with teacher expectations for teachers teaching these same skills (*r*=.43). The higher the belief that librarians should teach the skills, the higher perceived belief that teachers also have a role in teaching their students these skills.

Table 11. Zero-Order Correlations for Variables in Study.

	1	2	3	4	5	6	7	8
General	-							
Collaboration (Librarian)	.16	-						
Collaboration (Teacher)	.26*	.52**	-					
Impediments	-.26*	-.04	-.13	-				
Share Communication	.18	-.01	.18	-.26*	-			
Gather Communication	.19	-.05	.17	-.19	.80**	-		
Expectations (Librarian)	.21	.40**	.12	.13	.03	.11	-	
Expectations (Teacher)	.12	.06	.10	-.09	.21	.22	.43**	-

*p<.05; **p<.0s1

Multiple regression. A multiple regression analysis (Table 12) was conducted in which teacher collaboration and impediments were predictors, along with the other constructs of librarian collaboration, impediments to change, gathering information,

sharing information, and librarian expectations for teaching information literacy skills as covariates confirmed the initial hypothesis. A significant regression equation was found ($F(7,72)=2.64$, $p<.02$) with an R^2 of .20. As shown in Table 12, a greater belief that teachers need to be open to collaborate and less impediments blocking collaboration were associated with a stronger openness to change beyond the other covariates.

Table 12. Teacher Collaboration, Impediments to Change, and Librarians' Expectations as Predictors of Openness to Change.

Predictors	Openness to Change		
	B	*SE*	*β*
Openness to Change: Collaboration (Librarian)	-.05	.12	-.6
Openness to Change: Collaboration (Teacher)	.20	.10	.27*
Openness to Change: Impediments	-.22	.10	-.25*
Openness to Change: Gather Information	.02	.13	.03
Openness to Change: Share Information	.05	.12	.07
Teacher Expectations (Librarian)	.29	.15	.24+
Teacher Expectations (Teacher)	-.05	.13	-.04

*$p<.05$; +$p= .064$

A multiple regression analysis (Table 13) was conducted in which teacher collaboration and teacher expectations for librarian were predictors, along with the other constructs of general openness to change, impediments to change, gathering information, sharing information, and teacher expectations in teaching information literacy skills as covariates confirmed the initial hypothesis. A significant regression equation was found ($F(7,72)=7.51$, $p<.000$) with an R^2 of .42. As shown in Table 13, the greater belief in teacher collaboration and expectations of librarians to teach information literacy skills by

teachers was associated with openness to collaboration of the librarian beyond the other covariates.

Table 13. Teacher Collaborate and LMS Expectations as Predictors of Librarian Collaboration.

Predictors	Librarian Collaboration		
	B	*SE*	*B*
Openness to Change: (General)	-.5	.11	-.44
Openness to Change: Collaboration (Teacher)	.43	.08	.51*
Openness to Change: Impediments	-.03	.10	-.03
Openness to Change: Gather Information	.06	.13	.07
Openness to Change: Share Information	-.19	.12	-.24
Teacher Expectations (Librarian)	.48	.14	.35**
Teacher Expectations (Teacher)	.06	.13	.05

*p<.000; **p<.001

A multiple regression analysis (Table 14) was conducted in which general openness to change and teacher beliefs that librarians should collaborate were predictors, along with the constructs of general openness to change, impediments to collaboration, gathering information, sharing information, librarian expectations for teaching information literacy skills, and teacher expectations for teaching information literacy skills as covariates confirmed the initial hypothesis. A significant regression equation was found (F(7,72)=6.00, p<.000) with an R^2 of .37. As shown in Table 14, the greater openness to change in general and belief by teachers that librarians need to collaborate were associated with openness to teacher collaboration with librarians beyond the other covariates.

Table 14. Openness to Change (General) and Librarian Collaboration as Predictors of Teacher Collaboration.

Predictors	Teacher Collaboration		
	B	*SE*	*B*
Openness to Change: (General)	.29	.14	.22*
Openness to Change: Collaboration (Librarian)	.66	.12	.56**
Openness to Change: Impediments	.01	.12	.01
Openness to Change: Gather Information	.03	.16	.03
Openness to Change: Share Information	.14	.15	.15
Teacher Expectations (Librarian)	-.26	.19	-.16
Teacher Expectations (Teacher)	-.02	.16	-.01

*p<.05; **p <.000

A multiple regression analysis (Table 15) was conducted in which teacher belief that librarians should collaborate and teacher expectations for teaching information literacy skills were predictors along with the other constructs of general openness to change, teacher belief that they should collaborate, impediments to change, gathering information, and sharing information as covariates confirm the initial hypothesis. A significant regression equation was found (F(7,72)=5.92, p<.000) with an R^2 of .37. As shown in Table 15, the greater belief by teachers that librarians should collaboration and teacher expectations for teaching information literacy skills was associated with teacher expectations that librarians should teach information literacy skills beyond the other covariates.

Table 15. Librarian Collaborate and Teacher Expectations as Predictors of Librarian Expectations.

Predictors	Librarian Expectations		
	B	*SE*	*B*
Openness to Change: (General)	.16	.09	.19+
Openness to Change: Collaboration (Librarian)	.29	.09	.39*
Openness to Change: Collaboration (Teacher)	-.10	.07	-.16
Openness to Change: (Impediments)	.14	.07	.19++
Openness to Change: Gather Information	-.11	.10	-.18
Openness to Change: Share Information	.13	.09	.23
Teacher Expectations (Teacher)	.31	.09	.24*

p<.001; +*p*=/064; ++*p*=.059

What Are School Librarians' Reactions to Teacher Perception Results of Teaching Information Literacy Skills?

In viewing the survey data, one school librarian was insulted that "school librarians should teach students to take notes on how to organize information to be used in a report, paper, or project" was so low at 57.5% agreement among teachers. She believed that it is part of her role to teach this skill to students. She voiced that teachers would set themselves up for failure because they are already responsible for a considerable amount of content information. She felt that adding this task would be too much work for teachers. Another librarian noted that it was interesting that the teachers' response was at 57.5% agreement as the task of teaching students to take notes on organizing information was the role of the school librarian before the digital age. This librarian was curious as to why the belief had changed. Even in the digital age, she

responded that the library houses programs such as Easy Bib to help students with this skill.

Themes emerged as school librarians viewed the data on collaboration. School librarians realized that teachers find it difficult to collaborate because they generally use their prep periods for grading papers, lesson planning, or other district tasks. Consequently, the librarians were not surprised by that data. One librarian noted that information literacy skills are easier to integrate into a curriculum such as social studies or English language arts. She also said that the skills can be integrated into other courses such as math, but difficulties arise in the delivery of materials and finding the right teacher for collaboration. Upon reading that 90% of teachers believed it was the school librarian's role to teach students how to use printed materials, one librarian wondered how she could possibly teach these skills if she is not invited into the classroom.

In viewing who should have access to and use standardized data results, the librarians had similar views. The overall results for these questions revealed that teachers believed they should be the ones to view and use this data at a much higher percentage than school librarians (40% and 35%). These results show that both parties believe it is the teacher's role. In fact, one librarian wondered why 100% of the teachers did not agree that it was the role of the teacher to view and use standardized data. The school librarians realized that they are helping the whole student body versus five or six classes, so they do not need individual results. However, the librarians noted that they rely on the teachers to provide any information they may need to help adjust lessons to fit the needs of the learners. The school librarians expressed that if they had access to more generalized information, it could help their program. For example, if the librarians knew the Lexile

scores of a grade, they could purchase books to serve that specific group. Additionally, if they knew a class struggled in reading or comprehension, they could adjust their lessons and find easier resources for the students to utilize.

The librarians all viewed the impediments with some encouragement. The specific questions concerning them had low results which indicated that few teachers find the librarians to be an obstacle in collaboration or teaching information literacy skills. They were not surprised that the teachers' obstacles to collaborate largely involved lack of time and feeling overwhelmed by tasks.

The librarians shared some common themes regarding the data from the openness to change construct. They were encouraged that teachers responded with openness to change and willingness to adapt their instructional practices. The librarians reacted positively to the teachers' responses indicating that teaching information literacy skills was a joint effort. One librarian wondered if teachers viewed the collaborated effort as co-teaching where each party is responsible for teaching part of the lesson. Her preference was that teachers would be responsible for the content, but that the librarians would help with weaving information literacy skills into the content. One school librarian wondered if teachers would be willing to give up control of information literacy skills and let the school librarians teach these skills.

Another theme among the librarians was their reaction regarding which party is responsible for evaluating student work. They were disappointed to observe that teachers felt this was more the role of the teacher (79.1%) than the school librarian (47.7%). They believed they can work with the teachers to help with grading. If responsible for teaching a lesson, one librarian said that she offers to grade the work thereby reducing the

teacher's work. Another librarian expressed that she has been able to split assessment grading with her school's sophomore English language arts teacher. For example, the school librarian graded the content of a book study since she had read the books and created the question for the students. In turn, the teacher graded the speech component of the assignment. The same school librarian worked with the junior English language arts teacher, and the teacher commented on improved research skills shown by the students because of the librarian's lesson.

The school librarians were pleased to see that teachers reported at a higher percentage that school librarians should be responsible for professional development of information literacy skills (~40%). Those interviewed agreed that they focus on plagiarism, copyright laws, and databases, and they want to help teachers with these areas.

Summary

The data collected from the survey and interviews helps to answer the research questions for this study. Teachers and school librarians have similar and contrasting beliefs on information literacy skills. Differences among the teachers also emerged according to the data. Chapter V will provide an analysis of the findings along with recommendations and future research.

CHAPTER V

DISCUSSIONS

Fullan's (2007) Change Theory, specifically the first step, initiation of change, was utilized to examine teacher readiness to engage in changing the way information literacy skills are taught. The results indicated that some differences exist in teacher perceptions of the school librarian's role in teaching information literacy.

How Do Teacher Perceptions Vary on Librarian Roles Regarding Teaching Information Literacy Skills?

According to the results from the researcher's survey, teachers appeared to want professional development training on how to use information literacy skills when designing and teaching their lessons. Teachers portrayed an openness to change in general. However, the responses for the construct on expectations of librarians and teachers teaching information literacy skills revealed the teachers' beliefs on these roles. According to the data, teachers strongly believed that they should be the ones with access to standardized student test data as a means to develop information literacy skills. Teachers indicated a high preference for librarians to prepare professional development on topics related to information literacy skills for teachers. It may be inferred that teachers would then use that information to construct their own information literacy skills.

In Chapter II, the impact of teaching information literacy skills was discussed. Several studies found that more library access is needed including the use of technology

and the ability to utilize resources after hours (Bleidt, 2011; Moreillon, 2009; Achterman, 2008). Greater access to the library and technology resulted in better student performance for middle school students on English language arts and social studies exams (Achterman, 2008). More accessible library hours and technology as well as a larger collection and budget resulted in higher exam scores for high school students (Achterman, 2008). Fabbi (2015) found that the incoming college freshmen who had taken higher level courses in high school tended to have stronger information literacy skills and were subsequently more successful in college. Teaching information literacy skills is needed to help ensure student success.

It is unclear in the data, but it may be possible that teachers are less likely to collaborate on information literacy due to a limited understanding of what it means. Also, an unclear understanding of information literacy may have impacted the teachers' responses to the survey questions. The lack of understanding may explain why the openness to change construct did not correlate or predict the constructs on teacher expectations for teachers and librarians in teaching information literacy skills. Additionally, the literature review in Chapter II revealed that teachers have a limited understanding of information literacy skills. A study of new teachers and librarians on information literacy skills revealed a low understanding of these skills (Stockham & Collins, 2012; Montiel-Overall & Jones, 2011). Montiel-Overall and Jones (2011) found that one third of the teachers believed they were teaching information literacy skills in their class even though they were unsure how to define these skills. Finally, in their study, Francis and Lance (2011) found that if the administration valued information literacy skills, the administration rated the school librarian more favorably.

What Are Teachers' Levels of Openness to Change?

Collaboration between the school librarian and teacher was a theme from the literature review and the survey. The survey results found that several impediments to collaboration were perceived. For example, there was 83.6% agreement for "my prep periods are spent grading assessments and/or lesson planning" with an average response of 3.96. Secondly, there was 51.8% agreement for "tasks required by administration make it difficult" and an average response of 3.36. Finally, there was 54.7% agreement for "collaboration is difficult due to number of courses I teach" with an average response of 3.17. Moreillon (2008) stated that "collaboration occurs when educators co-design, co-plan, co-teach, and/or co-assess curriculum-based lessons or units of study" (p. 2). The literature review found that collaboration was not happening in this format. On the contrary, the common practice was to divide a lesson and assign topics to be taught independently of each other (Gavigan & Lance, 2015; Montiel-Overall & Jones, 2011). Another survey found that teachers used the school librarian to find resources versus collaborating on learning goals and lesson planning (Montiel-Overall & Jones, 2011). The literature review and survey results correspond regarding teachers' desires to increase collaboration, but they lack time to effectively collaborate.

What Differences Exist Among Teachers Regarding Librarian Roles In Information Literacy Skills?

The data collected and analyzed did not reveal significant differences among teachers regarding librarian roles in information literacy skills. The data analysis did find differences, but the differences were found through analysis of other data that was collected.

One ANOVA analysis found there was a significant difference because non-core subject teachers felt more impediments to collaboration than core subject teachers. It is possible non-core teachers struggle to see the connection of information literacy skills in their classes. Plus, being outside of the core classes, non-core teachers may find they have more preps and less time to collaborate. In Chapter II, Branch (2006) noted that many teachers avoid collaboration because they do not wish to look unintelligent in front of colleagues, they struggle to find the time, and they are unsure if the collaboration will result in helping their curriculum.

The data indicated that middle school teachers felt more impact than high school teachers on how information was gathered for change. Additionally, middle school teachers felt more impact than those teaching in both high school and middle school by how information was gathered for change. Middle school teachers also appeared to be more concerned about how a school includes different perspectives in gathering information on making changes. It may be inferred that these differences exist because the middle school model is different than the high school model. In middle school, teachers are often grouped together based on teaching a common group of students. For example, the math, English, science, and social studies teachers collaborate and work together to teach the same group of students. Each teacher also works with other content teachers. This model increased the amount of interaction among the teachers. High schools are arranged by departments, and the teachers may work closely with another teacher that teaches the same course as them. The higher amount of interaction in middle school may be why the data revealed that middle school teachers are more concerned

with how input is gathered and shared. They would also be concerned about utilizing different perspectives.

The librarian interviews showed that they realized that teachers struggle to collaborate because the teachers are busy during their prep periods either grading papers, lesson planning, or accomplishing other district tasks. In this regard, the librarians were not surprised by the data. One librarian noted that information literacy skills are easier to integrate into a curriculum such as social studies or English language arts versus other subjects like science and math. She also said that the skills can be integrated into other courses such as math, but difficulties arise in the delivery of materials and finding the right teacher for collaboration.

How Does Openness to Change Predict Teacher Expectations for Teaching Information Literacy Skills?

The data revealed that teachers who were more open to change and believed librarians need to collaborate were associated with openness to teacher collaboration with librarians. These teachers need to be willing to be a part of change that begins in the central office. Fullan's (2007) Change Theory begins with initiation. Initiation is defined as "the process that leads up to and includes a decision to adopt or proceed with change" (Fullan, 2007, p. 69). Fullan (2007) stated that change could begin with the top-down method. This consists of the classroom teacher advocating for change or approaching the central office of the school.

Although other regressions did not reveal more data on how openness to change predicts teacher expectations for teaching information literacy skills, it did reveal other information. The data analysis revealed that teachers who are open to change and did not

view as many impediments to change were associated with being more open to change. The teachers who believed in teacher collaboration and had higher expectations of librarians in the area of teaching information literacy skills were more open to collaborating with the librarian. Finally, the teachers who believed librarians should collaborate and teacher expectations for teaching information literacy skills were associated with teacher expectations that librarians should teach information literacy skills.

Correlational statistics were also utilized in order to understand the relationship among the various constructs. Correlational statistics were also used to predict teacher expectations for teaching information literacy skills. The general openness to change construct was positively correlated with teacher openness to collaborate with school librarians construct (r=.26). It was surprising that the openness to change construct was not also correlated with the teachers' belief that the librarian should collaborate with teachers. Perhaps this is because teachers wish to initiate collaboration. It may also be due to a belief that teachers are responsible for creating their own curriculum and pacing guide. The openness to change construct was negatively correlated with the impediments to collaboration construct (r=-.26) indicating that the more open teachers are to change the less likely they are to perceive and be impacted by impediments to collaboration. It was surprising that the openness to change construct was not significantly correlated with expectations for teachers or librarians in teaching information literacy skills.

The openness to change construct focusing on teacher belief that librarians should collaborate with teachers was strongly positively correlated with teacher openness to collaboration with school librarians construct (r=.52). It may be inferred that the level a

teacher perceives that librarians need to collaborate with teachers matches the teacher's level of willingness to participate in collaboration. The construct of teacher belief that librarians should collaborate was positively correlated with teacher expectations of the school librarian's role in teaching information literacy skills (r=.40). It may be inferred that the belief in the need for collaboration with librarians as previously stated should initiate a topic for that collaboration. A topic for collaboration may be that teachers have been trained to be experts in their content area but not in information literacy skills.

The impediments to collaboration construct was strongly negatively correlated with the openness to change: sharing information about change construct (r=-.26). Teachers who responded with a desire for information on changes to be shared with them also responded with less perceived impediments for collaboration. It may be inferred that teachers who desire more communication on changes occurring within the school will also perceive less impediments for collaboration as they would feel included in school initiatives. Additionally, they would gain understanding of those shared changes.

The construct on how teachers want information gathered regarding possible changes in the school was strongly positively correlated with the construct on how teachers want information shared regarding changes (r=.80). The correlation was not surprising because teachers generally desire to share their opinions on possible changes as well as learn about changes the school was planning on implementing.

Finally, the construct on teacher expectations for school librarians in teaching information literacy skills was positively correlated with teacher expectations for teachers teaching these same skills (r=.43). The stronger the belief that librarians should teach the

skills, the stronger perceived belief that teachers also have a role in teaching their students these skills.

Librarian Interviews Research Questions

The librarians echoed many of the same responses as the teachers. They believed it is their role to lead professional development on online resources and other technology. The librarians believed they should be an instructional partner with the teachers. They mentioned several times that they want to assist the teachers with enhancing classroom lessons and voiced a willingness to help with grading. Chapter II discussed the evolving role of the school librarian. This evolution included the demands of teaching information literary. The most recent standards released by the American Association of School Librarians (AASL) included five roles for school librarians: "leader, instructional partner, information specialist, teacher, and program administrator" (Moreillon, Cahill, & McKee, 2012, p. 2).

One librarian worked with the junior English language arts teacher, and the teacher commented on improved research skills shown by the students because of the librarian's lesson. She used this example to highlight the strength of collaboration with a teacher. Francis and Lance (2011) conducted a study on the perception of school librarians teaching information literacy skills. The results indicated that school librarians rated their lessons higher than teachers rated the same lessons for the success of teaching information literacy skills (Francis & Lance, 2011). In the same study, school librarians were more likely to rank themselves as excellent when the teacher invited them into the classroom to teach or co-teach frequently or if the school librarian thought the teacher or

administration liked them or viewed them as a technology solver (Francis & Lance, 2011).

Implementation

The literature review, survey results, and interviews provide guidance on how to implement change in a school. Fullan (2007) addressed a few factors that impact the initiation of change. Classroom teachers, administration, and the school's central office can be advocates for guiding new initiatives. Fullan (2007) also noted that a school district may need to work simultaneously top-down from the central office and bottom-up from the teachers.

The survey results indicated that teachers prefer that information for change is gathered in several ways, including faculty meetings, department chair meetings, surveys sent to all teachers, and individual department meetings. The two most preferred ways were surveys sent to all teachers and individual department meetings. It may be inferred that teachers wish to share their opinions personally versus through their department chair or in a large faculty meeting.

The teachers responded that they prefer receiving information on change through faculty meetings and individual department meetings. These methods were preferred over a survey or department chair meetings. Teachers want to hear the information directly just like they want to share the information directly.

Limitations

The research had a few limitations to note. The first limitation was the sample size of the survey. The total population for the survey was approximately 1,200 teachers of which 109 teachers responded. This is a total response of nine percent. The sample

size limits generalizability of schools located in a similar sized urban setting. In this study, the sample size allows for the generalizability of the total population of Class A schools in the Eastern Dakota Conference as well as other schools that may have similar characteristics. The study is not generalized to Class B schools in North Dakota due to the differences in size, setting, and other reasons. Class B schools include co-op schools and schools with a total K-12 population that is less than one grade in a Class A school.

Another limitation was the survey measures created by the researcher because they had not been validated. To help minimize this limitation, the researcher conducted a pilot study before administering the final survey.

Recommendations

Collaboration needs to include support for all stakeholders in a mutual working relationship. The researcher recommends that collaboration occurs when both the librarian and teacher develop lessons beginning with setting goals and concluding with assessment. Teachers need help processing and applying information literacy skills. An increased amount of collaboration can assist teachers to incorporate these skills into their lessons.

It is recommended that colleges continue to rely on PK-12 to teach more information literacy skills in order for students to be successful in college. As secondary education institutions implement these changes, it is recommended that schools follow Fullan's (2007) Change Theory to gather teacher input throughout the process of change as well as keep them informed of these initiatives. This type of communication is negatively correlated with perceived obstacles teachers have for collaboration with the school librarian. As noted, teachers preferred that their opinions are included in proposed

changes. Additionally, they prefer direct information sharing about changes. The data also revealed that teachers viewed fewer impediments to collaboration when schools share the changes with teachers.

Future Research

Since this study was limited to Class A schools in the EDC, a future study could be completed of Class A schools in the Western Dakota Conference to explore the similarities and differences between the two populations. The EDC and the WDC, the only two Class A divisions in the state, could effectively be compared since they share similar populations, test scores, and other characteristics. A study of this kind would draw a response from a larger population.

The literature review included numerous studies on the post-secondary perspective regarding the ability of incoming freshmen to understand and use information literacy skills successfully. Most of the research from these studies was at least five years old at the time of the researcher's study. A future study could include a survey of the universities in the region to explore if the deficiency still exists and to what degree. The study could also address incoming freshmen from Class A North Dakota high schools for further analysis.

The data revealed possible trends in teacher responses based their level of control over instruction. A possible future study could focus on teacher perception of control over their curriculum to understand how their perception relates to teacher willingness to allow true collaboration or changes in their curriculum.

Finally, the literature review found that if the administration valued information literacy skills, the administration rated the school librarian more favorably (Francis &

Lance, 2011). A possible future study could research the possible correlation between administrative perspectives and staff perspectives on information literacy skills.

Conclusions

The purpose of the study was to analyze Fullan's (2007) Change Theory, specifically the first step, initiation of change, which is utilized to examine teacher readiness to engage in changing the way information literacy skills are taught. The research included evaluating the openness of teachers to change and understanding obstacles that impede change. The research also included teachers' perceptions on the collaborative roles between a school librarian and a teacher regarding information literacy. Finally, the perceptions of three librarians were integrated into the study as well.

The results indicated that collaboration between teachers and school librarians most often results in the school librarian teaching a portion of a lesson when the teacher requests it. Collaboration does not generally mean working together to create a lesson from learning objectives to the assessment. Also, PK-12 schools need to teach information literacy skills more effectively in order for students to be successful in college. As secondary education introduces these changes, it is essential to gather teacher input throughout the process and keep them informed of changes and initiatives. This type of communication is negatively correlated with perceived obstacles teachers have for collaboration with the school librarian.

APPENDICES

Appendix A
Informed Consent

UNIVERSITY OF NORTH DAKOTA
Institutional Review Board
Informed Consent Statement

Title of Project: Examining Teacher Perceptions on Change in Secondary School Libraries to Promote Information Literacy

Principal Investigator: Sarah Crary 701.306.2260, sarah.crary@und.edu

Advisor: Dr. Larry Klundt, 701.214.1514, larry.klundt@und.edu

Purpose of the Study:
The purpose of this research study is to pilot an instrument intended to examine teachers' perceptions on change in secondary school libraries to promote information literacy within Fullan's (2007) implementation phase of the change process.

Procedures to be followed:
You will be asked to answer 67 questions on a survey regarding your perceptions on change in secondary libraries to promote information literacy. The questions are a mix of seven demographic questions, 60 Likert style questions addressing different factors of teaching and information literacy.

Risks:
There are no risks in participating in this research beyond those experienced in everyday life.

Benefits:

- This research may provide information to schools on factors that need to be addressed in schools for successful initiation of teaching information literacy skills.
- This research may aid in making the change process in schools easier for faculty.

Duration:
The survey will take 10-15 minutes to complete.

Statement of Confidentiality:
The survey does not ask for information that would identify who the responses belong to. Therefore, your responses are recorded anonymously. If this research is published, no information that would identify you will be included since your name is in no way linked to your responses.

All survey responses that we receive will be treated confidentially and stored on a secure server. However, given that the surveys can be completed from any computer (e.g., personal, work, school), we are unable to guarantee the security of the computer on which you choose to enter your responses. As a participant in our study, we want you to be aware that certain "key logging" software programs exist that can be used to track or capture data that you enter and/or websites that you visit.

Right to Ask Questions:
The researcher conducting this study is Sarah Crary. If you later have questions, concerns, or complaints about the research, please contact Sarah Crary at (701) 306-2260 or Dr. Larry Klundt at (701) 214-1514 during the day.

If you have questions regarding your rights as a research subject, you may contact The University of North Dakota Institutional Review Board at (701) 777-4279. You may also call this number with problems, complaints, or concerns about the research. Please call this number if you cannot reach research staff or you wish to talk with someone who is an informed individual who is independent of the research team.

General information about being a research subject can be found on the Institutional Review Board website "Information for Research Participants" http://und.edu/research/resources/human-subjects/research-participants.cfm

Voluntary Participation:
You do not have to participate in this research. You can stop your participation at any time. You may refuse to participate or choose to discontinue participation at any time without losing any benefits to which you are otherwise entitled.

You do not have to answer any questions you do not want to answer.

You must be 18 years of age or older to consent to participate in this research study.

Clicking "Consent" below indicates that this research study has been explained to you, that your questions have been answered, and that you agree to take part in this study.

- ❍ Consent
- ❍ Do Not Consent

If Do Not Consent Is Selected, Then Skip To End of Survey

Appendix B
Survey

Thank you for taking the time to complete this survey. The purpose of the survey is to investigate teachers' perceptions on their readiness to change in how information literacy skills are taught. Your participation is voluntary, and all responses will remain anonymous. Thank you for your participation. At the end of the survey, you will be able to enter a prize drawing for a $50 Amazon gift card.

Gender

- ❍ Female (1)
- ❍ Male (2)
- ❍ Other (3) _____

Age in years

Ethnicity

- ❍ White/Caucasian (1)
- ❍ African American/Black (2)
- ❍ American Indian (3)
- ❍ Asian American/Asian (4)
- ❍ Mexican American/Chicano (5)
- ❍ Puerto Rican American (6)
- ❍ Other Latino (7)
- ❍ Other (8) _____

Highest level of education

- ❍ BA/BS (1)
- ❍ Specialist Degree (2)
- ❍ MA/MS/M.ED (3)
- ❍ PhD/Ed.D (4)

Major subject area teaching assignment (Check all that apply)
English Language Arts (1)
Mathematics (2)
Science (3)
Social Studies (4)
Foreign Language (5)
Physical Education/Health (6)
Fine Arts (Band, Choir, Art) (7)
Career and Technical Education (Ag, Business, FACS, Computer, Trade and Engineering) (8)
Other (9) _____

Years of teaching experience

Grade level taught (Check all that apply)
6th (1)
7th (2)
8th (3)
9th (4)
10th (5)
11th (6)
12th (7)

Please answer each of the following based on the scale provided.

	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
I prefer to teach my subject the way it was taught to me. (1)	❍	❍	❍	❍	❍
I try to adapt my instructional approaches to follow current best practices. (2)	❍	❍	❍	❍	❍
I do not want to change the way I teach my subject. (3)	❍	❍	❍	❍	❍
I am quick to embrace new methods for teaching my subject. (4)	❍	❍	❍	❍	❍
Pressure to change my strategies makes me want to leave teaching. (5)	❍	❍	❍	❍	❍
I enjoy trying new ways of teaching my subject. (6)	❍	❍	❍	❍	❍
I am afraid to change the way I teach my subject. (7)	❍	❍	❍	❍	❍
Gaining new knowledge about teaching my subject is invigorating. (8)	❍	❍	❍	❍	❍

As you answer the questions below, please note the following definitions:

- **School Librarian** is the term used for school librarians, library media specialists, information specialists, or media specialists. The American Association of School Librarians prefers the term "teacher-librarian." However, I will use school librarian to avoid confusion between teacher and teacher-librarian (Montiel-Overall & Jones, 2011).
- **Collaboration** is "educators co-design, co-plan, co-teach, and/or co-assess curriculum-based lessons or units of study (Moreillon, 2008, p. 2).
- **Information Literacy** is "the ability to access, evaluate, and use information effectively and ethically" (Latham & Gross, 2008, p. 1).

Please answer each of the following based on the scale provided.

The school librarian should collaborate with teachers to

	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
teach students information literacy skills in the context of content curriculum. (1)	❍	❍	❍	❍	❍
plan lessons, which integrate information literacy into curriculum. (2)	❍	❍	❍	❍	❍
teach lessons that integrate information literacy into the curriculum. (3)	❍	❍	❍	❍	❍
evaluate student work from lessons which integrate information literacy into the curriculum. (4)	❍	❍	❍	❍	❍

Please answer each of the following based on the scale provided.

The teacher should collaborate with the school librarian to

	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
teach students information literacy skills in the context of content curriculum. (1)	❍	❍	❍	❍	❍
plan lessons, which integrate information literacy into curriculum. (2)	❍	❍	❍	❍	❍
teach lessons that integrate information literacy into the curriculum. (3)	❍	❍	❍	❍	❍
evaluate student work from lessons which integrate information literacy into the curriculum. (4)	❍	❍	❍	❍	❍

As you answer the questions below, please note the following definitions:

- **School Librarian** is the term used for school librarians, library media specialists, information specialists, or media specialists. The American Association of School Librarians prefers the term "teacher-librarian." However, I will use school librarian to avoid confusion between teacher and teacher-librarian (Montiel-Overall & Jones, 2011).
- **Collaboration** is "educators co-design, co-plan, co-teach, and/or co-assess curriculum-based lessons or units of study (Moreillon, 2008, p. 2).
- **Information Literacy** is "the ability to access, evaluate, and use information effectively and ethically" (Latham & Gross, 2008, p. 1).

Please answer each of the following based on the scale provided.

Collaboration is difficult because of

	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
the lack of a school librarian. (1)	❍	❍	❍	❍	❍
the lack of knowledge of the school librarian. (2)	❍	❍	❍	❍	❍
my prep periods are spent grading assessments and/or lesson planning. (3)	❍	❍	❍	❍	❍
the tasks required by administration. (4)	❍	❍	❍	❍	❍
the personality of the school librarian. (5)	❍	❍	❍	❍	❍
my course curriculum makes implementing information literacy skills difficult. (6)	❍	❍	❍	❍	❍
the number of different courses I teach. (7)	❍	❍	❍	❍	❍
the fear of appearing not as smart as the school librarian. (8)	❍	❍	❍	❍	❍
it takes too much time and prevents me teaching all the standards. (9)	❍	❍	❍	❍	❍
I worry that the school librarian will not fulfill his/her role so I will have to do all the work. (10)	❍	❍	❍	❍	❍

As you answer the questions below, please note the following definitions:

- **School Librarian** is the term used for school librarians, library media specialists, information specialists, or media specialists. The American Association of School Librarians prefers the term "teacher-librarian." However, I will use school librarian to avoid confusion between teacher and teacher-librarian (Montiel-Overall & Jones, 2011).
- **Collaboration** is "educators co-design, co-plan, co-teach, and/or co-assess curriculum-based lessons or unites of study (Moreillon, 2008, p. 2).
- **Information Literacy** is "the ability to access, evaluate, and use information effectively and ethically" (Latham & Gross, 2008, p. 1).

Please answer each of the following based on the scale provided.

The school librarian should teach students to use

	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
printed materials for research. (1)	❍	❍	❍	❍	❍
electronic subscription database, which contains journal articles for research. (2)	❍	❍	❍	❍	❍
information found on free websites for research. (3)	❍	❍	❍	❍	❍

Please answer each of the following based on the scale provided.

The school librarian should teach students how to

	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
locate information contained in print sources. (1)	❍	❍	❍	❍	❍
locate information contained in electronic sources. (2)	❍	❍	❍	❍	❍
evaluate information	❍	❍	❍	❍	❍

for accuracy and reliability before using it for research. (3)					
take notes on how to organize information to be used in a report, paper, or project. (4)	❍	❍	❍	❍	❍
respect intellectual property (avoid plagiarism, cite sources, respect copyright laws). (5)	❍	❍	❍	❍	❍
practice ethical behavior by following acceptable use policy guidelines in their use of information. (6)	❍	❍	❍	❍	❍

Please answer each of the following based on the scale provided.

The school librarian should

	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
have access to standardized student test data. (1)	❍	❍	❍	❍	❍
use standardized student test data as he/she develops information literacy instruction. (2)	❍	❍	❍	❍	❍
provide staff development for teachers in areas such as effective searching on the Web. (3)	❍	❍	❍	❍	❍
provide staff development for teachers in areas such as effective use of electronic subscription databases. (4)	❍	❍	❍	❍	❍
provide staff development for	❍	❍	❍	❍	❍

teachers in areas such as intellectual property and copyright. (5)					

Please answer each of the following based on the scale provided.

The teacher should teach students to use

	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
printed materials for research. (1)	❍	❍	❍	❍	❍
electronic subscription database, which contains journal articles for research. (2)	❍	❍	❍	❍	❍
information found on free websites for research. (3)	❍	❍	❍	❍	❍

Please answer each of the following based on the scale provided.

The teacher should teach students how to

	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
locate information contained in print sources. (1)	❍	❍	❍	❍	❍
locate information contained in electronic sources. (2)	❍	❍	❍	❍	❍
evaluate information for accuracy and reliability before using it for research. (3)	❍	❍	❍	❍	❍
take notes on how to organize information to be used in a report, paper, or project. (4)	❍	❍	❍	❍	❍
respect intellectual property (avoid	❍	❍	❍	❍	❍

plagiarism, cite sources, respect copyright laws). (5)					
practice ethical behavior by following acceptable use policy guidelines in their use of information. (6)	❍	❍	❍	❍	❍

Please answer each of the following based on the scale provided.

The teacher should

	Strongly Disagree 1 (1)	Disagree 2 (2)	Slightly Disagree 3 (3)	Slightly agree 4 (4)	Agree 5 (5)
have access to standardized student test data. (1)	❍	❍	❍	❍	❍
use standardized student test data as he/she develops information literacy instruction. (2)	❍	❍	❍	❍	❍
provide staff development for teachers in areas such as effective searching on the Web. (3)	❍	❍	❍	❍	❍
provide staff development for teachers in areas such as effective use of electronic subscription databases. (4)	❍	❍	❍	❍	❍
provide staff development for teachers in areas such as intellectual property and copyright. (5)	❍	❍	❍	❍	❍

Please answer each of the following based on the scale provided.

When administration wants to initiate a change, rate how you prefer they gather input.

	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
Faculty meetings (1)	❍	❍	❍	❍	❍
Department chair meetings (2)	❍	❍	❍	❍	❍
Survey sent to all teachers (3)	❍	❍	❍	❍	❍
Individual department meetings (4)	❍	❍	❍	❍	❍

Please answer each of the following based on the scale provided.

When administration wants to initiate a change, rate how you prefer they communicate their ideas with the staff.

	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
Faculty meetings (1)	❍	❍	❍	❍	❍
Department chair meetings (2)	❍	❍	❍	❍	❍
Survey sent to all teachers (3)	❍	❍	❍	❍	❍
Individual department meetings (4)	❍	❍	❍	❍	❍

Prize Drawing: If you would like to be entered in the drawing to win a $50 Amazon gift card, please enter your name, email address, and phone number below. This phone number will only be used if you win a prize and we cannot reach you by email.

Full name
Email Address
Phone number

Thank you for your time and consideration.

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