Teacher Perceptions of the Curriculum Development and Resource Adoption Process

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Abstract

The purpose of this study was to gather teacher perceptions of the curriculum development and resource adoption processes and to compare the perceptions of mathematics and English language arts (ELA) teachers. The researcher investigated the level to which teachers perceived their participation was authentic, the process was effective, participation in the process would positively impact the classroom, related professional development regarding the curriculum development and curriculum and resources implementation was effective, and the piloting process was adequate. The findings of this study indicated that teachers agree that their participation in the curriculum development process was authentic, with the exception that they neither agree nor disagree that interrelated special education teachers were a critical part of the curriculum development team; the curriculum development process was effective; the professional development regarding the curriculum development and curriculum and resources implementation was effective; participation in the curriculum development process led to positive impacts in their classrooms; and the resource piloting process was adequate. The findings regarding differences between mathematics and ELA teachers' perceptions were mixed; where differences were found, mathematics teachers agreed more strongly than ELA teachers. Mathematics and ELA teachers differed regarding their perceptions of interrelated special education teachers being a critical part of the curriculum development team and involving all teachers made the curriculum and development process meaningful. Mathematics and ELA teachers' perceptions differed regarding whether the time allotted matched the tasks to be completed for the curriculum development process. Mathematics and ELA teachers' perceptions did not differ

regarding the related professional development provided. In the area of participation in the curriculum development process leading to positive impacts in the classroom, mathematics and ELA teachers differed regarding their perceptions of whether participation helped them implement the new curriculum in their classrooms. Mathematics and ELA teachers' perceptions that the process for piloting potential resources was adequate differed regarding whether they perceived the number of teachers piloting potential resources was appropriate. The implication is that teachers should be involved in the curriculum development and resource adoption processes. This study should be expanded to include all content areas and a variety of school district sizes.

Dedication

This work is dedicated to my family. My parents, Mike and Amy Lee, always believed in my potential and encouraged me in my studies and as an educator. I hope my dad is looking down on me with pride. My grandmother, Arvilla, is the most amazing woman I know. She is wise, strong, brave, funny, and devoted to her family. To my sister and brother, Jenny and Allen, you know me best and love me anyway. They are my closest friends and confidants and have given me the gift of being an aunt. Finally, to my nieces and nephews, Maddie, Tristan, Hayley, Emerson, and Maya: knowing you and being there as you have grown has been the greatest joy of my life.

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Chapter 1

Introduction

While state boards of education provide their public school systems with the core standards for each content area, it is up to the local education agencies or individual school districts to develop and implement curriculum addressing those standards. This local curriculum development process requires a deep understanding of the intent of the state standards and how students should demonstrate attainment of them. When teachers participate in the curriculum development process, they increase their understanding and awareness of the standards and feel a sense of ownership (Lauridsen, 2003). In fact, both teachers and principals have agreed that teachers should be involved in the curriculum development process (Wingerter, 1987). Teachers have also reported that their participation in the local curriculum development process improved their own classroom instruction (Young, 1988).

In Kansas, between 2012 and 2013, the state standards for all four core content areas (English language arts [ELA], mathematics, science, and social studies) changed considerably (Kansas State Department of Education [KSDE], 2013). Along with those changes, new assessments were created with new reporting measures. In 2015, the KSDE changed from a 5-point measuring system to a 4-point measuring system for state assessments (Neuenswander, 2015). The state has seen low performance in all areas since the implementation of the new standards. The 2017 Mathematics assessment indicated that 34.16% of Kansas students were college and career ready (KSDE, 2017), while 38.21% of Kansas students were college and career ready in reading. Science scores were similar to the statewide ELA, with 38.34% of students being college and

career ready (KSDE, 2017). Also, results reported by Education Week Research Center (2014) were concerning to leaders in Bradley Public Schools. In a national study, only 41% of teachers reported their local curriculum was aligned to the new Common Core State Standards (CCSS), and 53% believed the training they received on the CCSS was high quality (Education Week Research Center, 2014). Furthermore, 31% of teachers said their primary resource was aligned to the CCSS.

Background

Prior to hiring an assistant superintendent of teaching and learning in 2017, Bradley Public Schools had not performed an extensive curriculum revision in nearly 20 years (assistant superintendent of teaching and learning, personal communication, June 11, 2018). In 2010, when this lack of attention occurred, the National Governors Association and the Council of Chief State School Officers released the Common Core Mathematics and Language Arts Standards (Novak, Hubbard, Ebeling, & Maher, 2016). Adopting these standards substantially increased the level of academic rigor in the classrooms to ensure the college and career readiness of students (Novak et al., 2016). Kansas adopted the Common Core State Standards in 2012 as the Kansas College and Career Readiness Standards, and the National Council for Social Studies released the College, Career, and Civic Life (C3) Framework (LaDuke, Linder, & Yanoff, 2016); the Next Generation Science Standards were released in 2013 (Novak et al., 2016). In 2013, KSDE revised its History, Government, and Social Studies standards (KSDE, 2013).

Bradley Public Schools has one high school, one middle school, one intermediate school, and one primary school, with just under 2,700 students enrolled in kindergarten through Grade 12. In 2016-2017, 33.28% of Kansas students scored college and career

ready on the Kansas Mathematics Assessment, and 33.46% of students in Bradley Public Schools scored college and career ready in mathematics. That same year, 37.2% of Kansas students scored college and career ready in reading, while 41.41% of Bradley Public Schools students scored college and career ready (KSDE, 2017). Bradley Public Schools students scored slightly higher on the mathematics and reading assessments; however, only 30.92% of students were economically disadvantaged, and 73.6% of students identified as white (KSDE, 2017). On average, Kansas districts with 60% or more white students, while enrolling 30% or fewer students who classify as economically disadvantaged, usually score in the 60%-90% range on the college and career-ready subject areas of math and reading. The assistant superintendent attributed the lower-than-expected scores, in part, to the lack of updated local curriculum and resources (assistant superintendent of teaching and learning, personal communication, June 11, 2018).

These disappointing state assessment scores were the catalyst for the district to begin the curriculum development process for all content areas, starting with ELA and mathematics. In the spring of 2017, Bradley Public Schools completed their first working draft of the kindergarten through Grade 12 mathematics curriculum. Curriculum writing continued during 2017-2018, and teachers piloted various potential resources after the curriculum draft was completed. In the Spring of 2018, teachers selected and adopted new resources. The initial implementation of this curriculum and new resources began in the 2018-2019 school year. By the 2019-2020 school year, the new mathematics curriculum and new resources were fully implemented. Bradley Public Schools also began developing a Grades 6-12 ELA curriculum in the spring of 2017. Teachers piloted resources during the 2017-2018 school year. When Kansas released

new ELA standards in Spring 2019, Bradley Public Schools revised their curriculum. Then, in the Fall of 2019, they developed a kindergarten to Grade 6 ELA curriculum. They also piloted new ELA resources during the 2019-2020 school year, adopting their selection for the 2020-2021 school year. Since the original curriculum writing in mathematics and ELA, there has been an annual review and continued implementation (assistant superintendent of teaching and learning, personal communication, June 11, 2018).

Statement of the Problem

Bradley Public Schools had considerable work to do to become current with changes in Kansas' standards for the core content areas. The new assistant superintendent began working immediately with kindergarten through twelfth-grade (K-12) mathematics teachers (assistant superintendent of teaching and learning, personal communication, June 11, 2018). A new curriculum aligned with state standards was developed, and new instructional resources were piloted and then adopted. Bradley must still develop a curriculum for K-5 science and kindergarten through twelfth-grade social studies. In addition, all elective courses, including fine arts and career and technical education, must have a local curriculum developed and adopt new resources (assistant superintendent of teaching and learning, personal communication, June 11, 2018). Bradley Public Schools did not know the teacher perceptions of the K-12 mathematics and English language arts curriculum development and resource adoption processes. The district needed to study the results of perceptions so they could move forward with additional content areas.

Purpose of the Study

The first purpose of this study was to determine the extent teachers perceive participation in the curriculum development process was authentic. The second purpose of this study was to determine the extent teachers perceive participation in the curriculum development process was effective. The third purpose of the study was to determine to what extent teachers perceive professional development regarding the curriculum development and curriculum and resource implementation was effective. The fourth purpose of this study was to determine the extent teachers perceive participation in the curriculum development process led to positive impacts in their classrooms. The fifth purpose of the study was to determine the extent teachers perceive the process for piloting potential resources was adequate. The final purpose of the study is to determine whether teacher perceptions differ by content area.

Significance of the Study

Surprisingly, little research is available on teacher perceptions of the curriculum development process since the adoption of the CCSS in Mathematics and Language Arts or Next Generation Science Standards (NGSS). However, in a national survey of teachers, researchers found that 86% had received some training on CCSS (Education Week Research Center, 2014). In Lauridsen's (2003) qualitative research on teacher perceptions of curriculum development, suggestions for future research included repeating research on curriculum development in other districts, as well as focusing on different content areas and grade levels. The results of this study could improve the curriculum development process for Bradley Public Schools and may also help other Kansas school districts with their curriculum development process. This research

contributes to the body of research on teacher perceptions of curriculum development and resource adoption. School district leaders can use this research when making decisions regarding curriculum development and resource adoption processes. It could help school leaders form teacher teams for these two processes or design the sequences and procedures of the processes.

Delimitations

Delimitations were defined by Lunenburg and Irby (2008) as "self-imposed boundaries set by the researcher on the purpose and scope of the study" (p. 134). Delimitations in this study included the location, a mid-sized school district in Kansas with a student population of approximately 2,700 students. Another delimitation of this study was that, at the secondary level, the research involved surveying mathematics and ELA teachers and their experience with curriculum development and resource selection. However, at the elementary level, all teachers were involved with both the curriculum development and resource selection in mathematics and ELA.

Assumptions

Lunenburg and Irby (2008) defined assumptions as the "postulates, premises, and propositions that are accepted as operational for the purposes of the research" (p. 135). One assumption in this study was that the participants understood the survey items and were truthful in their responses. A second assumption was that all teachers received the same level of training in curriculum development. A third assumption was that all respondents were participants in the curriculum development process. A fourth assumption was that respondents responded to the survey based on their curriculum development experiences in the Bradley School District.

Research Questions

Research questions provide the direction for a study (Lunenburg & Irby, 2008). They should address questions that have not been previously asked or have not been answered in previous literature (Lunenburg & Irby, 2008).

RQ1. To what extent do teachers perceive participation in the curriculum development process was authentic?

RQ2. To what extent do teachers' perceptions that participation in the curriculum development process was authentic differ by content area?

RQ3. To what extent do teachers perceive the curriculum development process was effective?

RQ4. To what extent do teachers' perceptions that the curriculum development process was effective differ by content area?

RQ5. To what extent do teachers perceive the professional development regarding the curriculum development and curriculum and resources implementation was effective?

RQ6. To what extent do teacher perceptions that the professional development provided around curriculum development was effective differ by content area?

RQ7. To what extent do teachers perceive participation in the curriculum development process led to positive impacts in their classrooms?

RQ8. To what extent do teachers' perceptions that participation in the curriculum development process led to positive impacts in their classrooms differ by content area?

RQ9. To what extent do teachers perceive the process for piloting of potential resources was adequate?

R10. To what extent are teachers' perceptions that the process for piloting of potential resources was adequate differ by content area?

Definition of Terms

The following terms are used specific to this research study to promote accurate understanding and interpretation of the study, definitions of the terms have been provided.

Authentic participation. King, Felty, and Susel (1998) defined authentic participation as that which works for all parties, including citizens and administrators. Authentic participation requires reconsidering the roles of all participants and the relationships between them.

Curriculum development process. Bradley (2004) defined the curriculum development process as developing, revising, or aligning curriculum to achieve consensus, responsiveness, ownership, involvement, and commitment among stakeholders, including teachers, administrators, parents, students, and community.

Piloting resources. Teachers experimenting with potential textbooks and their accompanying resources for two to six months before committing to purchase is resource piloting (Muther, 1985).

Professional development. The processes and activities designed to improve educators' skills, attitudes, and professional knowledge to enable them to advance the learning of students are professional development (Guskey, 2000).

Resource implementation. How instructional materials are used to improve student achievement is called resource implementation. It includes teacher professional

development and building school, teacher, and district capacity (National Academies of Sciences, Engineering, and Medicine, 2018).

Organization of the Study

This study is divided into five chapters. Chapter 1 provided an introduction, the background, the statement of the problem, the purpose of the study, the significance of the study, the delimitations, the assumptions, the research questions, and the definition of terms pertinent to the study. The next chapter includes a review of the literature related to the study, which includes a history of curriculum development, models of curriculum development, research on teacher perceptions of resource adoption, and research on teacher perceptions of curriculum development. Chapter 3 provides the methodology utilized in the study. The results of the study are described in Chapter 4. In Chapter 5, a study summary, findings related to the literature, and the conclusions are presented.

Chapter 2

Review of the Literature

In this chapter, the history of curriculum development is provided. Next, models of curriculum development are provided. Research on teacher perceptions of resource adoption is reviewed in the following section. The final section is research on teacher perceptions of curriculum development. Squires (2012) purports that by aligning their written, taught, and tested curriculum, school districts could increase their student achievement.

History of Curriculum Development

The evolution of curriculum development in the United States has gone through many phases. Some of those have included various levels of teacher participation in the process. Others have relied on university personnel or local and state policymakers. These periods of curriculum development have been heavily influenced by national or world events. They have also been shaped by the work of researchers and educational leaders.

Before the work of Thorndike and Dewey, curriculum in the United States mainly consisted of a list of subjects to be taught in schools, with slight variation in states across the country, apart from the history and geography of their state or region (Tyler, 1981). State and local educational agencies provided these subject lists, along with the sequence in which they should be taught. Once elementary students had learned reading, writing, and math skills, they could move on to more complex subjects (Tyler, 1981). Through his research on verbal faculty and logic, Thorndike was able to show that students could improve these skills without the traditional study in geometry and Latin (Tyler, 1986). In

1913, Dewey published research wherein he showed that students performed better on work in which they were interested (Tyler, 1986). Curriculum writers drew from the research in these two studies to write curriculum that incorporated topics more relevant and interesting to children. Tyler (1981) noted that textbooks and teaching methods also changed as a result of Thorndike's and Dewey's research.

During the late 1890s to early 1900s, some educators and educational leaders were beginning to advocate for teacher involvement in curriculum development. Bennett (2002) posited that Dewey maintained that teachers should be involved in all levels of educational decision-making. Bennett (2002) found that several educational leaders, including Hart, Young, Kinley, Jackman, and Snedden, promoted teacher involvement in curriculum development, as well as the freedom to modify the curriculum in some cases. Bennett (2002) also noted that Snedden argued that teacher participation in curriculum development and text selection would make them better educators. In a study of teachers' interest in curriculum writing, Brochhausen (1908) found that several teachers responded that involvement in course of study development was desired. In Boston, Dallas, Tacoma, and Chicago, teacher committees were formed to advise school boards on educational policy, including curriculum (Bennett, 2002).

One of the pioneers of curriculum in the early 1900s was John Franklin Bobbitt (Null, 1999). Bobbitt published his first book on curriculum in 1918, in which he listed more than 700 learning objectives within nine domains of learning (Eisner, 2000; McGill, 2004). His curriculum theory was primarily based on the scientific method and social efficiency (Null, 1999). Some researchers have suggested that Bobbitt believed the teacher's role was mainly to control and guide student learning rather than participate in

curriculum development (Valentine, 1984; Wingerter, 1987). However, other researchers' interpretations of Bobbitt's work have indicated he believed teachers, practitioners, and specialists needed to be part of groups involved in curriculum writing (Bennett, 2002; Null, 1999). Bobbitt's curriculum theory was influential in curriculum development throughout the 1920s (Eisner, 2000).

Many of Bobbitt's contemporaries agreed that teachers should be included in the curriculum development process. In a 1917 study, Updegraff reported that teacher participation in curriculum writing increased teacher's efficiency in instruction and improved professional growth (Bennett, 2002). In cities across the United States, teachers engaged in curriculum writing in the 1920s. Some notable examples were in Decatur, Illinois, Brooklyn, New York, Topeka, Kansas, Waterloo, Iowa, and Cleveland, Ohio. In those cities, the superintendents organized the teachers into curriculum writing groups (Bennett, 2002). In Chicago, the faculty of the Francis Parker School wrote a book about the curriculum they developed to focus on the needs of individual students (Schubert, Schubert, Thomas, & Carroll, 2002a).

During the Great Depression, curriculum theory began to shift. As young people were unable to find jobs, more of them attended high school. However, most did not intend to go to college and were not accepted into vocational education programs. Thus, high school students found the curriculum uninteresting and meaningless (Tyler, 1981, 1986). Local and state educational agencies began developing their own curriculums. Kansas and Virginia began statewide curriculum development projects with considerable involvement from teachers that included the creation of scope and sequence guidelines (Tyler, 1981). Schools in New York City launched an experimental activity school

program, in which the curriculum was developed around the interests and needs of the students. In a study of students from activity schools compared to control schools, researchers found that students from the activity schools performed better in leadership, critical thinking, and initiative (Frentress, 1988). In 1932, The Commission on Relation of School and College and the Progressive Education Association began "The Eight Year Study" in 30 secondary schools across the United States (Ritchie, 1971; Tyler, 1981). The researchers showed that studying subjects interesting to students could still prepare them for college. The commission also showed the importance of teacher professional development and teacher participation in the curriculum development process (Frentress, 1988).

With World War II, there was another turning point in curriculum development. It was marked by the influences of democracy and social conformity, in addition to new research on child development (Glatthorn, Boschee, Whitehead, & Boschee 2018). Tyler (1981) wrote that schools were expected to prepare students for the war industry and military service. Several notable curriculum theorists emerged during this period. Among those was Stratemeyer, who emphasized individual capacity, social participation, and students' ability to deal with their environment. Frentress (1988) closely associated her work with the life-adjustment curricular movement of Prosser, who believed curriculum should focus on preparing students for work who attend neither college, nor took a vocational track (Pinar, Reynolds, Slattery, & Taubman, 2004). Another curricularist of this period was Ralph Tyler, whose course syllabus at the University of Chicago was published in 1949. He espoused four sources of curriculum considerations, including purpose, experience, organization, and evaluation (Schubert et al., 2002b).

Tyler believed the curriculum should come from the student, the subject matter, and society. He argued that teachers must be involved in curriculum development and that curriculum development was a continuous process (Wraga, 2016). Saylor (1954) also contended that teachers and other staff in the school system must be involved in curriculum development.

The Soviet Union's launch of Sputnik in 1957 sent shockwaves through the United States and ignited a fear that the nation was behind technologically. The National Defense Education Act was passed by Congress to provide increased education in mathematics and science; the National Science Foundation was established, which prescribed a more centralized and conservative approach to curriculum (Tyler, 1981). In 1960, Bruner theorized that curriculum should be written by disciplinary specialists with the assistance of teachers (Pinar et al., 2004). Tanner (1983) criticized this "back-to-basics" approach, which utilized drill and memorization rather than problem-based approaches.

The centralized approach to curriculum development of the 1950s faced backlash in the late 1960s. The work of Rogers and other humanistic psychologists had an impact on curricularists of the time. Berman suggested that loving, perceiving, and valuing could be integrated into core curricular areas, such as social studies, science, and language arts (Schubert et al., 2002c). Middle schools emerged, promoting the whole child, as well open classrooms and alternatives, and free schools (Glatthorn et al., 2018). During the late 1960s, Schwab, who had previously been involved in the back-to-basics curriculum movement of the 1950s with his involvement in the Biological Sciences Curriculum Study, reassessed his view on curriculum and promoted the involvement of

teacher participation and local influence in curriculum development (Schubert et al., 2002c; Hlebowitsh, 2005). Additionally, during the early 1970s, curricularists Farris, Ross, and Doll argued that teacher participation in curriculum development was mandatory (Wingerter, 1987). Saylor (1973) remarked, "professional educators in league with students, parents, and other citizens should reaffirm the basic values of the American society, define the basic goals of the school" and together plan flexible and diversified learning opportunities and routines to meet those goals.

The return to curricular conservatism in the 1980s and 1990s was fueled by the 1983 publication of "A Nation at Risk" by the National Commission on Excellence in Education. This document promoted the goals of high-quality schools and educational equity. More and longer school days, more stringent college admissions requirements, and merit pay for teachers were recommended (Harrop, 1999). At the state and local level, this call for increased curricular rigor translated into increased requirements for high school graduation (Glatthorn et al., 2018). Despite this top-down approach to curriculum, in a study by Martin, Saif, and Thiel (1997), including 91 school districts from across the nation, there was unanimous agreement that curriculum development should be at the local level, and nearly all agreed that teachers should be on curriculum development committees.

The first two decades of the 21st century have been marked by what Glatthorn et al. (2018) call modern conservativism. Modern conservativism includes the No Child Left Behind initiative of the Bush administration, which helped usher in for-profit private schools, homeschooling, and charter schools, and was ultimately replaced by the Race to the Top initiative under the Obama administration. Additionally, the Common Core State

Standards for mathematics and reading were released by the Council of Chief State School Officers, and as of 2021, are used by 41 states and the District of Columbia. In 2018, Glatthorn et al. purported that the early 21st Century curriculum pushed for skills, technology, and cultural diversity.

Models of Curriculum Development

Curriculum models for teachers of pre-kindergarten through twelfth-grade students are often described as either technical-scientific or non-technical (Bhuttah, Xiaoduan, Ullah, & Javed, 2019; O'Neill, 2010). Within higher education, the technical-scientific models are often referred to as product models, while non-technical models are referred to as process models (O'Neill, 2010). Technical-scientific models provide a blueprint for how the learning environment should be structured. They are efficient and effective, with a means-ends approach (Bhuttah et al., 2019). However, they have been criticized for being linear and prescriptive (Oliva, 2005). Within technical-scientific models, there are also deductive and inductive models. Deductive models start at the general and move to the specific. They have goals and objectives created by the curriculum design team, and individual teachers design instruction towards those goals and objectives (Bhuttah et al., 2019). Inductive models often begin with the development of curriculum materials and lead to generalizations (Oliva, 2005). They start with specific goals and objectives then move to a broad curriculum plan. Technical-scientific models most often have a subject-centered design and are the most widely used models because schools are historically academic rational, and instructional resources are commonly available according to content areas (Ornstein & Hunkins, 2009).

Non-technical models are typically divided into post-positivism models versus deliberative models and learner-centered design versus problem-centered design (O'Neill, 2010). Deliberative models focus on the difference between what learners want to learn and the prescribed learning. Post-positivism models advocate students to discover learning from encounters with little teacher intervention and chaos, which leads to order (Bhuttah et al., 2019; O'Neill, 2010). Ornstein and Hunkins (2009) describe the learner-centered design as a learning environment where students have an opportunity to actively construct their own understanding through personal experiences, as well as social, emotional, physical, and logical knowledge. Problem-centered designs are based on social issues and focus on real-world problems. Learners find solutions to problems that expand beyond a single content and focus on society rather than individuals (Ornstein & Hunkins, 2009).

The models described next are all technical-scientific and are from well-known curriculum theorists. Technical-scientific curriculum is a model by which curriculum development is used as a blueprint for shaping the learning environment (O'Neill, 2010). Although Tyler and Taba were contemporaries, Taba was a student of Tyler's. Taba's model expands on his work to create a more cyclical model of curriculum development. Mooney and Mausbach's and Wiggins and McTighe's models are currently used in curriculum work (O'Neill, 2010). Wiggins and McTighe's model has been described as drawing from architecture and engineering (O'Neill, 2010). These four were chosen for their lasting impact on district curriculum work in the United States and around the world.

As previously mentioned, in 1949, Tyler published his course syllabus, the Tyler Rationale, from the University of Chicago (Wraga, 2017). The syllabus was one of the

first comprehensive curriculum models released and is among the most widely used and referenced models in the history of curriculum (Glatthorn et al., 2018; Oliva, 2005). Background experiences that shaped Tyler's model included his work on the Eight-Year Study and at Ohio State University on educational assessment (Wraga, 2017). The Tyler rationale is a technical/scientific model, in which Tyler proposed four questions for curriculum development. Additionally, the Tyler Rationale is a deductive model. The first question was about the purposes or objectives of education (Chen, Chen, & Cheng, 1996; Oliva, 2005; Wraga, 2017). Tyler posited that there should be three sources from which these objectives originate: the students, society, and the subject matter or disciplines. Tyler's second question was related to the teaching and learning experiences that should be provided to meet these objectives. Tyler believed learning took place in a student's experiences and interactions with environments and that it was the active behaviors of a student, rather than the actions of teachers, that led to learning (Wraga, 2017). In Tyler's third question, he dealt with how those learning experiences should be organized. According to Tyler, educational experiences must link contents within subjects to concepts and ideas (Bhuttah et al., 2019). Finally, Tyler wanted to determine how educators knew when the objectives were accomplished. Tyler's model has been criticized by some as too linear, though others have pointed out that Tyler did not intend for it to be a firmly prescribed sequence (Oliva, 2005; Wraga, 2017).

Taba published "Curriculum Development: Theory and Practice" in 1962 (Schubert et al., 2002c). Taba's curriculum model, often seen as an extension of Tyler's model, is a technical/scientific model; however, it is inductive rather than deductive (Bhuttah et al., 2019; Laanemets & Kalames-Ruubel, 2013; Oliva, 2005). Taba's model

is described as a more democratic model because it starts with input from teachers rather than being distributed from a higher authority (Krull, 2003; Oliva, 2005). Taba offered seven steps of curriculum design with what has been described as a grassroots approach because it starts with teachers (Bhuttah et al., 2019; Costa & Loveall, 2002; Laanemets & Kalames-Ruubel, 2013). The first step is a diagnosis of needs, which is to assess gaps in students' understanding. The second step is the formulation of objectives or goals for students. Selection of the content, step three, considers significance and validity and depth over breadth. In step four, the organization of the content, Taba posited that teachers should sequence content according to students' needs. Step five is the selection of learning activities or experiences, which should allow students to engage with and internalize learning. Organization of learning experiences, step six, should be sequenced to promote students' continuity of learning and remembrance of learning. In step seven, teachers should determine what should be evaluated and incorporate various assessment strategies appropriate for gaining relevant feedback (Aydına, Unverb, Alanc, & Sağlamd, 2017; Bhuttah et al., 2019). Taba's curriculum development model is still highly influential in current curriculum models (Laanemets, & Kalames-Ruubel, 2013).

Wiggins and McTighe (2005) introduced their backward design model of curriculum and instruction development in 1998. Wiggins and McTighe posited that many opportunities are lost to the twin enemies of understanding: activities and coverage. By the traditional focus on these two things, students are hands-on, but not minds-on (Wiggins and McTighe, 2005). They advocated for an approach to curriculum and instructional planning that began by determining the desired outcomes, determining acceptable evidence of success, and then designing educational activities (Wiggins &

McTighe, 2005). Wiggins and McTighe offered a planning template with three stages. The first stage puts the desired outcome or established goals at the top, then essential questions and understanding, and finally, what students will know and be able to do. They noted that the established goal could be the national, state, or local standard. The second stage is gathering and analyzing assessment evidence, which could include a performance assessment or other evidence. The final stage was the learning plan. Wiggins and McTighe's approach could be applied at any of six common entry points to the design process. One of these is beginning with the content standards. Users could also begin with real-world applications, key resources or favorite activities, important skills, assessments, or existing units. Using their template, any of these entry points could be designed with the end in mind (Wiggins & McTighe, 2005).

Mooney and Mausbach (2008) offered curriculum developers a step-by-step process for writing and revising district curriculum. Core content teams are to be developed and include core teachers, as well as special education teachers, English language learning teachers, Title 1 personnel, and school leaders. The first phase is planning and development. There are nine steps in this phase, including establishing the foundation or curriculum philosophy and an in-depth data analysis in the first year. During the summer between the first and second year, core content teams meet to write district performance assessments and rubrics, establish a scope and sequence for curriculum, and select textbooks to pilot the next school year. Steps six and seven, piloting and selecting resources and board of education approval of the curriculum, should happen during the second year. The third year includes steps eight and nine, staff development and implementation (Mooney & Mausbach, 2008).

Phase two is review and evaluation. Mooney and Mausbach (2008) recommended that curriculum teams meet at least twice a year to monitor implementation and review practitioners' feedback once the process has been completed. Additionally, school principals and teachers are provided professional development on curriculum and instructional practice and must be accountable to the district leadership for curriculum and instruction. Mooney and Mausbach (2008) warned that if school leaders are not held accountable, classroom implementation by teachers could be sporadic, at best. Districts must also have a designated curriculum leader, who serves as visionary, gatekeeper, and change agent. The curriculum leader must lead curriculum development and maintain a balance of all content curriculum and effective instructional practices (Mooney & Mausbach, 2008).

Research on Teacher Perceptions of Resource Adoption

There is limited research available on teacher perceptions of the resource adoption process. This section includes the results of eight such studies. These studies were conducted between 1986 and 2018. Two of the eight studies were conducted solely with teacher respondents.

Powell (1986) conducted a qualitative study on textbook selection processes in two school districts in central Indiana. One was a rural district consisting of one small town and the surrounding areas, with a total student population of 3,000. The other district was a consolidated county school district with one urban center, one small town, and the surrounding rural areas, with a total population of 11,551 students. Powell sought to understand the individual and group making the textbook selection decision. She interviewed a total of 47 teachers, administrators, and parents. Some of those

interviewed were not on the selection committee to provide a more robust discussion. Additionally, Powell interviewed six representatives from textbook publishing companies.

Powell (1986) identified seven factors that influenced individual and group decision-making in the textbook selection process. The first of those is the textbook publishers because they market through influential presentations, offer gratis materials, provide meals and other perks to key decision-makers, and were trained to sway teachers' opinions. A second factor identified by Powell was district procedures in the process, such as timeline, selection of committee members, and tools for evaluation of potential materials. Pedagogy was a third factor. The lack of an adopted curriculum in one district and the newness of the curriculum in the other forced teachers to make choices based on their individual preferences about pedagogy. The ability to pilot potential resources also had an impact on the decision-making process of teachers. They tended to favor the materials with which they were already familiar. Politics and personalities were a fifth factor Powell found that influenced decision making. Well-liked and respected teachers had more influence on their peers, and the personalities of the sales representatives influenced teachers. Additionally, if a sales representative had a relationship with key decision-makers in the school districts, that worked to their advantage. The appearance of the potential materials also affected individual decision making. Teachers' initial glance through the pages of a potential text often had a lasting impact. The final factor Powell (1986) identified as influencing individual and group decision-making process was the program image among committee members. If they had or knew of positive experiences with the potential textbooks, they were more likely to select them. Similarly,

if they had had or knew of negative experiences with the potential textbooks, they were less likely to select them.

Hanson (1988) conducted a mixed-methods study on textbook selection in Oregon. He surveyed teachers and administrators who had participated in the textbook selection process in 192 school districts. Additionally, 25 respondents were selected for telephone interviews. Respondents included 833 administrators, elementary teachers, secondary teachers, and other textbook selectors. Respondents rated the level of importance of the textbook selection recommendations from Oregon and answered items related to their training on textbook selection, compensation for participation, method of selection for participation, and satisfaction with the textbook selection process. Respondents answered on a 4-point Likert scale from "not important" to "very important."

Hanson (1988) found that 15 of the 18 recommendations for textbook selection criterion from Oregon were rated as important or very important. Among these, the highest-rated criterion by administrators and elementary teachers was that skills were sequenced logically from one grade level to the next. Secondary teachers rated the coherent flow of topics and ideas throughout the text and adequate information for students as the most important criterion. Technical aspects, such as readability at two grade levels below the target grade level, were rated less important. Secondary teachers rated some criteria less important than elementary teachers, for example, the methodology used in resources matching research on best practices, resource objectives matching district objectives, and the inclusion of pretests. All groups rated personal examination of resources by other teachers as the most important source of information

for evaluating resources. The second most important source of information for evaluating resources for all groups was an examination by other teachers. Hanson also found that in districts with less than 5,000 students, only 40% of selectors received training or professional development related to textbook selection. In districts with more than 5,000 students, it was closer to 70%. Textbook selectors from districts with more than 5,000 rated their satisfaction with the textbook selection process much higher than those in smaller districts. Administrators across all districts rated their satisfaction higher than elementary or secondary teachers. Approximately 55% of those in the selection process received compensation, most commonly in the form of release time. Just over 54% of respondents reported they had been asked to serve on textbook selection committees, while approximately 39% had volunteered. Among administrators, 31% reported it was part of their job descriptions.

Al-Moh'd (1987) conducted research in Kansas and Missouri with 283 classroom teachers and 15 principals. Each group responded to separate surveys. Classroom teachers responded to a 30-item survey with a 4-point Likert scale ranging from strongly agree to strongly disagree. Principals responded to a 21-item survey with "yes" or "no" answers, and for the items they responded "yes," they also identified the level of significance as "high," "medium," or "low." One purpose of Al-Moh'd's study was to identify influential factors important in textbook selection by public schools in the United States. He also investigated practices employed by public school teachers and principals when making decisions about the content of textbooks and the evaluation of textbooks. A final purpose was to make recommendations for the improvement of textbook adoption practices for public schools.

Al-Moh'd (1987) found that the importance of textbook features such as appearance, organization, current illustrations, vocabulary, and supplemental teaching resources was almost unanimously agreed or strongly agreed upon by the participants. Of slightly less importance were textbooks being interesting to students, providing strategies for individual student differences and development, and providing the basic skills, ideas, concepts, principles, breadth, and depth of curriculum. Factors that were least important included students being able to complete content in the time allowed, teachers' editions including all answers to problems and questions, and that the textbook must be feasible for the political climate of the time. In surveying the principals, Al-Moh'd found that most districts have written procedures for textbook selection, used teacher judgement as the main basis for textbook selection, and have procedures for a systematic review of textbooks already in use. From principals, he also found that in about two-thirds of districts, parents do not participate in the textbook selection, district leaders do not provide teachers with any professional development about textbook selection, and have no system for ensuring the participation of minorities on textbook selection committees.

Ball (1990) investigated teacher perceptions of textbook adoption criteria and standards. The first research question was about the overall perception of teachers of the criteria and standards. The second question was whether those perceptions varied because of teachers' years of experience, grade level taught, or highest level of degree obtained. Ball surveyed 246 Alabama public school teachers who taught first through sixth grades. Participants were given 16 statements from the Alabama State Textbook Adoption Committee's Standards and Criteria for the Selection of Textbooks (1986).

Participants responded to the statements on a 5-point Likert scale ranging from not important to extremely important. Additionally, participants answered three demographic questions about their years of teaching experience, grade level taught, and highest degree obtained. Seven of the standards and criteria addressed the textbook's physical characteristics, while nine addressed the depth of content, difficulty level, and availability of ancillary materials.

Ball (1990) found that teachers believed the criterion and standards used by the adoption committee were important. The most important were that reading levels and vocabulary were grade-appropriate, and information should be accurate and presented clearly and logically. Least important to respondents were supplemental and reference materials and the physical features of the text. Ball found only one demographic characteristic had a significant impact on one of the standards and criteria. The higher the level of education, the more important it was that textbooks reflect instructional goals appropriate for the maturity level of the age group.

In a 1993 study, Welsh compared districts that faced challenges from the public to districts that did not when adopting the Impressions reading series. Of the 53 districts that participated in the study, 39 were in California, and 14 were from nine other states. Of these 53 districts, 31 received public challenges, and 22 did not. Welsh investigated the extent to which there were similar policies, procedures, and practices in challenged and non-challenged districts. Participating districts answered a 44-item survey addressing nine areas: level of participation, board policies and administrative regulations, administrative written procedures or adoption handbooks, public

communication and review, publisher's role, curriculum revision, textbook selection, training, and piloting.

Welsh (1993) found that challenged districts had more parent and community involvement in textbook adoption, more communication with community groups, and more frequent updates on the process. Additionally, challenged districts reported more teachers involved in the curriculum revision and textbook piloting process. Non-challenged districts were more likely to have written administrative procedures for textbook selection, adoption, and implementation. Also, non-challenged districts had educational media complaint procedures that were readily available to the public. Non-challenged districts typically had checklists for textbook adoptions, spent more time on the selection process, consulted professional organizations, and had more extensive training on textbook selection and curriculum revision.

Kalder (2001) conducted a qualitative study in two New York school districts. The purpose of the study was to compare the similarities and differences between policies and procedures of two districts meant to represent typical school districts in New York and the United States. Interviews were conducted with the assistant superintendents of both districts and the publishing companies' representatives whose products were selected. Kalder found that both districts utilized similar procedures in forming textbook selection committees. Committees consisted of classroom teachers, department chairs, school-level administrators, and the assistant superintendent. In one district, the committee members made the final selection. In the other district, the final selection was ultimately made by the superintendent, overriding the committee. Kalder (2001) posited

that these two cases are representative of large districts in New York and across the United States.

Hedley (2005) conducted a qualitative study with elementary teachers in Ontario, Canada. Five respondents from one school board or region participated, including four classroom teachers and a mathematics consultant. Additionally, a member of the Canada Ministry of Education and a textbook publishing sales representative participated in the study. The research questions Hedley addressed were how was the need for a new textbook identified, who was involved in the selection process, and what was the criteria used in the selection criteria. Hedley was also interested in the top priorities for teachers when selecting textbooks. Hedley found that the school board adopted new textbooks according to the teacher's expressed lack of materials, textbook adoption schedules, and the fact that few teachers were using the current adoption due to lack of sufficient professional development on implementing the current adoption. Teachers were placed on a larger mathematics committee after responding to a letter of solicitation. The district's resource adoption committee included content teachers, as well as special education teachers, French teachers, and mathematics consultants. The selection criteria were adapted from an instrument created by the Canada Ministry of Education and reports from teachers who participated in a pilot process. Hedley (2005) also found that teachers' top priorities included simplification of instruction, rich standards-based philosophy, and match to the curriculum. Organization and ease of use of materials and access to professional development were also important considerations. Student-based pedagogy was also important to teachers, including critical thinking and problem-solving activities and the use of manipulatives. Overall, teachers' perceptions of the textbook

adoption process were positive, especially among those who participated in the pilot process.

In 2018, Morris conducted a study to determine if there is a difference in teachers' self-perception of learning new resources based on the duration of time spent in training by a textbook company representative. Thirty teachers from two Michigan school districts with student populations of approximately 12,000 participated in the study. Teachers were from all content areas and grade levels; however, almost half of the participants taught fifth grade. All participants had received professional development related to resource adoption in the previous five years. A survey with seven demographic questions and 10 items addressed the initial training and one optional written response question. Participants responded to the items related to the effectiveness of the initial training on a 5-point Likert scale ranging from "strongly disagree" to "strongly agree." Morris found a significant difference in teacher self-perceptions of learning when the duration of the training was a half-day rather than a full day or 60-120 minutes. Morris (2018) also found that teachers perceived their learning of lesson planning and student assessment was higher in a half-day training than a full-day training.

Research on Teacher Perceptions of Curriculum Development

There is discussion in this section about research conducted on teacher perceptions of curriculum development. There are eleven studies discussed in this section. The studies were conducted between 1967 and 2019. Six of the eleven studies were conducted with only teachers as participants.

Johansen (1967) researched teachers' perceptions of the influence of authority on the local curriculum development process. A secondary purpose of the study was to

determine the level of implementation when teachers participated in the curriculum development process. The study included teachers from four Illinois school systems, two systems had high teacher involvement in curriculum development, and two systems had low teacher involvement. Johansen found that teachers perceived that when there was a hierarchical, authoritative influence in the curriculum development, they were less likely to implement the curriculum. Additionally, Johansen found that teachers' curriculum implementation increased if they participated in making the curriculum guides and viewed their participation as authentic and influential, rather than merely functional.

Valentine (1984) conducted a study in eight suburban Philadelphia school districts with 304 teachers and 24 principals as participants. Valentine investigated the relationships between teachers' actual and desired levels of involvement in curriculum direction setting, curriculum writing, and resource selection. Additionally, Valentine compared teachers' and principals' perceptions in these areas. The findings from the study indicated that teachers desired involvement in curriculum direction setting, curriculum writing, and resource selection was statistically lower than teachers perceived actual involvement in these tasks. He also found that teachers perceived the quality of the curriculum and resources were higher when they were involved in the process. Valentine also observed that teachers and principals said teachers' desired involvement in resource selection was higher than both curriculum direction setting and curriculum writing.

An examination of the relationship between teacher participation in curriculum development and teacher job satisfaction was conducted by Little (1985). In this study, participants included 235 public school teachers in Nebraska who were surveyed. Little

found no relationship between teacher participation in curriculum development and job satisfaction; however, teachers reported they wanted more involvement in curriculum development. Additionally, teachers said they would have more ownership of the curriculum and work harder to implement it if they were involved in its development. Teachers also indicated a desire to be involved in resource selection and lesson development. Little observed that teachers had minimal training in curriculum development and felt intimidated by the prospect of developing a curriculum.

Kimpston and Anderson (1986) conducted a study that included 488 teachers from 6 school districts. Two independent variables were considered in the study. The first was the locus of control of curriculum decision making. Participating districts were classified prior to the survey as having classroom, school, or district control of the curriculum. Two of the districts fell into each of these categories. The second variable was teaching level, including elementary, junior high, and high school. Teachers, thus, were separated into nine categories. Participating teachers responded to two surveys: Teacher Self-Analysis Inventory (TSAI) and Curriculum Attitude Inventory (CAI). Respondents at all teaching levels reported a high degree of attending to the curriculum developed at the district level, with junior high teachers rating the highest on the TSAI, with high school and elementary school teachers nearly equal. When curriculum decisions were made at the school level, teachers at the elementary and junior high levels rated their TSAI lower than when they were made at the district level. High school teachers had only a slightly higher TSAI when decisions were made at the school level than at the district level. When decisions were made at the classroom level, all teachers rated their TSAI the lowest. Curriculum Attitude Inventory at the elementary and junior

high levels also showed the highest mean scores when the district was in control of curriculum decisions. At the high school level, CAI was the highest when the locus of control was at the classroom level.

In a qualitative study conducted in Alberta, Canada, Young (1988) investigated the motivations of 31 teachers serving on curriculum committees, and the satisfaction they derived from their experience. Of the 31 teachers interviewed, 16 worked on committees at the local level, and 15 worked on committees at the provincial level. In general, Young found that teachers would have preferred someone else do the work and had a neutral or negative view of their experiences for several reasons. One reason was that they believed their work would not be implemented because using the curriculum was optional. Other reasons for their neutral or negative view of the experience included not being paid for the work; their principals did not want them participating; and that there would not be resources allocated to train others on the curriculum. However, 90% of the teachers believed their participation on the curriculum committees would positively impact their teaching.

Wingerter (1987) studied the survey responses of 28 principals and 394 secondary teachers in Delaware County Pennsylvania. Teachers and principals were asked about their perceptions of the desired and actual participation of teachers in areas of curriculum development, including goals and objectives, content, implementation, and evaluation. Wingerter observed that in most of the aforementioned areas of curriculum development, teachers reported that they participated to a high extent but desired to participate at an even higher level. In the area of curriculum evaluation, teachers reported participating somewhat but desired to participate to a much higher extent.

In a study that surveyed Saudi teachers, Musharraf (2000) compared teachers' actual and desired participation in the curriculum development process. Additionally, Musharraf studied perceived obstacles and benefits to teacher participation in curriculum development. Musharraf collected survey responses from 433 teachers and school supervisors in Riyadh, Saudi Arabia. Among the responses, approximately 100 teachers were elementary, middle, and high school teachers, and 101 were school supervisors. Only male teachers and supervisors were surveyed. Musharraf reported that teachers and supervisors perceived teacher participation in curriculum development as insufficient, though teachers at all levels expressed a desire and willingness to participate in curriculum development. It is important to note that Musharraf said there was no official teacher involvement in curriculum development in Saudi Arabia at the time, so any teacher involvement was merely incidental. The Ministry of Education provided all curriculum. Elementary teachers reported the highest level of involvement in curriculum development. Middle and high school teachers reported desiring more involvement in curriculum development. Respondents said obstacles to their participation included lack of power, information, communication, encouragement, clarity, time, and trust from the Ministry of Education. However, the teachers and supervisors were aware of the benefits of teacher participation in curriculum development, particularly a better understanding of the curriculum, increased positive feelings and attitude towards the curriculum, increased quality of teaching and curriculum evaluation, and increased communication and interaction between the teachers and community.

Lauridsen (2003) conducted a qualitative study with fifth-and sixth-grade teachers who had participated in curriculum development in a district in southwest Ohio.

Lauridsen found that teachers believed they need to be given the opportunity to participate in curriculum development because when teachers have ownership, they are more likely to implement. Additionally, when teachers are involved in curriculum development, they have a better understanding of the curriculum. Lauridsen reported that teachers also said that when different grade levels collaborate on curriculum, it helps close the curriculum gap between grade levels.

In a survey of 618 middle and high school teachers in Volusia County, Florida, May (2010) investigated teachers' perceptions of job satisfaction and professional discretion related to the amount of control they had over their curriculum. Teachers with low levels of control, for example, mathematics, ELA, and science had a district-prescribed detailed curriculum, sequencing, and pacing, as well as a single text and pre-approved supplemental materials. They were also bound to rigorous district and state performance measures. Teachers with high control over their curriculum generally taught elective courses, such as fine arts, foreign language, and physical education. They also had non-prescriptive curriculum guides, multiple resource options and lacked district or state performance measures. Medium control was exerted over social science courses, such as government, history, and economics. Teachers in this category generally experienced control that fell in the middle of the high and low groups. Among May's findings was that teachers in the low and medium control groups expressed significantly lower perceptions of professional discretion and satisfaction, particularly, the areas of influence of teacher beliefs, perceptions of success and satisfaction, teacher control of pedagogy, and leadership.

Abudu and Mensa (2016) conducted a study with 130 teachers and pupil teachers (student teachers) from basic schools in the Wa Municipality of the Upper West Region of Ghana. They found that 46.3% of teachers and 50% of pupil teachers rated their participation in curriculum development as low or very low. Participants also responded that 82.6% did not have a curriculum leader in their school. The overwhelming majority, 90.8%, reported that their views were not incorporated into the curriculum development process. However, 94.4% of teachers and 72.7% of pupil teachers believed it was important for teachers to be included in the curriculum process. Teachers identified reasons for their lack of participation, including a huge workload, lack of expertise, funding, and the availability of information about when curriculum development was to occur.

In a qualitative study of 18 kindergarten through second-grade teachers in three districts in western Pennsylvania, Sikora (2018) investigated teachers' perceptions of the curriculum development process. Sikora found that teachers generally reported a positive perception of the curriculum development process and felt it benefitted their students and improved classroom instruction. Interviewees indicated that teachers are willing and enthusiastic about curriculum writing, collaborating in teams, and sharing ideas with their colleagues. They also reported that most teachers had not received professional development or educational experiences to learn how to create curriculum but felt it should be provided. Over two-thirds of the teachers in Sikora's study said the curriculum was an evolving document, and although the teachers understood some of the stages of curriculum development, they were unable to connect the dots. Participants reported their districts used a variety of curriculum experts but did not mention any curriculum

theorists. Additionally, the teachers talked about formative and summative assessments but appeared to lack an understanding of their use and purposes and reported no utilization of common assessments.

Lewis, Liace, and Braun (2019) surveyed 106 kindergarten through sixth-grade teachers, education specialists, and administrators in urban, suburban, and rural districts in Illinois. Just over half of the respondents reported that designing and planning instruction was the responsibility of school teams, while 19.8% said it was the district's responsibility and 15.1% said it was the individual's responsibility. In response to how they preferred to spend curriculum committee time, 46.2% reported they preferred to plan as a team, 21.7% preferred to work as a school, and 5.7% said they preferred to plan as a district. Additionally, 26.4% of respondents said their district had no curriculum development process or did not know what the process was. However, 79% said their schools created their own curriculum maps.

Summary

This literature review provided a historical account of curriculum development from the early 20th century to the present. Curriculum development since the early 20th century has included numerous pendulum swings from a more conservative and prescriptive curriculum focused heavily on core content to more liberal, student-centered approaches to curriculum development. This chapter also highlighted four well-known curriculum theorists' approaches to the curriculum development process. A review of research on teacher involvement in both the curriculum development and resource selection process was also provided. Although the research showed varying degrees of teacher satisfaction in these processes, a common theme throughout the literature review

was that teachers should be not only involved but critical designers and decision-makers in all levels of curriculum development and resource selection. However, none of the studies provided comprehensive information on teacher perceptions of their participation in the curriculum development and resource selection processes. Chapter 3 includes the methodology used to conduct this study.

Chapter 3

Methods

The first purpose of this study was to determine the extent teachers perceive participation in the curriculum development process was authentic. The second purpose of this study was to determine the extent teachers perceive participation in the curriculum development process was effective. The third purpose of the study was to determine the extent teachers perceive the professional development regarding the curriculum development and curriculum resources implementation was effective. The fourth purpose of this study is to determine the extent teachers perceive participation in the curriculum development process led to positive impacts in their classrooms. The fifth purpose of the study is to determine the extent teachers perceive the process for piloting of potential resources was adequate. The final purpose of the study is to determine whether teacher perceptions differ by content area.

Research Design

A quantitative research design with data obtained through a survey was utilized in this study. Creswell and Creswell (2014) defined quantitative research as "an approach for testing objective theories by examining the relationships among variables" (p. 4). The dependent variable in this research was the perceptions of teachers who participated in the curriculum development process. The independent variable was the content area (mathematics and ELA).

Selection of Participants

The population for this study was teachers from Bradley Public Schools. Purposive sampling was used to determine the participants in this study. Lunenburg and

Irby (2008) defined a purposive sample as "a sample based on the researcher's experience or knowledge of the group to be sampled" (p. 175). Elementary mathematics teachers must have participated in the curriculum development process during the 2017-2018 school year. Those elementary teachers who participated in the portion of the survey related to piloting potential materials must have participated in the piloting of potential resources during the 2019-2020 school year. Secondary mathematics teachers must have participated in the curriculum development process during the 2016-2017 school year. Those secondary teachers who participated in the portion of the survey related to piloting potential materials must have participated in the piloting of potential resources during the 2019-2020 school year. Elementary ELA teachers must have participated in the curriculum development process during the 2019-2020 school year. Those elementary teachers who participated in the portion of the survey related to piloting potential materials must have participated in the piloting of potential resources during the 2019-2020 school year. Secondary ELA teachers must have participated in the curriculum development process during the 2016-2017 school year. Those secondary teachers who participated in the portion of the survey related to piloting potential materials must have participated in the piloting of potential resources during the 2019-2020 school year.

Measurement

In consultation with the assistant superintendent of teaching and learning for Bradley Public Schools, the researcher developed two 32-item surveys to gather information about mathematics and ELA teacher perceptions about the curriculum development and resource piloting process. All items were measured using the same

scale. The Likert-type scale labels were (1) *Strongly Disagree*, (2) *Somewhat Disagree,* (3) *Neutral,* (4) *Somewhat Agree,* and (5) *Strongly Agree* (see Appendix A).

Items 1-4 were to collect demographic information about the teacher, for example, the number of years in the Bradley school district and in the profession and grade level taught. These items were not used in the hypothesis testing. Items 5-9 were used to determine the extent teachers perceive participation in the curriculum development process was authentic. These items provided data used in the hypothesis testing for two research questions (RQ1 [H1-H5] and RQ2 [H6-H10]). Items 10-14 were used to determine the extent teachers perceive participation in the curriculum development process was effective. These items provided data used in the hypothesis testing for two research questions (RQ3 [H11-H15] and RQ4 [H16-H20]). Items 15-19 were used to determine the extent teachers perceive professional development related to the curriculum development and curriculum and resource implementation was effective. These items provided data used in the hypothesis testing for two research questions (RQ5 [H21-H25] and RQ6 [H26-H30]). Items 20-24 were used to determine the extent teachers perceive participation in the curriculum development process led to positive impacts in the classroom. These items provided data used in the hypothesis testing for two research questions (RQ7 [H31-H35] and RQ8 [H36-H40]). Items 25-31 were explicitly related to the resource piloting process. These items provided data used in the hypothesis testing for two research questions (RQ9 [H41-H47] and RQ10 [H48-H54]). Items related to the resource piloting process included a sixth option on the Likert response scale, which was *Not Applicable.* No item in the survey included the teacher content area because separate surveys were developed and administered to the two groups

of teachers. The researcher was interested in the differences in perceptions across mathematics and ELA teachers.

Validity is the degree to which an instrument measures what a researcher asserts it measures (Lunenburg & Irby, 2008). An expert panel of mathematics teachers was asked to review the survey instrument for content validity. The panel reviewed survey items for relevance and provided feedback about the clarity of the survey items and made suggestions about potential additional survey items. The expert panel consisted of one elementary teacher, two middle school mathematics teachers, one high school teacher, one mathematics curriculum specialist, and two former district-level curriculum directors. Six of the seven members of the panel had previous experience in curriculum development processes. Several panelists suggested changing the wording of items about professional development from "professional development around" to "professional development related to." This change was made. Additionally, panelists suggested chunking the survey items and adding headers for each chunk. This change was also made. Two panelists expressed concern about using the word "appropriate" in some of the items; however, after discussion with an advisor, the researcher chose to keep this word. There were also some stylistic suggestions about using bold print or underlining words to distinguish between survey items. Because the survey was administered using Google Forms, this was not possible. The survey can be found in Appendix A.

Reliability is the degree to which an instrument consistently measures what it purports to measure (Lunenburg & Irby, 2008). A reliability analysis was not needed because a scale was not constructed from the survey items. According to Sackett and Larson (1990), in a discussion of the merits of using single items instead of constructing

scales, “if the construct being measured is sufficiently narrow or is unambiguous to the respondent, a single item [measurement] may suffice” (p. 631). The individual items used in this research were self-reported facts that were sufficiently narrow and unambiguous. Therefore, single-item measurement was appropriate, and reliability was not an issue for the measurement using this survey instrument.

Data Collection Procedures

Prior to collecting data, the Bradley Public School’s assistant superintendent granted permission to conduct research (see Appendix B). Additionally, a research proposal was submitted to the Baker University Institutional Review Board (IRB) and was approved on November 1, 2020 (see Appendix C). The data was collected during the 2019-2020 school year by the assistant superintendent of teaching and learning through a Google Forms survey. Archived survey data was made available for the hypothesis testing for this dissertation by the assistant superintendent of teaching and learning.

Data Analysis and Hypothesis Testing

This section includes the research questions, the hypotheses used to address them, and the analyses conducted to test the hypotheses. To address RQ1, RQ3, RQ5, RQ7, and RQ9, one-sample *t* tests were used because a sample mean was compared to a test value specified in each analysis. To address RQ2, RQ4, RQ6, RQ8, and RQ10, two-samples *t* tests were used because two sample means were compared.

RQ1. To what extent do teachers perceive participation in the curriculum development process was authentic?

Five hypotheses (H1-H5) are listed below. For each hypothesis, a one-sample *t* test was conducted to compare the mean against a test value of 3. The level of significance was set at .05 for each test. When appropriate, the effect size, as indexed by Cohen's *d*, is reported.

H1. Teachers perceive they were included in the curriculum development process.

H2. Teachers perceive their ideas and opinions about curriculum development were listened to during the process.

H3. Teachers perceive their colleagues' ideas and opinions about curriculum development were listened to during the process.

H4. Teachers perceive that interrelated special education teachers were a critical part of the curriculum development team.

H5. Teachers perceive that involving all teachers made the curriculum development process meaningful.

RQ2. To what extent do teachers' perceptions that participation in the curriculum development process was authentic differ by content area?

Five hypotheses (H6-H10) are listed below. For each hypothesis, a two-samples *t* test was conducted. The two sample means were compared for each test. The level of significance was set at .05. When appropriate, an effect size, as indexed by Cohen's *d*, is reported.

H6. Teachers' perceptions that they were included in the curriculum development process differ by content area.

H7. Teachers' perceptions that their ideas and opinions about curriculum development were listened to during the process differ by content area.

H8. Teachers' perceptions that their colleagues' ideas and opinions about curriculum development were listened to during the process differ by content area.

H9. Teachers' perceptions that interrelated special education teachers were a critical part of the curriculum development team differ by content area.

H10. Teachers' perceptions that involving all teachers made the curriculum development process meaningful differ by content area.

RQ3. To what extent do teachers perceive the curriculum development process was effective?

Five hypotheses (H11-H15) are listed below. For each hypothesis, a one-sample *t* test was conducted to compare the mean against a test value of 3. The level of significance was set at .05 for each test. When appropriate, the effect size, as indexed by Cohen's *d*, is reported.

H11. Teachers perceive their involvement in the curriculum development process increased their understanding of the local curriculum.

H12. Teachers perceive their involvement in the curriculum development process increased their understanding of KCCRS standards.

H13. Teachers perceive the sequence of curriculum development tasks was appropriate.

H14. Teachers perceive the time allotted for curriculum development was well matched with the tasks to be completed.

H15. Teachers perceive the curriculum development process led to the selection of high-quality resources.

RQ4. To what extent do teachers' perceptions that the curriculum development process was effective differ by content area?

Five hypotheses (H16-H20) are listed below along with the analyses that were used to test them. For each hypothesis, a two-samples *t* test was conducted. The two sample means were compared for each test. The level of significance was set at .05. When appropriate, an effect size, as indexed by Cohen's *d*, is reported.

H16. Teachers' perceptions that their involvement in the curriculum development process increased their understanding of the local curriculum differ by content area.

H17. Teachers' perceptions that their involvement in the curriculum development process increased their understanding of KCCRS standards differ by content area.

H18. Teachers' perceptions that the sequence of the curriculum development process was appropriate differ by content area.

H19. Teachers' perceptions that the time allotted for curriculum development was well matched with the tasks to be completed differ by content area.

H20. Teachers' perceptions that the curriculum development process led to the selection of high-quality resources differ by content area.

RQ5. To what extent do teachers perceive the professional development regarding the curriculum development and curriculum and resources implementation was effective?

Five hypotheses (H21-H25) are listed below. For each hypothesis, a one-sample *t* test was conducted to compare the mean against a test value of 3. The level of significance was set at .05 for each test. When appropriate, the effect size, as indexed by Cohen's *d*, is reported.

H21. Teachers perceive that the professional development provided related to the curriculum development process improved the curriculum development process.

H22. Teachers perceive that the professional development provided related to curriculum development improved the curriculum implementation.

H23. Teachers perceive that the professional development provided related to curriculum implementation improved the curriculum implementation.

H24. Teachers perceive that the professional development provided related to resource implementation improved the curriculum implementation.

H25. Teachers perceive that the professional development provided related to resource implementation improved the implementation of the new resources.

RQ6. To what extent do teacher perceptions that the professional development provided around curriculum development was effective differ by content area?

Five hypotheses (H26-H30) are listed below. For each hypothesis, a two-samples *t* test was conducted. The two sample means were compared for each test. The level of significance was set at .05. When appropriate, an effect size, as indexed by Cohen's *d*, is reported.

H26. Teachers' perceptions that the professional development regarding curriculum development process improved the curriculum development process differ by content area.

H27. Teachers' perceptions that the professional development regarding curriculum development improved the curriculum implementation differ by content area.

H28. Teachers' perceptions that the professional development regarding curriculum implementation improved the curriculum implementation differ by content area.

H29. Teachers' perceptions that the professional development regarding resource implementation improved the curriculum implementation differ by content area.

H30. Teachers' perceptions that the professional development regarding resource implementation improved the implementation of the new resource differ by content area.

RQ7. To what extent do teachers perceive participation in the curriculum development process led to positive impacts in their classrooms?

Five hypotheses (H31-H35) are listed below. For each hypothesis, a one-sample *t* test was conducted to compare the mean against a test value of 3. The level of significance was set at .05 for each test. When appropriate, the effect size, as indexed by Cohen's *d*, is reported.

H31. Teachers perceive that participation in the curriculum development process helped implement the new curriculum in their classrooms.

H32. Teachers perceive that participation in the curriculum development process led to improved instruction in their classroom.

H33. Teachers perceive that their participation in the curriculum development led to increased fidelity to instructional time allotments in core subjects.

H34. Teachers perceive that student scores on local assessments will improve as a result of their participation in the curriculum development process.

H35. Teachers perceive that student scores on state assessments will improve as a result of their participation in the curriculum development process.

RQ8. To what extent do teachers' perceptions that participation in the curriculum development process led to positive impacts in their classrooms differ by content area?

Five hypotheses (H36-H40) are listed. For each hypothesis, a two-samples *t* test was conducted. The two sample means were compared for each test. The level of significance was set at .05. When appropriate, an effect size, as indexed by Cohen's *d*, is reported.

H36. Teachers' perceptions that participation in the curriculum development process helped implement the new curriculum in their classrooms differ by content area.

H37. Teachers' perceptions that participation in the curriculum development process led to improved instruction in their classroom differ by content area.

H38. Teachers' perceptions that their participation in the curriculum development process led to increased fidelity to instructional time allotments in core subjects differ by content area.

H39. Teachers' perceptions that student scores on local assessments will improve as a result of their participation in the curriculum development process differ by content areas.

H40. Teachers' perceptions that student scores on state assessments will improve as a result of their participation in the curriculum development process differ by content area.

RQ9. To what extent do teachers perceive the process for piloting of potential resources was adequate?

Seven hypotheses (H41-H47) are listed. For each hypothesis, a one-sample *t* test was conducted to compare the mean against a test value of 3. The level of significance

was set at .05 for each test. When appropriate, the effect size, as indexed by Cohen's *d*, is reported.

H41. Teachers perceive that the length of time allotted for piloting potential resources was appropriate.

H42. Teachers perceive that the time of year for piloting potential resources was appropriate.

H43. Teachers perceive that the number of teachers piloting potential resources was appropriate.

H44. Teachers perceive that the number of potential resources piloted was appropriate.

H45. Teachers perceive that the evaluation rubric for piloting potential resources was appropriate.

H46. Teachers perceive that the evaluation rubric for piloting potential resources was comprehensive.

H47. Teachers perceive the process of piloting potential resources helped ensure the selection of a high-quality resource.

R10. To what extent are teachers' perceptions that the process for piloting of potential resources was adequate differ by content area?

Seven hypotheses (H48-H54) are listed. For each hypothesis, a two-samples *t* test was conducted. The two sample means were compared for each test. The level of significance was set at .05. When appropriate, an effect size, as indexed by Cohen's *d*, is reported.

H48. Teachers' perceptions that the length of time allotted for piloting potential resources was appropriate differ by content area.

H49. Teachers' perceptions that the time of year for piloting potential resources was appropriate differ by content area.

H50. Teachers' perceptions that the number of teachers piloting potential resources was appropriate differ by content area.

H51. Teachers' perceptions that the number of potential resources piloted was appropriate differ by content area.

H52. Teachers' perceptions that the evaluation rubric for piloting potential resources was appropriate differ by content area.

H53. Teachers' perceptions that the evaluation rubric for piloting potential resources was comprehensive differ by content area.

H54. Teachers' perceptions that the process of piloting potential resources helped ensure the selection of a high-quality mathematics resource differ by content area.

Limitations

Lunenburg & Irby (2008) defined limitations as factors of a study outside of the researcher's control that may affect the outcome. In this study, one limitation was the reliance on participants' honesty because a researcher has no way of knowing if participants are truthful in their answers. A second limitation was the voluntary completion of the survey by participants in the mathematics and ELA curriculum development and resource piloting process. Not all who participated in these processes completed the survey. A final limitation in this research was that the participants are

from a relatively small Midwest town, and the results of the research may not be applicable to all school districts.

Summary

Chapter 3 provided the research design, selection of participants, and measurements for this study into teacher perceptions of the curriculum design and resource selection process. Data collection procedures, data analysis and hypothesis testing, and the limitations were presented. Chapter 4 includes the descriptive statistics and the results of the hypothesis testing.

Chapter 4

Results

The purpose of this study was to determine teacher perceptions of the curriculum development and resource adoption processes, and whether the perceptions were different between mathematics and ELA teachers. Chapter 4 includes the descriptive statistics related to the research participants. Next were the results of the hypothesis testing for the 10 research questions and 54 hypotheses.

Descriptive Statistics

Sixty-one teachers from Bradley Public Schools completed the survey. Of the teachers who returned those 61 surveys, 32 taught ELA, and 29 taught mathematics. Three of the participants indicated they were special education teachers. See Table 1 for the demographic breakdown for the participants' levels taught, the years of teaching experience, and years taught in Bradley Schools.

Table 1

Descriptive Statistics for Participants

Demographic	*N*	%
Level taught		
Primary (K- 1)	6	9.8
Upper elementary (2-3)	14	23.3
Intermediate (4-5)	11	18.3
Middle school (6-8)	16	26.2
Middle school special education	1	1.6
High school	9	14.8
High school special education	1	1.6
No response	1	1.6
Years Taught		
2-5	10	16.4
6-10	10	16.4
11-15	13	21.3
16-20	13	21.3
21-25	5	8.2
26+	8	13.1
No response	2	3.3
Years employed by Bradley Public Schools		
1	1	1.6
2-5	19	31.1
6-10	16	26.2
11-15	17	27.9
16-20	3	4.9
26+	5	8.2

Hypothesis Testing

Ten research questions guided this study. Each research question is listed below and is followed by the hypothesis tests conducted to address that question, the hypothesis statements, and the results of each hypothesis test.

RQ1. To what extent do teachers perceive participation in the curriculum development process was authentic?

Five hypotheses (H1-H5) are listed below. For each hypothesis, a one-sample *t* test was conducted to compare the mean against a test value of 3. The level of significance was set at .05 for each test. When appropriate, the effect size, as indexed by Cohen's *d*, is reported.

H1. Teachers perceive they were included in the curriculum development process.

The results of the one-sample *t* test indicated a statistically significant difference between the group mean and the test value, $t(59) = 10.880$, $p = .000$, Cohen's $d = 1.405$. The sample mean ($M = 4.03$, $SD = .74$) was significantly higher than the test value (3). H1 was supported. Teachers agree or strongly agree they were included in the curriculum development process. The effect size indicated a large effect.

H2. Teachers perceive their ideas and opinions about curriculum development were listened to during the process.

The results of the one-sample *t* test indicated a statistically significant difference between the group mean and the test value, $t(60) = 7.677$, $p = .000$, Cohen's $d = 0.983$. The sample mean ($M = 3.75$, $SD = .77$) was significantly higher than the test value (3). H2 was supported. Teachers agree their ideas and opinions about curriculum development were listened to during the process. The effect size indicated a large effect.

H3. Teachers perceive their colleagues' ideas and opinions about curriculum development were listened to during the process.

The results of the one-sample *t* test indicated a statistically significant difference between the group mean and the test value, $t(60) = 7.676$, $p = .000$, Cohen's $d = 0.983$. The sample mean ($M = 3.74$, $SD = .75$) was significantly higher than the test value (3). H3 was supported. Teachers agree their colleagues' ideas and opinions about curriculum development were listened to during the process. The effect size indicated a large effect.

H4. Teachers perceive that interrelated special education teachers were a critical part of the curriculum development team.

The results of the one-sample *t* test no significant difference between the group mean and the test value, $t(59) = 1.069$, $p = .289$. The sample mean ($M = 3.15$, $SD = 1.09$) was not different from the test value (3). H4 was not supported. Teachers do not agree that interrelated special education teachers were a critical part of the curriculum development team.

H5. Teachers perceive that involving all teachers made the curriculum development process meaningful.

The results of the one-sample *t* test indicated a statistically significant difference between the group mean and the test value, $t(60) = 4.795$ $p = .000$, Cohen's $d = 0.614$. The sample mean ($M = 3.61$, $SD = .99$) was significantly higher than the test value (3). H5 was supported. Teachers agree that involving all teachers made the curriculum process meaningful. The effect size indicated a medium effect.

RQ2. To what extent do teachers' perceptions that participation in the curriculum development process was authentic differ by content area?

Five hypotheses (H6-H10) are listed below. For each hypothesis, an independent-samples *t* test was conducted. The two sample means were compared for each test. The level of significance was set at .05. When appropriate, an effect size, as indexed by Cohen's *d*, is reported.

H6. Teachers' perceptions that they were included in the curriculum development process differ by content area.

The results of the independent-samples *t* test indicated a statistically significant difference between the two means, $t(58) = 3.956$, $p = .000$, $d = 1.024$. The mathematics teachers' agreement that they were included in the curriculum development process ($M = 4.39$, $SD = 0.57$, $n = 28$) was stronger than ELA teachers' agreement ($M = 3.72$, $SD = 0.73$, $n = 32$). H6 was supported. The effect size indicated a large effect.

H7. Teachers' perceptions that their ideas and opinions about curriculum development were listened to during the process differ by content area.

The results of the independent-samples *t* test indicated a statistically significant difference between the two means, $t(59) = 2.878$, $p = .006$, $d = 0.738$. The mathematics teachers' agreement that their ideas and opinions about curriculum development were listened to ($M = 4.03$, $SD = 0.57$, $n = 29$) was stronger than the ELA teachers' agreement ($M = 3.50$, $SD = 0.84$, $n = 32$). H7 was supported. The effect size indicated a medium effect.

H8. Teachers' perceptions that their colleagues' ideas and opinions about curriculum development were listened to during the process differ by content area.

The results of the independent-samples *t* test indicated a statistically significant difference between the two means, $t(59) = 2.735$, $p = .008$, $d = 0.701$. The mathematics

teachers' agreement that their colleagues' ideas and opinions about curriculum development were listened to during the process (M = 4.00, SD = 0.60, n = 29) was stronger than the ELA teachers' agreement (M = 3.50, SD = 0.80, n = 32). H8 was supported. The effect size indicated a medium effect.

H9. Teachers' perceptions that interrelated special education teachers were a critical part of the curriculum development team differ by content area.

The results of the independent-samples t test indicated no significant difference between the two means, $t(58) = 0.904$, $p = .370$. Mathematics teachers' agreement that interrelated special education teachers were a critical part of the curriculum development team (M = 3.29, SD = 1.18, n = 28) was not different from the ELA teachers' agreement (M = 3.03, SD = 1.00, n = 32). H9 was not supported.

H10. Teachers' perceptions that involving all teachers made the curriculum development process meaningful differ by content area.

The results of the independent-samples t test indicated no significant difference between the two means, $t(59) = 1.969$, $p = .054$. The mathematics teachers' agreement that involving all teachers made the curriculum development process meaningful (M = 3.86, SD = 0.95, n = 29) was not different from ELA teachers' agreement (M = 3.38, SD = 0.976, n = 32). H10 was not supported.

RQ3. To what extent do teachers perceive the curriculum development process was effective?

Five hypotheses (H11-H15) are listed below. For each hypothesis, a one-sample t test was conducted to compare the mean against a test value of 3. The level of

significance was set at .05 for each test. When appropriate, the effect size, as indexed by Cohen's *d*, is reported.

H11. Teachers perceive their involvement in the curriculum development process increased their understanding of the local curriculum.

The results of the one-sample *t* test indicated a statistically significant difference between the group mean and the test value, $t(59) = 6.905$, $p = .000$, Cohen's $d = 0.891$. The sample mean ($M = 3.85$, $SD = .95$) was significantly higher than the test value (3). H11 was supported. Teachers agree their involvement in the curriculum development process increased their understanding of the local curriculum. The effect size indicated a large effect.

H12. Teachers perceive their involvement in the curriculum development process increased their understanding of KCCRS standards.

The results of the one-sample *t* test indicated a statistically significant difference between the group mean and the test value, $t(60) = 5.828$, $p = .000$, Cohen's $d = 0.746$. The sample mean ($M = 3.69$, $SD = .92$) was significantly higher than the test value (3). H12 was supported. Teachers agree their involvement in the curriculum development process increased their understanding of the KCCRS standards. The effect size indicated a medium effect.

H13. Teachers perceive the sequence of curriculum development tasks was appropriate.

The results of the one-sample *t* test indicated a statistically significant difference between the group mean and the test value, $t(60) = 6.713$, $p = .000$, Cohen's $d = 0.859$. The sample mean ($M = 3.72$, $SD = .84$) was significantly higher than the test value (3).

H13 was supported. Teachers agree the sequence of curriculum development tasks was appropriate. The effect size indicated a large effect.

H14. Teachers perceive the time allotted for curriculum development was well matched with the tasks to be completed.

The results of the one-sample *t* test indicated a statistically significant difference between the group mean and the test value, $t(60) = 3.883$, $p = .000$, Cohen's $d = 0.497$. The sample mean ($M = 3.46$, $SD = 0.923$) was significantly higher than the test value (3). H14 was supported. Teachers agree the time allotted for curriculum development was well matched with the tasks to be completed. The effect size indicated a medium effect.

H15. Teachers perceive the curriculum development process led to the selection of high-quality resources.

The results of the one-sample *t* test indicated a statistically significant difference between the group mean and the test value, $t(60) = 3.292$, $p = .002$, Cohen's $d = 0.442$. The sample mean ($M = 3.46$, $SD = 1.09$) was significantly higher than the test value (3). H15 was supported. Teachers agree the curriculum development process led to the selection of high-quality resources. The effect size indicated a small effect.

RQ4. To what extent do teachers' perceptions that the curriculum development process was effective differ by content area?

Five hypotheses (H16-H20) are listed below, along with the analyses used to test them. For each hypothesis, an independent-samples *t* test was conducted. The two sample means were compared for each test. The level of significance was set at .05. When appropriate, an effect size, as indexed by Cohen's *d*, is reported.

H16. Teachers' perceptions that their involvement in the curriculum development process increased their understanding of the local curriculum differ by content area.

The results of the independent-samples *t* test indicated a statistically significant difference between the two means, $t(58) = 2.617$, $p = .011$, $d = 0.677$. The mathematics teachers' agreement that their involvement in the curriculum development process increased their understanding of the local curriculum ($M = 4.18$, $SD = 0.82$, $n = 28$) was stronger than the ELA teachers' agreement ($M = 3.56$, $SD = 0.82$, $n = 32$). H16 was supported. The effect size indicated a medium effect.

H17. Teachers' perceptions that their involvement in the curriculum development process increased their understanding of KCCRS standards differ by content area.

The results of the independent-samples *t* test indicated a statistically significant difference between the two means, $t(59) = 2.631$, $p = .011$, $d = 0.675$. The mathematics teachers' agreement that their involvement in the curriculum development process increased their understanding of the KCCRS standards ($M = 4.00$, $SD = 0.93$, $n = 29$) was stronger than the ELA teachers' agreement ($M = 3.41$, $SD = 0.84$, $n = 32$). H17 was supported. The effect size indicated a medium effect.

H18. Teachers' perceptions that the sequence of the curriculum development process was appropriate differ by content area.

The results of the independent-samples *t* test indicated a statistically significant difference between the two means, $t(59) = 2.234$, $p = .029$, $d = 0.573$. The mathematics teachers' agreement that the sequence of the curriculum development process was appropriate ($M = 3.97$, $SD = 0.68$, $n = 29$) was stronger than the ELA teachers' agreement

(M = 3.50, SD = 0.92, n = 32). H18 was supported. The effect size indicated a medium effect.

H19. Teachers' perceptions that the time allotted for curriculum development was well matched with the tasks to be completed differ by content area.

The results of the independent-samples t test indicated no significant difference between the two means, $t(59) = 0.190$, $p = .850$. The mathematics teachers' agreement that the time allotted for curriculum development was well matched with the tasks to be completed (M = 3.48, SD = 0.91, n =29) was not different from the ELA teachers' agreement (M = 3.44, SD = 0.95, n = 32). H19 was not supported.

H20. Teachers' perceptions that the curriculum development process led to the selection of high-quality resources differ by content area.

The results of the independent-samples t test indicated a statistically significant difference between the two means, $t(59) = 2.103$, $p = .0.040$, $d = 0.539$. The mathematics teachers' agreement that the curriculum development process led to the selection of high-quality resources (M = 3.76, SD = 1.057, n = 29) was stronger than the ELA teachers' agreement (M = 3.19, SD = 1.061, n = 32). H20 was supported. The effect size indicated a medium effect.

RQ5. To what extent do teachers perceive the professional development regarding the curriculum development and curriculum and resources implementation was effective?

Five hypotheses (H21-H25) are listed below. For each hypothesis, a one-sample t test was conducted to compare the mean against a test value of 3. The level of

significance was set at .05 for each test. When appropriate, the effect size, as indexed by Cohen's *d*, is reported.

H21. Teachers perceive that the professional development provided related to the curriculum development process improved the curriculum development process.

The results of the one-sample *t* test indicated a statistically significant difference between the group mean and the test value, $t(60) = 2.378$, $p = .021$, Cohen's $d = 0.304$. The sample mean ($M = 3.28$, $SD = 0.92$) was significantly higher than the test value (3). H21 was supported. Teachers agree that the professional development provided related to the curriculum development process improved the curriculum development process. The effect size indicated a small effect.

H22. Teachers perceive that the professional development provided related to curriculum development improved the curriculum implementation.

The results of the one-sample *t* test indicated a statistically significant difference between the group mean and the test value, $t(59) = 2.696$, $p = .009$, Cohen's $d = 0.348$. The sample mean ($M = 3.35$, $SD = 1.01$) was significantly higher than the test value (3). H22 was supported. Teachers agree the professional development provided related to curriculum development improved the curriculum implementation. The effect size indicated a small effect.

H23. Teachers perceive that the professional development provided related to curriculum implementation improved the curriculum implementation.

The results of the one-sample *t* test indicated a statistically significant difference between the group mean and the test value, $t(60) = 2.967$, $p = .004$, Cohen's $d = 0.380$. The sample mean ($M = 3.36$, $SD = 0.95$) was significantly higher than the test value (3).

H23 was supported. Teachers agree the professional development provided related to curriculum implementation improved the curriculum implementation. The effect size indicated a small effect.

H24. Teachers perceive that the professional development provided related to resource implementation improved the curriculum implementation.

The results of the one-sample *t* test indicated a statistically significant difference between the group mean and the test value, $t(60) = 3.181$, $p = .002$, Cohen's $d = 0.407$. The sample mean ($M = 3.41$, $SD = 1.01$) was significantly higher than the test value (3). H24 was supported. Teachers agree the professional development provided related to resource implementation improved the curriculum implementation. The effect size indicated a small effect.

H25. Teachers perceive that the professional development provided related to resource implementation improved the implementation of the new resources.

The results of the one-sample *t* test indicated a statistically significant difference between the group mean and the test value, $t(50) = 3.130$, $p = .003$, Cohen's $d = 0.401$. The sample mean ($M = 3.41$, $SD = .1.02$) was significantly higher than the test value (3). H1 was supported. Teachers agree the professional development provided related to resource implementation improved the implementation of the new resource. The effect size indicated a small effect.

RQ6. To what extent do teacher perceptions that the professional development provided around curriculum development was effective differ by content area?

Five hypotheses (H26-H30) are listed below. For each hypothesis, an independent-samples *t* test was conducted. The two sample means were compared for

each test. The level of significance was set at .05. When appropriate, an effect size, as indexed by Cohen's *d*, is reported.

H26. Teachers' perceptions that the professional development regarding curriculum development process improved the curriculum development process differ by content area.

The results of the independent-samples *t* test indicated no significant difference between the two means, $t(59) = 1.985$, $p = .052$. The mathematics teachers' agreement that the professional development regarding curriculum development process improved the curriculum development process ($M = 3.52$, $SD = 0.91$, $n = 29$) was not different from the ELA teachers' agreement ($M = 3.06$, $SD = 0.88$, $n = 32$). H26 was not supported.

H27. Teachers' perceptions that the professional development regarding curriculum development improved the curriculum implementation differ by content area.

The results of the independent-samples *t* test indicated no significant difference between the two means, $t(58) = 1.617$, $p = .11$. The mathematics teachers' agreement that the professional development regarding curriculum development improved the curriculum implementation ($M = 3.57$, $SD = 0.96$, $n = 28$) was not different from the ELA teachers' agreement ($M = 3.16$, $SD = 1.02$, $n = 32$). H27 was not supported.

H28. Teachers' perceptions that the professional development regarding curriculum implementation improved the curriculum implementation differ by content area.

The results of the independent-samples *t* test indicated no significant difference between the two means, $t(59) = 1.799$, $p = .077$. The mathematics teachers' agreement that the professional development regarding curriculum implementation improved the

curriculum implementation (M = 3.59, SD = 0.078, n = 29) was not different from the ELA teachers' agreement (M = 3.16, SD = 1.05, n = 32). H28 was not supported.

H29. Teachers' perceptions that the professional development regarding resource implementation improved the curriculum implementation differ by content area.

The results of the independent-samples t test indicated no significant difference between the two means, $t(59) = 1.849$ $p = .069$. The mathematics teachers' agreement that the professional development regarding resource implementation improved the curriculum implementation (M = 3.66, SD = 0.94, n = 29) was not different from the ELA teachers' agreement (M = 3.19, SD = 1.03, n = 32). H29 was not supported.

H30. Teachers' perceptions that the professional development regarding resource implementation improved the implementation of the new resource differ by content area.

The results of the independent-samples t test indicated no significant difference between the two means, $t(59) = 1.551$, $p = .126$. The mathematics teachers' agreement that the professional development regarding resource implementation improved the implementation of the new resource (M = 3.62, SD = 0.98, n = 29) was not different from the ELA teachers' agreement (M = 3.22, SD = 1.04, n = 32). H30 was not supported.

RQ7. To what extent do teachers perceive participation in the curriculum development process led to positive impacts in their classrooms?

Five hypotheses (H31-H35) are listed below. For each hypothesis, a one-sample t test was conducted to compare the mean against a test value of 3. The level of significance was set at .05 for each test. When appropriate, the effect size, as indexed by Cohen's d, is reported.

H31. Teachers perceive that participation in the curriculum development process helped implement the new curriculum in their classrooms.

The results of the one-sample *t* test indicated a statistically significant difference between the group mean and the test value, $t(59) = 4.907$, $p = .000$, Cohen's $d = 0.634$. The sample mean ($M = 3.67$, $SD = 1.05$) was significantly higher than the test value (3). H31 was supported. Teachers agree participation in the curriculum development process helped implement the new curriculum in their classroom. The effect size indicated a medium effect.

H32. Teachers perceive that participation in the curriculum development process led to improved instruction in their classroom.

The results of the one-sample *t* test indicated a statistically significant difference between the group mean and the test value, $t(60) = 4.431$, $p = .000$, Cohen's $d = 0.567$. The sample mean ($M = 3.62$, $SD = 1.10$) was significantly higher than the test value (3). H32 was supported. Teachers agree participation in the curriculum development process led to improved instruction in their classroom. The effect size indicated a medium effect.

H33. Teachers perceive that their participation in the curriculum development led to increased fidelity to instructional time allotments in core subjects.

The results of the one-sample *t* test indicated a statistically significant difference between the group mean and the test value, $t(60) = 4.388$, $p = .000$, Cohen's $d = 0.562$. The sample mean ($M = 3.56$, $SD = 0.99$) was significantly higher than the test value (3). H33 was supported. Teachers agree participation in the curriculum development led to increased fidelity to instructional time allotments in core subjects. The effect size indicated a medium effect.

H34. Teachers perceive that student scores on local assessments will improve as a result of their participation in the curriculum development process.

The results of the one-sample *t* test indicated a statistically significant difference between the group mean and the test value, $t(60) = 6.965$, $p = .000$, Cohen's $d = 0.892$. The sample mean ($M = 3.77$, $SD = 0.86$) was significantly higher than the test value (3). H34 was supported. Teachers agree student scores on local assessments will improve as a result of their participation in the curriculum development process. The effect size indicated a large effect.

H35. Teachers perceive that student scores on state assessments will improve as a result of their participation in the curriculum development process.

The results of the one-sample *t* test indicated a statistically significant difference between the group mean and the test value, $t(60) = 6.204$, $p = .000$, Cohen's $d = 0.794$. The sample mean ($M = 3.69$, $SD = 0.867$) was significantly higher than the test value (3). H35 was supported. Teachers agree student scores on state assessments will improve as a result of their participation in the curriculum development process. The effect size indicated a large effect.

RQ8. To what extent do teachers' perceptions that participation in the curriculum development process led to positive impacts in their classrooms differ by content area?

Five hypotheses (H36-H40) are listed. For each hypothesis, an independent-samples *t* test was conducted. The two sample means were compared for each test. The level of significance was set at .05. When appropriate, an effect size, as indexed by Cohen's *d*, is reported.

H36. Teachers' perceptions that participation in the curriculum development process helped implement the new curriculum in their classrooms differ by content area.

The results of the independent-samples *t* test indicated a statistically significant difference between the two means, $t(58) = 2.762$, $p = .008$, $d = 0.714$. The mathematics teachers' agreement that participation in the curriculum development process helped implement the new curriculum in their classrooms ($M = 4.03$, $SD = 0.87$, $n = 29$) was stronger than the ELA teachers' agreement ($M = 3.32$, $SD = 1.11$, $n = 31$). The effect size indicated a medium effect.

H37. Teachers' perceptions that participation in the curriculum development process led to improved instruction in their classroom differ by content area.

The results of the independent-samples *t* test indicated no significant difference between the two means, $t(59) = 1.642$, $p = .106$. The mathematics teachers' agreement that participation in the curriculum development process led to improved instruction in their classroom ($M = 3.86$, $SD = 1.03$, $n = 29$) was not different from the ELA teachers' agreement ($M = 3.41$, $SD = 1.13$, $n = 32$). H37 was not supported.

H38. Teachers' perceptions that their participation in the curriculum development process led to increased fidelity to instructional time allotments in core subjects differ by content area.

The results of the independent-samples *t* test indicated no significant difference between the two means, $t(59) = 1.799$, $p = .077$. The mathematics teachers' agreement that their participation in the curriculum development process led to increased fidelity to instructional time allotments in core subjects ($M = 3.79$, $SD = 1.08$, $n = 29$) was not

different from the ELA teachers' agreement (M = 3.34, SD = 0.87, n = 32). H38 was not supported.

H39. Teachers' perceptions that student scores on local assessments will improve as a result of their participation in the curriculum development process differ by content areas.

The results of the independent-samples t test indicated no significant difference between the two means, $t(59) = 1.705$, $p = .093$. The sample mean for mathematics teachers' agreement that student scores on local assessments will improve as a result of their participation in the curriculum development process (M = 3.97, SD = 0.87, n = 29) was not different from the ELA teachers' agreement (M = 3.59, SD = 0.84, n = 32). H39 was not supported.

H40. Teachers' perceptions that student scores on state assessments will improve as a result of their participation in the curriculum development process differ by content area.

The results of the independent-samples t test indicated no significant difference between the two means, $t(59) = 1.504$, $p = .138$. The mathematics teachers' agreement that student scores on state assessments will improve as a result of their participation in the curriculum development process (M = 3.86, SD = 0.88, n = 29) was not different from the ELA teachers' agreement (M = 3.53, SD = 0.84, n = 32). H40 was not supported.

RQ9. To what extent do teachers perceive the process for piloting of potential resources was adequate?

Seven hypotheses (H41-H47) are listed. For each hypothesis, a one-sample t test was conducted to compare the mean against a test value of 3. The level of significance

was set at .05 for each test. When appropriate, the effect size, as indexed by Cohen's *d*, is reported.

H41. Teachers perceive that the length of time allotted for piloting potential resources was appropriate.

The results of the one-sample *t* test indicated a statistically significant difference between the group mean and the test value, $t(55) = 2.733$, $p = .008$, Cohen's $d = 0.365$. The sample mean ($M = 3.43$, $SD = 1.17$) was significantly higher than the test value (3). H41 was supported. Teachers agree the length of time allotted for piloting potential resources was appropriate. The effect size indicated a small effect.

H42. Teachers perceive that the time of year for piloting potential resources was appropriate.

The results of the one-sample *t* test indicated a statistically significant difference between the group mean and the test value, $t(55) = 2.479$, $p = .016$, Cohen's $d = 0.331$. The sample mean ($M = 3.39$, $SD = 1.19$) was significantly higher than the test value (3). H42 was supported. Teachers agree the time of the year for piloting potential resources was appropriate. The effect size indicated a small effect.

H43. Teachers perceive that the number of teachers piloting potential resources was appropriate.

The results of the one-sample *t* test indicated a statistically significant difference between the group mean and the test value, $t(54) = 6.389$, $p = .000$, Cohen's $d = 0.861$. The sample mean ($M = 3.75$, $SD = 0.87$) was significantly higher than the test value (3). H43 was supported. Teachers agree participation in the curriculum development process led to improved instruction in their classroom. The effect size indicated a large effect.

H44. Teachers perceive that the number of potential resources piloted was appropriate.

The results of the one-sample *t* test indicated a statistically significant difference between the group mean and the test value, $t(53) = 4.070$, $p = .000$, Cohen's $d = 0.554$. The sample mean ($M = 3.56$, $SD = 1.00$) was significantly higher than the test value (3). H44 was supported. Teachers agree the number of potential resources piloted was appropriate. The effect size indicated a medium effect.

H45. Teachers perceive that the evaluation rubric for piloting potential resources was appropriate.

The results of the one-sample *t* test indicated a statistically significant difference between the group mean and the test value, $t(54) = 3.897$, $p = .000$, Cohen's $d = 0.525$. The sample mean ($M = 3.47$, $SD = 0.90$) was significantly higher than the test value (3). H45 was supported. Teachers agree the evaluation rubric for piloting potential resources was appropriate. The effect size indicated a medium effect.

H46. Teachers perceive that the evaluation rubric for piloting potential resources was comprehensive.

The results of the one-sample *t* test indicated a statistically significant difference between the group mean and the test value, $t(55) = 5.723$, $p = .000$, Cohen's $d = 0.765$. The sample mean ($M = 3.64$, $SD = 0.84$) was significantly higher than the test value (3). H46 was supported. Teachers agree the evaluation rubric for piloting potential resources was comprehensive. The effect size indicated a medium effect.

H47. Teachers perceive the process of piloting potential resources helped ensure the selection of a high-quality resource.

The results of the one-sample *t* test indicated a statistically significant difference between the group mean and the test value, $t(54) = 4.773$, $p = .000$, Cohen's $d = 0.644$. The sample mean ($M = 3.75$, $SD = 1.16$) was significantly higher than the test value (3). H47 was supported. Teachers agree the process of piloting potential resources helped ensure the selection of a high-quality resource. The effect size indicated a medium effect.

R10. To what extent are teachers' perceptions that the process for piloting of potential resources was adequate differ by content area?

Seven hypotheses (H48-H54) are listed. For each hypothesis, an independent-samples *t* test was conducted. The two sample means were compared for each test. The level of significance was set at .05. When appropriate, an effect size, as indexed by Cohen's *d*, is reported.

H48. Teachers' perceptions that the length of time allotted for piloting potential resources was appropriate differ by content area.

The results of the independent-samples *t* test indicated no significant difference between the two means, $t(54) = -1.758$, $p = .084$. The mathematics teachers' agreement that the length of time allotted for piloting potential resources was appropriate ($M = 3.15$, $SD = 1.13$, $n = 27$) was not different from the ELA teachers' agreement ($M = 3.69$, $SD = 1.17$, $n = 29$). H48 was not supported.

H49. Teachers' perceptions that the time of year for piloting potential resources was appropriate differ by content area.

The results of the independent-samples *t* test indicated no significant difference between the two means, $t(54) = -1.747$, $p = .086$. The mathematics teachers' agreement that the time of year for piloting potential resources was appropriate ($M = 3.11$,

SD = 0.93, *n* = 27) was not different from the ELA teachers' agreement (*M* = 3.66, *SD* = 1.34, *n* = 29). H49 was not supported.

H50. Teachers' perceptions that the number of teachers piloting potential resources was appropriate differ by content area.

The results of the independent-samples *t* test indicated a statistically significant difference between the two means, *t*(58) = 2.957, *p* = .005, *d* = 0.798. The mathematics teachers' agreement that the number of teachers piloting potential resources was appropriate (*M* = 4.07, *SD* = 0.39, *n* = 27) was stronger than ELA teachers' agreement (*M* = 3.43, *SD* = 1.07, *n* = 28). H6 was supported. The effect size indicated a medium effect.

H51. Teachers' perceptions that the number of potential resources piloted was appropriate differ by content area.

The results of the independent-samples *t* test indicated no significant difference between the two means, *t*(52) = 0.690, *p* = .493. The mathematics teachers' agreement that the number of potential resources piloted was appropriate (*M* = 3.65, *SD* = 0.80, *n* = 26) was not different from the ELA teachers' agreement (*M* = 3.46, *SD* = 1.17, *n* = 28). H51 was not supported.

H52. Teachers' perceptions that the evaluation rubric for piloting potential resources was appropriate differ by content area.

The results of the independent-samples *t* test indicated no significant difference between the two means, *t*(53) = -0.988, *p* = .328. The mathematics teachers' agreement that the evaluation rubric for piloting potential resources was appropriate (*M* = 3.35,

SD = 0.94, *n* = 26) was not different from the ELA teachers' agreement (*M* = 3.59, *SD* = 0.87, *n* = 29). H52 was not supported.

H53. Teachers' perceptions that the evaluation rubric for piloting potential resources was comprehensive differ by content area.

The results of the independent-samples *t* test indicated no significant difference between the two means, *t*(54) = -0.113, *p* = .911. The mathematics teachers' agreement that the evaluation rubric for piloting potential resources was comprehensive (*M* = 3.63, *SD* = 0.79, *n* = 27) was not different from the ELA teachers' agreement (*M* = 3.66, *SD* = 0.90, *n* = 29). H53 was not supported.

H54. Teachers' perceptions that the process of piloting potential resources helped ensure the selection of a high-quality mathematics resource differ by content area.

The results of the independent-samples *t* test indicated no significant difference between the two means, *t*(53) = 0.143, *p* = .887. The mathematics teachers' agreement that the process of piloting potential resources helped ensure the selection of a high-quality mathematics resource (*M* = 3.77, *SD* = 1.18, *n* = 26) was not different from the ELA teachers' agreement (*M* = 3.72, *SD* =1.16, *n* = 29). H54 was not supported.

Summary

Chapter 4 began with the descriptive statistics for the study participants. This chapter included the results of the statistical analyses for 54 hypotheses. Chapter 5 includes a summary of the study, findings related to the literature, and conclusions.

Chapter 5

Interpretation and Recommendations

In 2017, teacher teams in Bradley Public Schools began the curriculum development and resource adoption process. This study of teachers' perceptions of that process began with an introduction, background information, statement of the problem, significance of the study, delimitations, assumptions, research questions, the definition of terms, and organization of the study in Chapter 1. Chapter 2 was a review of the literature. In Chapter 3, the methodology of the study was described, and Chapter 4 provided the descriptive statistics and results of the hypothesis testing. Included in Chapter 5 are the study summary, findings related to the literature, and the conclusions.

Study Summary

In this study, teacher perceptions of the curriculum development and resource adoption process were investigated. Provided in this section is an overview of the problem, a review of the purpose statement and research questions. Also included is a review of the study's methodology of the study and, finally, the major findings of the study.

Overview of the problem. In 2010, Kansas released the KCCRS standards, and Bradly Public Schools needed to update their local curriculum to match those standards. Bradley Public Schools began the process of curriculum development and resource adoption in 2017. Once the curriculum was developed, resources were piloted and adopted. Teachers in Bradley Public Schools completed the curriculum development and resource adoption process. District leaders wanted to gather the perceptions of teachers

involved in the mathematics and ELA curriculum development and resource adoption process so the process for additional content areas could be improved.

Purpose statement and research questions. The first purpose of this study was to determine the extent teachers perceive participation in the curriculum development process was authentic. The second purpose of this study was to determine the extent teachers perceive participation in the curriculum development process was effective. The third purpose of the study was to determine to what extent teachers perceive the professional development regarding the curriculum development and curriculum resources implementation was effective. The fourth purpose of this study was to determine the extent teachers perceive participation in the curriculum development process led to positive impacts in their classrooms. The fifth purpose of the study was to determine the extent teachers perceive the process for piloting of potential resources was adequate. The final purpose of the study was to determine whether teacher perceptions differ by content area. To address the purposes of this study, 10 research questions were posed, and 54 hypotheses were tested.

Review of the methodology. A quantitative research design with data obtained through a researcher-developed survey was utilized in this study. The dependent variable was the perceptions of teachers who participated in the curriculum development and resource adoption processes. The independent variable was the teacher's content area (mathematics or ELA). Elementary mathematics teachers must have participated in the curriculum development process during the 2017-2018 school year. Those elementary teachers who participated in the portion of the survey related to piloting potential materials must have participated in the piloting of potential resources during the 2019-

2020 school year. Secondary mathematics teachers must have participated in the curriculum development process during the 2016-2017 school year. Those secondary teachers who responded to the portion of the survey related to piloting potential materials must have participated in the piloting of potential resources during the 2019-2020 school year. Elementary ELA teachers must have participated in the curriculum development process during the 2019-2020 school year. Those elementary teachers participated in the portion of the survey related to piloting potential materials must have participated in the piloting of potential resources during the 2019-2020 school year. Secondary ELA teachers must have participated in the curriculum development process during the 2016-2017 school year. Those secondary teachers participated in the portion of the survey related to piloting potential materials must have participated in the piloting of potential resources during the 2019-2020 school year. The researcher used one-sample *t* tests and independent-samples *t* tests to analyze survey responses.

Major findings. The results of the analyses indicated that teachers' perceptions of the curriculum development and resource adoption processes were positive. With a few exceptions, teachers agreed that they felt included, thought the processes were effective, and would have positive impacts in their classroom and that the professional development provided was effective. RQ1 and RQ2 were related to the authenticity of the curriculum development process; teachers agreed with the following.

- They were included in the curriculum development process.
- Their ideas and opinions were listened to during the process.
- Their colleagues' ideas and opinions were listened to during the process.
- Involving all teachers made the curriculum development process meaningful.

Teachers did not agree that interrelated special education teachers were a crucial part of the process. Mathematics teachers agreed more strongly than ELA teachers that

- They were included in the curriculum development process.
- Their ideas and opinions were listened to during the process.
- Their colleagues' ideas and opinions were listened to during the process.

There was no difference in agreement between mathematics and ELA teachers that interrelated special education teachers were a crucial part of the curriculum development team or that involving all teachers made the curriculum development process more meaningful.

Related to teachers' perceptions that the curriculum development process was effective, teachers agreed with the following.

- Their involvement in the curriculum development process increased their understanding of the local curriculum.
- Their involvement in the curriculum development process increased their understanding of the KCCRS standards.
- The sequence of curriculum development tasks was appropriate.
- The time allotted for curriculum development was well matched with the tasks to be completed.
- The curriculum development process led to the selection of a high-quality resource.

Mathematics teachers agreed more strongly than did ELA teachers that

- Their involvement in the curriculum development process increased their understanding of the local curriculum.

- Their involvement in the curriculum development process increased their understanding of the KCCRS standards.
- The sequence of curriculum development tasks was appropriate.
- The curriculum development process led to the selection of a high-quality resource.

There was no difference in agreement between mathematics and ELA teachers that the time allotment for the curriculum development process was well matched with the tasks to be completed.

Related to teachers' perceptions about professional development, teachers agreed with the following.

- The professional development provided related to the curriculum development process improved the curriculum development process.
- The professional development provided related to curriculum development improved the curriculum implementation.
- The professional development provided related to curriculum implementation improved the curriculum implementation.
- The professional development provided related to resource implementation improved the curriculum implementation.
- The professional development provided related to resource implementation improved the implementation of the new resource.

There was no difference in perception between the mathematics and ELA teachers' perceptions that the professional development regarding the curriculum development and curriculum and resource implementation was effective.

Related to teacher perceptions that participation in the curriculum development process led to positive impacts in their classrooms, teachers agreed with the following.

- Participation in the curriculum development process helped implement the new curriculum in their classroom.
- Participation in the curriculum development process led to improved instruction in their classroom.
- Participation in the curriculum development led to increased fidelity to instructional time allotments in core subjects.
- Student scores on local assessments will improve as a result of their participation in the curriculum development process.
- Student scores on state assessment will improve as a result of their participation in the curriculum development process.

Mathematics teachers agreed more strongly than ELA teachers that participation in the curriculum development process helped implement the new curriculum in their classrooms. There was no difference in perception between the mathematics and ELA teachers for the following items.

- Participation in the curriculum development process led to improved instruction in their classroom.
- Participation in the curriculum development led to increased fidelity to instructional time allotments in core subjects.
- Student scores on local assessments will improve as a result of their participation in the curriculum development process.

- Student scores on state assessment will improve as a result of their participation in the curriculum development process.

Related to teacher perceptions that the process for piloting potential resources was adequate, teachers agreed with the following.

- The length of time allotted for piloting potential resources was appropriate.
- The time of the year for piloting potential resources was appropriate.
- The number of teachers piloting potential resources was appropriate.
- The number of potential resources piloted was appropriate.
- The evaluation rubric for piloting potential resources was appropriate.
- The rubric for piloting potential resources was comprehensive.
- The process of piloting potential resources helped ensure the selection of a high-quality resource,

Mathematics teachers agreed more strongly than ELA teachers that the number of teachers piloting potential resources was appropriate. There was no difference in perception between the mathematics and ELA teachers for the following items.

- The length of time allotted for piloting potential resources was appropriate.
- The time of the year for piloting potential resources was appropriate.
- The number of potential resources piloted was appropriate.
- The evaluation rubric for piloting potential resources was appropriate.
- The rubric for piloting potential resources was comprehensive.
- The process of piloting potential resources helped ensure the selection of a high-quality resource.

Findings Related to the Literature

There were few studies in which researchers investigated teacher perceptions of the curriculum development process or teacher perceptions of the resource adoption process. A number of researchers indicated that there was little teacher involvement in these processes. At the time of this study, no literature was found in which ELA teacher perceptions were compared to mathematics teacher perceptions about the curriculum development or resource adoption process.

Teachers in the current study agreed that they were included in the curriculum development process. This finding supports the opinions of Saylor (1954) and Tyler (1981), who both posited that teachers should be included in the curriculum development process. It is in contrast with Mushariff's (2000) finding that teachers' involvement in the curriculum development process was insufficient and was largely incidental. This result is also in contrast with Abudu and Mensa (2016), who found that 90% of teachers felt their views were not incorporated in the curriculum development process, and 46% reported low or very low involvement in the curriculum development process.

Teachers in the current study agreed that their involvement in the curriculum development process increased their understanding of the local curriculum and the KCCRS standards. This result supports Lauridsen's (2003) finding that teachers involved in the curriculum development process had a better understanding of the curriculum.

In the current study, teachers agreed that professional development related to the curriculum development process improved the curriculum development process. This finding is in contrast to Little (1985), who found that teachers felt intimidated by the curriculum development process because they believed they did not have enough

training. Similarly, the finding about professional development in the current study contrasts with Sikora (2018), who found that teachers had not received professional development on the curriculum development process but believed it should have been provided.

Teachers in the current study agreed that participation in the curriculum development process helped them implement the new curriculum in their classrooms. This finding is in support of previous research by Johansen (1967). Johansen found that if teachers believed their participation was authentic and influential, it increased their implementation of the curriculum. Lauridsen (2003) found that teachers agreed they were more likely to implement the curriculum if they participated in the curriculum development. The current study supports Lauridsen's finding.

As noted by Bennett (2002), in 1917, Updegraff found that participation in curriculum development positively impacted teachers' instructional efficiency. Young (1988) found that 90% of teachers agreed their participation on curriculum committees would positively impact their teaching. Similarly, Sikora (2018) found that teachers generally reported a positive perception of the curriculum development process and felt it benefitted their students and improved classroom instruction. The findings of the current study are in support of the findings of these researchers. In the current study, teachers agreed that participation in the curriculum development process led to additional positive impacts in their classrooms.

Conclusions

The curriculum development process and resource adoption process are approached differently by school districts. In Bradley Public Schools, teachers wrote the

curriculum and selected resources. This study on their perceptions of these processes yielded several significant findings. Based on these findings, this section includes the implications for action, recommendations for future research, and concluding remarks.

Implications for action. The results of this study indicate that Bradley Public Schools teachers have positive perceptions of their participation in the curriculum development and resource adoption process. They perceived they were included in the processes and that their participation was effective and would have a positive impact in the classroom. They also felt the professional development was effective and that the piloting process was adequate. Bradley Public Schools should continue to use teacher committees in the curriculum development and resource adoption processes.

There were areas, however, that mathematics teachers agreed more strongly than ELA teachers. Mathematics teachers' agreement that they and their colleagues were included and listened to during the curriculum development process was stronger than the ELA teachers. Mathematics teachers also agreed more strongly than ELA teachers that participation in the curriculum development process led to a better understanding of local and state standards and would improve implementation in their classrooms. Considering these findings, Bradley Public Schools should gather more detailed comments from ELA teachers to improve the process for additional content areas.

Both mathematics and ELA teachers did not agree that interrelated special education teachers were a critical part of the curriculum development team. Interrelated special education teachers provide services to students in all core content areas and should be part of the curriculum development committee. As Bradley Public Schools continues to develop curriculum for all content areas, the district should ensure either a

greater number of interrelated special education teachers participate in the process or that their role is given greater importance in the process.

Based on the findings of the current study, it is recommended that all school districts include teachers in the curriculum development process. Further, districts should provide professional development for teachers participating in these processes. Districts should also include teachers in the resource adoption process and allow for the piloting of potential resources.

Recommendations for future research. The purpose of this study was to gather teacher perceptions of the curriculum development and resource adoption processes. An additional purpose was to compare the perceptions of mathematics and ELA teachers on curriculum development and resource adoption processes. One recommendation is to collect data in the Bradley School District from the social studies and science teachers after they have participated in these processes. This research would provide data on whether modifications to the process after evaluating the current data have been beneficial. Additionally, Bradley School District could determine whether there are differences in student achievement on the Kansas State assessments before and after the curriculum development and resource adoption process.

This research should be extended by conducting a mixed-methods study, collecting quantitative and qualitative data. Interviews should be completed with teachers or groups of teachers who have participated in the processes. This type of study could allow the researcher to gather teacher recommendations on specific improvements that might be made to the curriculum development and resource adoption processes.

This study should be adapted in smaller school districts by conducting qualitative research with a small group of teachers. The researcher could focus on only one aspect of curriculum development or resource adoption. By doing this, more in-depth data could be obtained.

This study should also be conducted in school districts of varying numbers of students and locations. Bradley Public Schools is a medium-sized district in the Midwest. Data collected using the same survey instrument in large and small districts and different areas of the United States or the world might yield results that benefit districts of all sizes and locations.

Concluding remarks. Limited studies have focused on teacher perceptions of the curriculum development or resource adoption processes. In the studies related to teacher participation in these processes, findings indicated that teachers and administrators believed teachers should have greater participation. The current study is the first in which teacher perceptions were collected related to their participation in the curriculum development and resource adoption processes.

Given the findings of the current research and prior research, educational leaders should realize the importance of including teachers in both processes. Bradley Public Schools should continue these processes with all content areas for which curriculum is be written and resources adopted. Furthermore, all districts should develop and implement teacher-driven processes for curriculum development and resource adoption.

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Appendices

Appendix A: Math and Language Arts Curriculum Development and Resource Adoption Surveys

Math Curriculum Development and Resource Adoption Survey

Items 1-5 are related to your experience as an educator.

1. What school level do you teach? (Check all that apply)
   □ Primary (K-2) □ Intermediate (3-5) □ Middle School (6-8) □ High School (9-12) Other_____

2. Are you a general education teacher or a special education teacher?
   □ general education teacher □ special education teacher

3. How many years of teaching experience do you have, including this year?
   □ 1 □ 2-5 □6-10 □ 11-15 □ 16-20 □ 21-25 □ 26+

4. How many years have you taught in Lansing Public Schools, including this year?
   □ 1 □ 2-5 □6-10 □ 11-15 □ 16-20 □ 21-25 □ 26+

Items 5-14 are related to the curriculum development process. Please respond to your level of agreement with each item from strongly disagree to strongly agree.

5. I felt included in the mathematics curriculum development process.
   □ Strongly Disagree □ Somewhat Disagree □ Neutral □ Somewhat Agree □ Strongly Agree

6. My ideas and opinions about mathematics curriculum development were listened to during the process.
   □ Strongly Disagree □ Somewhat Disagree □ Neutral □ Somewhat Agree □ Strongly Agree

7. My colleagues' ideas and opinions about mathematics curriculum development were listened to during the process.
   □ Strongly Disagree □ Somewhat Disagree □ Neutral □ Somewhat Agree □ Strongly Agree

8. Interrelated special education teachers were a critical part of the curriculum development team.
   □ Strongly Disagree □ Somewhat Disagree □ Neutral □ Somewhat Agree □ Strongly Agree

9. Involving all mathematics teachers made the curriculum development process meaningful.
   □ Strongly Disagree □ Somewhat Disagree □ Neutral □ Somewhat Agree □ Strongly Agree

10. Participating in the mathematics curriculum development process increased my understanding of the local mathematics curriculum.
    □ Strongly Disagree □ Somewhat Disagree □ Neutral □ Somewhat Agree □ Strongly Agree

11. Participating in the mathematics curriculum development process increased my understanding of the Kansas College and Career Standards in Mathematics.
    □ Strongly Disagree □ Somewhat Disagree □ Neutral □ Somewhat Agree □ Strongly Agree

12. The sequence of mathematics curriculum development tasks was appropriate.
    □ Strongly Disagree □ Somewhat Disagree □ Neutral □ Somewhat Agree □ Strongly Agree

13. The amount of time allotted for mathematics curriculum development was well matched with the tasks to be completed.
    □ Strongly Disagree □ Somewhat Disagree □ Neutral □ Somewhat Agree □ Strongly Agree

14. The mathematics curriculum development process led to the selection of a high-quality mathematics resources.
    □ Strongly Disagree □ Somewhat Disagree □ Neutral □ Somewhat Agree □ Strongly Agree

Items 15-19 are related to professional development. Please respond to your level of agreement with each item from strongly disagree to strongly agree.

15. The professional development provided related to curriculum development improved the mathematics curriculum development process.
    □ Strongly Disagree □ Somewhat Disagree □ Neutral □ Somewhat Agree □ Strongly Agree

16. The professional development provided related to curriculum development improved the mathematics curriculum implementation.
    □ Strongly Disagree □ Somewhat Disagree □ Neutral □ Somewhat Agree □ Strongly Agree

17. The professional development provided related to curriculum implementation improved the implementation of the new mathematics curriculum.
    □ Strongly Disagree □ Somewhat Disagree □ Neutral □ Somewhat Agree □ Strongly Agree

18. The professional development provided related to resource implementation improved the mathematics curriculum implementation.
    □ Strongly Disagree □ Somewhat Disagree □ Neutral □ Somewhat Agree □ Strongly Agree

19. The professional development provided related to resource implementation improved the implementation of the new mathematics resources.
    □ Strongly Disagree □ Somewhat Disagree □ Neutral □ Somewhat Agree □ Strongly Agree

Items 20-24 are related to the impact of your participation in the curriculum development process. Please respond to your level of agreement with each item from strongly disagree to strongly agree.

20. My participation in the mathematics curriculum development process helped me implement the new curriculum in my classroom.
    □ Strongly Disagree □ Somewhat Disagree □ Neutral □ Somewhat Agree □ Strongly Agree

21. My participation in the mathematics curriculum development process has led to improved instruction in my classroom.
    □ Strongly Disagree □ Somewhat Disagree □ Neutral □ Somewhat Agree □ Strongly Agree

22. My participation in the mathematics curriculum development process has increased fidelity to instructional time allotments in mathematics in my classroom.
    □ Strongly Disagree □ Somewhat Disagree □ Neutral □ Somewhat Agree □ Strongly Agree

23. I believe my participation in the mathematics curriculum development process will lead to improved student achievement on local assessments.
□ Strongly Disagree □ Somewhat Disagree □ Neutral □ Somewhat Agree □ Strongly Agree

24. I believe my participation in the mathematics curriculum development process will lead to improved student achievement on state assessments.
□ Strongly Disagree □ Somewhat Disagree □ Neutral □ Somewhat Agree □ Strongly Agree

If you were part of the mathematics resource piloting process, please respond from strongly disagree to strongly agree on items 25-30. If you were not part of the process, please check "not applicable on items" 25-30.

25. The length of time allotted for piloting potential mathematics resources was appropriate.
□ Strongly Disagree □ Somewhat disagree □ Neutral □ Somewhat Agree □ Strongly Agree □ Not Applicable

26. The time of year for piloting potential mathematics resources was appropriate.
□ Strongly Disagree □ Somewhat disagree □ Neutral □ Somewhat Agree □ Strongly Agree □ Not Applicable

27. The number of mathematics teachers involved in piloting potential mathematics resources was appropriate.
□ Strongly Disagree □ Somewhat disagree □ Neutral □ Somewhat Agree □ Strongly Agree □ Not Applicable

28. The number of potential mathematics resources piloted was appropriate.
□ Strongly Disagree □ Somewhat disagree □ Neutral □ Somewhat Agree □ Strongly Agree □ Not Applicable

29. The evaluation rubric for piloted mathematics resources was appropriate.
□ Strongly Disagree □ Somewhat disagree □ Neutral □ Somewhat Agree □ Strongly Agree □ Not Applicable

30. The evaluation rubric for piloted mathematics resources was comprehensive.
□ Strongly Disagree □ Somewhat disagree □ Neutral □ Somewhat Agree □ Strongly Agree □ Not Applicable

31. The process of piloting potential mathematics resources helped ensure the selection of a high-quality mathematics resources.
□ Strongly Disagree □ Somewhat disagree □ Neutral □ Somewhat Agree □ Strongly Agree □ Not Applicable

ELA Curriculum Development and Resource Adoption Survey

Items 1-5 are related to your experience as an educator.

1. What school level do you teach? (Check all that apply)
   □ Primary (K-2) □ Intermediate (3-5) □ Middle School (6-8) □ High School (9-12) Other_____

2. Are you a general education teacher or a special education teacher?
   □ general education teacher □ special education teacher

3. How many years of teaching experience do you have, including this year?
   □ 1 □ 2-5 □6-10 □ 11-15 □ 16-20 □ 21-25 □ 26+

4. How many years have you taught in Lansing Public Schools, including this year?
   □ 1 □ 2-5 □6-10 □ 11-15 □ 16-20 □ 21-25 □ 26+

Items 5-14 are related to the curriculum development process. Please respond to your level of agreement with each item from strongly disagree to strongly agree.

5. I felt included in the mathematics curriculum development process.
   □ Strongly Disagree □ Somewhat Disagree □ Neutral □ Somewhat Agree □ Strongly Agree

6. My ideas and opinions about ELA curriculum development were listened to during the process.
   □ Strongly Disagree □ Somewhat Disagree □ Neutral □ Somewhat Agree □ Strongly Agree

7. My colleagues' ideas and opinions about ELA curriculum development were listened to during the process.
   □ Strongly Disagree □ Somewhat Disagree □ Neutral □ Somewhat Agree □ Strongly Agree

8. Interrelated special education teachers were a critical part of the curriculum development team.
   □ Strongly Disagree □ Somewhat Disagree □ Neutral □ Somewhat Agree □ Strongly Agree

9. Involving all ELA teachers made the curriculum development process meaningful.
   □ Strongly Disagree □ Somewhat Disagree □ Neutral □ Somewhat Agree □ Strongly Agree

10. Participating in the ELA curriculum development process increased my understanding of the local mathematics curriculum.
    □ Strongly Disagree □ Somewhat Disagree □ Neutral □ Somewhat Agree □ Strongly Agree

11. Participating in the ELA curriculum development process increased my understanding of the Kansas College and Career Standards in Mathematics.
    □ Strongly Disagree □ Somewhat Disagree □ Neutral □ Somewhat Agree □ Strongly Agree

12. The sequence of ELA curriculum development tasks was appropriate.
□ Strongly Disagree □ Somewhat Disagree □ Neutral □ Somewhat Agree □ Strongly Agree

13. The amount of time allotted for ELA curriculum development was well matched with the tasks to be completed.
□ Strongly Disagree □ Somewhat Disagree □ Neutral □ Somewhat Agree □ Strongly Agree

14. The ELA curriculum development process led to the selection of a high-quality mathematics resources.
□ Strongly Disagree □ Somewhat Disagree □ Neutral □ Somewhat Agree □ Strongly Agree

Items 15-19 are related to professional development. Please respond to your level of agreement with each item from strongly disagree to strongly agree.

15. The professional development provided related to curriculum development improved the ELA curriculum development process.
□ Strongly Disagree □ Somewhat Disagree □ Neutral □ Somewhat Agree □ Strongly Agree

16. The professional development provided related to curriculum development improved the ELA curriculum implementation.
□ Strongly Disagree □ Somewhat Disagree □ Neutral □ Somewhat Agree □ Strongly Agree

17. The professional development provided related to curriculum implementation improved the implementation of the new ELA curriculum.
□ Strongly Disagree □ Somewhat Disagree □ Neutral □ Somewhat Agree □ Strongly Agree

18. The professional development provided related to resource implementation improved the ELA curriculum implementation.
□ Strongly Disagree □ Somewhat Disagree □ Neutral □ Somewhat Agree □ Strongly Agree

19. The professional development provided related to resource implementation improved the implementation of the new ELA resources.
□ Strongly Disagree □ Somewhat Disagree □ Neutral □ Somewhat Agree □ Strongly Agree

Items 20-24 are related to the impact of your participation in the curriculum development process. Please respond to your level of agreement with each item from strongly disagree to strongly agree.

20. My participation in the ELA curriculum development process has led to improved instruction in my classroom.
□ Strongly Disagree □ Somewhat Disagree □ Neutral □ Somewhat Agree □ Strongly Agree

21. My participation in the ELA curriculum development process helped me implement the new curriculum in my classroom.
□ Strongly Disagree □ Somewhat Disagree □ Neutral □ Somewhat Agree □ Strongly Agree

22. My participation in the ELA curriculum development process has increased fidelity to instructional time allotments in mathematics in my classroom.
□ Strongly Disagree □ Somewhat Disagree □ Neutral □ Somewhat Agree □ Strongly Agree

23. I believe my participation in the ELA curriculum development process will lead to improved student achievement on local assessments.
□ Strongly Disagree □ Somewhat Disagree □ Neutral □ Somewhat Agree □ Strongly Agree

24. I believe my participation in the ELA curriculum development process will lead to improved student achievement on state assessments.
□ Strongly Disagree □ Somewhat Disagree □ Neutral □ Somewhat Agree □ Strongly Agree

If you were part of the ELA resource piloting process, please respond from strongly disagree to strongly agree on items 25-30. If you were not part of the process, please check "not applicable on items" 25-30.

25. The length of time allotted for piloting potential ELA resources was appropriate.
□ Strongly Disagree □ Somewhat disagree □ Neutral □ Somewhat Agree □ Strongly Agree □ Not Applicable

26. The time of year for piloting potential ELA resources was appropriate.
□ Strongly Disagree □ Somewhat disagree □ Neutral □ Somewhat Agree □ Strongly Agree □ Not Applicable

27. The number of ELA teachers involved in piloting potential mathematics resources was appropriate.
□ Strongly Disagree □ Somewhat disagree □ Neutral □ Somewhat Agree □ Strongly Agree □ Not Applicable

28. The number of potential ELA resources piloted was appropriate.
□ Strongly Disagree □ Somewhat disagree □ Neutral □ Somewhat Agree □ Strongly Agree □ Not Applicable

29. The evaluation rubric for piloted ELA resources was appropriate.
□ Strongly Disagree □ Somewhat disagree □ Neutral □ Somewhat Agree □ Strongly Agree □ Not Applicable

30. The evaluation rubric for piloted ELA resources was comprehensive.
□ Strongly Disagree □ Somewhat disagree □ Neutral □ Somewhat Agree □ Strongly Agree □ Not Applicable

31. The process of piloting potential ELA resources helped ensure the selection of a high-quality mathematics resources.
□ Strongly Disagree □ Somewhat disagree □ Neutral □ Somewhat Agree □ Strongly Agree □ Not Applicable

Appendix B: Bradley Public Schools Letter of Permission for Research

Dear Ms. Lee,

I am pleased to tell you that your request to do research in the [redacted] School District is approved. In any of your work please do not refer to [redacted] by name, but, rather, a suburban school in Northeastern Kansas (or something similar of your choosing). Please do not use any identifying information related to staff or students.

Thank you,
[redacted]

[redacted]
Assistant Superintendent of Teaching and Learning
[redacted]
[redacted]

Appendix C: Institutional Review Board Approval Letter

Baker University Institutional Review Board

October 28th, 2020

Dear Becky Lee and Susan Rogers,

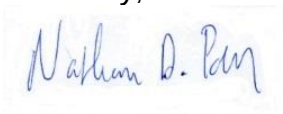
The Baker University IRB has reviewed your project application and approved this project under Exempt Status Review. As described, the project complies with all the requirements and policies established by the University for protection of human subjects in research. Unless renewed, approval lapses one year after approval date.

Please be aware of the following:

1. Any significant change in the research protocol as described should be reviewed by this Committee prior to altering the project.
2. Notify the IRB about any new investigators not named in original application.
3. When signed consent documents are required, the primary investigator must retain the signed consent documents of the research activity.
4. If this is a funded project, keep a copy of this approval letter with your proposal/grant file.
5. If the results of the research are used to prepare papers for publication or oral presentation at professional conferences, manuscripts or abstracts are requested for IRB as part of the project record.
6. If this project is not completed within a year, you must renew IRB approval.

If you have any questions, please contact me at npoell@bakeru.edu or 785.594.4582.

Sincerely,



Nathan Poell, MLS
Chair, Baker University IRB

Baker University IRB Committee
Sara Crump, PhD
Nick Harris
Christa Manton, PhD
Susan Rogers, PhD