The Proposed Implementation Of Proficiency-Based Diplomas Within The Larger Context Of Educational Transformation In Maine

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The Proposed Implementation of Proficiency-Based Diplomas within the Larger Context of Educational Transformation in Maine

by

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A DISSERTATION

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The Proposed Implementation of Proficiency-based Diplomas within the Larger Context of Educational Transformation in Maine

Abstract

This transformation from an industrialized age model to a student-centered, standards-based model has received various reactions from a multitude of stakeholders. In May 2012, the 125th Maine Legislature passed into law LD 1422, *An Act to Prepare Maine People for the Future Economy*. This law required students that graduate from Maine public high schools to graduate with a diploma that demonstrated proficiency on standards in eight content areas and guiding principles. One prior study conducted in four phases by the Maine Education Policy Research Institute (MEPRI) examined the impacts, challenges and facilitators within implementation of this state policy. The focus for this study was to document, analyze and describe how school district leaders in Maine have proposed to implement LD 1422 by July 1, 2021. As all Maine districts were required to complete a confirmation of readiness application or an extension application with the Maine Department of Education (MDOE), this study reviewed these applications and district policies. The collected data were coded, analyzed and organized in relation to the research questions. Findings were reported by five categories: background metrics, state extension options, policy implementations, professional development and patterns and trends. This research suggests that there is a personalized learning approach to the implementation of LD 1422 as no significant patterns or trends emerged. The study suggests that LD 1422 was an impetus for change as districts increased professional development (91%) and changed district policies (68.8%). The study found that 81.3% of districts are measuring
proficiency in four content areas by 2021 and 65.5% of districts are measuring proficiency of standards through proficiency scales or dual grading scales. The study revealed that the extension option chosen did not impact the implementation efforts of the districts. This study offers recommendations to the Maine Department of Education, Maine Legislature, and educational leaders.
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CHAPTER 1
INTRODUCTION

Classroom are changing in North America. Many teachers are incorporating student input in creating classroom cultures of learning, curriculum and assessments and instruction as they build a standards-based system. Following the passage of No Child Left Behind, state-level policies throughout the United States established varying high school graduation requirements for exiting seniors (Silvernail, Stump, Stewart-McCafferty & Hawes, 2014). The states of “Colorado, Oregon, New Hampshire, Vermont and Maine” adopted a standards-based diploma system (Silvernail et al., 2014). This transformation from an industrialized age model to a student-centered, standards-based model has received various reactions from a multitude of stakeholders as there is very little empirical research that has examined the processes of implementation (Silvernail et al., 2014).

In May 2012, the 125th Maine Legislature passed into law LD 1422, *An Act to Prepare Maine People for the Future Economy*. This law required students that graduate from Maine public high schools to graduate with a diploma that demonstrated proficiency on standards in eight content areas and guiding principles. The content areas include standards for English language arts, mathematics, science and technology, social studies, health and physical education, visual and performing arts, world languages and career and educational development. The guiding principles include standards related to the learner being a clear and effective communicator, self-directed and lifelong learner, creative and practical problem-solver, responsible and informed citizen, and integrated and informed thinker.

The Maine Department of Education (MDOE) began providing assistance to school departments financially and through site visits to help schools systems make this transformation.
The school districts received 1/10 of 1% of their total district’s budget to help make the transition to meet the new legal requirements. A plan for how these funds would be used was required and approved by the Maine Department of Education. The Department of Education was also required to maintain a website with resources. These resources were divided into four main areas: basics of proficiency-based education, mission and vision, curriculum and reporting and community engagement. Within each area, the Department of Education provided documentation of best practices, videos and examples from school districts. The initial deadline for the implementation of all legal requirements was January 1, 2018.

Although proficiency-based educational transformation is occurring nationally, few states have passed legislation with a strategic plan centered on this transformation. The state’s educational plan drafted in 2012 outlined five key transformative practices: effective, learner-centered education; great teachers and leaders; multiple pathways for learner achievement; comprehensive school and community supports; and coordinated and effective state support (MDOE, 2015). This model was called “Education Evolving” in which students would have a more active role in organizing their education and more choice in deciding how they master the academic standards (MDOE, 2015). To gain support with this transition, Maine partnered with over 30 state organizations to help implement the plan. Some of these organizations include Maine Cohort for Customized Learning (MCCL), Great Schools Partnership (GSP), Jobs for Maine Graduates (JMG), Maine School Management Association (MSMA), New England Secondary Schools Consortium (NESSC) and the University of Maine System.

The state also funded a small percentage of each district’s budget to help support the transformation. However, each district determined how they would use these funds. Some district leaders chose to use this money for professional development, costs of software to track
proficiencies, or funding substitute teachers to allow time for teachers to do the necessary preparation. With districts having local control to implement their proficiency-based diploma system, the transition to a proficiency-based system could look very different depending on the foci of each district. For example, districts that chose to receive professional development from MCCL compared to GSP may have two different curriculums. MCCL delivers a K-12 continuum of standards in all eight content areas while GSP develops graduation standards within each school district providing exemplar standards at the 5th, 8th and high school performance indicator levels in all eight content areas. While each school district would have standards at which to measure proficiency, the definition of proficiency varies among school districts as each school district is using different curriculum. With MCCL learning targets are clustered in grade level spans, K-2, 3-5, 6-8, and 9-12. Students move along a continuum of learning and proficiency that is not determined by the age of the child at any specific grade level. Children move from learning target to learning target as they demonstrate proficiency. Other curriculums are more aligned to grade level specific learning targets. In this model, proficiency is determined by the learning targets assigned to that specific grade level. Having local control within LD 1422, may allow for differences in practice and policy leading to educational differences across Maine.

While many district leaders in Maine began the work to address LD 1422 and the MDOE worked with districts on implementation plans, not all stakeholders embraced the legislation. Many district leaders that began the work needed more time to implement the requirements of the legislation. In 2014, the Maine Department of Education required school administrative units to submit a confirmation of readiness application or one of six extension options for implementing systems that support the awarding of proficiency-based diplomas starting in 2018.
(MDOE, 2015). Then acting Commissioner Rier wrote in a letter to Superintendents (2014), stating: “Even districts that have eagerly pursued implementation and believe deeply in the value of these systems in strengthening teaching and learning admit they may not be ready in all content areas by 2018.” With this announcement, the MDOE also released a readiness survey to aide districts in their implementation process and to provide the MDOE a snapshot of where the school districts were in the implementation process (Warren, 2014).

In 2015, superintendents, curriculum directors, teachers, businesses, Great Schools Partnership (GSP), Maine Cohort for Customized Learning (MCCL) and others lobbied for changes to LD 1422. From these sessions, the Joint Standing Committee on Education and Cultural Affairs enacted the following changes to LD 1422. Districts now had more time to graduate students with a proficiency-based diploma starting in 2021 with the four content areas of English language arts, mathematics, science and technology and social studies and the guiding principles. Each year following, districts must add on one content area of proficiency until all content areas are included by 2025. The Joint Standing Committee also enacted legislation that allowed each district to offer proficiency certificates in each content area and required districts to report out proficiency-based diploma data beginning in 2017. The complete statute can be read in Appendix A.

When districts lobbied for changes to LD 1422, it was clear they needed more time to implement LD 1422, but also needed more resources. “While the law and the state’s tradition of local education control puts the responsibility of implementation and policy development on local school units”, the Maine Department of Education needs to provide assistance (Warren, 2014). This support was provided by publication of a web site with online best practices, a portal of web resources and on-site visits depending on the type of extension application
submitted to the Maine DOE. During these on-site visits by the MDOE in 2014 and 2015, schools were provided feedback on their extension applications in alignment with the state’s vision of LD 1422. Feedback was provided by a team of proficiency-based content area specialists that reviewed each district’s standards, instructional and assessment practices.

When LD 1422 was enacted in 2012, the Maine Legislature’ Joint Standing Committee on Education and Cultural Affairs commissioned the Maine Education Policy Research Institute (MEPRI) to conduct an ongoing study that examines the impacts, challenges and facilitators within implementation of this state policy (Stump, Doykos, & Fallona, 2016). There were four phases of this study. Phase one analyzed the implementation at the school level. Phase two analyzed the implementation at the district level. Phase three analyzed district level high school graduation policies. Phase four analyzed ongoing practices of previous districts studied in prior phases of the study. These studies serve as foundational studies as there are very little data on the implementation of LD 1422 in Maine school districts. These studies provide information on current practices through case studies and suggestions to the MDOE and the state legislature as they continue to make implementation decisions.

The first phase, *Preliminary Implementation of Maine’s Proficiency-based Diploma Program* (2012), analyzed nine sample schools as they revealed their transition strategies. Over two years, the study focused on the “preliminary development, costs and impacts of standards-based school programs in Maine” (Silvernail et al., 2013, p. 2). The first phase of the study presented findings that showed that “Maine educators and educational leaders were working diligently to embrace and apply the underlying philosophies of standards-based education as well as build systems applicable to their local context” (Stump et al., 2016, p. 6). However, while Maine schools were making progress, school programs were at various levels of implementation
and school leaders had taken various approaches to implementation of LD 1422 (Silvernail et al., 2013). This study further recommended a number of policy recommendations to help align the various approaches seen within the schools studied. One policy recommendation was to “discuss, debate and resolve the issue of multiple content and proficiency standards systems” seen at each school (Silvernail et al., 2013). If Maine’s school leaders could create common standards for learning which were embedded in a system where students had multiple pathways for meeting those standards, then Maine school districts would be on the road to a transformational shift in how they document learning (Silvernail et al., 2013). With local control, school districts had taken various approaches to developing standards and proficiency systems (Silvernail et al., 2013).

The second phase of the study, Implementation of a Proficiency-Based Diploma System: Early Maine Experiences (2014) focused on nine case studies in Maine school districts that are in the process of implementing a proficiency-based system. Phase II examined district benefits and challenges of “putting this state law into practice” (Stump et al., 2016). The study found that “effective management systems, strong instructional practices, embedded time for professional collaboration, and robust intervention systems are yet to be fully developed in most of the case studies” (Silvernail, Stump, Stewart-McCafferty & Hawes, 2014, p. 3). Findings also revealed that district leaders were working to implement policies with fidelity that were beneficial to all students even when their districts were faced with challenges (Stump et al., 2016). These challenges included creating common definitions, developing management systems and finding resources to support their work (Stump et al., 2016). The MEPRI research team also recommended that the state provide “greater consistency in standards and assessments” (Silvernail et al., 2014, p. 31). With district teams working diligently to fulfill the state mandate,
the study concluded there was a need for the state to develop systems of monitoring for the MDOE and school districts as they both develop their proficiency-based diploma system (Silvernail et al., 2014). This was important because the MDOE was required to provide a plan and resources to school districts under state statute and school districts needed feedback on the systems they were developing to ensure that the statute was being met.

The third phase of the study, *Proficiency-Based Diploma System in Maine: Implementing District-Level High School Graduation Policies* (2015) was completed after the MDOE required school districts to “submit a Confirmation of Readiness or an Extension Application outlining the policies and practices in place and planned for implementation of a proficiency-based diploma” (Stump & Silvernail, 2015, p. 5). By examining seven case studies of Maine public schools, the study found various approaches to meeting the mandates of LD 1422 (Stump & Silvernail, 2015). The report identified several key aspects of the legislated mandate that were identified as critical elements for implementation (Stump & Silvernail, 2015). These critical elements were identified by district leaders, policymakers, state education leaders and practitioners (Stump & Silvernail, 2015). The critical aspects of a proficiency-based system identified were “academic content standards, Maine’s Guiding Principles, grade reporting system, defining proficiency levels, providing multiple pathways and opportunities, defining educational experiences, developing common standards and experiences” (Stump & Silvernail, 2015, p. 8). This study found that none of the school districts had the same academic standards required for graduation and none of the school districts had the same definition of proficiency (Stump & Silvernail, 2015). Policy recommendations included reviewing the law and the original intent to determine if adjustments needed to be made regarding the substantial variation in proficiency from one school district to the next (Stump & Silvernail, 2015). Stump & Silvernail
(2015) documented a clear difference between districts that were viewing this mandated state policy change as an effort to change beliefs, systems and traditional practices as challenging. Some district leaders viewed the statute as establishing the need for a systems change while others maintained “more traditional practices instead of larger reform efforts” (Stump & Silvernail, 2014, p. 19). Regardless of whether local leaders were choosing to partake in a reformation of systems-change or more traditional practices, Stump and Silvernail (2014) recommended that the state provide “consistent direction and guidelines about the fundamental requirements of meeting the law” (p. 19).

The fourth and most recent phase of this study, Proficiency-based High School Diploma Systems in Maine: Local Implementations of State Standards-based Policy (2016) compared perceived challenges and benefits from initial implementation to ongoing implementation (Stump et al., 2016). A conceptual framework model was required to inform the ongoing work of district leaders and state policymakers in order to respond to stakeholders’ needs (Stump et al., 2016). This framework served to align beliefs, practices and local policies with the state policy. Stump et al. (2016) believed that “state policy mobilized beliefs that were then enacted within school and district practices and then instituted as local policies” (p.12). This study suggested that the state-wide policy of LD 1422 was the impetus for educators and leaders to examine their beliefs and then improve their practices and policies (Stump et al., 2016).

This study was also important as it linked a possible cause of confusion in implementing LD 1422 for districts between the state statute and the MDOE. In LD 1422, the law indicates that students must be allowed to gain proficiency through multiple pathways. Multiple pathways are then listed as career and technical education, alternative education programs, apprenticeships, advanced placements, online courses, and dual enrollment. The Maine DOE then “expanded the
definition of multiple pathways to encompass an approach called personalized pathways” (Stump et al., 2016, p. 36). Personalized pathways are then defined by the MDOE as learning that does not have to occur at the same time every day and can be delivered inside or outside the classroom (MDOE, 2016). These assumptions may have led to some districts changing their belief systems and thus having different implementation plans for LD 1422. These plans may center on more traditional practices or may have include a new vision and mission leading to more policy changes within the district. The researcher wondered about how different schools were implementing LD 1422 and to what degree LD 1422 was being implemented.

As an educator in Maine for twenty-five years, the researcher had experienced many efforts to transform schools. In 1997, the Maine Learning Results were adopted by the Maine Legislature. This document contained the K-12 standards in eight content areas and districts began aligning curriculum, assessments and professional development to the Maine Learning Results (Stump et al., 2016). During these 10 years, the researcher established standards-based practices and assessments within her classroom. These efforts included student-centered approaches with differentiation, multiple choices for demonstrating learning, grouping and regrouping methods, and alignment of assessments to standards. Ten years later, the standards were updated and the common local assessment system ended unsuccessfully (Stump et al., 2016). The researcher continued to use the same approaches as did her colleagues, as the belief and research around best practices supported local work.

As a principal and superintendent in three Maine school districts, the researcher has experienced LD 1422 implementation in different ways based on the beliefs that support the district leaders’ vision and mission for the educational system of that district. Teams in all three districts worked diligently to implement LD 1422 aligning standards to assessments to measure
proficiency; however, the beliefs of the district leaders and stakeholders certainly affected how quickly this change occurred and to what extent classroom instructional practices changed. Two districts aligned more closely with the MDOE and created personalized pathways for students while the third district aligned more with traditional approaches and maintained the statute requirements. All three used different standards to measure proficiency of students. This discrepancy within leadership experiences caused the researcher to question, “What is the intention of LD 1422 and what exactly is happening in Maine school districts in regards to implementing LD 1422?” In the state of Maine, are more districts reform or are there more districts continuing traditional approaches?

In the last 10 years, there have been three major school reform movements in the United States: standards-based reform, comprehensive school reform and student-centered reform (Silver, 2004). Standards-based reform is about identifying what students need to know and what are they expected to do. Through transparency with aligning the standards to assessments, this movement is intended to ensure that every student succeeds. Comprehensive school reform is a whole school reform based on comprehensive best practices. This reform has many components to it where there is an integration between instruction, assessment, classroom management, professional development and community involvement to raise student aspirations (Silver, 2004). Comprehensive reform is grounded in theory as stakeholders assess and evaluate the research base of each method and strategy. Finally, student-centered reform focuses on building strong relationships between students and teachers. Teachers know their students well and work with their students to meet common goals.

The Maine DOE has all three reform movements built within their strategic plan. For example, the MDOE recognizes that students need to be proficient in all eight content areas
through standards-based reform. The MDOE also recognizes best practices and alignment of policy, practice and community engagement through their online implementation process (Maine DOE, 2015). However, this implementation process is a guideline for districts to use and allows district leaders to make choices in what the system will look like in each district. The MDOE does agree that successful implementation of a proficiency-based diploma system involves three critical areas: policy, practice and community engagement (Maine DOE, 2015). Finally, the MDOE’s implementation plan includes the student-centered reform movement as the department of education discussed learner-centered instructional practices, multiple pathways for achievement and success through student voice and choice, and anytime, anywhere learning (Maine DOE, 2015).

Maine is poised to lead an educational charge with the passage of state legislation and the use of educational best practices in the Maine DOE’s strategic plan. However, what Maine school district leaders have chosen to do to implement LD 1422 is not well documented or reported. What does this proficiency-based model look like in districts across the state? Does the model follow a more traditional approach or has it changed to include personalized pathways with anytime, anywhere learning as outlined in the MDOE strategic plan?

As all Maine districts were required to complete a confirmation of readiness application or an extension application with the MDOE, this study reviewed these applications and district policies of all districts that submitted an application to the MDOE. This study’s author then analyzed the data within the confirmation of readiness and extension applications and district policies to gather evidence of practices and policies within Maine districts in regards to the implementation of LD 1422. The study determined patterns of implementation by analyzing specific data points required within LD 1422, the MDOE implementation plan, and other metrics.
emerged. This study benefits the Maine Department of Education and the legislative body by providing some understanding of where Maine School Departments are in the implementation process. This study also benefits administrators and teachers by the sharing of reform activities and practices throughout the state’s districts.

**Statement of the Problem**

Images of early American education in the one room school house depicts the teacher in the front of the room, standing up straight, asking the students to sit up straight, feet on the floor, opening up their readers to page twelve and beginning the lesson for the day. The teacher usually taught reading, writing, arithmetic, history and geography (One-Room Schoolhouse, 2000).

Images of today’s American classroom, vary depending on the state one may visit, the school within that district and even the teacher within that hallway. Classrooms may still look like the images of the early American classroom with rows of desks and the teacher in the front of the room. However, the researcher has seen a new type of classroom develop. Ken Robinson suggests the characteristics of this new classroom represent an educational paradigm shift (2010).

Ken Robinson (2010) discusses the changing education paradigms that have moved international education from an Industrial Age model to a 21st Century model. Robinson (2010) states that every country in the world is changing education for two reasons. These reasons are economic and cultural. He states that students need to be able to take their place within an economy while retaining their cultural identity (Robinson, 2010). Mitra (2006) speaks about the term *student voice* and describes the ways in which youth might have the opportunity to participate in school-based decision-making that will shape their lives and the lives of their peers. Education is changing in North America. It is growing from the one room schoolhouse to
a classroom where teachers take students’ experiences and perspectives seriously, recognizing how much more engaged in their learning students are when teachers listen and respond to them (Cook-Sather, 2009). “Recently, more and more policymakers and educators nationwide, as well as here in Maine, have advocated for standards-based reform movements” to support students in their education and close the achievement gaps (Silvernail et al., 2013, p. 10).

The state of Maine recognized the importance of engaging students in their learning process in the plan titled *Education Evolving: Maine’s Plan for Putting Learners First* (Maine DOE, 2015). This plan outlined goals, plans and action steps to respond to the changing needs of Maine students. Just as Ken Robinson recognized a paradigm shift in education, the state of Maine recognized that “a new age is upon us” and the needs of Maine students had changed (Education Evolving, 2012, p. 4). Those changes meant recognizing that schools once needed to prepare students for work in a predominantly natural resource-based economy of forestry, farming and fishing. They are now needed to prepare students to be competitive in a global economy where many of Maine’s jobs had moved (Education Evolving, 2012). This evolution in the workplace meant the plan had to include not only “reforming schools but re-imagining them; to build on the successes of the past by building a model of schooling for this new age” (Education Evolving, 2012, p. 4).

For as long as anyone can remember, the learners in the American educational system had been grouped by age. These students then move through school within their age cohort whether the students understood the material or have not fully mastered the content. Maine educational leaders recognized the need to change to a student-centered, proficiency-based instructional model to allow learners to advance in their learning after demonstrating mastery of defined learning outcomes. This model allows for learning to be the constant and time to be the
variable, thus eliminating age in the educational model. Through the passage of LD 1422 and the outline of the state’s implementation plan, many districts began the steps toward a student-centered, proficiency-based diploma system. However, recent studies by MEPRI found that Maine school districts vary in their implementation approaches, definitions of proficiency, standards and assessment practices (Silvernail et al., 2013; Silvernail et al., 2014; Stump & Silvernail, 2015; Stump et al., 2016).

The first problem guiding the study is the lack of data or documentation about how schools have implemented proficiency-based diploma systems, LD 1422. When districts were asked to submit their confirmation of readiness applications or extension applications, there were no parallel reports. Districts leaders were asked to provide evidence demonstrating their preparedness to deliver diplomas representing proficiency on the standards of the eight content areas; provide a description of the overall plan including annual benchmarks and a budget for the proficiency-based diploma transition funds (Maine DOE, 2015). The little data that does exist specific to Maine’s implementation of LD 1422 reflects case study analysis over a four-year period by the Maine Education Policy Research Institute (MEPRI). These data, while useful to the researcher, served as an impetus that more data and analysis is needed to see how Maine districts are implementing LD 1422.

The second problem guiding this study is that district leaders have taken different approaches toward implementation of the state statute which caused the researcher to question whether the guidelines of the statute is fully being implemented throughout the state. Having worked in three school districts during the last 10 years, the researcher has experienced implementation efforts in each district differently. As seen in the four-year study by MEPRI, district leaders have different beliefs, practices, standards, definitions of proficiency and
graduation policies (Silvernail et al., 2014; Stump & Silvernail, 2015; Stump et al., 2016). As the state statute requires students to graduate with a proficiency-based diploma, some district leaders are making changes to high schools only to meet the requirements of the state statute. Other district leaders are changing philosophies about how students learn and restructuring their districts K-12 to meet the requirements of the state statute. The differences may stem from local control and whether district staffs and their communities agree with the state’s implementation plan for LD 1422. With district leaders choosing to implement their own plans possibly based on local beliefs about education throughout the state, the researcher questions how the Maine Department of Education will review, analyze and measure outcomes of LD 1422. The MEPRI studies recommend further clarification of what is required by school districts by the statute and the provisions of more resources by the Maine Department of Education (Stump & Silvernail, 2015; Stump et al., 2016).

At the onset of the study, the researcher contacted the Maine Department of Education to ask if there were any new initiatives regarding program evaluation for school districts. The researcher was informed of a pilot program that was completed in 2016 and was provided the protocol and guiding questions for the district evaluations. The Maine Department of Education is currently considering in 2020 a peer review process to inform readiness for awarding proficiency-based diplomas. The purpose of this peer review process is supported by a Theory of Action. In this theory the Maine DOE believes that if the MDOE and Maine school administrative units can reach consensus on the guidance/criteria regarding sufficient capacity to offer all students the opportunity to learn and demonstrate proficiency in each content area and each Guiding Principle of the system of learning results and this guidance/criteria is applied through a peer review
process, then consensus regarding readiness to award proficiency-based diplomas will increase statewide through consensus (Maine DOE, 2016, n.p.).

The peer review process is then defined with specific requirements in four areas to demonstrate readiness to award proficiency-based diplomas. Those four areas are standards, guiding principles, multi-tiered supports, and reporting structures and rules. The full process and protocol can be found in Appendix C.

With this new information on what the Maine Department of Education will require of school districts for successful implementation, gathering data on what school districts are implementing will be beneficial. After gathering data on district implementation plans, the researcher was able to analyze how Maine school districts are meeting or not meeting the MDOE’s criteria for successful implementation of LD 1422, proficiency-based diplomas. This analysis may lead to further recommendations of what school districts need to further their work to implement LD 1422.

**Purpose of the Study**

The purpose of this descriptive, mixed-methods study within the state of Maine was tri-fold. First, the study determined how Maine school districts have proposed to implement LD 1422 by July 1, 2021. Second, the study determined the policies that have been enacted by school districts that represent a significant shift in educational practices aligned with LD 1422 and the state’s implementation plan. Third, the study determined possible patterns in the data by analyzing the school districts implementation plans and policy changes.

This study is beneficial to the state of Maine as it provides an understanding of how Maine school districts are implementing LD 1422. Understanding where Maine’s school districts are in the implementation process allows the Maine Department of Education and the
state legislatures to make future decisions on funding and guidelines for LD 1422. This study also benefits other educational leaders within the state by providing a description and analysis of the state’s vision and implementation plan. As the researcher is a leader of one of the school districts in Maine, this research also benefits the researcher by gaining an understanding of how her district is compares to other districts in the state.

This study provides findings that inform upcoming educational transformation efforts. While the state’s current initiative is a student-centered proficiency-based model, there is already a new initiative on the horizon called Redefining Ready. Redefining Ready is a national campaign launched by the American Association of Administrators (AASA). This campaign introduces new research-based metrics to demonstrate that students are college, career and life ready (Redefining Ready, 2016). This study’s findings may have implications for school leaders who are opening up additional pathways in LD 1422 for students to demonstrate that they are college, career, and life ready to earn their high school diplomas. Analyzing the progress of Maine school districts as they implement LD 1422 is the first step in understanding where Maine is in the educational transformation or paradigm shift. This shift is important to meet the global skills students need to be successful including independent thinking and problem-solving, collaboration with teams and people around the globe, and more advanced critical thinking skills (Education Evolving, 2012).

**Research Question**

The focus for this study was to document, analyze and describe how school district leaders in Maine have proposed to implement LD 1422 by July 1, 2021. Three research questions guided this study.
**Primary question.** The primary research question for this descriptive study was the following: How have Maine school district leaders proposed to enact the state-mandated educational transformation of a student-centered proficiency-based diploma system?

**Secondary questions.** The supporting research questions for the study were the following: (a) How are Maine school district leaders implementing LD 1422? (b) How have district policies like IKF (graduation), IKA (grading system) and AD (vision/mission) changed in Maine school districts since the passage of LD 1422? (c) What patterns exist within Maine school districts implementing LD 1422?

**Conceptual Framework**

As public schools across North America are changing approaches to assessment, many learning theories have been described in the educational literature to support this change. The constructivist and humanistic theory support student-centered teaching practices where the student collaborates with the teacher and the teacher assumes the role of facilitator who guides individual students through their personalized learning pathway. These theories would not have gained support however, if it were not for the historical perspective of the Modernism and Postmodernism eras. From Modernism to Postmodernism, how educators viewed children as learners changed dramatically. Teachers learned that students think in different ways and John Dewey advocated that by listening to students, lessons could be based on students’ interests and motivate students to learn. By the time Postmodernism was alive in the classroom, Marie Montessori and Jean Piaget strived to end the era of one-size fits all. Some classrooms become diverse learning environments where the student is seen as an individual and is engaged with different pedagogies: active learning, student-centered learning, collaborative learning, experiential learning and problem-based learning.
For the last twenty-five years, the researcher has experienced many of these new divergent pedagogies with her students as the state of Maine legislators implemented changes to improve schools. The passage of LD 1422 requiring all high school students to graduate with a proficiency-based diploma represents a changed vision for public education in Maine. For example, the MDOE strategic plan clearly outlines the new vision that encompasses five core priority areas. While each of these areas is not mandated by the statute, the MDOE’s vision for changing from an industrial-aged model to a 21st century student-centered model is detailed with goals and objectives for districts. However, with only the proficiency-based diploma in the state statute being mandated, what processes and practices are Maine district leaders implementing? As an educator in Maine, the researcher is concerned with districts defining proficiency differently due to local control, that the intentions of LD 1422 are not being met and students may be affected negatively. The negative impacts may include students not graduating with the skills needed depending on how different districts define proficiency, not being able to graduate if the proficiency level is defined as too rigorous, or not having a system that is easily transferable from district to district if the student is transient.

After an extensive review of the literature on standards-based education practices and implementation, very few empirical studies were found. There were articles on what standards-based education should look like but very few studies besides the four specific studies on Maine’s implementation on LD 1422 were located. One of the Maine studies did create a conceptual framework for a standards-based system (Silvernail et al., 2014). This conceptual framework consisted of the key items that should be in a standards-based system and guided the research for the Maine study. These key items are: proficiency-based diploma legislation, culture of learning, standards-based curriculum and assessment, instruction, proficiency-based
progress, community and family support, professional development and learning management system. For the proficiency-based system to be successful, all of these components must be satisfied (Silvernail et al., 2014). The same conceptual framework supported by historical educational transformation theories from Modernism and Postmodernism frame this study (Figure 1).

![Conceptual Framework of a Proficiency-Based Diploma System](image)

Figure 1. Conceptual Framework of a Proficiency-Based Diploma System (Adapted from Silvernail et al., 2014).

During Phase 4, *Proficiency-based High School Diploma Systems in Maine: Local Implementations of State Standards-based Policy* (2016), Stump et. al., simplified the conceptual model based on their four-year study. This framework was developed to “provide a common language across stakeholders and policymakers as well as identify key components for examining educational policy implementation” (p. 11). This conceptual model “identified a path of implementation in which state policy mobilized beliefs that were then enacted within school and district practices and then instituted as local policies” (Stump et. al., 2016, p. 12). This model explains the researcher’s different experiences at three different districts since the
implementation of LD 1422. One district’s leaders took the time to mobilize beliefs and create a new vision and mission, another district attempted to do this unsuccessfully and the third district began their change at just the high school level but then changed to a district wide belief system through a district wide strategic plan, vision and model when new leadership was hired. Figure 2 represents the simplified conceptual framework.

![Figure 2. Conceptual Framework of a Proficiency-Based Diploma Systems in Maine (Stump et al., 2016).](image)

The Maine DOE researchers also used a logic model as they developed their strategic plan (Doiron, 2017). This logic model states that the MDOE’s role is to “describe the vision and intent of Maine statutes pertaining to the system of learning results with regards to proficiency-based learning and proficiency-based diplomas and provides rule chapters, guidance, technical assistance, and where appropriate, any non-negotiables of implementation” (MDOE Logic Model, n.d.) The content of the model suggests that,

Maine educators need to work within the Maine statutes, rule chapter, guidance, technical assistance, and where appropriate, any non-negotiables to refine their structures, policies, practices, patterns of action and principles to increase the opportunity for each student to

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learn and demonstrate growth and proficiency in the standards of the system of learning results and its Guiding Principles (MDOE Logic Model, n.d.).

The interactions of these systems will support students’ potential to exit a Pre-K through grade 12 system ready for college or career choice (MDOE Logic Model, n.d.).

The assumptions in the MDOE’s logic model for the implementation of proficiency-based learning and proficiency-based systems caused the researcher to question yet again, what are these non-negotiables and what are the patterns of action and principles the MDOE expects each district to implement? How have Maine school districts enacted LD 1422 and what patterns of implementation exist across the state? This study aimed to find those answers.

Assumptions and Limitations

There are a few assumptions guiding the scope of this research. One assumption is that all school districts have leadership that is engaged in proficiency-based, student-centered reform education. While the state statute currently requires all high school students to graduate with a proficiency-based diploma by 2021, it does not describe how this will be done. Some school district leaders may have chosen to become standards-referenced and not move forward with the new transformational model outlined by the MDOE. Are district practices more traditional or are they transformational? This study documents, analyzes and describes how districts have proposed to implement policy and practices to meet the mandate of LD 1422.

Another assumption is that all the district leaders are familiar with the state’s strategic plan. Depending on a district’s personnel, professional development provided and prior experience, the focus of what and how district leadership decided to implement LD 1422 will be different. As the researcher reviewed policies and practices proposed in the implementation plans, it was important to understand the language the districts used to meet LD 1422 and the
state implementation plan. For example, proficiency-based may be called standards-based, competency-based or personalized learning depending on the district. The researcher used the *Glossary of Education Reform*, an online resource that describes and defines major terms in school reform to reconcile any language differences.

A third assumption is that the researcher collected data that are based on proposed implementation plans from school districts in Maine submitted in 2014. There is an assumption that these districts will follow through on these plans. Some districts may have changed their pathway as they began to implement their initial plans. However, districts have had to submit updated progress reports to the MDOE since the submission of the extension plans. While the researcher asked for the updated information, this was not provided. The researcher turned to reviewing policies on the district’s web sites to find new practices in action regarding grading and proficiency-based education. By following each district’s policy enactments that impacted the first proficiency-based class to graduate in Maine, the class of 2021, the researcher was able to collect more current, reliable data reflective of recent practices. These policies included the graduation policy (IKF), grading practices (IKA), commitment to the Maine Learning Results (ADF), and vision/mission (AD). This second set of data to review for implementation of LD 1422 proved to be quite valuable in the research.

Limitations of this study included the number of districts that submitted an extension or confirmation of readiness application to the Maine Department of Education as the researcher reviewed all districts that submitted an application. All districts with a high school were required to submit one of these applications unless the school was a 60% publicly funded school. Another limitation was the accuracy of the districts policies on their web sites. Most districts
however post updated policies after they are approved at the school committee/board meetings but the format and details of those reports will vary.

**Significance**

This study is timely for two reasons. One, nationally there is a paradigm shift to a proficiency-based student-centered classroom model where students are at the center of this transformation as collaborators with their teachers. Second, the state of Maine has taken a stance on this transformation by adopting LD 1422 and creating a strategic plan stating the importance of this paradigm shift in education. While the state has provided funds to enact this change initiative and has supported districts through state-wide visits and by requiring implementation plans, there is little documentation about the status of LD 1422 in the school districts in Maine. Divergence in implementation may be due to local control. This study aimed to find out how student-centered proficiency-based models are being implemented in Maine school districts since the passage of LD 1422. The researcher evaluated how particular policies like grading practice (IKA), graduation (IKF), vision/mission (AD) and commitment to Maine Learning Results (ADF) policies, changed in Maine school districts as they implemented LD 1422. Finally, the findings describe trends or patterns that existed within Maine school districts implementing LD 1422. This study benefits educators, administrators, legislatures, the Maine Department of Education, but more importantly, the students.

**Definition of Terms**

**Great Schools Partnership (GSP).** This organization is a nonprofit school-support organization working to redesign public education and improve learning for all students. It is one of the organizations that is a resource for many school districts in the state of Maine by providing school coaching (Great Schools Partnership, 2016).
LD 1422: An Act to Prepare Maine People for the Future Economy. The state statute that became public law on May 9, 2012 that stated that the diploma indicating graduation from a secondary school must be based on student demonstration of proficiency by January 1, 2017. This act was later amended where starting with the class of 2021, students must demonstrate proficiency in the content areas of English Language Arts, Mathematics, Science and Social Studies. For the three years after this year, one additional content area must be added until all eight content areas are reached with the class of 2025 (Maine Legislature, 2016).

Maine Cohort for Customized Learning (MCCL). This is a statewide coalition of school systems, organizations, and individuals committed to supporting proficiency-based education in Maine school systems (Maine Cohort for Customized Learning, 2016). This resource is also used by many schools in the state of Maine in the transformation process.

Pedagogical tools. The definition of pedagogical means to relate to teaching. A pedagogical tool is anything that helps students learn or a teacher teach. This can include a chalkboard, a presentation, a discussion protocol, and an online program. There are many pedagogical tools, however, these tools should help students learn or obtain proficiency to be effective (Reusser, 1996).

Proficiency-based education. For the purposes of this study, the state of Maine definition of this term will be used. The State of Maine (2016) defines it as the following: Proficiency-based education refers to any system of academic instruction, assessment, grading and reporting that is based on students demonstrating mastery of the knowledge and skills they are expected to learn before they progress to the next lesson, get promoted to the next grade level or receive a diploma.
Reinventing Schools Coalition (RISC). Once developed and operated by a small school district in Alaska, this organization is now operated by Robert Marzano’s Research. RISC provides an array of services to support districts, schools, and classrooms as they transition from teacher-driven, time-based education systems to learner-centered, competency-based systems (Reinventing Schools, 2016). Many districts in the state of Maine have used this organization to help with the state transformation.

Student-centered education. “The term student-centered learning refers to a wide variety of educational programs, learning experiences, instructional approaches, and academic-support strategies that are intended to address the distinct learning needs, interests, aspirations, or cultural backgrounds of individual students and groups of students. To accomplish this goal, schools, teachers, guidance counselors, and other educational specialists may employ a wide variety of educational methods, from modifying assignments and instructional strategies in the classroom to entirely redesigning the ways in which students are grouped and taught in a school” (Hidden Curriculum, 2014, n.p.).

Transformation. To change in form, appearance or structure is the definition of transformation (Webster Dictionary, 2016). For the purposes of this study, educational transformation, is the processes or pedagogical practices that have changed to impact how students learn. Educational transformation has happened throughout history and has been seen through modernism and postmodernism.

Conclusion

Through the passage of LD 1422, Maine has begun a new educational transformation where student learning is at the center of the classroom and students are collaborators with the teacher in their learning. From the Modern Era to Postmodernism, from Montessori to Dewey,
pedagogical practices and education have been reformed. While many states encourage a 
proficiency-based diploma policy, only two states, Maine and Vermont have passed legislation, 
requiring all public schools to implement proficiency-based graduation requirements (Stump et. 
al., 2017). Through historical changes, pedagogical best practices and challenges of Maine 
students, Maine legislators and school leaders have seen the need to revamp the educational 
system to a proficiency-based model where learning is the constant, recognizing that learning 
happens any time of day, inside and outside of the school walls.

The Maine DOE implementation plan encompasses this new model of learning, however, 
the MEPRI studies had not seen the same implementation across school districts within their 
studies (Silvernail et al., 2013; Silvernail et al., 2014; Stump & Silvernail, 2015; Stump et al., 
2016). The researcher had not experienced the same implementation of LD 1422 in different 
districts where she had been employed. Through the passage of LD 1422, the Maine Department 
of Education developed a strategic plan to assist districts in creating their local plan at 
establishing a proficiency-based diploma system. However, local systems were the reason for 
this research. How are Maine districts implementing LD 1422? What differences exist within 
these local implementation plans? Within these local systems, the MDOE’s vision may look very 
different. This study aimed to uncover how districts have proposed to implement LD 1422 by 
analyzing their confirmation of readiness or extension applications. By analyzing these 
applications and their current policies, the researcher also analyzed the data looking for patterns 
and themes that emerged within the implementation of LD 1422.

Chapter II addresses the historical perspective of educational transformation and how 
standard-based models have developed. It also describes the state of Maine’s transformation and 
strategic plan and the key organizations that have helped many districts with this transformation.
Chapter III describes the methodology, participants and sampling methods for this study including the data and analysis. Chapter IV presents the results and analysis methods. Chapter V concludes the study with the findings and recommendations for action and further study.
CHAPTER 2

REVIEW OF THE LITERATURE

For the last five years, the researcher examined the literature regarding student-centered, standards-based pedagogical practices in the classroom. Within this literature, the researcher focused on the transformational changes that have occurred throughout educational history from Modernism to current educational paradigm shifts. Through the resources at the University of New England Library, Google Scholar, Mendeley and Zotero, the researcher cited books and articles that were relevant to the research topic creating a thematic matrix that compared similar ideas and theories with authors and thus created a timeline of historical transformations. Additionally, the researcher communicated with the Reinventing Schools Coalition (RISC), Great Schools Partnership (GSP), the Maine Department of Education (MDOE) and the Maine Cohort for Customized Learning (MCCL) about their educational plans to assist Maine school districts in implementing LD 1422. The researcher also became part of a Student Voice Facebook Cohort, a site rich in student-centered best practices and studies speaking with two lead researchers on student voice, a major component of student-centered education. Currently this literature review consists of ninety-eight resources that address the following key terms: historical educational transformations, LD 1422, standards-based education, pedagogical tools, MCCL, RISC, GSP and MDOE transformations.

The History of Educational Transformations

Although Maine has only recently passed legislation designed to create a new education system, “the standards-based education reform” has a long developmental history (Silvernail et al., 2013). This literature review documents how education has changed in the last two-hundred years demonstrating how learning theories have lead new pathways to new pedagogies within the
classroom. Through a historical understanding, the researcher then analyzes the roots of the standards-based reform movement tracing the timeline of the minimum competency movement in the 1970’s, the publication of *A Nation at Risk in 1983*, the 1994 Goals 2000: Educate America Act, and in 2002, the No Child Left Behind Law (Silvernail et al., 2013).

The literature review then establishes the standards-based reform movement as a national transformation in the United States sharing examples of different models from states building upon the “shared philosophies and goals that are evident across many contexts” (Silvernail et al., 2013, p. 5). The literature review follows by exploring the State of Maine’s 2012 legislation of LD 1422 that states all students will graduate with a proficiency-based diploma by January 1, 2017. This state mandate led to the development of the state’s educational plan which outlines five key transformative practices to a student-centered, proficiency-based model (Maine DOE, 2012). Needing help in this transformation, many school district leaders throughout the state worked with three key organizations, Reinventing Schools Coalition (RISC), Maine Cohort for Customized Learning (MCCL) and Great Schools Partnership (GSP). These three organizations are also explained.

As the Joint Standing Committee on Education and Cultural Affairs of the Maine Legislature was concerned about the implementation of LD 1422, members requested that the Maine Educational Research Policy Institute compile data on the implementation across the school districts. This literature review examines this study’s four phases from 2013 through 2016 exploring the findings and recommendations to the Joint Standing Committee and the Maine Department of Education. This study is important as it provides the only data on Maine’s implementation process and provides a conceptual framework for the researcher’s study.
The literature review then shares the state of Maine’s extension application process with each district and the need for further data collection on what districts are doing to implement LD 1422. Through this analysis, the literature review demonstrates the need for further evaluation of the implementation of student-centered, proficiency-based school reform specifically in Maine. By providing a rich understanding of the historical educational transformations in North America, the roots of standards-based reform, and how Maine leaders plan to implement LD 1422, the literature review serves as a solid foundation for the study.

**Educational Transformation: The Modern Era**

Education and pedagogical practices have reformed since the 19th century. The Modern Era was built on the ideas of philosophers like John Locke (1692), Rousseau (1911), and Froebel (1893). The Modern Era, from the Renaissance to World War II, gave rise to educational philosophers and educational transformations to blossom during this period. With each transformation or educational philosopher, formal education was influenced by new theories or pedagogies. With each new development, classroom instruction changed.

**Herbart.** During the 19th century John Herbart stated that our motivation depended upon our intellectual apparatus (Ghiraldelli, 2016). John Herbart lived from 1776 to 1841 and is known as one of the founders of scientific pedagogy. He developed a theory of education, later named Herbartianism, which advocated for five formal steps (Murphy, 2006). These steps relied on the student to connect learning to relevant ideas or memories in order for a student to have vital interest in the topic to be learned. When teachers presented the material, the presentation then needed to be connected to concrete ideas or real experiences. Through association and comparison, students could “implant the new idea” into their minds (Murphy, 2006). Students would then apply this learning so that it became a part of their “functional mind” (Encyclopedia
Britannica, 2015). Herbart allowed for student participation in the classroom by sharing experiences with teachers. Student participation was not used to inform what the instructional topic would be or how the instructional lesson would be delivered. The teacher was the center of the classroom delivering instruction and the students shared memories to connect the learning topics through association and comparison (Murphy, 2006).

**Dewey.** As far back as John Dewey, teachers have been asked to listen to students and to engage their thinking by completing learning objectives from a variety of assignments, projects and assessments. Dewey (1910) stated that the problem of the teachers is “what the minds of the pupils are doing with this subject matter.” Dewey recognized that teachers needed to understand what students were thinking about the subject matter and that teachers needed to acknowledge this thought process to engage learners in activities that would “construct meaning” (Rodgers, 2015). Dewey disagreed with Herbart. His main critique was that the intellectual apparatus did not work alone (Ghiraldelli, 2016). Instead of lessons being constructed in a logical or historical way, lessons should be designed in a psychological way to motivate students (Ghiraldelli, 2016). Dewey stated that lessons should start with the problems of the world so that students were interested and motivated to learn (Ghiraldelli, 2016; Cherian, 2010). Dewey’s contribution was important to student learning as he helped educators understand that students think. He also helped teachers understand that children think in different ways and this was not wrong (Ghiraldelli, 2016). Dewey argued for a progressive pedagogy where every student was an active participant (Richardson, 2001).

**Freire.** Paulo Freire’s educational philosophy was born from the rise of political action (Ghiraldelli, 2016). He believed that within the action to make humans free, pedagogy in the classroom should be based on political action to help the poor people. Freire was a
transformational leader in that he worked to “acknowledge power and privilege” (Shields, 2010). In doing so, he shared that all people can learn through actions in the real world, not simply banking information like a traditional classroom (Smith, 2002). He modeled the belief that all can learn through his literacy program and was even arrested for his activism. He did not back down from controversy. Freire’s classroom teacher did not look for teachable moments but rather pedagogical moments were seized every day by turning everyday situations into discussions where the oppressed and the oppressor argued for a common understanding (Smith, 2002). In Paulo Freire’s classroom, student participation stemmed from political action so the oppressed could regain their sense of humanity through politics being brought into the classroom (Smith, 2002). What did the classroom teacher need to do to support students outside of the classroom? What did the student need besides the 3R’s? The student became a factor in lesson planning as teachers were no longer discussing only learning in the classroom but larger political policies and situations that impacted children in their homes.

**The Effects of the Modern Era**

The Modern Era had three revolutions of change: universality, progress and regularity (Richardson, 2001). Proponents of Universality stated that students were homogeneous. They progressed at a regular pace using the same textbooks and no adjustments were made based on student needs (Richardson, 2001). Dewey brought progress to American education, proposing a model where the student became an active participant in the classroom. With progress, students now had a predictable sequence of learning to follow. Regularity was then introduced as teachers began to look at the mean of their students’ progress. Students that were not progressing with the rest of the class were then labeled with a disability (Richardson, 2001).
**Society.** During the years Dewey studied pedagogy, many changes in society affected students. During the Modern Era, most students came from two parent homes where the mother was the caretaker and the father was the provider. Divorce was rarely an option and not the norm. Teachers were expected to teach the three R’s, reading, writing and arithmetic, and family values were instilled in the home (Ghiraldelli, 2016). After World War II, changes in society and the home began to appear. With these changes, teachers began to see the “appearance of poor and odd children inside schools” (Ghiraldelli, 2016, p.4).

**Students’ Classroom Experience.** Classroom experiences focused on the teacher’s needs and lessons in the Modern Era. Teachers listened to students share experiences to assess student learning. As teachers began to understand that students think and learn in different ways, they began to listen more intently to how students shared their experiences. Teachers also realized that the world around students affected what happened in the classroom. Student participation became the vehicle for helping teachers to understand students’ thought processes and how each child was different from the next. Classrooms were still teacher directed. Pedagogical tools were used was mostly for expression where students would articulate their perspectives (Toshalis and Nakkula, 2012). These tools included volunteering opinions, creating art, and celebrating and praising student achievements (Toshalis and Nakkula, 2012).

**Educational Transformation: Postmodernism**

Postmodernism marked the age of creativity for teachers. When teachers saw students as individuals, teachers realized they needed to motivate and inspire their students based on students’ interests so that they could “invent their own future in a rapidly changing world” (Shawver, 2007, p. 254). Postmodern teachers build their own theories based on earlier educators’ philosophies, but they are also skeptics who question whether one theory can guide
how teachers respond to the needs of all students (Shawver, 2007). Due to this skepticism, postmodern teachers often struggle with what should they do to help different students learn. Do they really hold onto the old methods or do they take a chance to try something new? Two educators that took that chance were Maria Montessori (2013) and Jean Piaget (2015) by introducing educational beliefs of differences, choice, freedom within limits, and interactions with the teacher that were more facilitated.

**Montessori.** By 1925, there were more than 1000 Montessori Schools opened in the United States (Bio, 2016). These schools had the following components: multiage groupings that foster peer learning, uninterrupted blocks of work time, guided choice of work activity, specially designed instructional materials, and sensory-motor activities (AMS, 2016). Montessori believed that children organize their thinking and needed pedagogical tools to apply this thinking to the real world (AMS, 2016). From using these tools with younger children, older children were then able to understand more abstract concepts. The basis of Montessori Schools was to use students’ curiosity to educate (AMS, 2016). Teachers often stood back and guided students based on conversations with the student and observations in the classroom (AMS, 2016).

**Piaget.** Jean Piaget was the first psychologist to conduct a systemic study of cognitive development (McLeod, 2009). Through four stages of cognitive development: sensorimotor, preoperational, concrete operational and abstract thinking, students’ mastery of concepts and skills develop from concrete objects, to mastery of symbols, to mastery of classes where reasoning is required, to the mastery of thought and abstract thinking (Intellectual Development, 2016). This field of study was called genetic epistemology (Duncan, 2016). Piaget’s teaching focused on children being innately curious (Segal, 2010). As children develop and pass through
each of these stages, children interpret experiences, structure problems and seek solutions through using their voice and pedagogical tools with the teacher (Segal, 2010).

**The Effects of Postmodernism**

It is difficult to understand how school has changed without understanding the effects of Postmodernism. Postmodernism is a critique of Modernism. It marked the end of traditional structures and institutions and the one-size fits all theory of education (Bauman, 2007). Postmodernism marked the beginnings of multiple pathways, diversity and difference, and forming connections within learning (Bauman, 2007). During Postmodernism, all educational practices were under scrutiny. New teaching practices like cooperative learning, performance assessments, portfolios, and projects became the norm as teachers now understood that students learn in different ways. Teachers also began to value how students could demonstrate learning in multiple ways. During this time, Special Education, Gifted and Talented, and Learning Disabled were a few of the labels that became law due to the need to recognize differences in how students learn (Richardson, 2001).

**Society.** There were changes in the home during Postmodernism as well. No longer were students coming from two parent homes. Single parenting, gay parenting, foster parenting was more common. The wall between private and public lives began to crumble. Things that were once kept private were now entering school. The assumptions that students did not question the teacher began to erode and students were now seen as “competent small adults that could deal with divorce, drug addictions, violence, advertising, neglect and sometimes abuse” (Richardson, 2001, p.4).

**Students’ Classroom Experience.** Student activism was born out of Postmodernism. With Montessori’s approach, the educational transformation was modeled around the
experiences of the individual (Cooney, 2011). Children had the freedom to choose with what materials they wanted to work and with whom they wanted to work, thus building upon their own knowledge, adding skills to continually challenge their existing knowledge (Cooney, 2011). Montessori believed in the teacher being a facilitator, listening to students and guiding students in the natural process of learning that develops through human experiences (Cooney, 2011). Piaget let children discover the world by encouraging them to interact with the environment asking questions (Pearson, 2010). Teachers began to differentiate classroom materials and activities for individual students’ needs (Pearson, 2010). Teachers were focusing on the process of how children think, not just the products that children produce in the learning process (Pearson, 2010). Students consulted with their teachers often sharing opinions (Toshalis and Nakkula, 2012). These changes were a catalyst for future transformations. These transformations have connections to educational theories such as, constructivism and humanism.

**Learning Theories: Connections to Educational Transformation**

Three main learning theories emerged in the 20th century: behaviorist, cognitive, and constructivist (Ozuah, 2005; Harasim, 2012). Understanding learning theories, helps teachers and administrators connect the pedagogies in the classroom to student outcomes. Each theory has differences in how students approach learning. “Understanding the major theories of learning that emerged in the 20th and 21st centuries and how they shaped educational practice can help us understand how the field of education has developed and changed” (Harasim, 2012, p. 4). When educators understand learning theory, they can reflect on their practice, improve, and build upon their discipline (Harasim, 2012). These three theoretical frameworks are viewed along a historical continuum connecting educational theorists, classroom pedagogy and student-centered transformations. It is important to understand that this continuum is not a straight line, it curves,
and intersects, drawing from the past, pushing into the future. Learning theory is ever evolving, as scholars discuss, debate, observe, and respond to new information (Harasim, 2012).

**Behaviorist.** In behaviorist theory, the goal is to change the behavior of students and align goals to clear objectives (Ozuah, 2005). Students are then rewarded for their accomplishments through reinforcement (Ozuah, 2005). Behaviorism at its time was considered to be a breakthrough, but looking back on it now, it was rigid in its structure (Harasim, 2012). Teachers limited their responses to an action that they could observe. Teachers’ decisions were based on pre-determined outcomes and void of the influence of student thought processes.

**Cognitive.** In cognitive theory, the goal is for the learner to connect new knowledge to old knowledge (Ozuah, 2005). The teacher role is to assess where the child is currently, develop new learning and then assess again. The importance of the mind was key to the cognitive theory. Teachers realized the “power of the mind was to influence or make decisions that are not directly related to an external stimulus was highly significant” (Harasim, 2012, p. 11). A criticism of cognitive theory is that the student was to assimilate the information that the teacher presented (Harasim, 2012). Students were seen as computers, taking in information into their hard drive, their minds, processing it, then regurgitating it back out to the teacher in print.

**Constructivist.** In constructivism, the teacher and student work together to build a shared understanding of the knowledge (Ozuah, 2005). The teacher is more of a facilitator in the constructivist theory model as there is a natural tendency for the learner to have questions about the world around them (Harasim, 2012; Ultanir, 2012). Constructivism has been defined by many scholars as a theory of learning where individuals make their own meaning of the learning through prior experiences and knowledge (Cannella & Reif, 1994; Richardson, 2001; Richardson, 2003; Ozuah, 2005; Ultanir, 2012). Student-centered teacher practices are strongly based in
constructivism. In this practice, learners are active in constructing their own understanding of the world through experience and reflecting on that experience (Harasim, 2012). In a constructivist learning environment, instructional emphasis is on construction knowledge in an environment that supports active and collaborative learning (Ultanir, 2012). Classroom activities would be comprised of individual and group work and be student-centered. The teacher would focus on students in their learning playing an active role together as a facilitator and learner (Ultanir, 2012). The students would become active participants, monitoring their own learning progress becoming leaders of change (Delorenzo, 2007; Maine DOE, 2012; Toshalis and Nakkula, 2012; Ultanir, 2012).

**The Next Theory.** Students are now an active participant in the learning process. As educators continue to discuss, observe, and develop new classroom practices, what role will students have in the classroom? What opportunities do school districts and teachers need to provide to have students impact the next learning theory? Perhaps the students will be the ones to develop the next theory on their own as leaders of change. Perhaps that is already occurring in the standards-based reform movement.

**The Standards-based Reform Movement**

Choosing to engage young minds is a challenging career. Behind every student, there is a story. This story is affected by societal changes that include enhanced social and sexual maturity, neglect and substance abuse, poverty. Each story is complex. How is learning to occur against a backdrop of complexity? Including the voice of the teacher and student in today’s classroom to create a supportive and productive learning environment is one of the most essential challenges educators struggle with today.
School leaders must emphasize that schools have become the primary institution that fosters belonging and the development of youth identity as the cohesiveness among families and communities has declined (Elias, 2000). Schools are a place where students must be encouraged to express themselves often and where students can feel listened to and understood. Students learn better when they are engaged partners throughout the educational process (Beaudoin, 2005; Cook-Sather, 2009). When students plan their own educational activities, their investment, ownership, and learning is greatly increased (Flutter, 2006). By involving students in decision making, the attitudes and systems that underlay the culture of the school transform (Flutter, 2006). These characteristics are seen in student-centered, standards-based reform movements throughout North America (Stump et al., 2016).

**Roots of Standards-based Reform Movement**

Efforts to establish a standards-based educational system has a long developmental history supported by research and government publications (Silvernail et al., 2014). In the 1970’s, this movement was known as the minimum competency movement where school systems began to define minimum level of competencies for students in reading, writing and arithmetic (Brookhart, 2013). When a *Nation at Risk* in 1983 was published, recommendations to address the issues raised in the report were made. These recommendations included strengthening graduation requirements, adopting more measureable and rigorous standards, devoting more time to a longer school day and improving the preparation of teachers (Editorial Article, 2004). In 1994, the 103rd Congress passed, the Educate America Act to improve teaching and learning by providing a framework for educational reform. This act required states to submit educational improvement plans which included a process for adopting and developing state content and performance standards for all students. The Maine Learning Results were then
adopted in 1997 and updated in 2011 to include the Common Core English language arts and math.

**Models of Standards-based Reform Movement**

Proficiency-based education has a long-standing history of transformation (Silvernail et al., 2013). Silvernail et al. (2013) states that “the reform movement goes by many names, including standards-based education, proficiency-based programs, learner-centered education, and competency-based accountability, but at its core the reform is designed to accomplish similar outcomes” (p. 9). Despite the variety of names, all of these reform systems include standards that indicate what students need to know and do, measures of the student attainment of the standards, and targets for performance on those measures (Silvernail et al., 2013). Accountability systems were also put in place and by “the early 2000’s every state had adopted a system of standards and assessments and was using this system as an accountability mechanism to promote school improvement” (Silvernail et al., 2013, p. 8). State-wide systems were held to these accountability systems because of No Child Left Behind legislation that “imposed stricter requirements for testing (e.g., a requirement that all students in grades 3 to 8 be tested annually) and for the creation of proficiency-based cut scores” (Silvernail et al., 2013, p. 9).

**Standards-based Reform Movement in Maine**

Currently Maine law requires the implementation of a proficiency-based diploma beginning with the class of 2021. The four content areas, English Language Arts, Mathematics, Social Studies, Science and the Guiding Principles must be addressed in the first stage of implementation. The state then allows school districts more time for full implementation of all eight content areas by the year 2025. With limited information regarding the status of all school districts’ implementation of measuring proficiencies in the content areas, the state granted
extensions to school districts. The state also enacted an amendment to LD 1422 to give schools
more time to prepare their systems, teachers, students and communities for the changes involved
in implementing a proficiency-based diploma system.

**Implementing LD 1422 in Maine.** In 2012, the Maine Legislature passed into law LD
1422, *An Act to Prepare Maine People for the Future Economy.* This law required students that
graduate from Maine high schools to earn a diploma that demonstrates proficiency on standards
in all eight content areas and guiding principles. The Maine Department of Education (MDOE)
also began providing assistance to school departments financially and through site visits to help
schools systems make this transformation. The school districts received 1/10 of 1% of their total
district’s budget to help make this transition. A plan for how these funds would be used was
required and approved by the Maine Department of Education. The Department of Education
was also required to maintain a website with resources. The deadline for the implementation is
January 1, 2018. The Maine Department of Education also developed an implementation plan
called *Education Evolving* to help school districts create their proficiency-based diploma
systems.

**Maine’s Implementation Plan.** *Education Evolving: Maine’s Plan for Putting Learners
First* is a strategic plan that sets objectives and action steps for building a proficiency-based
education system in Maine that meets the needs of all learners (Maine DOE, 2016.) This plan
was drafted in 2011 by the Commissioner of Education based on feedback from multiple
stakeholders. In 2012, this plan was presented with five core priority areas: effective, learner-
centered instruction; great teachers and leaders; multiple pathways for learner achievement;
comprehensive school and community supports; and coordinated and effective state support.
Each of the core areas has clear goals and action steps with resources for school departments.
This plan is important because it demonstrates the vision of proficiency-based diplomas from the Maine Department of Education.

*Effective, learner-center instruction.* At the heart of learner-centered instruction are the Maine Learning Results standards, first adopted in 1997. The MDOE believes that rigorous standards are important to teaching and learning but they are meaningless unless they inform instructional practice at the classroom level. Learner-centered instructional approaches where learners are active participants in and directors of their own learning are discussed in the plan.

*Great teachers and leaders.* At the center of each classroom, guiding students in their learning, should be an effective teacher. This plan sets clear guidelines for what teachers should know and be able to do by adopting state standards for teacher and leader effectiveness. Providing high quality training and effective professional development with a specific emphasis on transformational leadership is the focus. This priority area in the plan led to the development of a state-wide teacher/leader evaluation system signed into law in 2012, *An Act to Ensure Effective Teachers and School Leaders.*

*Multiple pathways for learner achievement.* The state of Maine recognizes that, for generations, the adults have made the decisions when and what students learn, and where and how they learn it. The state leadership believes that this method where the learner needs to adapt to the school instead of the teacher adapting to the student’s needs has never been effective. With legislation supporting the new educational vision for the state, four key practices are outlined for how learner can demonstrate achievement. These practices include advancement based on demonstration of mastery, student voice and choice in the demonstration of learning, expanded learning options, and anytime, anywhere learning.
**Advancement based on mastery.** Educators in the state of Maine believe that children should demonstrate their learning based on a mastery of learning targets or standards. Instead of being grouped by age, where students need to wait for others to catch up or where some are left behind confused about the content, students progress when they have demonstrated proficiency. The state established a Center of Best Practices to help guide districts through this transition by providing resources and videos. LD 1422 was passed in legislation with a commitment to this vision on education.

**Student voice and choice in the demonstration of learning.** If the students are to advance in this student-centered proficiency-based model, they need to collaborate with the teacher. The state defines this collaboration when the student becomes an active participant in the role of learning and assessments with the teacher (Maine DOE, 2015). However, even with the knowledge about the importance of student voice, the state has not clearly defined tools and practices for how to build this partnership. The state’s plan is more focused on legislation, digital learning opportunities to support with self-pacing, and multiple pathways through charter school and CTE legislation found in the expanded learning options and anytime, anywhere learning sections of the plan.

**Maine Districts Seek Organizational Help.** As district leaders began to develop their implementation plans to meet the mandates of LD 1422 and decipher what the Maine Department of Education “required” in their plan, many districts sought help in organizing their district implementation plans. Three organizations that helped school districts build their implementation plans are the Reinventing Schools Coalition (RISC), the Maine Cohort for Customized Learning (MCCL) and the Great Schools Partnership (GSP).
The Reinventing Schools Framework. The Reinventing Schools Coalition (RISC) is a national nonprofit foundation established to transform educational systems around the world and produce dramatically improved learning environments and achievement results for all children (Reinventing Schools, 2015). RISC (2015) consultants have a specific approach to education that shifts the paradigm from a time-driven system to a performance-based system called the RISC Approach to Schooling. This system coaches teachers, students, parents and community members to design and implement a personal mastery system that works for them. This system is composed of a framework where learning is owned at developmental levels with clear learning goals and targets; learners master relevant assessments that require skills like problem-solving and collaboration; and students are equipped with the knowledge, skills and abilities to succeed in an ever-changing world (Reinventing Schools, 2015). This framework is based on the experiences of the Chugach School District in Alaska where the processes, tools and systems have been developed and shared with many districts across the United States. The model has been judged by one of the toughest standards in the country, as recognized by the Malcolm Baldrige National Quality Award. The Chugach School District won the award for producing extraordinary results in student achievement (Reinventing Schools, 2015).

The Reinventing Schools organization states that this model can be reproduced anywhere by anyone, for any student under any set of circumstances. At the center of this model is a student-centered approach where the following events occur: every child becomes a leader in his/her learning process; teachers become facilitators and partners; students demonstrate high levels of mastery; and the pathway to graduation is transparent to everyone (Reinventing Schools, 2015). The Reinventing Schools framework offers training to school districts where specific tools are taught through trainings called Curriculum Design and Delivery and
Instructional Design and Delivery. These tools and processes focus on a transparent curriculum, flexibility, student ownership and relevant standards (Reinventing Schools, 2015). These tools aim at including student voice and choice into a transparent model of instruction where students experience common core and 21st century standards, common multiple assessments with choice in how they demonstrate mastery, effective instruction where pedagogical tools are used to reflect on progress and guide instruction. They also include real time electronic reporting (Reinventing Schools, 2015).

In 2014, the Reinventing Schools became a part of Marzano Research which currently provide supports to school districts, schools and classrooms as they transition to a standards-based model in nine state and nine districts in Maine. They represent over 26,000 students in Maine.

Maine Cohort for Customized Learning (MCCL). The Maine Cohort for Customized Learning (MCCL) is a cohort of schools, organizations, and individuals committed to supporting proficiency-based education in Maine School Systems (MCCL, 2015). The MCCL vision is about the implementation of a school structure that makes it possible to simultaneously meet the individual and personal needs of learners every hour of every day. MCCL also envisions educational settings where every learner, every day comes to school and is met at his/her specific learning level and is challenged and successful. Students look forward to returning to school the next day. All of this is made possible by today’s transformational technologies and the by instructional practices being uncompromisingly student-centered. What does this look like? It means that the learning opportunities are based on the appropriate learning level, the learning style of the learner, the interests of the learner, and the relevance of the learning to the learner’s world (MCCL, 2015). To provide this learning environment, the teacher needs to communicate
with the student. The student is involved in sharing the what they will learn, designing the learning experiences with the teacher, creating assessment opportunities, and reflecting on their learning. MCCL currently represents approximately 20% of Maine’s students and 19 school districts (MCCL, 2015). MCCL offers a curriculum of standards in all eight content areas, complex reasoning skills and life-long habits of mind.

**Maine Education Policy Research Institute Study (MEPRI).** MEPRI “provides policymakers with objective data, policy research and evaluation to define and assess educational needs, services and impacts” (MEPRI, 2017). They were established in 1995 by the legislature and conduct research trends on topics of interest. They often report back to the Joint Standing Committee on Education and Cultural Affairs and the Maine Department of Education. In 2012, MEPRI was asked to conduct a study “designed to compile data on the preliminary development, costs, and impacts of standards-based school programs and to report back to the committee in 2013 on the progress Maine schools and school districts were making in transitioning to the new education system” (Silvernail et. al., 2013, p. 1). To date, there have been five phases conducted of this study.

*Phase One: Preliminary Implementation of Maine’s Proficiency-based Diploma Program (2013).* In the first phase of the study, (2013), staff analyzed nine sample schools as they revealed their transition strategies. Over two years, the study focused on the “preliminary development, costs and impacts of standards-based school programs in Maine” (Silvernail et al., 2013, p. 2). The first phase of the study presented findings that showed that “Maine educators and educational leaders were working diligently to embrace and apply the underlying philosophies of standards-based education as well as build systems applicable to their local context” (Stump et al., 2016, p. 6). However, while Maine schools were making progress, staffs
were at various levels of implementation and had taken various approaches to implementation of LD 1422 (Silvernail et al., 2013). This study further recommended a number of policy recommendations to help align the various approaches seen within the schools studied. One policy recommendation was to “discuss, debate and resolve the issue of multiple content and proficiency standards systems” seen at each school” (Silvernail et al., 2013). If Maine’s school leaders could create common standards for learning which were embedded in a system where students had multiple pathways for meeting those standards, then Maine school districts would be on the road to a transformational shift in learning (Silvernail et al., 2013). With local control, school districts had taken various approaches to developing standards and proficiency systems (Silvernail et al., 2013).

**Phase Two: Implementation of Proficiency-based Diploma System in Maine: District Level Analysis (2014)** The second phase of the study, (2014), focused on nine case studies in Maine school districts that are in the process of implementing a proficiency-based system. Phase II examined district benefits and challenges of “putting this state law into practice” (Stump et al., 2016). The study found that “effective management systems, strong instructional practices, embedded time for professional collaboration, and robust intervention systems are yet to be fully developed in most of the case studies” (Silvernail, Stump, Stewart-McCafferty & Hawes, 2014, p. 3). Findings also revealed that district leaders were working to implement policies with fidelity that were beneficial to all students even when their districts were faced with challenges (Stump et al., 2016). These challenges included creating common definitions, developing management systems and finding resources to support their work (Stump et al., 2016). The MEPRI research team also recommended that the state provide “greater consistency in standards and assessments” (Silvernail et al., 2014, p. 31). With districts working diligently to fulfill the
state mandate, the study included recommendations that the state to develop systems of monitoring for the MDOE and school districts as they both develop their proficiency-based diploma system (Silvernail et al., 2014). This was important as the MDOE was required to provide a plan and resources to school districts under state statute and school districts needed feedback on the systems they were developing to ensure that the statute was being met.

Phase Three: Proficiency-based Diploma System in Maine: Implementing District-Level High School Graduation Policies (2015) The third phase of the study, (2015) was completed after the MDOE required school districts to “submit a Confirmation of Readiness or an Extension Application outlining the policies and practices in place and planned for implementation of a proficiency-based diploma” (Stump & Silvernail, 2015, p. 5). By examining seven case studies of Maine public schools, the study found various approaches to meeting the mandates of LD 1422 (Stump & Silvernail, 2015). The report identified several key aspects of the legislated mandate that were identified as critical elements for implementation (Stump & Silvernail, 2015). These critical elements were identified by district leaders, policymakers, state education leaders and practitioners (Stump & Silvernail, 2015). The key critical aspects of a proficiency-based system identified were “academic content standards, Maine’s Guiding Principles, grade reporting system, defining proficiency levels, providing multiple pathways and opportunities, defining educational experiences, developing common standards and experiences” (Stump & Silvernail, 2015, p.8). This study found that none of the school districts had the same academic standards required for graduation and none of the school districts had the same definition of proficiency (Stump & Silvernail, 2015). Policy recommendations included reviewing the law and the original intent to determine if adjustments need to be made regarding the substantial variation in proficiency from one school district to the
next (Stump & Silvernail, 2015). Stump & Silvernail (2015) also stated a clear difference between districts that were viewing this mandated state policy change as an effort to change beliefs, systems and traditional practices as challenging. Some districts leaders interpreted the statute as requiring a system-level change while others maintained “more traditional practices instead of larger reform efforts” (Stump & Silvernail, 2014, p. 19). Regardless of whether local control was choosing to partake in a reformation of systems change or more traditional practices, Stump and Silvernail (2014) recommended that the state provide “consistent direction and guidelines about the fundamental requirements of meeting the law” (p. 19).

**Phase Four: Proficiency-based High School Diploma Systems in Maine: Local Implementation of State Standards-based Policy (2016.)** The fourth and most recent phase of this study, *Proficiency-based High School Diploma Systems in Maine: Local Implementations of State Standards-based Policy (2016)* compared perceived challenges and benefits from initial implementation to ongoing implementation (Stump et al., 2016). This study found the need to create a conceptual framework model to inform the ongoing work of district leaders and state policymakers to respond to stakeholders’ needs (Stump et al., 2016). This framework served to align beliefs, practices and local policies with the state policy. Stump et al. (2016) believed that “state policy mobilized beliefs that were then enacted within school and district practices and then instituted as local policies” (p. 12). This study suggested that the state-wide policy of LD 1422 was the impetus for educators and leaders to examine their beliefs and then improve their practices and policies (Stump et al., 2016).

**The Legislature’s Response to District’s Needs.** While many districts in Maine began the work to address LD 1422 and the MDOE worked with districts on implementation plans, not everyone agreed with the legislation. The language between the state’s implementation plan and
the statute did not align. District leaders were unclear on how or what the Maine Department of Education required. The three organizations working with districts approached the statute differently. In 2015, superintendents, principals, teachers, businesses, MCCL, GSP, MDOE, and others lobbied for changes to the status quo to LD 1422. From these sessions, the Joint Standing Committee on Education and Cultural Affairs enacted the following changes to LD 1422. *An Act to Implement Certain Recommendations of the Maine Proficiency Education Council* (LD 1627) was passed into law and amended the original LD 1422 law passed in 2012. Districts now had more time to graduate students with a proficiency-based diploma starting in 2020-21 with the four content areas of English Language Arts, Mathematics, Science and Social Studies and the Guiding Principles. Each year following, districts must add on one content area of proficiency until all content areas are included by 2025. The Joint Standing Committee also enacted legislation that allowed for proficiency certificates in each content area and required districts to report out proficiency-based diploma data beginning in 2017. Districts were also required to keep academic transcripts reporting out proficiency levels in each content area. Districts were also given flexibility in how they allow multiple pathways for students to achieve proficiency.

Prior to these changes, in 2014, districts were required to submit a confirmation of readiness application or one of six extension application options to the MDOE. Pilot extension applications were posted on the MDOE web site and a letter was sent to Superintendents from the Commissioner of Education on the application process. The applications were to confirm the great deal of work that was occurring in Maine school districts as they implemented strategic plans to transition to a proficiency-based diploma system. Districts that were prepared to award proficiency-based diplomas were to submit a confirmation of readiness application providing evidence of readiness in all eight content areas and Guiding Principles.
All districts received a letter from the MDOE after the application was reviewed in 2015. This letter confirmed approval of the extension submitted, requested additional materials, suggested other extension options, and provided feedback. Those that chose option five or six received an additional site visit by a team of standards-based specialists from the MDOE to review the progress and offer next steps for these districts in a written report. When the statute changed providing more time to implement, the clarity about what is expected from the school districts was again questioned by school districts, administrators and teachers.

**Maine Department of Education District Peer Evaluation Pilot.** In 2017, the researcher contacted the MDOE to inquire about whether the state of Maine leadership was looking at an evaluation system for proficiency-based diploma implementation given the results of the MEPRI studies. At that time, the researcher was given a copy of a protocol and feedback questions being used in a pilot process of peer review between districts. This protocol provided four areas for review for readiness: standards, guiding principles, multi-tiered supports and reporting structures. At the time of this research, the MDOE had not yet determined if this protocol would be used as an evaluation tool with all districts.

**The Research Gap and Future Studies**

As the state of Maine has provided proficiency-based funding to all school districts to meet the LD 1422 graduation diploma requirements, many school districts have used this money for professional development with organizations like MCCL, RISC and GSP. Others have not. With local control determining how they will meet LD 1422, each district has chosen different ways to establish a proficiency-based diploma system. Based on historical transformations through the Modern and Postmodern Eras, practices have changed with each new educational transformation to a more student-centered approach. As Maine transforms to this student-
centered proficiency-based model, what are school districts establishing in their district implementation plans to meet the requirements of LD 1422? Are these practices aligned with the MDOE vision and implementation plan and will these practices meet the evaluation model the state is proposing to use? There simply has not been enough data collected in Maine to analyze what school districts are doing in regards to the implementation of proficiency-based diploma systems. This study aims to gather that data and analyze it against the requirements of the statute and the requirements of the MDOE evaluation tool.

**Conceptual Framework**

The conceptual framework of a study can vary by researcher and the study. The conceptual framework often guides the work and offers the supports needed to help the researcher balance the components of the research study. The components of a conceptual framework include personal interest, topical research, and a theoretical framework (Ravitch & Riggans, 2012). While the components do not need to be balanced, each component frames the purpose for the study and often grounds or directs the researcher throughout the process (Ravitch & Riggans, 2012). Figure 1 delivers the first conceptual framework that categorized personal interest, topical research and a theoretical framework for standards-based education practices and implementation (see Figure 1). Figure 2 delivers a simplified theoretical framework in which to evaluate how Maine school systems are implementing standards-based education practices through the impetus of state statute impacting beliefs, practices and local policies (see Figure 2).

**Personal Interest**

As a teacher, building leader, and then a district leader, the researcher has experienced the implementation of standards-based reform movement in many different settings. With the passage of the Maine Learning Results in 1994, the researcher was a teacher and involved in
developing a local assessment system. This system held all students accountable to demonstrating proficiency on the Maine Learning Results and was recorded within a data information system. As a teacher, offering tiered supports to students was an integral part of this system, as well as having time to develop multiple assessments and pathways for students to demonstrate their knowledge.

As the researcher became a building leader, LD 1422 was passed in 2012, and the researcher changed school districts. In this school district, implementation involved a refocus of beliefs forming a strategic planning committee that gathered feedback from all stakeholders to write a new vision and mission for the district. Professional development was a high priority as evident through numerous book studies, coaches coming into the district, district goal setting, and training for all teachers and faculty. Practices began to change and policies were implemented.

The year that districts needed to submit extension or confirmation of readiness applications (2015), the researcher had the opportunity to relocate and lead a district in proficiency-based reform. This district leadership had done some work as a faculty at the high school but very little work had been done at the elementary school. The district was also without a superintendent at the time and the researcher was asked to guide the district’s implementation planning. This district used funds to bring in similar training to the researcher’s prior district. Without the strategic planning committee and a new vision/mission created, the level of staff engagement was mixed. The district did submit an extension application and hire a full-time superintendent which helped their staff make progress in the following year.

The researcher was then hired to lead a different district. During this implementation, the researcher found that this district once again had made changes at the high school level but little
had been done in grades K-8. Learning from the last experience, the researcher formed a strategic planning committee, and the district adopted a vision and mission, ending with a detailed strategic plan. This plan was created with multiple stakeholders’ input leading to changes in practices, K-12 standard implementation, creation of assessments, updated policies and community forums. The belief system that was implemented reflected stakeholder values, thus practices and policy followed.

As the researcher reflected on these different experiences and began to visit and discuss with other district leaders their implementation plans, she realized that Maine schools were implementing LD 1422 in very different ways. Some were changing those belief systems K-12 while others were adapting their current high school practices. This caused the researcher to question, the purpose of LD 1422, the MDOE and their understanding of how to implement LD 1422, and just what was happening in our Maine school districts to implement a proficiency-based diploma system.

**Topical Research**

Efforts to establish a standards-based educational system have a long developmental history supported by research and government publications (Silvernail et al., 2014). In the 1970’s, this movement was known as the minimum competency movement where school systems began to define minimum level of competencies for students in reading, writing and arithmetic (Brookhart, 2013). When the publication of a *Nation at Risk* in 1983 was published, recommendations to address the issues raised in the report were made. These recommendations included strengthening graduation requirements, adopting more measureable and rigorous standards, devote more time to a longer school day and improving the preparation of teachers (Editorial Article, 2004). In 1994, the 103rd Congress passed, the Educate America Act to
improve teaching and learning by providing a framework for educational reform. This act required states to submit educational improvement plans which included a process for adopting and developing state content and performance standards for all students.

While investigating the standards-based reform movement, it became clear that Maine has a long-standing history within this reform movement across the United States. When the Educate America Act was passed, Maine legislators and educators began a task force to write the Maine Learning Results. These were adopted in 1997, updated in 2007 and again in 2011 to include the Common Core English language arts and math. During the standards-based reform movement, Maine’s changes paralleled some of the national changes. As the No Child Left Behind Law was enacted in 2002, all states were now required to adopt a system of standards and assessments (Silvernail et. al., 2013). The culminating standards-reform movement for Maine was the passage of LD 1422 which now required under statute that all students graduate with a proficiency-based diploma. Maine is only the second state in the country to pass statute requiring a proficiency-based diploma system (Stump et. al., 2017).

**Theoretical Framework**

In a proficiency-based system, teachers are focused on student outcomes. By administrators and teachers understanding learning theories, they are able to connect pedagogies to student outcomes. “Understanding the major theories of learning that emerged in the 20th and 21st centuries and how they shaped educational practice can help us understand how the field of education has developed and changed” (Harasim, 2012, p. 4). When educators understand learning theory, they can reflect on their practice, improve, and build upon their discipline (Harasim, 2012). The MDOE implementation plan is centered around five core priority areas: effective, learner centered instruction; great teachers and leaders; multiple pathways for student
achievement; comprehensive school with supports; and coordinated and effective state support. Constructivism has been defined by many scholars as a theory of learning where individuals make their own meaning of the learning through prior experiences and knowledge (Cannela & Reif, 1994; Richardson, 2001; Richardson, 2003; Ozuah, 2005; Ultanir, 2012). Student-centered teacher practices are based in constructivism. In this practice, learners are active in constructing their own understanding of the world through experience and reflecting on that experience (Harasim, 2012). In a constructivist learning environment, instructional emphasis is on constructing knowledge in an environment that supports active and collaborative learning (Ultanir, 2012). Classroom activities would comprise individual and group work and be student-centered. The teacher would focus on students in their learning, playing an active role together as a facilitator and learner (Ultanir, 2012). The student would be an active participant, monitoring their own learning progress becoming a leader of change (Delorenzo, 2007; Maine DOE, 2012; Toshalis and Nakkula, 2012; Ultanir, 2012). The constructivist approach requires the teacher and student work together to build a shared understanding of the knowledge (Ozuah, 2005). The teacher is more of a facilitator in the constructivist theory model as there is a natural tendency for the learner to have questions about the world around them (Harasim, 2012; Ultanir, 2012).

Just as teachers are using the constructivist theory to create classroom activities with their students, helping students to monitor their own learning and navigate standards along a continuum of learning; constructivism also guides the work of district leaders in navigating the implementation of proficiency-based education diplomas. Since Maine has passed legislation with the requirements for a proficiency-based diploma, how district leaders interpret the mandate varies within their district and within classrooms has been controlled locally. Stump et. al.,
2017, “posit that teachers and others in similar roles become policy makers themselves as they are forced to turn policy into practice with varying levels of guidance from the original policy makers” (p. 13). This in turn, leads to differences in practices, policy and implementation within districts.

Summary

As Maine school districts transition to a student-centered, proficiency-based diploma system beginning with the graduating class of 2021 as outlined in the updated statute, LD 1627, there is one large question remaining: what do implementation efforts look like in school districts in Maine? The history of American education demonstrates how pedagogical practices have changed based on an understanding of how students learn and develop. From Modernism to Postmodernism, the role of the teacher changed significantly from looking at students as a group where all students received the same instruction at the same time, to seeing students as individuals who could think and create and provide meaning to what they were learning in a variety of contexts. As transformations occurred, federal legislation was enacted that drove the accountability factor in a standards-based system across our country. With this movement, all states were now outlining learning standards and high-stakes assessments were federally mandated through No Child Left Behind. However, during this legislation, states across the country began to look at the model of education and how to address that students learn in different ways and timeframes. The standards-based reform movement developed and Maine became one of two states to adopt legislation that required all students to graduate with a proficiency-based diploma.

Very few empirical studies have been conducted on proficiency-based education in the United States. MEPRI was asked to conduct research by the Joint Standing Committee on
Education and Cultural Affairs. This four-year research effort has provided data on the implementation of LD 1422 in Maine’s school systems but still no comprehensive, study has been done to look at every district in the state of Maine. The MEPRI studies have furthered the researcher’s knowledge and contributed to state and global policy implementation research.

This study is timely for two reasons. One, nationally there is a paradigm shift to a student-centered classroom model. With multiple states having adopted standards and assessments for accountability, many more states have adopted policies that encourage movement toward proficiency or competency-based approaches (Stump et. al., 2017). Second, the state of Maine has taken a stance on this transformation by adopting LD 1422 and creating a strategic plan stating five key priority areas within this plan. While the state has given funds to this change initiative and supported districts through state-wide visits and requiring implementation plans, the question remains, how have Maine school district leaders proposed to enact the state-mandated educational transformation of a student-centered proficiency-based diploma system?
CHAPTER THREE

METHODOLOGY

In May 2012, the 125th Maine Legislature mandated the requirements of proficiency-based diplomas for Maine high school students. Findings from the MEPRI studies, commissioned by the Maine Legislature’ Joint Standing Committee on Education and Cultural Affairs “suggests that Maine’s proficiency-based high school diploma mandate has mobilized PK-12 collaborative professional work”, but there was needed additional time for full systemic implementation (Stump et al., 2016). Stump et al., (2016) also found that while stakeholders within school districts were using more common language, there were challenges in “selecting appropriate grading scales, developing standards-based reporting systems, assessing study work habits, and securing public support” (p. 3).

Since school districts are creating different systems with varying pedagogical practices to meet the requirements of the state mandate, the experiences students have may be different from district to district. However, the state has outlined in the state’s strategic plan, the components of a student-centered proficiency-based model. With all districts having choice in how their district will accomplish LD 1422 with local control, this study provides data to the Department of Education, District Administrators, and school personnel, as to what districts have proposed to implement in regards to practices and policy when aligning their districts to LD 1422 and the MDOE strategic plan.

The study addressed the following primary question: How have Maine school leaders proposed to enact the state-mandated educational transformation of a student-centered proficiency-based diploma system? The supporting research questions for the study were the following: (a) How are Maine school leaders implementing LD 1422? (b) How have district
policies like IKF (graduation), IKA (grading system) and AD (vision/mission) changed in Maine school districts since the passage of LD 1422? (c) What patterns exist within Maine school districts implementing LD 1422?

This methodology chapter provides further contextualization for the problem statement and research question addressing how the study was conducted and how the researcher gained access to the research setting and data collected. As this study was a descriptive study the researcher’s methods of data collection including organizational protocols are described. Analysis and coding methods of data are also described as well as, ethical considerations given to protect the anonymity of each school district and their rights in this study. Potential limitations to the study conclude the chapter.

Setting

Since LD 1422 stated that all Maine high school students beginning in the year 2015, must demonstrate proficiency in the content areas of English language arts, mathematics, science and technology, social studies, in addition to, health, physical education and wellness, the setting for this research study involved all of Maine’s 164 school districts. Each of these school districts is labeled as one of the following administrative units: municipal school unit (MSU), regional school unit (RSU), school administrative unit (SAD), consolidated school unit (CSD), technology centers, technology regions, Maine Indian Education (MIE), and Education in Unorganized Territories (EUT). Some of these school units operate without schools and pay tuition for students to attend neighboring school units. Within the state of Maine, all school districts are organized into nine Maine School Board Association (MSBA) regions. These regions are: Aroostook, Penquis, Washington, Hancock, Mid-coast, Western Maine,
Cumberland, Kennebec and York. The Superintendents of these regions meet regularly to discuss educational initiatives and meet with a representative of the MDOE.

**Research Sample**

As the deadline for implementation for a proficiency-based diploma became closer, the MDOE allowed schools to submit an application of confirmation of readiness or an application for an extension. All publicly funded school districts were required to submit either application. This study reviewed every extension and readiness application that was submitted to the MDOE in 2014. These applications were available on the MDOE website along with a letter of response from the MDOE. These applications included evidence demonstrating the preparedness to deliver diplomas based on proficiency in all eight content areas, an overall plan and benchmarks for each year the extension was requested to meet the guiding principles and demonstrate proficiency in the standards, and a budget for using the targeted transition funds. The research sample was an inclusive sample of convenience as it first examined the readiness and extension applications that all school districts were required to submit to the Maine Department of Education in 2014. Four districts did not submit an application and ten districts were not required to submit an application as they are a 60% publicly funded school. Once districts that did not have a public high school were also removed from the study, the research sample contained 107 school districts.

**Data**

The following data was collected through web-based queries from the MDOE web site and the school district web sites. Since this data is public, printout of reports was permissible. However, the data that was recorded on the spreadsheet and analyzed was housed on the researcher’s personal computer. School districts were identified on the spreadsheet with a
numerical/alphabetical combination to protect the school districts as generalizations were made by the researcher. The researcher investigated the following for each school district:

- Review confirmation of readiness applications
- Review extension applications options 1-6
- Review Maine state statute requirements (LD 1422) and any updates
- Policy AD Vision/Mission
- Policy ADF Commitment to Learning Results
- Policy IKF Graduation Policy
- Policy IKA Grading Systems
- Nonprofit Organizations that assisted with implementation

Within the confirmation of readiness applications, extension applications and policy reviews, the following data was reviewed for each district:

- Region of School District
- Evidence of Preparedness
- Overall Implementation Plan through the Graduation Policy
- Scoring Scale (Definition of Proficiency) and Grading Practices
- Evidence of Guiding Principles
- Credit-based or Proficiency-based Practices
- Evidence of proficiency in all eight content areas or some of the content areas based on change in statute in 2015 that allowed a phase in approach to the eight content areas
  - Class 2020-2021 English language arts, mathematics, science and technology and social studies
  - Class 2021-2022 English language arts, mathematics, science and technology and
social studies and at least one additional content area
  o Class 2022-2023 English language arts, mathematics, science and technology and social studies and at least two additional content areas
  o Class 2023-2024 English language arts, mathematics, science and technology and social studies and at least three additional content areas
  o Class 2024-2025 certifies that students are meeting all content areas

The study also gathered additional metrics for the 2014-15 school year to look for possible trends within the data. This year was chosen as this was the year that the applications were submitted to the MDOE. These metrics included: state assessment scores using the Maine Assessment Accountability Reporting System; free/reduce lunch rates, graduation rate, per pupil expenditures and school report card grades using the Maine Data Warehouse for each district that submitted an application.

Data Collection Methods

The primary purpose of this study was to determine how districts have proposed to implement proficiency-based, student-centered diploma systems since the passage of LD 1422. The collection methods for this study was set up in five phases (Figure 3). Each phase had a clear purpose and guided the researcher to uncover the patterns that were existing in Maine school districts through implementing LD 1422. After the five phases of data collection was completed, coding was able to occur to find trends within the data. This is explained further in the analysis section.

Phase One: Determined Districts Extension Application and Regional Distribution.

The Maine Department of Education web site was used to collect the extension and confirmation of readiness application data. All 107 districts’ applications were reviewed and
coded by type of application and superintendent’s region the school district was assigned by the Maine School Board Association. Each application was then read and data was gathered on the MDOE letter of approval or denial placing each district on a timeline for meeting the statute requirements of implementing a proficiency-based diploma system. Each region was color coded by application approval type. This can be found in Appendix D.

**Methodology**

- Data collection methods
  - Phase One: Extension Applications and Regional Distribution
  - Phase Two: Metrics
  - Phase Three: Policy Review IKA/IKF/AD
  - Phase Four: Content Area Proficiency Review
  - Phase Five: Nonprofit Organizations
- Analysis
  - Descriptive and inferential statistics
  - Coding Methods

Figure 3. Methodology Phases

**Phase Two: Gathered Metrics on All Districts that Submitted an Extension or Readiness Application.**

The Maine Data Warehouse is a tool open to the public that allows parents and educators to access school district information and compare how their school is doing compared to others in the state. The Maine Data Warehouse was used in this study to collect graduation data, free/reduced lunch data, per pupil expenditure data and school district report card data for the 2014-15 school year. This data was used to make correlations between the proficiency-based data and metric data collected to see if there were implementation trends throughout the state of Maine.

The research conducted web based queries reviewing each of the 107 districts’ web sites to view their policies directly linked to proficiency-based diploma implementation and the conceptual framework. As stated in the MEPRI studies, there is a premise that LD 1422, instilled districts to look at policy AD, their mission/vision, changing possibly their beliefs or philosophy in education (Stump et. al., 2016). During this phase of data collection, the researcher reviewed Policy AD for each district, and the date of adoption. As LD 1422 was passed in 2012, the researcher looked for any policy changes to policy AD from 2012 forward. This data was then used to correlate whether districts that changed their vision and mission, (policy AD), had made more progress in implementing proficiency-based practices like changes in grading systems and graduation policies.

Phase Four: Determined Content Area Proficiency Practices through Extension Application and Policy IKF Review.

During phase four of the data collection, the researcher used web based queries to review graduation policies for each district. During this review, the researcher observed if districts were moving to proficiency systems only, still maintaining credit-based systems, or using dual systems which included both. The researcher also observed whether all eight content areas and guiding principles were a part of the graduation policy and noted whether districts were phasing in content areas as allowed under the amended statute LD 4722 or keeping with the original eight content areas in LD 1422. Districts that also mentioned guiding principles were documented.
Phase Five: Determined the nonprofits organizations districts used to help with the implementation of proficiency-based diplomas.

This phase of the research involved reading the timelines and implementation plans which was part of the extension applications submitted to the MDOE in 2014. In these plans, districts shared how they used their proficiency-based funds, many providing a list of professional development used within the district. Others mentioned professional development in their plans, as how they were preparing teachers, to effectively instruct students anytime, anywhere, providing multiple pathways for students to demonstrate proficiency. The names of organizations, coaches and books was documented.

Analysis

Descriptive and inferential statistics was organized and documented once the data was collected on each of the phases. The data was analyzed to answer the four research questions: (1) How have Maine school leaders proposed to enact the state-mandated educational transformation of a student-centered proficiency-based diploma system? (2) How are Maine school leaders implementing LD 1422? (3) How have policies IKF (graduation), AD (vision/mission), IKA (grading practices) changed since the passage of LD 1422? (4) What patterns, if any, exist within Maine school districts implementing LD 1422?

Each phase of the data collection was coded and descriptive statistics was collected. Inferential statistics was also calculated to see if there were any statistical trends between data points. Supporting data, such as graduation rates, per pupil expenditure, free/reduced lunch rates and regional data was also used to add statistical relevance to the study. Descriptive statistics were calculated by overall state data and also split into the nine superintendent regions for the entire research sample.
Coding Methods. To help the researcher look for trends in the data and calculate descriptive statistics, coding methods were used to put numerical values to the qualitative data. Once numerical values were added to the qualitative data, the correlation function on Excel was used to determine the correlation coefficient measuring the effect size of the relationship. This value was used to help determine if any trends existed between the variables collected.

Policy Changes within timeline of LD 1422. When looking at whether policies had been updated since the 2012 passage of LD 1422, the adoption or revision dates of policies was recorded. If the policy was adopted and/or revised after the adoption of 2012, it received a coding score of 1. If the policy was adopted prior to 2012 or not revised, it received a coding score of 0. This allowed the researcher to calculate an overall average for districts that changed their policies since the implementation of LD 1422 for each policy reviewed.

Implementation of Graduation Policies (Policy IKF). When gathering data from the graduation policies, three variables stood out to the researcher. These variables in the graduation policies were: a full implementation of all eight content areas for a proficiency-based diploma, a phase in approach to the content areas for a proficiency-based diploma, and no mention of a proficiency-based diploma within the policy. A three-point coding system was used for this policy where (1) was no mention of proficiency-based diploma, (2) a phase in approach to the content areas and, (3) full implementation of all eight content areas. This allowed the researcher to view descriptive statistics for each of these approaches since the implementation of LD 1422.

Implementation of Grading Practices (Policy IKA and IKF). Using two policies, the researcher determined how and if proficiency was being measured in each district. Some districts chose to use a credit-based system; some districts chose to measure only proficiencies; and other districts chose to use a dual system. This data was recorded using the following coding
system: (1) only proficiencies recorded, (2) only credits recorded, and (3) both credits and proficiencies recorded. The researcher then determined the state average for implementing grading practices in terms of proficiencies and credits, the mode and whether this data point correlated to any other data point recorded using Pearson correlation.

Nonprofit organization coding. Lastly, the researcher coded the most frequent membership and organizations within the professional development discussed in the extension applications and timelines by each district. Four professional organizations were coded using the following system: (1) RISC, (2) Marzano, (3) MCCL, and (4) Great Schools Partnership. The researcher then determined the percentage of districts that used a professional organization as a resource and whether this data point correlated to the implementation of proficiency-based diplomas in the state of Maine.

The Use of Logic Models and the Conceptual Framework in the Data Analysis. The MEPRI studies during Phase IV (2016), discussed a conceptual framework where the LD 1422 was the impetus for changes in beliefs within districts which then lead to changes in practices within the classroom and eventually policy changes within the district. The Maine Department of Education also has a Logic Model that aligns with this conceptual framework (MDOE, 2015). This logic model is circular looking at inputs and outputs within the implementation of LD 1422. The logic model depicts the Maine DOE describing the intent or vision of the Maine statutes which then leads Maine educators to work within their districts to create structures, policies, and practices where each student can grow in a proficiency-based system. When this occurs, students are ready for their college or career choices. This logic model is shown in Figure 4.
As the research questions were designed around the conceptual framework and logic model, the analysis of the study is also guided by the conceptual framework and logic model. By answering the research questions, (1) How have Maine school leaders proposed to enact the state-mandated educational transformation of a student-centered proficiency-based diploma system? (2) How are Maine school leaders implementing LD 1422? (3) How have policies IKF (graduation), AD (vision/mission), IKA (grading practices) changed since the passage of LD 1422? (4) What patterns exist within Maine school districts implementing LD 1422?. The researcher focused on whether changes in vision/mission impacted practices, which then changed graduation policies.

Limitations

As the study is a descriptive study, there are limitations to the data that was selected. Since the data was submitted in extension application in 2014, some of this data may have been changed in the last few years. Other districts may have submitted their applications later and therefore their data is not included in this study as it was not available to the researcher. There are also limitations in the study as the researcher is bound by what the districts have submitted within their readiness/extension applications. The data submitted within these applications may
be incomplete. Some districts may have more detailed information and some districts may have changed direction since the original submission of their applications.

Another limitation is the accuracy of the policies that are posted on the district web pages. If districts do not keep current with their updates on the web page, then the overall data may not be representative of the entire state’s progress toward proficiency-based implementation as some districts did not have updated policies posted. Just because a policy is not posted does not necessarily mean a district has not updated its policies. The district could also be in the process of updating as the incoming freshmen class would be the first graduating class under the extension applications to earn the proficiency-based diploma.

However, very little data on what school districts have done or are planning to do to implement LD 1422 exists in the state of Maine. This descriptive study is valid and helpful to other educators and leaders as they continue to plan their educational systems. This study also represents an overview of what is occurring within our districts. Between reviewing the extension applications and current policies, descriptive data was collected on nearly every district within the state on their implementation practices of LD 1422.

**Ethical Considerations and Participant Protections**

As this study does not look at individual students or teachers but at school districts collectively, the researcher did not need to be concerned about student or teacher rights within this study. However, the districts in this study were kept anonymous and all distinguishing characteristics were removed from the data. The data was reported out as collective findings of where Maine school districts are in the proposed implementation of LD 1422, policy implementation and patterns and trends within the data. The researcher kept all identifying characteristics void from the findings and did not need to seek IRB exemption.
Pilot Study

A pilot study of the data collection process was completed to make sure that the protocols and instruments were valid for the descriptive study (Creswell, 2015). The researcher selected the districts where she has worked and where she is currently an administrator to be her research sample for the pilot study. During the pilot study, the researcher was able to test the data phases and make a timeline for completion of the study. Modifications were made based on the pilot study as the study changed from a case study to a descriptive study studying 106 districts within the state of Maine. The data from this pilot group was not removed from the findings of this study as all of the data is public information.

Summary

A study about how Maine school districts proposed to enact changes to implement proficiency-based student-centered diplomas will aid in providing information to the MDOE, state legislature, administrators, teachers, parents and students that can be used to implement LD 1422 within their local systems. As school district leaders submitted their readiness/extension plans to the MDOE, they provided information on benchmarks to meet the requirements laid out by the state statute and the MDOE. The MEPRI studies have shown that Maine schools are already beginning to following different pathways towards proficiency-based diplomas as some school districts are taking this mandated state policy to change the beliefs, systems and traditional practices while others were maintaining more traditional practices. The primary question this study addressed is how have Maine school district leaders proposed to enact the state-mandated educational transformation of a student-centered proficiency-based diploma system? The supporting research questions for the study will be the following: (a) How are Maine school district leaders implementing LD 1422? (b) How have policies including IKF
(graduation), AD (vision/mission), and IKA (grading practices) changed since the passage of LD 1422? (c) What patterns exist within Maine school districts implementing LD 1422?

Through reviewing all school districts that submitted an extension application or completion of readiness application to the MDOE from Maine’s 164 school districts, the researcher gathered descriptive data to answer the research questions. The data reviewed included demographic data, enrollment, academic performance, length of implementation time, free/reduced lunch rates, and non-profit organization assistance. The researcher also reviewed implementation plans, graduation policies, vision/mission policies and grading practice policies. Statistical and coding methods were shared. As all of the data was collected through web based queries, the study did not require an IRB exemption. However, precautions were implemented to ensure the anonymity of the school districts during the findings of this research. The largest limiting factor of this study was accuracy of the web based queries. The accuracy of the readiness/extension applications and updating of district policies on a regular basis could have significantly impacted the findings of this study. A follow up study of a cross section of schools would be recommended to interview in person the practices occurring within the districts to add additional supporting data to the study. Chapter 4 shares the results of this study. Chapter 5 clarifies the overall conclusions and suggests future studies that would benefit the state of Maine in the implementation of LD 1422 and more importantly, the students.
CHAPTER FOUR

RESULTS

The purpose of this mixed methods, descriptive study was to address how Maine school district leaders have proposed to enact the state-mandated educational transformation of a student-centered proficiency-based diploma system as defined in LD 1422. The supporting research questions for the study were the following: (a) How are Maine school district leaders implementing LD 1422? (b) How have the policies IKF (graduation), AD (vision/mission), and IKA (grading practices) changed since the passage of LD 1422? (c) What patterns exist, if any, within Maine school districts implementing LD 1422? Chapter 4 explains the analysis method used to try an answer the research questions of this study. Following the analysis method discussion, the data is organized and presented in five sections: Background Data, Extension and Confirmation of Readiness Applications, Policy Implementations, Professional Development and Patterns and Trends. A summary of results concludes this chapter.

Analysis Method

After following the data collection methods discussed in chapter 3, organizing all data into aggregated and disaggregated tables, the information was reviewed with the help of a data analyst. The data analyst helped organize the data into a single table to use for descriptive statistics as well as, inferential statistics between variables. This spreadsheet was used to answer the research questions.

Descriptive statistics were primarily used to discuss the metric data presented in this study. The metrics for the 2014-15 school year were assessed to look for possible trends within the data. This year was chosen as this was the year that the applications were submitted to the MDOE. These metrics included: state assessment scores using the Maine Assessment
Accountability Reporting System; free/reduced lunch rates, graduation rate, per pupil expenditures and school report card grades using the Maine Data Warehouse for each district that submitted an application. When gathering summaries of the data from a state perspective, descriptive statistics were also used to calculate the average number of extension applications approved by options and the average number of report card grades assigned to each region as an overall assessment. Finally, descriptive statistics were used to calculate percentages of districts that have made transitions in grading policies, graduation policies and mission statements.

Inferential statistics were used to compare the variables within the study. The researcher used inferential statistics to find out the strengths of the relationships between the independent variables. The following inferential statistics were used in this study: Pearson correlation, Anova, Bi-variate regression and confidence interval. For most of these tests, the independent variable used was the extension option approved by the MDOE. The researcher examined the relationship between the extension option that districts were approved for and the other variables in the study. Some of these relationships explored were: extension option granted and changes to graduation policy; extension option granted and changes to grading policy; extension option granted and changes to mission statement. The findings of these correlations will be discussed later in the chapter.

**Presentation of Data**

The data is organized and the results are presented in five sections starting with background information using metrics on Maine school districts used within the study. The second section then delivers information on the state extension data for the state and each superintendent region. The third section addresses the research questions by sharing the data around policy changes within the state of Maine impacted by the passage of LD 1422. This third
section also discusses how Maine schools have changed graduation and grading practices due to the passage of LD 1422. Professional development and the most common organizations used in the implementation of LD 1422 are discussed in section four. Finally, the last section of data shares the findings regarding trends and patterns between the variables and the inferential statistics used. A summary of results will conclude this chapter.

Background Data

This research study involved all of Maine’s 164 school districts initially. Each of these school districts is labeled as one of the following administrative units: municipal school unit (MSU), regional school unit (RSU), school administrative unit (SAD), consolidated school unit (CSD), technology centers, technology regions, Maine Indian Education (MIE), and Education in Unorganized Territories (EUT). As some of these school units operate without schools and pay tuition to send students to neighboring school units, these school units were removed from the population. Four districts also did not submit an application and ten districts were not required to submit an application as they are a 60% publicly funded school. Once all non-qualifying schools were removed from the study, the research sample contained 106 school districts distributed among the nine Maine School Board Association (MSBA) regions. These regions are: Aroostook, Penquis, Washington, Hancock, Mid-coast, Western Maine, Cumberland, Kennebec and York. The distribution of schools in each region can be seen in Table 1, the study population.

Once the study population was identified, the researcher used the metric data to understand the school populations within the state of Maine. Comparing regional data among the study population, allowed for the researcher to gain a greater understanding of school units as they prepared for the implementation of LD 1422. The researcher studied the free/reduced lunch
rates, per pupil expenditures, graduation rates, and the report card grades assigned to each school unit. Two years of data was collected. The 2013-14 and 2014-15 school years was selected as the cohort years for the data. These two years represented the year prior to the extension applications being due to the MDOE and the year the application was due to the MDOE. These two years demonstrate the progress and planning years towards implementation of LD 1422.

Table 1

*Distribution of School Units by Superintendent Regions*

<table>
<thead>
<tr>
<th>Superintendent Region</th>
<th>Count</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aroostook</td>
<td>16</td>
<td>15.1%</td>
</tr>
<tr>
<td>Cumberland</td>
<td>16</td>
<td>15.1%</td>
</tr>
<tr>
<td>Hancock</td>
<td>5</td>
<td>4.7%</td>
</tr>
<tr>
<td>Kennebec</td>
<td>15</td>
<td>14.2%</td>
</tr>
<tr>
<td>Midcoast</td>
<td>10</td>
<td>9.4%</td>
</tr>
<tr>
<td>Penquis</td>
<td>16</td>
<td>15.1%</td>
</tr>
<tr>
<td>Washington</td>
<td>3</td>
<td>2.8%</td>
</tr>
<tr>
<td>Western Maine</td>
<td>13</td>
<td>12.3%</td>
</tr>
<tr>
<td>York</td>
<td>12</td>
<td>11.3%</td>
</tr>
<tr>
<td><strong>Total School Units</strong></td>
<td><strong>106</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Report Card Grades.** In 2013, the Maine School Performance Grading System began. In this system, all school units received an A-F grade, which was calculated based on several factors. These factors were: student achievement in reading and math, growth in achievement, the growth of the bottom 25 percent of children in the school district for elementary schools, and graduation rates for high schools (MDOE, 2015). The grades were reflective of the state assessment scores. Any school that did not reach 95% participation rate, the federal requirement, received a letter grade deduction. If a school had less than 90% participation rate, it automatically received an F. If the participation rate was between 90% and 95%, the school received one grade lower than they would have received based on their test scores alone.
Since LD 1422 is requiring all high schools to graduate with a proficiency-based diploma, the high school “report card” grade was gathered for all high schools within the population study. Due to the number of high schools in certain districts and the data that was available to the researcher on the Maine Data Warehouse, 107 high schools report card grades were gathered for the 2014 year. This was the same year that the extension applications were due to the MDOE. Thirty high schools received a D or F this year; 54 received a C; and 23 high schools received an A or a B, as seen in Table 2.

Table 2

Distribution of Report Card Grades in Maine High Schools in 2014

<table>
<thead>
<tr>
<th>Report Card Grade</th>
<th>Count</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>8</td>
<td>7.5%</td>
</tr>
<tr>
<td>B</td>
<td>15</td>
<td>14.0%</td>
</tr>
<tr>
<td>C</td>
<td>54</td>
<td>50.5%</td>
</tr>
<tr>
<td>D</td>
<td>20</td>
<td>18.7%</td>
</tr>
<tr>
<td>F</td>
<td>10</td>
<td>9.3%</td>
</tr>
<tr>
<td><strong>Total Reported</strong></td>
<td><strong>107</strong></td>
<td></td>
</tr>
</tbody>
</table>

Regional Comparison of Report Card Grades. The researcher questioned whether the report card grades differed by region. This data was then distributed out into each of the nine superintendent regions. York, Midcoast and Cumberland regions did not receive a high school grade of an F in the 2014 year compared to the other six regions that received at least one F. Cumberland (29.4%) and York (25%) were the only two regions that had high schools that received a grade of an A. Aroostook (17.6%), Hancock (20.0%), Kennebec (12.5%), Penquis (13.3%), Washington (33.3%), and Western Maine (6.7%) all had one or more high schools that received an F. The highest percentage grade in every region was the C as seen in Table 3.
### Table 3

Comparison of High School Report Card Grades in Regions

<table>
<thead>
<tr>
<th>Superintendent Region</th>
<th>Grade A</th>
<th>%</th>
<th>Grade B</th>
<th>%</th>
<th>Grade C</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aroostook</td>
<td>0</td>
<td>0.0%</td>
<td>1</td>
<td>5.9%</td>
<td>9</td>
<td>52.9%</td>
</tr>
<tr>
<td>Cumberland</td>
<td>5</td>
<td>29.4%</td>
<td>4</td>
<td>23.5%</td>
<td>7</td>
<td>41.2%</td>
</tr>
<tr>
<td>Hancock</td>
<td>0</td>
<td>0.0%</td>
<td>0</td>
<td>0.0%</td>
<td>3</td>
<td>60.0%</td>
</tr>
<tr>
<td>Kennebec</td>
<td>0</td>
<td>0.0%</td>
<td>3</td>
<td>18.8%</td>
<td>8</td>
<td>50.0%</td>
</tr>
<tr>
<td>Midcoast</td>
<td>0</td>
<td>0.0%</td>
<td>1</td>
<td>14.3%</td>
<td>3</td>
<td>42.9%</td>
</tr>
<tr>
<td>Penquis</td>
<td>0</td>
<td>0.0%</td>
<td>3</td>
<td>20.0%</td>
<td>8</td>
<td>53.3%</td>
</tr>
<tr>
<td>Washington</td>
<td>0</td>
<td>0.0%</td>
<td>0</td>
<td>0.0%</td>
<td>2</td>
<td>66.7%</td>
</tr>
<tr>
<td>Western Maine</td>
<td>0</td>
<td>0.0%</td>
<td>1</td>
<td>6.7%</td>
<td>8</td>
<td>53.3%</td>
</tr>
<tr>
<td>York</td>
<td>3</td>
<td>25.0%</td>
<td>2</td>
<td>16.7%</td>
<td>6</td>
<td>50.0%</td>
</tr>
</tbody>
</table>

Total Approved          | 8       | 15  | 54     |

<table>
<thead>
<tr>
<th>Superintendent Region</th>
<th>Grade D</th>
<th>%</th>
<th>Grade F</th>
<th>%</th>
<th>Total Reported</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aroostook</td>
<td>4</td>
<td>23.5%</td>
<td>3</td>
<td>17.6%</td>
<td>17</td>
</tr>
<tr>
<td>Cumberland</td>
<td>1</td>
<td>5.9%</td>
<td>0</td>
<td>0.0%</td>
<td>17</td>
</tr>
<tr>
<td>Hancock</td>
<td>1</td>
<td>20.0%</td>
<td>1</td>
<td>20.0%</td>
<td>5</td>
</tr>
<tr>
<td>Kennebec</td>
<td>3</td>
<td>18.8%</td>
<td>2</td>
<td>12.5%</td>
<td>16</td>
</tr>
<tr>
<td>Midcoast</td>
<td>3</td>
<td>42.9%</td>
<td>0</td>
<td>0.0%</td>
<td>7</td>
</tr>
<tr>
<td>Penquis</td>
<td>2</td>
<td>13.3%</td>
<td>2</td>
<td>13.3%</td>
<td>15</td>
</tr>
<tr>
<td>Washington</td>
<td>0</td>
<td>0.0%</td>
<td>1</td>
<td>33.3%</td>
<td>3</td>
</tr>
<tr>
<td>Western Maine</td>
<td>5</td>
<td>33.3%</td>
<td>1</td>
<td>6.7%</td>
<td>15</td>
</tr>
<tr>
<td>York</td>
<td>1</td>
<td>8.3%</td>
<td>0</td>
<td>0.0%</td>
<td>12</td>
</tr>
</tbody>
</table>

Total Approved          | 20      | 10  | 107    |

**Per Pupil Expenditure.** On the Maine Data Warehouse, the researcher created an ad hoc report under the finance domain in order to search for per pupil expenditures for each school district during the 2013-14 and 2014-15 school years. Per pupil expenditures includes the cost of regular instruction, special education instruction, student and staff support, school administration, transportation and buses, facilities and maintenance, debt service, career and technical education, system administration and other instruction like adult education. By searching data from the 2013-14 school year and the 2014-15 school year, the researcher was
able to find the per pupil expenditures for each school district in the study that had data within the data warehouse. The average for all school districts in the study for the 2013-14 per pupil expenditure was $13,122 compared to the state average of $12,056. The average for the 2014-15 for all school districts in the study for the 2014-15 per pupil expenditure was $13,553 compared to the state average of $12,551. Some school districts information was not included on the data warehouse as there were consolidations or separations and these school units did not exist during that time.

**Regional Comparison of Per Pupil Expenditure.** The researcher then evaluated how funding in education varied by region and distributed this data into the nine regions. The Penquis region spends the least ($11,663) on per pupil expenditures while the Midcoast ($16,233) region spends the most over the two-year period. Aroostook, Kennebec, Penquis and Western Maine all spend less than the state average on per pupil expenditure costs. Table 4 compares the data demonstrating that the costs of education vary among the regions throughout the state of Maine. Whether these costs influenced the implementation of LD 1422 will be discussed in the trend section later in this chapter.

**Free and Reduced Lunch Rates.** The Maine Department of Education oversees many USDA Food and Service Nutrition Programs that provide healthy food to our students (MDOE, 2015). One such program is the National School Lunch Program (NSLP). NSLP provides free or reduced cost meals to students. Schools must follow these federally established guidelines. The researcher has experienced implementation of LD 1422 at three different districts that has three varying free/reduced lunch rates ranging from 75% to 40%. The researcher questioned if implementation of LD 1422 varied in the state based on this data point. Using the Maine Data Warehouse, the researcher collected the free and reduced lunch rates for the 2013-14 and 2014-
15 school year. These two years represented the year prior to submitting the implementation plan and the year the implementation plan was due to the MDOE. The average for the state for the population in the study for the 2013-14 school year was 47.8% and 49.0% for the 2014-15 school year showing an increase in the free/reduced lunch rate.

Table 4

*Regional Per Pupil Expenditure Costs for the 2013-14 and 2014-15 School Years in Maine*

<table>
<thead>
<tr>
<th>Region</th>
<th>2013-14</th>
<th>2014-15</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aroostook</td>
<td>$12,079</td>
<td>$12,514</td>
<td>$12,296</td>
</tr>
<tr>
<td>Cumberland</td>
<td>$13,086</td>
<td>$13,588</td>
<td>$13,337</td>
</tr>
<tr>
<td>Hancock</td>
<td>$14,660</td>
<td>$16,560</td>
<td>$15,610</td>
</tr>
<tr>
<td>Kennebec</td>
<td>$11,603</td>
<td>$11,872</td>
<td>$11,737</td>
</tr>
<tr>
<td>Midcoast</td>
<td>$16,035</td>
<td>$16,431</td>
<td>$16,233</td>
</tr>
<tr>
<td>Penquis</td>
<td>$11,542</td>
<td>$11,784</td>
<td>$11,663</td>
</tr>
<tr>
<td>Washington</td>
<td>$14,511</td>
<td>$13,356</td>
<td>$13,934</td>
</tr>
<tr>
<td>Western Maine</td>
<td>$11,992</td>
<td>$12,462</td>
<td>$12,227</td>
</tr>
<tr>
<td>York</td>
<td>$12,586</td>
<td>$13,410</td>
<td>$12,998</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>2013-14</th>
<th>2014-15</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average PPE Study Population</td>
<td>$13,122</td>
<td>$13,553</td>
<td>$13,337</td>
</tr>
<tr>
<td>State Average</td>
<td>$12,056</td>
<td>$12,551</td>
<td>$12,304</td>
</tr>
</tbody>
</table>

Table 5

*Regional Free and Reduced Lunch Rates for the 2013-14 and 2014-15 School Year*

<table>
<thead>
<tr>
<th>Region</th>
<th>2013-14</th>
<th>2014-15</th>
<th>Increase/Decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aroostook</td>
<td>56.2%</td>
<td>56.7%</td>
<td>0.5</td>
</tr>
<tr>
<td>Cumberland</td>
<td>28.8%</td>
<td>30.3%</td>
<td>1.5</td>
</tr>
<tr>
<td>Hancock</td>
<td>37.8%</td>
<td>42.9%</td>
<td>5.1</td>
</tr>
<tr>
<td>Kennebec</td>
<td>54.6%</td>
<td>59.7%</td>
<td>5.1</td>
</tr>
<tr>
<td>Midcoast</td>
<td>46.1%</td>
<td>43.0%</td>
<td>-3.1</td>
</tr>
<tr>
<td>Penquis</td>
<td>54.6%</td>
<td>50.1%</td>
<td>-4.5</td>
</tr>
<tr>
<td>Washington</td>
<td>62.7%</td>
<td>64.8%</td>
<td>2.1</td>
</tr>
<tr>
<td>Western Maine</td>
<td>52.8%</td>
<td>54.9%</td>
<td>2.1</td>
</tr>
<tr>
<td>York</td>
<td>36.6%</td>
<td>38.7%</td>
<td>2.1</td>
</tr>
</tbody>
</table>

| Average           | 47.8%   | 49.0%   | 1.2               |
**Regional Comparison of Free and Reduced Lunch Rates.** The researcher then organized the data into regional spreadsheets comparing the free/reduced lunch rates across each superintendent region (Table 5). Table 5 shows that all regions except Penquis and Midcoast had an increase in free/reduced lunch percentages during the two-year range. Hancock and Kennebec regions saw the largest increase of 5.1% while Aroostook saw the smallest increase of 0.5% in free/reduced lunch rates. The regions with over 50% free/reduced lunch rates for both years include Aroostook, Kennebec, Penquis, Washington and Western Maine. The region with lowest free/reduced lunch rate for these two years was Cumberland. The impact of these changes in free and reduced lunch rates to the implementation of LD 1422 will be discussed in the trend section.

**Graduation Rates.** Graduation is the heart of this study as all students that graduate beginning in the class of 2018 according to LD 1422, must graduate with a proficiency-based diploma. The implementation date has changed from the original date of 2017, because the law required implementation grants for each year of implementation to help districts bring forth these changes. Since these implementation grants were not issued in the 2012-13 school year, the deadline was changed to 2018. Schools were then given more time to “ensure proficiency-based diplomas are done right” in 2014 by the then acting Commissioner Rier (Rier, 2014, n.p.). As schools submitted one of the six extension options or the confirmation of readiness application, school units continued to implement systems to meet LD 1422 requirements.

The researcher gathered graduation rates for all the high schools in the study population. The graduation rates showed an increase of .4% from 2014 (86.1%) to 2015 (86.5%) for the population study. As some school units were exempt from the study due to having private high schools or high schools receiving less than 60% of public funding, the researcher also gathered
the graduation rates for all schools in the state for these two years. In 2014, Maine graduated 12,362 students for a graduation rate of 86.48%. For the 2015 school year, Maine graduated 11,317 students for a graduation rate of 87.16%. Overall, the graduation rate in Maine is increasing for both the population study and the entire student population in Maine.

**Regional Comparison of Graduation Rates.** The graduation rates were compared according to superintendent regions. Four regions (Hancock, Washington, Western Maine and York) reported a decrease in their graduation rates from the 13-14 school year to the 14-15 school year. Five regions (Aroostook, Cumberland, Kennebec, Midcoast, Penquis) reported an increase in their graduation rates during the same time frame. Hancock saw the largest decrease of 5.2% while Penquis had the highest increase of 4.2%. Table 6 summarizes the regional graduation rates for this two-year time frame for the study population. The implementation of LD 1422 and its effect on graduation rates is discussed in the trend section of this chapter.

Table 6

*Regional Graduation Rates for the 2013-14 and 2014-15 School Years for the Population Study*

<table>
<thead>
<tr>
<th>Region</th>
<th>2013-14</th>
<th>2014-15</th>
<th>Increase/Decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aroostook</td>
<td>89.5%</td>
<td>91.0%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Cumberland</td>
<td>89.5%</td>
<td>92.0%</td>
<td>2.5</td>
</tr>
<tr>
<td>Hancock</td>
<td>86.0%</td>
<td>80.2%</td>
<td>-5.2</td>
</tr>
<tr>
<td>Kennebec</td>
<td>85.1%</td>
<td>87.6%</td>
<td>2.5</td>
</tr>
<tr>
<td>Midcoast</td>
<td>83.6%</td>
<td>84.6%</td>
<td>1</td>
</tr>
<tr>
<td>Penquis</td>
<td>84.6%</td>
<td>88.8%</td>
<td>4.2</td>
</tr>
<tr>
<td>Washington</td>
<td>89.4%</td>
<td>88.4%</td>
<td>-1</td>
</tr>
<tr>
<td>Western Maine</td>
<td>86.2%</td>
<td>85.8%</td>
<td>-0.4</td>
</tr>
<tr>
<td>York</td>
<td>81.3%</td>
<td>80.0%</td>
<td>-1.3</td>
</tr>
<tr>
<td>Average</td>
<td>86.1%</td>
<td>86.5%</td>
<td>0.4</td>
</tr>
</tbody>
</table>

**Statewide Extension/Readiness Options**

As the researcher became more knowledgeable about the metrics that might impact education including per pupil expenditures, free/reduced lunch rates, and graduation rates, she
began to review the statewide extension applications and confirmation of readiness applications submitted to the MDOE. These applications were posted on the MDOE website in completion, as well as, a response letter from the MDOE. Each school unit was able to decide which application it wanted to apply for. Each application option has a different timeline and different deliverables to the MDOE. Option 1 had a shorter timeline and districts are closer to implementing a proficiency-based diploma than a district applying for Option 6. Districts that applied for Option 5 and 6 received a site visit from the MDOE for additional support. The options are summarized in Table 7.

Table 7.

*Extension Option Descriptions and Deliverables*

<table>
<thead>
<tr>
<th>Extension Option</th>
<th>Timeline and Deliverables</th>
<th>DOE Visit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>an extension through July 1, 2020 for Guiding Principles ONLY</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>an extension through January 1, 2019 to pilot eight content areas and guiding principles</td>
<td>No</td>
</tr>
<tr>
<td>3</td>
<td>an extension through July 1, 2020 to phase in the eight content areas and guiding principles</td>
<td>No</td>
</tr>
<tr>
<td>4</td>
<td>an extension through July 1, 2020 for remaining six content areas; already do English and Math</td>
<td>No</td>
</tr>
<tr>
<td>5</td>
<td>an extension through July 1, 2020 and is transitioning to PBE system; has evidence of professional development or coaching</td>
<td>Yes</td>
</tr>
<tr>
<td>6</td>
<td>an extension through July 1, 2020; districts that have just begun and need more time for professional development with coaches or help from MDOE</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Note: Information is adapted from the MDOE Extension applications, 2014.
Statewide Distribution of Extension Applications. One hundred six applications were reviewed for this study. The distribution can be viewed in Table 8. One district was approved for a confirmation of readiness application. Only 2 districts (1.9%) were approved for option 1, 8 districts (7.5%) were approved for option 2, 24 (22.6%) were approved for option 3, and 4 (3.8%) were approved for option 4. 37 districts were demonstrating some evidence of measuring proficiency of content standards at the time the extension applications were submitted. This means that 37.0% of the school districts in Maine were measuring proficiency in some content standards in 2014. 63% of Maine schools applied for an extension 5 and 6 extension application meaning they either just started working on the implementation of proficiency-based or needed more time working with their coach to get ready for proficiency-based diplomas.

Table 8.

*Extension and Confirmation of Readiness Distribution in Maine*

<table>
<thead>
<tr>
<th>Extension Approved</th>
<th>Count</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extension 1</td>
<td>2</td>
<td>1.9%</td>
</tr>
<tr>
<td>Extension 2</td>
<td>8</td>
<td>7.5%</td>
</tr>
<tr>
<td>Extension 3</td>
<td>24</td>
<td>22.6%</td>
</tr>
<tr>
<td>Extension 4</td>
<td>4</td>
<td>3.8%</td>
</tr>
<tr>
<td>Extension 5</td>
<td>54</td>
<td>50.9%</td>
</tr>
<tr>
<td>Extension 6</td>
<td>13</td>
<td>12.3%</td>
</tr>
<tr>
<td>COR</td>
<td>1</td>
<td>0.9%</td>
</tr>
<tr>
<td><strong>Total Approved</strong></td>
<td><strong>106</strong></td>
<td></td>
</tr>
</tbody>
</table>

Regional Distribution. With 37% of the state making some forward progress on measuring proficiency within the eight content areas, the researcher sorted the data once again regionally to see if the geography of Maine influenced the extension application that districts applied for. Two regions, Washington and Aroostook, had primarily only extension 5 applications approved. The Aroostook region had 16 total schools approved, with 14 approved with an extension 5 and 2 approved with an extension 4. Washington had all three high schools
approved with an extension 5. The only region to have a confirmation of readiness application approved was the Midcoast region. The other six regions, Cumberland, Hancock, Kennebec, Penquis, Western Maine and York, had a combination of school districts that had submitted extension applications that required a visit from the MDOE meaning they had just started implementation or extension application options that provided evidence they had begun the process of recording proficiencies. Table 9 compares the distribution of applications by superintendent regions.

Table 9

Comparison of Distribution of Extension Applications by Superintendent Regions

<table>
<thead>
<tr>
<th>Superintendent Region</th>
<th>Extension 1</th>
<th>Extension 2</th>
<th>Extension 3</th>
<th>COR</th>
<th>Total Approved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aroostook</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>16</td>
</tr>
<tr>
<td>Cumberland</td>
<td>0</td>
<td>3</td>
<td>4</td>
<td>0</td>
<td>16</td>
</tr>
<tr>
<td>Hancock</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Kennebec</td>
<td>1</td>
<td>0</td>
<td>7</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Midcoast</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Penquis</td>
<td>0</td>
<td>2</td>
<td>4</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td>Washington</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Western Maine</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>York</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>2</td>
<td>8</td>
<td>24</td>
<td>4</td>
<td>106</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Superintendent Region</th>
<th>Extension 5</th>
<th>Extension 6</th>
<th>COR</th>
<th>Total Approved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aroostook</td>
<td>14</td>
<td>0</td>
<td>0</td>
<td>16</td>
</tr>
<tr>
<td>Cumberland</td>
<td>6</td>
<td>3</td>
<td>0</td>
<td>16</td>
</tr>
<tr>
<td>Hancock</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Kennebec</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td>Midcoast</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Penquis</td>
<td>6</td>
<td>4</td>
<td>0</td>
<td>16</td>
</tr>
<tr>
<td>Washington</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Western Maine</td>
<td>6</td>
<td>2</td>
<td>0</td>
<td>13</td>
</tr>
<tr>
<td>York</td>
<td>8</td>
<td>0</td>
<td>0</td>
<td>12</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>54</td>
<td>13</td>
<td>1</td>
<td>106</td>
</tr>
</tbody>
</table>

86
Policy Implementations since State Adoption of LD 1422

In Chapter 3, the researcher discussed the conceptual framework of Phase IV of the MEPRI studies (2016) and the MDOE logic model (2015). Both of these frameworks discussed how LD 1422 compelled district leaders to reexamine their beliefs. These beliefs led to changes in school philosophies, mission statements and vision statements. The MEPRI studies (2016) and the MDOE logic model (2015) also discuss how belief systems then lead to changes in practices within the classroom and eventually policy changes within the district. While the logic model is circular looking at inputs and outputs within the implementation of LD 1422; the Maine DOE describes the intent or vision of the Maine statutes which then leads Maine educators to work within their districts to create structures, policies, and practices where each student can grow in a proficiency-based system.

The researcher reviewed four policies for the study population. These policies included vision/mission (Policy AD), commitment to Maine Learning Results (Policy ADF), graduation requirements (Policy IKF) and grading practices (Policy IKE). By reviewing these four policies, the researcher was able to gather data on proficiency-based practices happening within school districts in Maine. The researcher also collected data on each of the policies and whether they changed since the passage of LD 1422 in 2012. If the policies were changed, the researcher noted the changes creating queries that searched for common ground. This section of the results will report out on each of the policies and the information obtained on proficiency-based practices and policy implementation. Trends between these practices and policies will be discussed in the trend section of this chapter.

Mission and Vision, Policy AD. Policy AD is often the district’s educational philosophy. For many districts, it can be as simple as a mission and vision statement. The
researcher did a web-based query for each school district in the study population and recorded the date that policy AD was last adopted or revised. Since the passage of LD 1422, 47.1% of Maine school districts have either adopted or revised policy AD. The researcher then disaggregated the data into regions. Table 10 compares the changes in policy AD in the Superintendent regions after the passage LD 1422 in 2012. Aroostook, Kennebec, Penquis, Washington and Western Maine changed Policy AD more than 50% of the time. The researcher began to question if districts that adopted a new vision and mission made more gains in implementing proficiency-based practices. The results of this correlation is discussed in the trend section.

Table 10

<table>
<thead>
<tr>
<th>Region</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aroostook</td>
<td>50.0%</td>
</tr>
<tr>
<td>Cumberland</td>
<td>28.8%</td>
</tr>
<tr>
<td>Hancock</td>
<td>37.8%</td>
</tr>
<tr>
<td>Kennebec</td>
<td>54.6%</td>
</tr>
<tr>
<td>Midcoast</td>
<td>46.1%</td>
</tr>
<tr>
<td>Penquis</td>
<td>54.6%</td>
</tr>
<tr>
<td>Washington</td>
<td>62.7%</td>
</tr>
<tr>
<td>Western Maine</td>
<td>52.8%</td>
</tr>
<tr>
<td>York</td>
<td>36.6%</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td><strong>47.1%</strong></td>
</tr>
</tbody>
</table>

**Commitment to Maine Learning Results, Policy ADF.** Core Priority One of Maine’s Educational System called Education Evolving, is effective, learner-centered instruction. This instruction includes rigorous standards and aligned curricula. In 1997, Maine adopted the Maine Learning Results which includes eight content areas and is framed by the Guiding Principles. Maine then adopted the Common Core State Standards in 2011. Part of the MDOE’s implementation plan was to provide professional development opportunities, set up an online
collaboration platform of resources and create regional centers to help coordinate and implement standards and aligned curricula (Education Evolving, 2012). However, there was a lack of funding and the regional centers were not formed.

The researcher reviewed policy ADF, a Commitment to Maine’s Learning Results on every school district’s web site that was part of the population study. The researcher looked for the year the policy was adopted or revised, as well as, if there was any mention of proficiency-based education practices or the guiding principles. Table 11 demonstrates that 47.5% of the school districts in the study adopted or revised policy ADF after the passage of LD 1422 in 2012. Of these districts that revised or adopted policy ADF, only 8 districts specifically mentioned the guiding principles in policy ADF. Aroostook, Hancock, Kennebec, Midcoast, and York had 50% of school districts adopt or revise policy ADF. Washington region did not make any changes to policy ADF since 2012 whereas, the Midcoast region’s school districts adopted or revised 75%. The researcher questioned whether schools that adopted or revised commitment to the Maine Learning Results had any correlation to the extension application or their implementation process. This trend data will be discussed in the trend section of this chapter.

Table 11

<table>
<thead>
<tr>
<th>Region</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aroostook</td>
<td>50.0%</td>
</tr>
<tr>
<td>Cumberland</td>
<td>69.2%</td>
</tr>
<tr>
<td>Hancock</td>
<td>50.0%</td>
</tr>
<tr>
<td>Kennebec</td>
<td>50.0%</td>
</tr>
<tr>
<td>Midcoast</td>
<td>75.0%</td>
</tr>
<tr>
<td>Penquis</td>
<td>36.4%</td>
</tr>
<tr>
<td>Washington</td>
<td>0.0%</td>
</tr>
<tr>
<td>Western Maine</td>
<td>38.5%</td>
</tr>
<tr>
<td>York</td>
<td>58.3%</td>
</tr>
<tr>
<td>Average</td>
<td>47.5%</td>
</tr>
</tbody>
</table>
Graduation Requirements, Policy IKF. As school systems are required to graduate students with a proficiency-based diploma starting in 2018 under statute LD 1422, and in 2021 if granted an extension option, many school districts were faced with having to fully understand the statute requirements. This lead to a review of their graduation policies and district leadership made changes to align with the state statute. The researcher having experienced this process in three districts witnessed this process in three different ways and knew that three different polices came out of this process, all meeting the state requirements outlined in the statute. One graduation policy was strictly credit-based and students met proficiency in the eight content areas as they earned credits, thus certifying proficiencies in each of those content areas and guiding principles. Another graduation policy contained a combination of proficiencies in all eight content areas and students earned credits and proficiency scores, forming a dual scoring system. The third system was working towards proficiency scores and the removal of credits phasing in content areas working towards the extension date of 2021.

The researcher evaluated what graduation policy practices were occurring within Maine school districts and reviewed all graduation policies recording the following data: year of adoption and/or revision, whether all eight content areas were being fully implemented with the first graduating class in a proficiency-based system, whether there was a phase in approach to the eight content areas and guiding principles, and whether the system was credit-based, proficiency-based or a dual grading system.

Have Maine school districts made changes to the graduation policy since 2012? Table 12 demonstrates that 68.9% of Maine school districts have adopted or revised their graduation policy since 2012. Other than Washington (33.3%) and Aroostook (43.8%) regions, the other Superintendent regions made changes to their graduation policy more than 50%. All school
districts in Hancock region (100%) changed their graduation policy and 91.7% of York region changed their graduation policy.

Table 12

*Comparison of Maine School Regions Adopting or Revising Graduation Policy IKE since 2012*

<table>
<thead>
<tr>
<th>Region</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aroostook</td>
<td>43.8%</td>
</tr>
<tr>
<td>Cumberland</td>
<td>68.8%</td>
</tr>
<tr>
<td>Hancock</td>
<td>100.0%</td>
</tr>
<tr>
<td>Kennebec</td>
<td>73.3%</td>
</tr>
<tr>
<td>Midcoast</td>
<td>50.0%</td>
</tr>
<tr>
<td>Penquis</td>
<td>75.0%</td>
</tr>
<tr>
<td>Washington</td>
<td>33.3%</td>
</tr>
<tr>
<td>Western Maine</td>
<td>84.6%</td>
</tr>
<tr>
<td>York</td>
<td>91.7%</td>
</tr>
<tr>
<td>Average</td>
<td>68.9%</td>
</tr>
</tbody>
</table>

Table 13

*Comparison of Graduation Policy Content Area Implementations for Study Population*

<table>
<thead>
<tr>
<th>Region</th>
<th>Full</th>
<th>Phase In</th>
<th>Not Mentioned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aroostook</td>
<td>6</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Cumberland</td>
<td>6</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Hancock</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Kennebec</td>
<td>4</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>Midcoast</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Penquis</td>
<td>6</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Washington</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Western Maine</td>
<td>5</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>York</td>
<td>7</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>35</td>
<td>17</td>
</tr>
<tr>
<td>Percentage</td>
<td>42.90%</td>
<td>38.40%</td>
<td>18.70%</td>
</tr>
</tbody>
</table>

*How have Maine school districts changed their graduation policy to include measuring proficiency within the eight content areas?* Table 13 denotes the changes that superintendent regions made in regards to full implementation or partial implementation of measuring content areas since 2012. Of the 106 school districts within the population study, 91 of them had a
graduation policy IKF posted on their website. Of those posted on their web site, 81.3% of them mentioned LD 1422 by stating the needs to meet the standards or proficiency in the eight content areas. Within the 74 school districts that mentioned proficiency-based implementation, 42.9% were going to implement all eight content standards representing a full implementation approach. 38.4% identified at least four content areas for students to be proficient in and then adding another content area over the next few years until all eight in 2021. Few mentioned world language as a need in the future but did not yet include it in their lists of proficiency-based content areas but did state it was needed by 2021.

**Grading Practices, Policy IKD.** While reviewing the graduation policy, the researcher noticed that districts had different methods for recording proficiency for students. Some districts defined proficiency and how students earned proficiency within the graduation policy. Other districts, did not. The researcher decided to complete another web based query on grading practices, policy IKD, to see if districts identified grading practices, defined proficiency and whether districts used credits, proficiency scales or a combination of both to graduate students with a proficiency-based diploma. Table 14 display the total data after reviewing policy IKD and comparing this data with the graduation policy IKF.

It is important to note that when coding the districts, the researcher made a clear distinction between the three categories. Districts that were placed in the *proficiency* category clearly demonstrated they were scoring proficiencies of standards and were no longer using a credit-based system. They had moved away or were in the process of moving away from the Carnegie unit and their grading practices and graduation policy were based on measuring of the content area standards and students demonstrating proficiency. Districts that were placed in the *credit* category did not mention proficiency in their graduation policy as a requirement to earn
their diploma. The diploma was a credit-based completion of credits with no mention of LD 1422. Districts that were placed in the dual category demonstrated evidence of measuring proficiencies in their policies but students may still earn credits in the process of demonstrating proficiencies.

**How are Maine school districts from the study population transitioning their grading systems to a proficiency-based system?** Of the 90 school districts of the 106 that posted policy IKD on their websites, 65.6% of them presented a grading system that measured proficiency of content areas through either a dual system or just proficiency scales. 40% percent used only proficiency scales, 34.4% used a credit-based system with a 0-100 grading scale, and 25.6% used a dual system that combined a proficiency scale and a 0-100 grading scale.

Table 14

*Comparison of Grading Practices in a Proficiency-based System in the Study Population*

<table>
<thead>
<tr>
<th>Region</th>
<th>Proficiency</th>
<th>Credit</th>
<th>Dual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aroostook</td>
<td>3</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Cumberland</td>
<td>7</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Hancock</td>
<td>3</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Kennebec</td>
<td>5</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Midcoast</td>
<td>4</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Penquis</td>
<td>6</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Washington</td>
<td>1</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Western Maine</td>
<td>2</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>York</td>
<td>5</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>36</strong></td>
<td><strong>31</strong></td>
<td><strong>23</strong></td>
</tr>
<tr>
<td><strong>Percentage</strong></td>
<td>40.0%</td>
<td>34.4%</td>
<td>25.6%</td>
</tr>
</tbody>
</table>

Table 14 breaks down the additional superintendent regional data for how districts are measuring the proficiency of content areas. While 65.6% of the state in the population study is recording proficiency, 34.4% of the state did not mention the requirement of proficiency in their graduation policies or grading policies. Of the 90 school districts from the population study that
posted these policies on their websites, the Western Maine region had 10 school districts measured by credits, 2 with proficiency and 1 under a dual system. This region had the largest range in implementation of proficiency within the region with the fewest schools in that region mentioning movement in measuring standards. All other regions demonstrated significant movement toward proficiency-based standards measurement.

**Professional Development in the Implementation of LD 1422**

School districts did not wake up one morning and walk into schools and have a proficiency-base system waiting for them. To implement this system, numerous hours of professional development are needed. Leaders need professional development to learn how to build capacity for change within their districts. Teachers need professional development to learn how to teach in a classroom where students learn in different ways and in different timeframes, honing their craft and learning to differentiate to the specific skills that students require on any given day. As the researcher reviewed extension applications, policy implementations and district websites, professional development was evident. The researcher noted for each school district any professional development organizations mentioned in the extension applications and during the policy reviews. This data is summarized in Table 15.

Of the 106 school units in the study, 91% of the school units participated in professional development with an outside source to help implement LD 1422. Outside source is defined as any organization, consultant or book that was used by the district and named specifically in the extension application as a resource during the implementation plan. Four sources were mentioned often by the school units. These sources were RISC (18), *The Art of Science and Teaching* by Marzano (35), MCCL (31), and Great Schools Partnership (33).
Table 15

Districts per Region that Participated in Professional Development to Implement LD 1422

<table>
<thead>
<tr>
<th>Region</th>
<th>Professional Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aroostook</td>
<td>14</td>
</tr>
<tr>
<td>Cumberland</td>
<td>14</td>
</tr>
<tr>
<td>Hancock</td>
<td>4</td>
</tr>
<tr>
<td>Kennebec</td>
<td>15</td>
</tr>
<tr>
<td>Midcoast</td>
<td>8</td>
</tr>
<tr>
<td>Penquis</td>
<td>14</td>
</tr>
<tr>
<td>Washington</td>
<td>3</td>
</tr>
<tr>
<td>Western Maine</td>
<td>13</td>
</tr>
<tr>
<td>York</td>
<td>11</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>96</strong></td>
</tr>
<tr>
<td><strong>Percentage</strong></td>
<td><strong>91.0%</strong></td>
</tr>
</tbody>
</table>

Patterns and Trends within the Data

Each section of the results has culminated to the trend section of this chapter. The first section of the results stated the regional metrics for the population study, including per pupil expenditure, free/reduced lunch rates and graduation rates for each region. The second section reviewed the statewide readiness/extension application submitted across the study population to gain an understanding of where districts were in the timeline for implementing LD 1422. The third section went deeper into the implementation of LD 1422, reviewing policies within the study population to seek answers to the research questions about grading practices, graduation practices and policy changes. The fourth section then looked at the most common organizations that helped the study population get to these changes.

While all of this information is valuable and descriptive to what is happening in Maine schools, the researcher determined the viability of these variables correlation or impact on each other. This next section will look at trends among the variables discussed within the first four sections. For example, the researcher began to ask if school units that had a higher free/reduced
lunch rates were making more/less progress in implementing LD 1422. Another example, did the professional development choice by districts have an impact on the implementation of LD 1422? In other words, were there any variables that might be affecting the implementation of LD 1422.

**Analysis Methods.** The researcher used inferential statistics to compare the variables within the study. The researcher chose to use inferential statistics to find out the strengths of the relationships between the independent variables. Regression analysis was first used to establish the strength and direction of any relationships between the variables. The following inferential statistics were then used to further test the relationship: Pearson correlation, Anova, Bi-variate regression, and confidence interval. Pearson correlation, denoted R, was used to establish the linear relationship between two variables and denote if the relationship was positive or negative. Anova was chosen as there was more than two variables to compare to the extension application approved by the MDOE. This test allowed the researcher to view the F-ratio and whether the differences between variables was statistically significant or caused by chance. P-values were used to determine the significance of the results. The trends were divided into four major categories: regional trends, expenditure trends, policy trends and implementation trends.

**Regional Trends.** As the researcher observed the population study in superintendent regions due to the fact that these superintendent regions meet regularly during the school year to discuss issues in education, developments at the MDOE, and legislative changes. The researcher questioned whether regional trends correlated to the extension options that were approved by the MDOE and whether regional graduation rates correlated to the extension options approved by the MDOE.
**Regional and Extension Option Approvals.** No correlation can be established between region and extension option approval. Table 16, 17 and 18 share the inferential statistics on these two variables. There was no statistically significant correlation between the variables for population study (n=106).

Table 16.

*Regression Statistics between Regional Divisions and Extension Option Approvals*

<table>
<thead>
<tr>
<th>Regression Statistics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple R</td>
<td>0.0279</td>
</tr>
<tr>
<td>R Square</td>
<td>0.001</td>
</tr>
<tr>
<td>Adjusted R Square</td>
<td>-0.001</td>
</tr>
<tr>
<td>Standard Error</td>
<td>1.3001</td>
</tr>
<tr>
<td>Observations</td>
<td>106</td>
</tr>
</tbody>
</table>

Table 17.

*ANOVA Statistics between Regional Divisions and Extension Option Approvals*

<table>
<thead>
<tr>
<th></th>
<th>Df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>Significance F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>1</td>
<td>0.137</td>
<td>0.137</td>
<td>0.081</td>
<td>0.777</td>
</tr>
<tr>
<td>Residual</td>
<td>104</td>
<td>175.948</td>
<td>1.692</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>105</td>
<td>176.085</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 18

*Confidence Levels between Regional Divisions and Extension Options Approvals*

<table>
<thead>
<tr>
<th></th>
<th>Coefficients</th>
<th>Standard Error</th>
<th>t Stat</th>
<th>P-value</th>
<th>Lower 95%</th>
<th>Upper 95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>4.412</td>
<td>0.256</td>
<td>17.229</td>
<td>3.07E-32</td>
<td>3.905</td>
<td>4.92</td>
</tr>
<tr>
<td>Region Code</td>
<td>-0.013</td>
<td>0.047</td>
<td>-0.284</td>
<td>0.777</td>
<td>-0.107</td>
<td>0.08</td>
</tr>
</tbody>
</table>

**Regional Graduation Rates and Extension Option Approvals.** When comparing whether extension option approvals were related to the regional graduation rates, no correlation can be established. Table 19, 20 and 21 share the inferential statistics on these two variables.
There was no statistically significant correlation between the variables for population study (n=99).

Table 19

*Regression Statistics between High School Graduation Rates and Extension Option Approvals*

<table>
<thead>
<tr>
<th>Regression Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple R</td>
</tr>
<tr>
<td>R Square</td>
</tr>
<tr>
<td>Adjusted R Square</td>
</tr>
<tr>
<td>Standard Error</td>
</tr>
<tr>
<td>Observations</td>
</tr>
</tbody>
</table>

Table 20

*ANOVA Statistics between High School Graduation Rates and Extension Option Approvals*

<table>
<thead>
<tr>
<th>ANOVA</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>Significance F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regression</td>
<td>1</td>
<td>0.036</td>
<td>0.036</td>
<td>0.023</td>
<td>0.879</td>
</tr>
<tr>
<td>Residual</td>
<td>97</td>
<td>151.135</td>
<td>1.558</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>98</td>
<td>151.171</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 21

*Confidence Levels between High School Graduation Rates and Extension Options Approvals*

<table>
<thead>
<tr>
<th>Coefficients</th>
<th>Standard Error</th>
<th>t Stat</th>
<th>P-value</th>
<th>Lower 95%</th>
<th>Upper 95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>4.22</td>
<td>1.016</td>
<td>4.154</td>
<td>7.04E-05</td>
<td>2.203</td>
</tr>
<tr>
<td>2014-15 HS Graduation Rate</td>
<td>0.177</td>
<td>1.155</td>
<td>0.153</td>
<td>0.879</td>
<td>-2.116</td>
</tr>
</tbody>
</table>

**Expenditure Trends.** By searching the 2013-14 school year and the 2014-15 school year, the researcher was able to find the per pupil expenditures for each school district in the study that had data within the data warehouse. The average for all school districts in the study for
the 2013-14 per pupil expenditure was $13,122 compared to the state average of $12,056. The average for the 2014-15 for all school districts in the study for the 2014-15 per pupil expenditure was $13,553 compared to the state average of $12,551. The researcher questioned if the funding that schools received impacts two areas, the regional report card grades that all schools received and the extension option approvals for each school district. The researcher also compared free/reduced lunch rate to the extension option approvals to see if there was a correlation between these two variables.

**Per Pupil Expenditure and Report Card Grades.** When comparing whether per pupil expenditures were related to the high school report card grades, a potential correlation was presented. Table 22, 23 and 24 share the inferential statistics on these two variables. Multiple R=0.19 which meant a small positive correlation between these two variables. The researcher then ran a statistical p-value to confirm this correlation. The p-value score >.05 which is the standard cut off to say that we cannot reject the the possibility that the slight correlation occurred by chance. The p-value was 0.0586.

Table 22

*Regression Statistics between Per Pupil Expenditure and High School Report Card Grades*

<table>
<thead>
<tr>
<th>Regression Statistics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple R</td>
<td>0.192</td>
</tr>
<tr>
<td>R Square</td>
<td>0.037</td>
</tr>
<tr>
<td>Adjusted R Square</td>
<td>0.027</td>
</tr>
<tr>
<td>Standard Error</td>
<td>1.005</td>
</tr>
<tr>
<td>Observations</td>
<td>98</td>
</tr>
</tbody>
</table>
Table 23

ANOVA Statistics between Per Pupil Expenditure and High School Report Card Grades

<table>
<thead>
<tr>
<th></th>
<th>Df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>Significance F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>1</td>
<td>3.702</td>
<td>3.702</td>
<td>3.663</td>
<td>0.059</td>
</tr>
<tr>
<td>Residual</td>
<td>96</td>
<td>97.043</td>
<td>1.011</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>97</td>
<td>100.745</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 24

Confidence Levels between Per Pupil Expenditure and High School Report Card Grades

<table>
<thead>
<tr>
<th></th>
<th>Coefficients</th>
<th>Standard Error</th>
<th>t Stat</th>
<th>P-Value</th>
<th>Lower 95%</th>
<th>Upper 95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>4.317</td>
<td>0.669</td>
<td>6.45</td>
<td>4.52E-09</td>
<td>2.989</td>
<td>5.646</td>
</tr>
<tr>
<td>2013-14 Spending</td>
<td>-0.0001</td>
<td>5.34E-05</td>
<td>-1.914</td>
<td>0.059</td>
<td>-0.0001</td>
<td>3.80E-06</td>
</tr>
</tbody>
</table>

**Per Pupil Expenditure and Extension Option Approvals.** When comparing whether per pupil expenditures were related to the extension option approvals, no correlation can be established. Table 25, 26 and 27 share the inferential statistics on these two variables. There was no statistically significant correlation between the variables for population study (n=102).

Table 25

Regression Statistics between Per Pupil Expenditure and Extension Option Approvals

<table>
<thead>
<tr>
<th>Regression Statistics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple R</td>
<td>0.012</td>
</tr>
<tr>
<td>R Square</td>
<td>0.000</td>
</tr>
<tr>
<td>Adjusted R Square</td>
<td>-0.010</td>
</tr>
<tr>
<td>Standard Error</td>
<td>1.288</td>
</tr>
<tr>
<td>Observations</td>
<td>102</td>
</tr>
</tbody>
</table>
Table 26

ANOVA Statistics between Per Pupil Expenditure and Extension Option Approvals

<table>
<thead>
<tr>
<th></th>
<th>Df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>Significance F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>1</td>
<td>0.025</td>
<td>0.025</td>
<td>0.015</td>
<td>0.902</td>
</tr>
<tr>
<td>Residual</td>
<td>100</td>
<td>165.936</td>
<td>1.659</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>101</td>
<td>165.960</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 27

Confidence Levels between Per Pupil Expenditure and Extension Option Approvals

<table>
<thead>
<tr>
<th></th>
<th>Coefficients</th>
<th>Standard Error</th>
<th>t Stat</th>
<th>P-value</th>
<th>Lower 95%</th>
<th>Upper 95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>4.243</td>
<td>0.586</td>
<td>7.235</td>
<td>9.64E-11</td>
<td>3.08</td>
<td>5.407</td>
</tr>
<tr>
<td>2014-15 Per Pupil Expenditure</td>
<td>5.37E-06</td>
<td>4.36E-05</td>
<td>0.123</td>
<td>0.902</td>
<td>-8.10E-05</td>
<td>9.18E-05</td>
</tr>
</tbody>
</table>

**Percentage of Free/Reduced Lunch and Extension Option Approvals.** When comparing whether the percentage of free/reduced lunch rates were related to the extension option approvals, a potential correlation was presented. Table 28, 29 and 30 share the inferential statistics on these two variables. Multiple R=0.18 which presented a possible correlation between these two variables. The researcher then ran a statistical p-value to confirm this correlation. The p-value score >.05 which is the standard cut off to say that we cannot reject the the possibility that the slight correlation occurred by chance. The p-value was 0.0670.
Table 28

*Regression Statistics between Free/Reduced Lunch and Extension Option Approvals*

<table>
<thead>
<tr>
<th>Regression Statistics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple R</td>
<td>0.181</td>
</tr>
<tr>
<td>R Square</td>
<td>0.033</td>
</tr>
<tr>
<td>Adjusted R Square</td>
<td>0.023</td>
</tr>
<tr>
<td>Standard Error</td>
<td>1.275</td>
</tr>
<tr>
<td>Observations</td>
<td>103</td>
</tr>
</tbody>
</table>

Table 29

*ANOVA Statistics between Free/Reduced Lunch and Extension Option Approvals*

<table>
<thead>
<tr>
<th>ANOVA</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Df</td>
</tr>
<tr>
<td>Regression</td>
<td>1</td>
</tr>
<tr>
<td>Residual</td>
<td>101</td>
</tr>
<tr>
<td>Total</td>
<td>102</td>
</tr>
</tbody>
</table>

Table 30

*Confidence Levels between Free/Reduced Lunch and Extension Option Approvals*

<table>
<thead>
<tr>
<th>Coefficients</th>
<th>Standard Error</th>
<th>t Stat</th>
<th>P-value</th>
<th>Lower 95%</th>
<th>Upper 95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>3.731</td>
<td>0.362</td>
<td>10.315</td>
<td>1.82E-17</td>
<td>3.014</td>
</tr>
<tr>
<td>2014-15 Free/Reduced %</td>
<td>1.306</td>
<td>0.705</td>
<td>1.851</td>
<td>0.067</td>
<td>-0.093</td>
</tr>
</tbody>
</table>

**Policy Trends.** As districts responded to LD 1422, policies began to change within districts. The researcher reviewed four policies for the study population. These policies included vision/mission (Policy AD), commitment to Maine Learning Results (Policy ADF), graduation requirements (Policy IKF) and grading practices (Policy IKE). 47.1% (n=108) of school districts changed their vision/mission policy AD since the passage of LD 1422. 47.5% of the school districts adopted or revised their commitment to the Maine Learning Results, policy
ADF. Sixty-eight point nine percent of Maine school districts have adopted or revised their graduation policy IKE while 75.6% have changed their grading system to measure proficiency of the content standards through either proficiency scales or a dual system.

While schools are making changes in policies, the researcher questioned if any of these changes and the timeline of these changes had a relationship with the extension option approvals. Were schools that made changes to these policies granted a specific extension option by the MDOE or was the extension option a predictor to how quickly a school system might adopt policies and implement change? The researcher completed analysis on the following relationships: mission/vision policy AD and extension option approvals; grading practices policy ADF and extension option approvals; graduation policy IKF and extension option approvals; and change in credits/proficiency/dual system and extension option approvals.

**Change in Mission/Vision Policy AD and Extension Option Approvals.** When comparing whether the percentage of districts that made changes in policy AD since 2012 when LD 1422 was passed in the Maine legislature and the extension option approvals by the MDOE, no correlation can be established. Table 31, 32 and 33 share the inferential statistics on these two variables. There was no statistically significant correlation between the variables for population study (n=84).

Table 31

*Regression Statistics between Mission/Vision Policy AD Changes and Extension Option Approvals*

<table>
<thead>
<tr>
<th>Regression Statistics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple R</td>
<td>0.083</td>
</tr>
<tr>
<td>R Square</td>
<td>0.007</td>
</tr>
<tr>
<td>Adjusted R Square</td>
<td>-0.005</td>
</tr>
<tr>
<td>Standard Error</td>
<td>1.339</td>
</tr>
<tr>
<td>Observations</td>
<td>84</td>
</tr>
</tbody>
</table>
Table 32

ANOVA Statistics between Mission/Vision Policy AD Changes and Extension Option Approvals

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>Significance F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>1</td>
<td>1.017</td>
<td>1.017</td>
<td>0.567</td>
<td>0.454</td>
</tr>
<tr>
<td>Residual</td>
<td>82</td>
<td>147.126</td>
<td>1.794</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>83</td>
<td>148.143</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 33

Confidence Levels between Mission/Vision Policy AD Changes and Extension Option Approvals

<table>
<thead>
<tr>
<th>Coefficients</th>
<th>Standard Error</th>
<th>t Stat</th>
<th>P-value</th>
<th>Lower 95%</th>
<th>Upper 95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>4.067</td>
<td>0.245</td>
<td>16.629</td>
<td>3.58</td>
<td>4.553</td>
</tr>
<tr>
<td>Policy AD Change</td>
<td>0.23</td>
<td>0.305</td>
<td>0.753</td>
<td>-0.377</td>
<td>0.836</td>
</tr>
</tbody>
</table>

Change in Grading Practices Policy ADF and Extension Option Approvals. When comparing whether the percentage of districts that made changes in policy ADF since 2012 when LD 1422 was passed in the Maine legislature and the extension option approvals by the MDOE, no correlation can be established. Table 34, 35 and 36 share the inferential statistics on these two variables. There was no statistically significant correlation between the variables for population study (n=80).

Table 34

Regression Statistics between Commitment to Maine Learning Results Policy ADF Changes and Extension Option Approvals

<table>
<thead>
<tr>
<th>Regression Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple R</td>
</tr>
<tr>
<td>R Square</td>
</tr>
<tr>
<td>Adjusted R Square</td>
</tr>
<tr>
<td>Standard Error</td>
</tr>
<tr>
<td>Observations</td>
</tr>
</tbody>
</table>
Table 35

ANOVA Statistics between Commitment to Maine Learning Results Policy ADF Changes and Extension Option Approvals

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>Significance F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>1</td>
<td>0.914</td>
<td>0.914</td>
<td>0.528</td>
<td>0.470</td>
</tr>
<tr>
<td>Residual</td>
<td>78</td>
<td>135.036</td>
<td>1.731</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>79</td>
<td>135.950</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 36

Confidence Levels between Commitment to Maine Learning Results Policy ADF Changes and Extension Option Approvals

<table>
<thead>
<tr>
<th></th>
<th>Coefficients</th>
<th>Standard Error</th>
<th>t Stat</th>
<th>P-value</th>
<th>Lower 95%</th>
<th>Upper 95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>4.385</td>
<td>0.211</td>
<td>20.811</td>
<td>1.41E-33</td>
<td>3.965</td>
<td>4.804</td>
</tr>
<tr>
<td>Policy ADF Code</td>
<td>-0.214</td>
<td>0.294</td>
<td>-0.727</td>
<td>0.47</td>
<td>-0.8</td>
<td>0.372</td>
</tr>
</tbody>
</table>

Change in Graduation Policy IKF and Extension Option Approvals. When comparing whether the percentage of districts that made changes in policy IKF since 2012 when LD 1422 was passed in the Maine legislature and the extension option approvals by the MDOE, a small positive correlation can be established. Table 37, 38 and 39 share the inferential statistics on these two variables. There was a small potential correlation between the variables for population study (n=90) with Multiple R =0.22. The researcher then ran a statistical p-value to confirm this correlation. The p-value score <.05 which means the correlation is valid. The p-value was 0.0323. However, only about 5% of the variability in the extension option could be explained by the graduation rate (r^2=.05).
Table 37

*Regression Statistics between Graduation Policy IKE Changes and Extension Option Approvals*

<table>
<thead>
<tr>
<th>Regression Statistics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple R</td>
<td>0.226</td>
</tr>
<tr>
<td>R Square</td>
<td>0.051</td>
</tr>
<tr>
<td>Adjusted R Square</td>
<td>0.040</td>
</tr>
<tr>
<td>Standard Error</td>
<td>1.308</td>
</tr>
<tr>
<td>Observations</td>
<td>90</td>
</tr>
</tbody>
</table>

Table 38

*ANOVA Statistics between Graduation Policy IKE Changes and Extension Option Approvals*

<table>
<thead>
<tr>
<th>ANOVA</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>df</td>
<td></td>
</tr>
<tr>
<td>SS</td>
<td></td>
</tr>
<tr>
<td>MS</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td></td>
</tr>
<tr>
<td>Significance F</td>
<td></td>
</tr>
<tr>
<td>Regression</td>
<td>1</td>
</tr>
<tr>
<td>Residual</td>
<td>88</td>
</tr>
<tr>
<td>Total</td>
<td>89</td>
</tr>
</tbody>
</table>

Table 39

*Confidence Levels between Graduation Policy IKE Changes and Extension Option Approvals*

<table>
<thead>
<tr>
<th>Coefficients</th>
<th>Standard Error</th>
<th>t Stat</th>
<th>P-value</th>
<th>Lower 95%</th>
<th>Upper 95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>5.142</td>
<td>0.435</td>
<td>11.818</td>
<td>7.38E-20</td>
<td>4.277</td>
</tr>
<tr>
<td>Graduation Code</td>
<td>-0.402</td>
<td>0.185</td>
<td>-2.175</td>
<td>0.032</td>
<td>-0.769</td>
</tr>
</tbody>
</table>

*Change in Credits/Proficiency/Dual System and Extension Option Approvals.* When comparing whether the percentage of districts that made changes to grading practices in how they measured proficiency on content standards and the extension option approvals by the MDOE, no correlation can be established. Table 40, 41 and 42 share the inferential statistics on these two variables. There was no statistically significant correlation between the variables for population study (n=89).
Table 40

*Regression Statistics between Grading Practice Changes and Extension Option Approvals*

<table>
<thead>
<tr>
<th>Regression Statistics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple R</td>
<td>0.057</td>
</tr>
<tr>
<td>R Square</td>
<td>0.003</td>
</tr>
<tr>
<td>Adjusted R Square</td>
<td>-0.008</td>
</tr>
<tr>
<td>Standard Error</td>
<td>1.335</td>
</tr>
<tr>
<td>Observations</td>
<td>89</td>
</tr>
</tbody>
</table>

Table 41

*ANOVA Statistics between Grading Practice Changes and Extension Option Approvals*

<table>
<thead>
<tr>
<th>ANOVA</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>Significance F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>0.499</td>
<td>0.499</td>
<td>0.280</td>
<td>0.598</td>
</tr>
<tr>
<td></td>
<td>87</td>
<td>155.007</td>
<td>1.782</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>88</td>
<td>155.506</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 42

*Confidence Levels between Grading Practice Changes and Extension Option Approvals*

<table>
<thead>
<tr>
<th>Coefficients</th>
<th>Standard Error</th>
<th>t Stat</th>
<th>P-value</th>
<th>Lower 95%</th>
<th>Upper 95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>4.4</td>
<td>0.36</td>
<td>12.206</td>
<td>1.50E-20</td>
<td>3.684</td>
</tr>
<tr>
<td>Grading Code</td>
<td>-0.094</td>
<td>0.178</td>
<td>-0.529</td>
<td>0.598</td>
<td>-0.447</td>
</tr>
</tbody>
</table>

**Implementation Trends.** Implementation was defined in this research as how districts chose to phase in the requirements of LD 1422 specifically in the eight content areas and guiding principles. The original statute passed in 2012 and then amended in 2015, allowed for school districts to phase in the eight content areas as long as all eight content areas were measured by 2021. The researcher’s data found that 42.9% (N=91) had policies that included full implementation of all eight content areas; 38.4% (N=91) had policies that included a phase-in
approach to the eight content areas; and 18.7% (N=91) did not mention proficiency in any of the eight content areas in their graduation policy.

The researcher had questions about whether this data was impacted by funding. The researcher also questioned if the implementation was impacted by the MEPRI studies and MDOE logic model’s conceptual framework which discussed how changes in beliefs systems were impacting practices within districts (MDOE, 2015; Stump et. al., 2015). The researcher also determined if since the passing of LD 1422, if districts that reviewed their commitment to the Maine Learning Results policy made greater gains in implementation than those that did not. The following correlations were reviewed: funding and implementation; mission change and implementation; and commitment to Maine Learning Results and implementation.

**Funding and Implementation.** When comparing whether per pupil expenditures were related to the implementation efforts of districts, no correlation can be established. Table 43, 44 and 45 share the inferential statistics on these two variables. There was no statistically significant correlation between the variables for population study (n=88).

Table 43

<table>
<thead>
<tr>
<th>Regression Statistics between Funding and Implementation of LD 1422</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Regression Statistics</strong></td>
</tr>
<tr>
<td>Multiple R</td>
</tr>
<tr>
<td>R Square</td>
</tr>
<tr>
<td>Adjusted R Square</td>
</tr>
<tr>
<td>Standard Error</td>
</tr>
<tr>
<td>Observations</td>
</tr>
</tbody>
</table>
Table 44

**ANOVA Statistics between Funding and Implementation of LD 1422**

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>Significance F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>1</td>
<td>0.016</td>
<td>0.016</td>
<td>0.029</td>
<td>0.865</td>
</tr>
<tr>
<td>Residual</td>
<td>86</td>
<td>47.973</td>
<td>0.558</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>87</td>
<td>47.989</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 45

**Confidence Levels between Funding and Implementation of LD 1422**

<table>
<thead>
<tr>
<th></th>
<th>Coefficients</th>
<th>Standard Error</th>
<th>t Stat</th>
<th>P-value</th>
<th>Lower 95%</th>
<th>Upper 95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>2.299</td>
<td>0.365</td>
<td>6.299</td>
<td>1.23E-08</td>
<td>1.574</td>
<td>3.025</td>
</tr>
<tr>
<td>Implementation Coding</td>
<td>-4.61E-06</td>
<td>2.71E-05</td>
<td>-0.17</td>
<td>0.865</td>
<td>-5.86E-05</td>
<td>4.93E-05</td>
</tr>
</tbody>
</table>

**Mission Change and Implementation.** When comparing whether mission policy changes were related to the implementation efforts of districts, no correlation can be established.

Table 46, 47 and 48 share the inferential statistics on these two variables. There was no statistically significant correlation between the variables for population study (n=84).

Table 46

**Regression Statistics between Mission Change and Implementation of LD 1422**

<table>
<thead>
<tr>
<th>Regression Statistics</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple R</td>
<td>0.073</td>
</tr>
<tr>
<td>R Square</td>
<td>0.005</td>
</tr>
<tr>
<td>Adjusted R Square</td>
<td>-0.007</td>
</tr>
<tr>
<td>Standard Error</td>
<td>0.710</td>
</tr>
<tr>
<td>Observations</td>
<td>84</td>
</tr>
</tbody>
</table>
Commitment to Maine Learning Results and Implementation. When comparing whether districts review of their commitment to the Maine Learning Results was related to the implementation efforts of districts, no correlation can be established. Table 49, 50 and 51 share the inferential statistics on these two variables. There was no statistically significant correlation between the variables for population study (n=80).
Table 50

ANOVA Statistics between Commitment to Maine Learning Results and Implementation of LD 1422

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>Significance F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>1</td>
<td>0.160</td>
<td>0.160</td>
<td>0.295</td>
<td>0.588</td>
</tr>
<tr>
<td>Residual</td>
<td>78</td>
<td>42.228</td>
<td>0.541</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>79</td>
<td>42.388</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 51

Confidence Level between Commitment to Maine Learning Results and Implementation of LD 1422

<table>
<thead>
<tr>
<th>Coefficients</th>
<th>Standard Error</th>
<th>t Stat</th>
<th>P-value</th>
<th>Lower 95%</th>
<th>Upper 95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>2.333</td>
<td>0.118</td>
<td>19.804</td>
<td>3.68E-32</td>
<td>2.099</td>
</tr>
<tr>
<td>Commitment to MLR</td>
<td>-0.089</td>
<td>0.165</td>
<td>-0.543</td>
<td>0.588</td>
<td>-0.417</td>
</tr>
</tbody>
</table>

Summary

The purpose of this descriptive, mixed-methods study was to use web based query data and statistical analysis to investigate the proposed implementation of LD 1422, a Maine statute that states all high school students need to graduate by 2018 with a proficiency-based diploma. However, with a change in statute, school districts have been given the opportunity to apply for extensions where they could have to the year 2021 to meet the newly amended state mandates of LD 4722. This mandate allowed students to transition in the eight content areas starting with the mathematics, English language arts, science and social studies, and phasing in the other four until all eight were implemented by the year 2025.

The study aimed to answer the following research questions: (1) How have Maine school district leaders proposed to enact the state-mandated educational transformation of a student-
centered proficiency-based diploma system? (2) How are Maine school district leaders implementing LD 1422? (3) How have policies IKF (graduation), AD (vision/mission), IKA (grading practices) changed since the passage of LD 1422? (4) What patterns exist within Maine school districts implementing LD 1422?

The study population was determined by evaluating all school districts that submitted a confirmation of readiness application or an extension application to the MDOE (n=106). Those that were approved for an extension 1 were more prepared to meet the state statute than those approved for an extension 6. All extensions provided more time to school districts to implement a proficiency-based diploma. 1.9% were approved for extension 1; 7.5% for extension 2; 22.6% for an extension 3; 3.7% for an extension 4; 50.9% for extension 5 and 12.3% for extension 6. Only 1 school district was approved for a confirmation of readiness application.

The following metrics were reviewed for the study population: free/reduced lunch rates, pupil expenditure rates, and graduation rates. While free/reduced lunch rates rose within the study population (n=106; 49%), so do per pupil expenditures (n=106, $13,553). Graduation rates also continue to rise among the study population (n=106, 86.5%). These metrics varied by superintendent region as well.

The researcher reviewed four policies for the study population. These policies included vision/mission (Policy AD), commitment to Maine Learning Results (Policy ADF), graduation requirements (Policy IKF) and grading practices (Policy IKE). By reviewing these four policies, the researcher was able to gather data on proficiency-based practices happening within school districts in Maine. All four of these policies have had close to half of the districts review or adopt new policies since the passage of LD 1422. 47.1% have revised or adopted a new vision/mission policy AD; 47.5% have revised or adopted their commitment to the Maine
Learning Results; 68.9% have revised or adopted new graduation requirements; 65.6% of districts are measuring proficiency of content areas through either proficiency scales or a dual system; and 81.4% of districts are either phasing in or fully implementing all eight content areas by 2021 to meet LD 1422.

For district leaders to meet the requirements of LD 1422, many of them accessed professional organizations or materials. Of the 106 school units in the study, 91% of the school units participated in professional development with an outside source to help implement LD 1422. The four sources mentioned most often were RISC (18), *The Art of Science and Teaching* by Marzano (35), MCCL (31), and Great Schools Partnership (33).

Four major categories of trends were explored through inferential statistics: regional trends, expenditure trends, policy trends and implementation trends. While many of these trends showed no correlation, two trends showed a slight positive correlation. The two positive correlation trends were between free/reduced lunch and the extension option application approval and graduation policy change and the extension option application approval.

The first potential correlation (R = 0.18) was between free/reduced lunch and extension option application approval. However, the p-value score (p=0.0670) was > .05 which is the standard cut off to say that we cannot reject the possibility that the slight correlation occurred by chance.

The second potential correlation was between graduation policy change and extension option approval. When comparing whether the percentage of districts that made changes in policy IKF since 2012, (when LD 1422 was passed in the Maine legislature) and the extension option approvals by the MDOE, a potential positive correlation can be established. There was a small positive correlation between the variables for population study (n=90) with Multiple R
=0.22. The researcher then ran a statistical p-value to confirm this correlation. The p-value 
(p=0.0323) < .05 which means the correlation is valid. However, only about 5% of the variability 
in the extension option could be explained by the graduation policy change (r^2 = .05).

Throughout this study, further questions have been gathered and additional data has been 
warranted. The need for further study on this topic will be discussed in Chapter 5, as well as, the 
interpretations of these findings. Recommendations will conclude Chapter 5.
CHAPTER FIVE
CONCLUSION

Efforts to establish a standards-based educational system has a long developmental history supported by research and government publications (Silvernail et al., 2014). Silvernail et. al (2013) states that “the reform movement goes by many names, including standards-based education, proficiency-based programs, learner-centered education, and competency-based accountability, but at its core the reform is designed to accomplish similar outcomes (p. 9). Despite the variety of names, all of these reform systems include standards that indicate what students need to know and do, measures of the student attainment of the standards, and targets for performance on those measures (Silvernail et. al., 2013).

Currently Maine law, implements a proficiency-based diploma beginning with the class of 2021 with four content areas: English Language Arts, Mathematics, Social Studies, Science and the Guiding Principles. The state allows for full implementation of all eight content areas by the year 2025. With limited information regarding the status of all school districts’ implementation of measuring proficiencies in the content areas, the state granted extensions to school districts. The state also enacted an amendment to LD 1422 to give schools more time to prepare their systems, teachers, students and communities for the changes involved in implementing a proficiency-based diploma system.

The Maine Department of Education also developed an implementation plan called Education Evolving to help school districts create their proficiency-based diploma systems. This plan was drafted in 2011 by the Commissioner of Education based on feedback from multiple stakeholders. In 2012, this plan was presented with five core priority areas: effective, learner-centered instruction; great teachers and leaders; multiple pathways for learner
achievement; comprehensive school and community supports; and coordinated and effective state support. This plan is important as it demonstrates the vision of proficiency-based diplomas from the Maine Department of Education.

At the heart of the proficiency-based diploma system are the Maine Learning Results standards, first adopted in 1997. The MDOE believes that rigorous standards are important to teaching and learning but they are meaningless unless they inform instructional practice at the classroom level. Learner-centered instructional approaches where learners are active participants in and directors of their own learning is discussed in the plan.

The state of Maine also believes that children should advance in their learning based on a mastery of learning targets or standards. Instead of being grouped by age, where students need to wait for others to catch up or where some are left behind in confusion, students progress when they have demonstrated proficiency. The state established a Center of Best Practices to help guide districts through this transition by providing resources and videos. LD 1422 was passed in legislation with a commitment to this vision on education.

When LD 1422 was passed by the legislature in 2012, school districts needed to prepare students to graduate with a proficiency-based diploma. Since the original statute, the Maine legislature has amended the legislation to give schools longer time to implement and also allow schools a phase in approach to the eight content areas and guiding principles. With the amended legislation and different extension options granted by the MDOE, school districts vary in their implementation plans across the state.

The purpose of this mixed-methods, descriptive study was to use web-based queries to investigate how Maine school districts have proposed to implement proficiency-based, student-centered diploma systems since the passage of LD 1422. This study reviewed the extension
applications submitted to the MDOE, key policies impacted by the passage of LD 1422, and conducted inferential statistics to look for trends within the variables.

This research study involved all of Maine’s 164 school districts initially. As some of these school units operate without high schools and tuition students to neighboring school units, these school units were removed from the population. Four districts also did not submit an application and ten districts were not required to submit an application as they are a 60% publicly funded school. Once all non-qualifying schools were removed from the study, the research sample contained the school districts belonging to the nine Maine School Board Association (MSBA) regions (n=106). Interpretations of the findings, implications for the use of the information, limitations of this study, recommendations for future action and future study continue this chapter.

**Interpretation of Findings**

**Research Questions** Guided by the conceptual framework by the MEPRI studies and the MDOE logic model, the researcher conducted the investigation into how Maine school district leaders proposed to enact proficiency-based diploma systems by implementing LD 1422. The research questions that guided this study were: (1) How are Maine school district leaders implementing LD 1422? (2) How have district policies like IKF (graduation), IKA (grading system) and AD (vision/mission) changed in Maine school districts since the passage of LD 1422? (3) What patterns exist within Maine school districts implementing LD 1422? The interpretations of the resulting data of each question are discussed.

**Question 1.** The implementation at the time of the extension application submittals to the MDOE in 2014 were varied across the state. The six extension options and the confirmation
of readiness application were submitted to the MDOE and letters with feedback or visitations were scheduled. It was noted that 1.9% were approved for extension 1; 7.5% for extension 2; 22.6% for an extension 3; 3.7% for an extension 4; 50.9% for extension 5 and 12.3% for extension 6. Only 1 school district was approved for a confirmation of readiness application. The study suggests that in 2014, nearly all schools except for one requested an extension of time to implement proficiency-based diplomas. Of those schools that asked for an extension 1 or an extension 2 (9.4%), these schools demonstrated deliverables regarding proficiency in the content areas and needed more time in either the guiding principles or in piloting their programs. With 22.6% of the state requesting an extension 3, the study suggests that our elementary schools are also making a change to proficiency-based practices. This option stated a deliverable of evidence where districts provided evidence of K-8 proficiency systems but needed more time to implement at the high school level. The study also suggests that 50.9% of the study population was working with an active organization and needed more time to implement proficiency-based systems while a small percentage of schools (12.3%) had only just begun work towards implementation in 2014.

Since over 50% of the study population was working with an active organization by the selection of option 5 application (50.9%), the study gained more insight on the help of professional organizations used within the implementation efforts of districts by reviewing all district applications. Of the 106 school units in the study, 91% of the school units participated in professional development with an outside source to help implement LD 1422. Outside source is defined as any organization, consultant or book that was used by the district and named specifically in the extension application as a resource during the implementation plan. Four
sources were mentioned often by the school units. These sources were RISC (18), *The Art of Science and Teaching* by Marzano (35), MCCL (31), and Great Schools Partnership (33).

**Question 2.** The reviewing of district policies demonstrated the change in proficiency-based practices that is occurring within districts in the study population to implement LD 1422. The study reviewed four policies for the study population. These policies included vision/mission (Policy AD), commitment to Maine Learning Results (Policy ADF), graduation requirements (Policy IKF) and grading practices (Policy IKE). All four of these policies have had close to half of the districts review or adopt new policies since the passage of LD 1422. 47.1% have revised or adopted a new vision/mission policy AD; 47.5% have revised or adopted their commitment to the Maine Learning Results; 68.9% have revised or adopted new graduation requirements; 65.6% of districts are measuring proficiency of content areas through either proficiency scales or a dual system; and 81.3% of districts are either phasing in or fully implementing all eight content areas by 2025 to meet LD 1422.

These policy changes suggest three key findings seen in Maine implementing a proficiency-based system: a movement to a proficiency-based grading system instead of a Carnegie unit credit system; a phasing in or an adoption of all eight content areas by 2025; and a creation of a culture of learning through professional collaboration.

**Credits, proficiency or dual.** Of the 90 school districts (n=106) that posted policy IKD on their websites, 75.6% of them presented a grading system that measured proficiency of content areas through either a dual system or just proficiency scales. 40% percent used only proficiency scales, 34.4% used a credit-based system with a 0-100 grading scale, and 25.6% used a dual system that combined a proficiency scale and a 0-100 grading scale. The study suggests that as LD 1422 was passed, that districts changed their practices to include proficiency grading
scales moving away from the credit-based system. Many districts included statements in either their graduation policies (IKF) or commitment to learning results policies (IKD) like “implementing a proficiency-based graduation system as required by Maine Law” or “the awarding of a diploma will be contingent on the demonstration of proficiency in ALL of the content areas and Guiding Principles of Maine’s system of Learning Results as demonstrated through completion of coursework requirements or approved alternate pathway experiences rather than the accumulation of credits.” Three-quarters of Maine schools in this study suggested measuring proficiency of standards in policy to meet the statute.

**Phase in or full implementation of the content areas.** As the amended Maine statute requires students to demonstrate proficiency in all eight content areas by 2025, school systems had a choice to continue with their plans in the extension contract or to modify their plans. After reviewing policy IKF, graduation policies, of the 74 schools that mentioned proficiency-based education implementation, 42.9% were going to implement all eight content area standards representing a full implementation approach by 2021. 38.4% identified at least four content areas for students to be proficient in and then adding another content area over the next few years until all eight in 2025. Quite a few school districts mentioned world language as a need in the future but did not yet include it in their lists of proficiency-based content areas. These school districts did state it was needed by 2021 or 2025 depending on year by which they intended to fully implement. Overall, the study suggests that Maine schools are working toward an implementation of all eight content areas as outlined in the state statute.

There is a concern that some schools are not progressing as fast as other schools based on a perceived lack of progress on policies not posted on their web pages. Without more evidence, it is hard to distinguish if this is from lack of progress or simply not updating progress through
policy revision. However, Maine schools have made progress in implementation of LD 1422 as 81.3% of districts are either phasing in or fully implementing all eight content areas by 2025 to meet LD 1422. It is important to note that these schools are also measuring proficiency of the four content areas, Mathematics, English language arts, social studies, science and the guiding principles by 2021. This means that 81.3% of Maine schools in this study (n=106) are measuring proficiency in these areas by 2021 for all Maine students.

**Building common beliefs through professional collaboration.** Maine schools have a commitment to the Maine Learning Results and to measuring student progress within their school districts. Defining the levels of proficiency and identifying common standards across districts is tangible work most districts are completing within the extension application timeline. Through professional collaboration, districts are able to align beliefs around the statute and implement best practices within their classrooms as they work with their mentors, coaches and outside sources. With 91% of districts participating in professional development, the MEPRI studies conceptual framework that LD 1422 represented an impetus for district beliefs to come together around best practices can be supported (Stump et. al., 2016).

With regards to the MEPRI statements that “mandating implementation of a standards-based education system and proficiency-based high school diploma requirements had clearly mobilized change and increased examination of long-held beliefs in Maine's public school districts”, the researcher did find that districts had made changes due to the mandate of LD 1422 (Stump et. al., 2016, p. 14). However, this study suggests not all school districts mobilized their central beliefs and changed their vision/mission before making changes to practices or other policies like graduation or grading. With 47.1% of Maine school districts within the study population adopting or revising their vision and mission, these districts did not show any more of
a correlation to implementation of proficiency-based practices than other districts that did change their vision and mission statement. The study suggests that while collaboration through professional development increased greatly (91%), and policy changes also increased, not all districts changed their overarching “belief” statement or “philosophy” to do so.

**Question 3.** Few trends exist when variables were compared and correlations were statistically generated. Free/reduced lunch rates generated a possible positive correlation (R=0.18) with extension application approvals. However, the p-value score (p=0.0670) was >.05 which is the standard cut off to say that we cannot reject the possibility that the slight correlation occurred by chance. The other trend that showed promise was the relationship between changes in graduation policy and extension option approvals (R=0.22, p=0.0323). Both of these correlations were statistically weak and all others were close to zero. This itself, however, was a finding in that there were no strong trends among the variables between the districts in the state of Maine or within the regions. Graduation rates, expenditure rates, school letter grades, extension application approval, and professional organization affiliation appear not to have an impact on implementation efforts. Districts implementing proficiency-based diplomas submitted an extension application (n=106), 91% and have made changes to a policy revision since 2012 toward proficiency-based education of a policy that was reviewed in this study.

Just as proficiency-based education is meant to provide multiple pathways for student attainment of standards, this study suggests that school districts are using a personalized learning approach to implement LD 1422 by 2025. As no statistically significant patterns or trends could be found, this finding suggests that Maine state leaders are allowing districts to be flexible in how they approach implementing LD 1422. Just as learning in the classroom is not a “one size fits all” model, the approach to implementing LD 1422 has allowed districts to provide
professional development and develop policies and practices based on district needs and timelines.

**Limitations**

The limitations of this study center around the accuracy of the data that could be collected. The data collected was from web-based queries. This data came from 2014 extension applications submitted by school districts to the MDOE. This data reflects the proposals submitted at that time, and could have changed during the last three years. The policy review could have been influenced by what information was posted on the web pages. The analysis was only as accurate as the information currently posted as the researcher did not personally contact each district and relied on what was posted on the web pages. The third possible limitation is that practices might not be reflective of policies in the school districts. Districts can implement policies but administrators and teachers need to put forth the practices that inform students learning. Without great teachers to instruct students and put practices into place, the policies have no purpose. Teachers bring the policies to life with students. Without personally interviewing teachers and students, there is a missing piece to the puzzle regarding actual practices verses perceived or proposed implementation based on applications and policies that are posted on a web page.

**Implications**

The findings of this study are based on web-based queries, and the data found and supported in this study has implications for the proficiency-based movement in the state of Maine. Evaluating the overall implementation timeline suggests school districts are in the process of doing so. Understanding how specific policies are being changed to influence practices is important to the continued implementation of LD 1422. Time is an important factor
in this study as districts are making progress in following their plans to meet the original LD 1422 or the amended LD 4722. The findings from this study support the MDOE and the legislature’s decision to give districts more implementation time. It is critical that the legislature continue to fund the implementation of proficiency-based diploma implementation. With the amount of professional development that districts need to conduct, district leaders will continue to need the funding to support this work. Recently in 2017, this funding was cut from the state budget.

This study also has implications for district leaders. Just as the state statute has been an impetus for proficiency-based implementation work within the state (Stump et. al., 2016), this study can help state-level leaders with data that demonstrates to districts where they are in their implementation cycle compared to other regions or overall in the state. Having additional data about what the state is doing and understanding where each district is within the implementation cycle can help leaders to plan, do, check and adjust their own implementation plans. Leaders need to make meaning of where their districts are through prior experiences and knowledge. Constructivism has been defined by many scholars as a theory of learning where individuals make their own meaning of the learning through prior experiences and knowledge (Cannela & Reif, 1994; Richardson, 2001; Richardson, 2003; Ozuah, 2005; Ultanir, 2012). As leaders work with their faculties to continue their implementation plans, it will be important to build an environment that supports active and collaborative learning (Ultanir, 2012). Just as teachers would focus on students in their learning, playing an active role together as a facilitator and learner, district leaders need to help their staff collaborate with one another to facilitate a culture of learning (Ultanir, 2012). Maine leaders and faculty are certainly showing a remarkable effort in collaborating and moving their districts forward in the implementation of LD 1422.
Recommendations for Action

Many of the recommendations are specific to the MDOE and legislature. These recommendations are needed to support the progress of school districts with their continued implementation efforts to meet the amended LD 4722 statute by 2025.

- The MDOE needs to publish examples of proficiency scoring scales for graduation standards in all eight content areas and Guiding Principles to help define proficiency in the state of Maine.
- Continued support in developing proficiency in world language standards and possibly looking at the number of world language teachers that exist in Maine and provide training for additional teachers to meet the needs of the statute by 2025.
- The MDOE should provide rules or guidance for defining proficiency as this varied from district to district.
- Provide continued funding for implementation of proficiency-based diplomas. As these funds were recently eliminated from the 2017-18 school year budget, the researcher is concerned for continued progress within districts with funding being eliminated.
- Review *Education Evolving* and update the MDOE strategic plan for to include the new LD 4722 timeframe with supports for school districts.
- Develop a tool for districts to assess where they are along a proficiency-based implementation model that the MDOE recommends.

The following recommendations are for school districts, leaders, and teachers living this work day in and day out helping students to meet proficiency in each content area and guiding principle.
• Continue to collaborate within your district but reach out to your neighbors, they are doing remarkable work. You are not alone in this endeavor.

• Revisit your mission/vision of your districts if you have not already to establish your beliefs as a district on how students learn.

• Continue to update your policies to align with your practices within your districts.

• Review your grading practice policies to align with your graduation policies and update if necessary.

**Recommendations for Further Study**

As this study was descriptive and based on web based queries of extension applications and policy reviews, further study of a representative sample of participants where the researcher would conduct personal interviews about implementation practices is recommended. Through this study, the researcher noted many questioned she wanted to know and pursue for specific districts reviewed. Questions on grading scales, how proficiency was defined, classroom practices, dual grading systems, and whether current policies were even available were just a few of them. Completing a qualitative case study would enrich the study and find out more details on what is happening with implementation practices within school districts.

Another recommended study would be to follow the first graduating class of 2021 under a proficiency-based system. The study could compare graduation rates of the class of 2021 to schools that did not graduate students with a proficiency-based system or prior years in that same district. The study could also compare success rates of college/career readiness and the number of remedial courses that students needed to take upon entering college compared to current students entering college.
Further exploration of the MEPRI conceptual model of districts and changes aligned to belief statements district and state wide is also recommended. District leaders can describe how they have implemented changes in their districts with or without changes to their mission/vision and shed light on district implementation of and general engagement in the proficiency-based model. Looking within districts at all practices and how these practices align to proficiency-based “beliefs” compared to traditional “beliefs” could also be compared.

Finally, with 81.3% of districts in this study demonstrating a change to proficiency-based practices by 2021 in four content areas, the question remains in how will districts account for student migration and alignment between different district’s systems. The researcher found variation in content standards across districts and there was no clear definition of proficiency used by all districts. With this variance in how proficiency is defined, a study in how districts will account the proficiency for students moving between districts would be valuable.

Conclusion

In 2012, Maine released a plan called Education Evolving. The purpose of this plan was to transition Maine schools to a system where students had more choice in organizing their education and more choice in how they demonstrated the learning of the standards (Education Evolving, 2012). When LD 1422 was signed into law May 12, 2012, the timeline for implementation of the new statute began for all Maine high schools. This timeline stated that all high school students needed to graduate with a proficiency-based diploma in eight content areas and guiding principles by January 2017. With lack of funding one year, and amended statute changes, the requirements and timeline has changed. Most of this timeline change seems to be due to the MDOE recommendations and testimony of school leaders and organizations working with those schools, stating that schools needed more time to implement. With a new timeline
between 2021 and 2025 which allows a phase in of the eight content areas but requires the core
four and guiding principles by 2021, this study demonstrated that 81.3% of schools were ready to
meet this demand. But what does this mean for our students?

When this study first began, the researcher had interest in proficiency-based education as
a reform movement in education. The literature review demonstrates a change in how students
have been educated differently during the modernism and post modernism eras. Students went
from a one room school house to classrooms set up by age levels. Teachers changed their
instructional models. The history of education demonstrates how pedagogical practices have
changed based on an understanding of how students learn and develop. Teachers must continue
to look at each student as an individual, assess each for his/her understanding, create lesson plans
specific to that child and provide meaning about what students are learning in a variety of
contexts. The job of a teacher is much more complex than ever before and Maine has adopted a
state statute to provide the backbone to ensure this transformation continues.

The accountability factor in a standards-based system has never been higher with diploma
systems depending on the proficiency of standards. Most educators will state they know students
learn in different ways and in different time frames. This study suggests that district leaders must
do so as well. With districts implementing accountability in different ways and in different time
frames, the state is moving towards full implementation of proficiency-based diplomas. The
current statute allows for phase in by 2025. One question that remains whether all districts will
meet this target by 2025. With 81.3% already demonstrating policies that state progress in
content areas, credits-vs- proficiency grading scales, and a commitment to the Maine Learning
results, the study suggests that the standards-based reform movement is promising in Maine.
In closing, the researcher would like to emphasize the importance of this study and the implementation of proficiency-based diplomas, the students and their preparation for their futures. In a day where we are preparing students for jobs that do not even exist yet, it is important that students are graduating with the skills needed to be successful for work and/or college ready. Days of rote memorization have been replaced by the phones that live in their hands. Students need to learn how to problem solve and critically think so they can apply the knowledge they acquire. Proficiency-based education allows students a more rigorous, thoughtful approach to learning where they have a voice in their learning, working collaboratively with their teacher. Supporting our teachers by having a thorough understanding of how challenging it is to educate children in this new system, is imperative. We need to advocate for resources, professional development and funding for our school systems. Each child deserves the best educator and our teachers deserve to know we care about the work they are doing each and every day for our children. Maine has done some remarkable work in every region. We should celebrate our successes, help our neighbors that need it and share our resources. Our children deserve it.
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APPENDIX A: LD 1422 STATUTE

An Act To Prepare Maine People for the Future Economy

Be it enacted by the People of the State of Maine as follows:

PART A

Sec. A-1. 5 MRSA §1664, sub-§1, ¶G, as amended by PL 2007, c. 613, §2, is further amended to read:

G. Contain any statements relative to the financial plan that the Governor-elect or the Governor considers desirable or that may be required by the Legislature; and

Sec. A-2. 5 MRSA §1664, sub-§1, ¶H, as enacted by PL 2007, c. 613, §3, is amended to read:

H. Include a long-range plan for State Government. The long-range plan must describe the vision of the Governor-elect or the Governor for State Government for the upcoming biennium and the 2 succeeding biennia and how the proposed biennial budget fits into and moves State Government toward this long-range vision; and

Sec. A-3. 5 MRSA §1664, sub-§1, ¶I is enacted to read:

I. Present proposed expenditures on early childhood development, public education, adult education, higher education and workforce development in a manner that facilitates evaluation by the Legislature of whether funds are being appropriated and allocated in a manner that best accords with the policy framework established in Title 20-A, section 501, advances the goals established in Title 20-A, section 502 and implements the strategic plan developed pursuant to Title 20-A, section 505.

Sec. A-4. 20-A MRSA c. 6 is enacted to read:

CHAPTER 6

EDUCATION POLICY

§ 501. Education policy

1. Policy. It is the policy of the State that the education system must prepare all of the people of the State for success in college, career, citizenship and life. The State recognizes that it needs an education system, spanning from early childhood development through college and workforce training, in which:

A. All young children have access to high-quality programs that advance their development;

B. All students graduate from high school prepared for college, career, citizenship and life; and

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C. The highest possible number of people in this State complete a 2-year or 4-year college degree or other postsecondary national industry certificate.

2. **Core priorities.** In order to develop an education system that prepares all people for future success, the State has identified the following as its core priorities:

A. High-quality early care and learning experiences that give all children an equal opportunity for healthy growth and development;

B. High standards and personalized learning opportunities that maximize success for all;

C. Effective, knowledgeable and well-trained teachers in every classroom to prepare all children for success;

D. Strong and focused school, community and state leadership to support effective teaching;

E. Engaged parents, families and communities that set high expectations for academic achievement and work together to build a high-quality education system;

F. Expanded access to and support for college and workforce training to increase the number of individuals earning college degrees and postsecondary national industry certificates or occupational certificates and the high-paying jobs to which they lead;

G. Collection and analysis of reliable data to identify what is working well in the education system and to address shortcomings; and

H. Efficient and equitable investment of education resources to maximize opportunity, equity and accountability.

§ 502. **Education system goals**

1. **Preparation for kindergarten.** It is a goal of this State that children enter kindergarten prepared for the learning experiences that primary school provides. The chief indicator of progress toward the goal set forth in this subsection is the percentage of children that enter kindergarten and are determined by a common measuring tool and process to be prepared for learning experiences in the kindergarten curriculum.

2. **Preparation to read and calculate.** It is a goal of this State that children have a foundation in reading and mathematics skills that is strong enough to allow them to learn through application of those skills. The most effective strategy for reaching the goal set forth in this subsection is to ensure that all children in this State are proficient in mathematics and reading by the end of grade 3. The chief indicator of progress toward the goal set forth in this subsection is the percentage of children enrolled in grade 4 who are proficient in reading and mathematics.

3. **Preparation for college and workforce training.** It is a goal of this State that children graduate from high school with mastery of the basic subjects and skills that college and workforce training require. The most effective strategy for reaching the goal set forth in this subsection is to ensure that all children in this State achieve the content standards of the parameters for essential instruction and graduation requirements established pursuant to section 6209 before
earning a diploma, and providing multiple pathways to that achievement as set out under section 4703. The chief indicator of progress toward the goal set forth in this subsection is the percentage of students graduating from high school with a standards-based diploma, whether that completion is achieved in 4, 5 or 6 years. The specific goals of the State regarding preparation for college and workforce training include the following:

A. Achieving a graduation rate of 90% by the end of the 2015-2016 school year for each publicly supported secondary school;

B. Increasing the percentage of high school graduates enrolling in associate or bachelor's degree programs to at least 80% by 2016. It is the policy of this State to raise the percentage of working-age adults who have earned associate, bachelor's and postbaccalaureate degrees to 56% by 2019; and

C. Reducing the percentage of students required to take remedial courses in their first year of college to 5% by 2016.

4. Preparation for career. It is a goal of this State to dramatically increase the education and skills of its workforce, to ensure that the State can grow and attract a sustainable mix of high-wage, high-growth businesses and create high-paying jobs in every community. The chief indicators of progress toward the goal set forth in this subsection are:

A. The percentage of working-age adults earning national industry certificates and associate, bachelor's and postbaccalaureate degrees;

B. The percentage of students who enroll within one year of graduating from high school in national industry certificate and associate, bachelor's and postbaccalaureate degree programs;

C. The percentage of students enrolled in a bachelor's degree program who earn a bachelor's degree within 6 years;

D. The percentage of students enrolled in an associate degree program who earn an associate degree within 3 years; and

E. The percentage of students enrolled in a national industry certificate program who earn a national industry certificate within 2 years.

§ 503. Benchmarks

The commissioner shall implement necessary strategies and tactics to achieve the following benchmarks for the education goals set forth in section 502.

1. Preparation for kindergarten; benchmarks. By 2016, 80% of children that enter kindergarten will be prepared for the learning experiences in the kindergarten curriculum as evidenced by measures adopted by the State. By 2020, 90% of children that enter kindergarten will be prepared for the learning experiences in the kindergarten curriculum as evidenced by measures adopted by the State.

2. Preparation to read and calculate for learning; benchmarks. By 2016, 80% of students in grade 4 will be proficient in reading and mathematics. By 2020, 90% of students
in grade 4 will be proficient in reading and mathematics.

3. Preparation for college and workforce training; benchmark. By 2016, 90% of students will graduate from high school with a standards-based diploma within 6 years of entering high school.

4. Preparation for career; benchmarks. By 2016, the percentage of working-age adults who earn national industry certificates or associate, bachelor's or postbaccalaureate degrees will be 52%. By 2020, the State will exceed the New England average for the number of working-age adults that have earned a national industry certificate or an associate, bachelor's or postbaccalaureate degree.

§ 504. Intervention

1. Intervention strategies. The commissioner shall examine progress toward the benchmarks set forth in section 503 and shall employ intervention strategies to ensure achievement of those benchmarks. These strategies may include, but are not limited to, termination of ineffective programs and redirection of budgeted resources.

2. Intervention by entities other than the department. The commissioner shall report to the joint standing committee of the Legislature having jurisdiction over education and cultural affairs regarding instances when entities other than the department are required to employ intervention strategies in order to ensure attainment of the benchmarks set forth in section 503 and shall include any recommendations to increase progress toward achievement of the benchmarks set forth in section 503.

§ 505. Strategic plan; reporting

1. Strategic plan. The commissioner, in consultation with the Commissioner of Health and Human Services, the Commissioner of Labor, the Chancellor of the University of Maine System, the President of the Maine Community College System and local and state stakeholders, shall develop a strategic plan in accordance with this subsection for achieving the goals established in section 502, within the policy framework established in section 501. The strategic plan must:

A. Address strategies for the implementation of statewide, comprehensive early college or dual enrollment experiences, with current numbers of participants and recommended annual benchmarks;

B. Require public higher education institutions to develop and implement plans that improve efficiency, productivity, student progression, and degree completion rates;

C. Address the need to increase the number of graduates in programs related to the current and projected needs of employers and entrepreneurs in the State;

D. Address the implementation by the Governor of a budget covering all education sectors, including explicit student-centered outcomes at all levels of the education system from early childhood through workforce training, and a blueprint for independence that sets forth a strategy for helping young people at risk gain the tools necessary to succeed in life;
E. Require personal learning plans for each student, beginning in grade 7;

F. Include recommendations for ensuring that a hospital, pediatrician, primary care physician and other providers of preventive health services to a child under 5 years of age screen that child for cognitive developmental delays and behavioral problems at annual checkups when the child is approximately one year of age and when the child is approximately 2 years of age and make appropriate referrals for services; and

G. Take into consideration applicable reports, findings, recommendations and studies that have been completed and have relevance to the strategic plan.

2. **Comprehensive scope.** The strategic plan developed pursuant to subsection 1 must encompass the entire system of public education from early childhood through postsecondary education workforce training and adult education.

3. **Reports on progress.** Beginning in 2013, the commissioner shall report annually to the joint standing committee of the Legislature having jurisdiction over education and cultural affairs regarding the implementation of the strategic plan developed pursuant to subsection 1 and the State's progress on indicators of progress toward the goals identified in section 502 and the benchmarks identified in section 503. Beginning in 2013, the Chancellor of the University of Maine System and the President of the Maine Community College System shall report to the joint standing committee of the Legislature having jurisdiction over education and cultural affairs on the implementation of those parts of the strategic plan that involve their respective systems and on progress in reaching the indicators of progress toward the goals identified in section 502, subsection 4 and the benchmarks identified in section 503, subsection 4.

4. **Priority initiatives.** The strategic plan developed pursuant to subsection 1 and the reports delivered in accordance with subsection 3 must specifically describe the department's progress in implementing the system of interventions for kindergarten to grade 12 required under section 4710 and in providing students with opportunities for learning in multiple pathways in accordance with section 4703.

5. **Legislative reports.** In the reports under subsection 3, the commissioner, the Chancellor of the University of Maine System and the President of the Maine Community College System shall indicate to the committee the manner in which the matter in question relates to the policy framework articulated in section 501, to the goals articulated in section 502 and to the strategic plan developed pursuant to subsection 1.

**PART B**

Sec. B-1. 20-A MRSA §7204, sub-§5, as amended by PL 2005, c. 662, Pt. A, §25, is further amended to read:

5. **Due process.** Shall:

A. Adopt or amend rules to assure and protect the rights of due process for children with disabilities; and
B. Inform and train each school administrative unit on the rights of children with disabilities to due process under state laws and rules and federal law and regulations; and

Sec. B-2. 20-A MRSA §7204, sub-§6, as amended by PL 2005, c. 662, Pt. A, §25, is further amended to read:

6. Technical assistance. May, on the request of a school administrative unit, provide technical assistance in the formulation of a plan or subsequent report required of all administrative units. Assistance may not be designed to transfer the responsibility for or actual development of the plan or report.; and

Sec. B-3. 20-A MRSA §7204, sub-§7 is enacted to read:

7. Kindergarten screening. Shall prescribe by rule a uniform process for kindergarten screening that facilitates reliable and consistent measurement of statewide kindergarten readiness. Rules adopted pursuant to this subsection are routine technical rules as defined in Title 5, chapter 375, subchapter 2-A.

PART C

Sec. C-1. 20-A MRSA §4722, sub-§7 is enacted to read:

7. Proficiency in standards. Students graduating from high school:

A. Beginning with the class that graduates in 2015, must demonstrate proficiency in the content areas of:

(1) English language arts;

(2) Mathematics;

(3) Science and technology;

(4) Social studies; and

(5) Health, physical education and wellness; and

B. Beginning with the class that graduates in 2018, must demonstrate proficiency in the content areas of:

(1) Career and education development;

(2) English language arts;

(3) World languages;

(4) Health, physical education and wellness;
(5) Mathematics;

(6) Science and technology;

(7) Social studies; and

(8) Visual and performing arts.

Students must be engaged in learning mathematics, science and technology and English language arts during each of their years of high school study.

Sec. C-2. Requirements for awarding high school diplomas. By December 15, 2011, the Commissioner of Education shall adopt rules that require school administrative units to award high school diplomas based on standards established by rule. These standards must take into account, in addition to any local course work and accumulation of credits, a broad spectrum of learning experiences that may include internships, portfolios, long-term capstone projects, early college, standardized tests and other appropriate learning experiences that provide opportunities to demonstrate proficiency in the learning results set forth in the Maine Revised Statutes, Title 20-A, section 6209.

Sec. C-3. Preparation of strategic plan. The Commissioner of Education shall develop a proposed strategic plan in accordance with the Maine Revised Statutes, Title 20-A, section 505 and shall present the plan, including any necessary implementing legislation, to the Joint Standing Committee on Education and Cultural Affairs by February 1, 2012. The draft plan must, at a minimum, recommend and prioritize tactics for implementing the strategies identified to achieve the goals set forth in Title 20-A, section 502, describe timelines for implementing those tactics and recommend benchmarks for each of the indicators of progress toward the goals identified in Title 20-A, section 502 and must establish annual targets extending to 2021. After receipt and review of the commissioner's plan, the joint standing committee may submit a bill regarding the plan to the Second Regular Session of the 125th Legislature.

Sec. C-4. Kindergarten screening. In adopting rules prescribing a uniform process for kindergarten screening pursuant to the Maine Revised Statutes, Title 20-A, section 7204, subsection 7, the Commissioner of Education shall work with the Maine School Superintendents Association and the Children's Cabinet to develop, adopt and implement a uniform process and tool for prekindergarten screening in a manner that facilitates reliable and consistent measurement of statewide kindergarten readiness. Rules must be adopted pursuant to this section prior to March 1, 2012.

Sec. C-5. Early childhood programs. By March 1, 2012, the Commissioner of Education, in consultation with state and local stakeholders, shall develop a plan, which may be a component of the strategic plan adopted pursuant to the Maine Revised Statutes, Title 20-A, section 505, to achieve universal high-quality early learning opportunities. This plan must address universal early learning opportunities as a strategy toward achieving the goal established under Title 20-A, section 502, subsection 1. The Department of Education shall seek to maintain an annual 10% growth of early childhood programs in Maine, with the ultimate goal of achieving
universal prekindergarten. The commissioner shall present a draft of the plan to the Joint Standing Committee on Education and Cultural Affairs no later than March 15, 2012.

SUMMARY

This bill:

1. Establishes an education policy, core priorities for the State's education system, education system goals, benchmarks and intervention strategies;

2. Requires the development of a strategic plan to achieve the goals within the policy framework;

3. Requires that the state budget document present proposed expenditures on early childhood development, public education, adult education, higher education and workforce development in a manner that facilitates evaluation by the Legislature of whether funds are being appropriated and allocated in a manner that best accords with the established policy framework, advances the established goals and implements the strategic plan;

4. Requires that the Commissioner of Education adopt rules prescribing a uniform process for kindergarten screening in a manner that facilitates reliable and consistent measurement of statewide kindergarten readiness;

5. Requires school administrative units to award high school diplomas based on standards established by rule; and

6. Requires that, beginning with the class of 2015, students graduating from high schools demonstrate proficiency in the content areas of English language arts, mathematics, science and technology, social studies and health, physical education and wellness. Beginning with the class of 2018, students graduating from high schools must demonstrate proficiency in the content areas of career and education development; English language arts; world languages; health, physical education and wellness; mathematics; science and technology; social studies; and visual and performing arts.
§4722-A. PROFICIENCY-BASED DIPLOMA STANDARDS AND TRANSCRIPTS

Beginning January 1, 2017, a diploma indicating graduation from a secondary school must be based on student demonstration of proficiency as described in this section. The commissioner may permit a school administrative unit to award diplomas under this section prior to January 1, 2017 if the commissioner finds that the unit's plan for awarding diplomas meets the criteria for proficiency-based graduation under this section. [2011, c. 669, §7 (NEW).]

1. Requirements for award of diploma. In order to award to a student a diploma indicating graduation from secondary school, a school subject to the system of learning results established under section 6209 must:

   A. [2015, c. 489, §2 (RP).]

      A-1. Certify that the student has met all requirements specified by the governing body of the school administrative unit attended by the student; [2015, c. 489, §2 (NEW).]

   B. Certify that the student has demonstrated proficiency in meeting state standards in all content areas of the system of learning results established under section 6209; [2015, c. 489, §2 (AMD).]

      B-1. Phase in the following diploma requirements from the 2020-2021 school year to the 2024-2025 school year:

         (1) For a student graduating in the graduating class of 2020-2021, certify that the student has demonstrated proficiency in meeting the state standards in the content areas of English language arts, mathematics, science and technology and social studies;

         (2) For a student graduating in the graduating class of 2021-2022, certify that the student has demonstrated proficiency in meeting the state standards in the content areas of English language arts, mathematics, science and technology, social studies and at least one additional content area of the student’s choice;

         (3) For a student graduating in the graduating class of 2022-2023, certify that the student has demonstrated proficiency in meeting the state standards in the content areas of English language arts, mathematics, science and technology, social studies and at least 2 additional content areas of the student’s choice;

         (4) For a student graduating in the graduating class of 2023-2024, certify that the student has demonstrated proficiency in meeting the state standards in the content areas of English language arts, mathematics, science and technology, social studies and at least 3 additional content areas of the student’s choice; and

         (5) For a student graduating in the graduating class of 2024-2025 and for each subsequent graduating class, certify that the student has demonstrated proficiency in meeting the state standards in all content areas.

For the purposes of this paragraph, "content areas" refers to the content areas of the system of learning results established under section 6209. [2015, c. 489, §2 (NEW).]

   C. Certify that the student has demonstrated proficiency in each of the guiding principles set forth in department rules governing implementation of the system of learning results established pursuant to section 6209; and [2015, c. 489, §2 (AMD).]

   D. [2015, c. 489, §2 (RP).]

   E. Certify that the student has engaged in educational experiences relating to English language arts, mathematics and science and technology in each year of the student's secondary schooling. [2015, c. 489, §2 (NEW).]
2. Method of gaining and demonstrating proficiency. Students must be allowed to gain proficiency through multiple pathways, as described in section 4703, and must be allowed to demonstrate proficiency by presenting multiple types of evidence, including but not limited to teacher-designed or student-designed assessments, portfolios, performance, exhibitions, projects and community service.

3. Exceptions. Notwithstanding subsection 1, a student may be awarded a diploma indicating graduation from a secondary school in the following circumstances.

   A. A student who is a child with a disability, as defined in section 7001, subsection 1-B, may meet the requirements of subsection 1 and become eligible for a diploma by demonstrating proficiency in state standards established in the system of learning results through performance tasks and accommodations that maintain the integrity of the standards as specified in the student’s individualized education program by the student’s individualized education program team pursuant to the requirements of chapter 301. [2015, c. 489, §2 (AMD).]

   B. A student who has satisfactorily completed the freshman year in an accredited degree-granting institution of higher education is eligible to receive a high school diploma from the secondary school the student last attended. [2015, c. 489, §2 (AMD).]

B-1. [2015, c. 489, §2 (RP).]

B-2. For the graduating class of 2020-2021 and each subsequent graduating class, a student who has satisfactorily completed a state-approved career and technical education program of study and either met 3rd-party-verified national or state industry standards set forth in department rules established pursuant to section 8306-B or earned 6 credits in a dual enrollment career and technical education program formed pursuant to chapter 229 from a regionally accredited institution of higher education and who has successfully demonstrated proficiency in meeting state standards in the content areas and the guiding principles set forth in department rules governing implementation of the system of learning results established pursuant to section 6209, is eligible to receive a high school diploma from the secondary school the student last attended. A student may be awarded a high school diploma from the secondary school the student last attended in accordance with the phase-in of the following diploma requirements for the graduating class of 2020-2021 to the graduating class of 2023-2024:

   (1) For a student graduating in the graduating class of 2020-2021, the student has demonstrated proficiency in meeting the state standards in the content areas of English language arts, mathematics and social studies;

   (2) For a student graduating in the graduating class of 2021-2022, the student has demonstrated proficiency in meeting the state standards in the content areas of English language arts, mathematics, social studies and at least one additional content area of the student’s choosing;

   (3) For a student graduating in the graduating class of 2022-2023, the student has demonstrated proficiency in meeting the state standards in the content areas of English language arts, mathematics, social studies and at least 2 additional content areas of the student’s choosing; and

   (4) For a student graduating in the graduating class of 2023-2024 and in each subsequent graduating class, the student has demonstrated proficiency in meeting the state standards in the content areas of English language arts, mathematics, social studies and at least 3 additional content areas of the student’s choosing.

For the purposes of this paragraph, "content areas" refers to the content areas of the system of learning results established under section 6209. [2015, c. 489, §2 (NEW).]

C. [2013, c. 439, §4 (RP).]

D. A school administrative unit may award a high school diploma to a student who has met the standards set forth in a waiver request that was approved by the commissioner pursuant to section 4502, subsection 8. [2011, c. 669, §7 (NEW).]
E. A person may be awarded a high school diploma, including a posthumous award, if the person or a family member of the person applies to a secondary school and:

(1) The person:
   (a) Attended a secondary school in the geographic area now served by the secondary school from which a diploma is requested; or
   (b) Resides at the time of application for a diploma in the geographic area served by the secondary school from which a diploma is requested;

(2) The person did not graduate or receive a diploma from a secondary school because the person left secondary school to serve in the Armed Forces and served during the following periods:
   (a) World War II, from December 7, 1941 to August 16, 1945;
   (b) The Korean Conflict;
   (c) The Vietnam War era, from February 28, 1961 to May 7, 1975; or
   (d) The period of wartime or peacetime after a period of wartime described in division (a), (b) or (c); and

(3) The person received an honorable discharge or a certificate of honorable service from the Armed Forces.

For the purposes of this paragraph, "Armed Forces" means the United States Army, Navy, Air Force, Marine Corps and Coast Guard and the merchant marine. [2015, c. 489, §2 (AMD).]

4. Grants; contingent extension of full implementation. During the period of transition to proficiency-based graduation in accordance with this section, the department, if funds are available, shall make annual transition grants to each school administrative unit equal to 1/10 of 1% of the school administrative unit's total cost of education calculated under section 15688, subsection 1 to be used in the manner determined by the school administrative unit to fund the costs of the transition not otherwise subsidized by the State through the 2014-2015 school year. The date for implementation of the awarding of diplomas based on student demonstration of proficiency as described in this section is extended one year for each year for which transition grants are not made available to a school administrative unit or for which levels of general purpose aid for local schools fall below school year 2012-2013 levels. Beginning in the 2015-2016 school year to the 2020-2021 school year, the department, if funds are available, shall make annual transition grants to each school administrative unit that operates schools equal to 1/9 of 1% of the school administrative unit's total cost of education calculated under section 15688, subsection 1 to be used in the manner determined by the school administrative unit to fund the costs of the transition not otherwise subsidized by the State, including the transition to proficiency-based graduation in accordance with this section and the proficiency-based reporting and credentials requirements in accordance with section 6209, subsection 3-A.

[2015, c. 489, §2 (AMD).]

5. Transcripts and certification of content area proficiency. In addition to maintaining a high school transcript for each student, a school administrative unit shall certify each student's content area proficiency and may award a certificate of content area proficiency to a student for each content area in the system of learning results established under section 6209 in which the student has demonstrated proficiency. Certification of content area proficiency must be included with the student's permanent academic transcript, and a student may use certification of content area proficiency as an official credential of academic achievement for the purposes of employment and postsecondary education. When a school administrative unit certifies content area proficiency, it shall report these certifications of content area proficiency to the department, and the department shall collect and aggregate these data as evidence of progress towards high school graduation goals.

(Subsection 5 as enacted by PL 2015, c. 367, §1 is REALLOCATED TO TITLE 20-A, SECTION 4722-A, SUBSECTION 6)

[2015, c. 489, §2 (AMD).]
6. (REALLOCATED FROM T. 20-A, §4722-A, sub-§5) **Implementation of proficiency-based diplomas and transcripts.** Beginning in the 2016-2017 school year, the department shall annually collect and report data on the progress of public schools and public charter schools towards the implementation of proficiency-based diplomas and transcripts in relation to the ongoing transition plan required pursuant to section 4502, subsection 1, including the number of students graduating with proficiency-based diplomas, the number of students concluding their high school careers proficient in each of the content areas of the system of learning results established under section 6209 and in each of the guiding principles set forth in department rules governing implementation of the system of learning results established pursuant to section 6209 and the number of students certified as ready for college and careers. By January 15, 2017, and annually thereafter, the department shall provide an annual report of the data collected for the prior school year to the joint standing committee of the Legislature having jurisdiction over education matters, and the department shall post the annual report on its publicly accessible website.

[ 2015, c. 489, §2 (AMD) . ]

7. **Rulemaking.** The commissioner shall develop rules to accomplish the purposes of this section. Rules adopted by the commissioner under this section must:

A. Allow local flexibility and innovation in developing consistent graduation standards, enable school administrative units to continue current progress aligned with the phase-in of the standards and proficiency requirements in subsection 1, paragraph B-1 and subsection 3, paragraph B-2 and describe standard criteria for ensuring equal educational opportunities for students; [2015, c. 489, §2 (NEW).]

B. Allow the commissioner to identify the manner in which the opportunities for learning in multiple pathways of career and technical education programs may be used to satisfy certain components of the system of learning results established under section 6209; and [2015, c. 489, §2 (NEW).]

C. Address the appropriate placement of students in career and technical education programs while ensuring that all students be exposed to all the content areas of the system of learning results established under section 6209 through the 10th year of their studies. [2015, c. 489, §2 (NEW).]

Rules adopted pursuant to this subsection are routine technical rules as defined in Title 5, chapter 375, subchapter 2-A. 
APPENDIX C: MAINE DOE PEER REVIEW PROCESS

The Maine DOE proposes that districts provide the following evidence that student
demonstrations of proficiency are focused on and reflect the intended breadth and rigor of the
high school level standards.

Reporting standards for graduation
For each content area, a diverse sample of 2-3 assessments, scoring criteria used to gather
evidence for reporting proficiency and a redacted student work sample representing proficiency
for each assessment
Guiding Questions for Review
• Do the district’s reporting standards reflect all the content standards (domains/strands – for
ELA and math) that are in the Maine Learning Results? Identify anything that appears to be
missing or unclear.
• Do the district’s reporting standards reflect high school standards? Identify anything that does
not appear to reflect high school level expectations of the standards.
• Does the evidence presented by the district (reporting standards, assessments, rubrics and
samples of proficient student work) reflect the skills and concepts of the content area at the
intended rigor of the standards? Identify anything that appears to be missing or at a lower rigor.

Guiding Principles
The Maine DOE proposes that districts provide the following evidence that student
demonstrations of proficiency are focused on and reflect the spirit and intent of Guiding
Principles.

Criteria articulating the expectations for demonstrating proficiency
• Protocols and opportunities to gather evidence of student competencies in the Guiding
Principles over time, in a variety of experiences
• Student capacity for using criteria to adapt and grow in capacity in each Guiding Principle

Guiding Questions for Review
• Does the evidence presented by the district reflect the spirit and intent of each Guiding
Principle? Identify anything that appears to be missing or unclear.
• Does the evidence presented by the district indicate clear criteria for each Guiding Principle?
Identify anything that appears to be missing or unclear.
• Does the evidence presented by the district indicate opportunities for students to actively
reflect, monitor, and adapt as they grow in capacity in each Guiding Principle? Identify anything
that appears to be missing or unclear.
• Does the evidence presented by the district indicate opportunity for students to gather evidence
over time, in a variety of experiences inside and outside of school for each Guiding Principle?
Identify anything that appears to be missing or unclear.

Multi-tiered Supports
The Maine DOE proposes that districts provide evidence that supports are in place for student
learning, including supports when a student(s) are struggling to demonstrate proficiency and
including supports that respond with the appropriate instructional opportunities when a student(s) demonstrate proficiency ahead of the pace of instruction.
• Practices/protocols for supporting student when they struggle to demonstrate proficiency
• Practices/protocols for supporting students who demonstrate proficiency ahead of the pace of instruction

Guiding Questions
• Does the evidence presented by the district provide a clear description of the practices/protocols for improving student performance and ensuring feedback is timely, specific to each student and delivered when and where it has the most benefit? Identify anything that appears to be missing or unclear.
• Does the evidence presented by the district provide a clear description of practices for regular monitoring of student progress? Identify anything that appears to be missing or unclear.
• Does the evidence presented by the district provide a clear description of equity of opportunity for support to students in any content area and the Guiding Principles? Identify anything that appears to be missing or unclear.
• Does the evidence presented by the district provide a clear description of the practices/protocols for responding with the appropriate instructional opportunities when a student(s) demonstrate proficiency ahead of the instructional pace? Identify anything that appears to be missing or unclear.

Reporting Structures and Rules
The Maine DOE proposes that districts provide the following evidence to certify proficiency in the content standards and Guiding Principles of the system of learning results.
• Capacity to report content knowledge separate from capacities embedded in the Guiding Principle
• Decision rules and calculation methods for reporting proficiency
• Any documentation students will receive at graduation (e.g., permanent transcript with certifications of content area proficiency and certifications of Guiding Principles proficiency, proficiency-based diploma, certificate of completion, certificate of participation)

Guiding Questions
• Does the evidence presented by the district demonstrate capacity to report content knowledge and skills separately from the knowledge, skills and dispositions embedded in the Guiding Principles? Identify anything that appears to be missing or unclear.
• Does the evidence presented by the district describe the decision rules and calculation methods for reporting proficiency at the reporting standard levels for each content area and for each Guiding Principle? Identify anything that appears to be missing or unclear.
• Does the evidence presented by the district include any document a student may receive at graduation (e.g., a sample permanent transcript that reports certification of content area proficiency in each of the content areas and certification in each of the Guiding Principles, proficiency-based diploma, certification of completion, certification of participation). Identify anything that appears to be missing or unclear.
### APPENDIX D: SUPERINTENDENT REGIONS AND SCHOOL DISTRICTS

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### Figure 5. Superintendent Regions and School Districts