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## Implementing Authentic Practice Through Capstone Projects At Selected Terminal Grades: A Policy Advocacy Document

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A THREE-PART DISSERTATION:

IMPACT OF SINGLE GENDER PROGRAMS ON ACHIEVEMENT, ATTENDANCE,  
DISCIPLINE, AND CHARACTER: A PROGRAM EVALUATION PROJECT

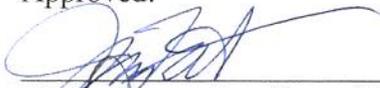
ADAPTIVE CHANGE FOR AN ALL BOYS COLLEGE PREPARATORY PUBLIC  
MIDDLE SCHOOL: A CHANGE LEADERSHIP PROJECT

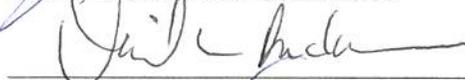
IMPLEMENTING AUTHENTIC PRACTICE THROUGH CAPSTONE PROJECTS AT  
SELECTED TERMINAL GRADES: A POLICY ADVOCACY DOCUMENT

Carla L. Sparks

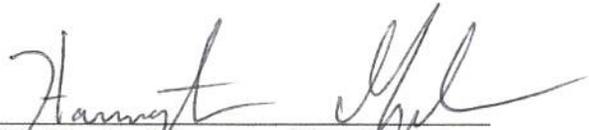
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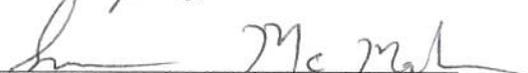
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IMPLEMENTING AUTHENTIC PRACTICE THROUGH CAPSTONE PROJECTS AT  
SELECTED TERMINAL GRADES: A POLICY ADVOCACY DOCUMENT

Carla L. Sparks

Educational Leadership Doctoral Program

Submitted in partial fulfillment  
of the requirements of  
Doctor of Education  
in the Foster G. McGaw Graduate School

National College of Education

National Louis University

November 30, 2015

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# NLU Digital Commons Document Origination Statement

This document is organized to meet the three-part dissertation requirement of the National Louis University (NLU) Educational Leadership (EDL) Doctoral Program. The National Louis Educational Leadership Ed.D. is a professional practice degree program (Shulman et al., 2006).

For the dissertation requirement, doctoral candidates are required to plan, research, and implement three major projects, on each year, within their school or district with a focus on professional practice. The three projects are:

- Program Evaluation
- Change Leadership Project
- Policy Advocacy Document

For the **Program Evaluation** candidates are required to identify and evaluate a program or practice within their school or district. The “program” can be a current initiative; a grant project; a common practice; or a movement. Focused on utilization, the evaluation can be formative, summative, or developmental (Patton, 2008). The candidate must demonstrate how the evaluation directly relates to student learning.

In the **Change Leadership Project** candidates develop a plan that considers organizational possibilities for renewal. The plan for organizational change may be at the building or district level. It must be related to an area in need of improvement with a clear target in mind. The candidate must be able to identify noticeable and feasible differences that should exist as a result of the change plan (Wagner et al., 2006).

In the **Policy Advocacy Document** candidates develop and advocate for a policy at the local, state or national level using reflective practice and research as a means for supporting and promoting reforms in education. Policy advocacy dissertations use critical theory to address moral and ethical issues of policy formation and administrative decision making (i.e., what ought to be). The purpose is to develop reflective, humane and social critics, moral leaders, and competent professionals, guided by a critical practical rational model (Browder, 2006).

## Works Cited

- Browder, L. H. (1995). An alternative to the doctoral dissertation: The policy advocacy concept and the policy document. *Journal of School Leadership, 5*, 40-69.
- Patton, M.Q. (2008). *Utilization-focused evaluation* (4<sup>th</sup> ed.). Thousand Oaks, CA: Sage.
- Shulman, L.S., Golde, C.M., Bueschel, A.C. & Garabedian, K.J. (2006). Reclaiming education’s doctorates: A critique and a proposal. *Educational Researcher, 35*(3), 25-32.
- Wagner, T. et al. (2006). *Change leadership: A practical guide to transforming our schools*. San Francisco: Jossey-Bass.

## **ABSTRACT**

American educational and political communities have become focused on assessment of students and accountability of teachers and administrators. Consequently, educators are focused largely on preparing students for high stakes tests, oftentimes at the expense of authentic instructional practice. The educational, economic, social, political, moral, and ethical needs of students and American society demand a policy that provides student experiences that are action-oriented, promote character development, provoke reflective thinking, and develop skills and knowledge that prepare students for life and ultimately transform society. Therefore, I recommend through this Policy Advocacy Document that the school district under study require capstone projects of all students at terminal grades to better prepare them for the next phase of their educational career and for life.

## PREFACE

The implementation of authentic instructional practice that includes problem based learning, project based learning, inquiry based learning, exhibitions of mastery, and capstone projects is an adaptive change from the current, prevalent practice of American public schools to prepare students for high stakes tests. As a district administrator in a public school district, I regularly share with educators within my area of influence the critical need to implement authentic instructional practices with their students. As I continue to study the topic of authentic instructional practice, I am convinced that all public schools should mandate this approach to educating their students. Therefore, I have emphasized the need for such an adaptive change in this Policy Advocacy Document (PAD) starting with the district in my study so it can serve as a model for other districts.

I used my research regarding the use of capstone projects as a form of authentic instructional practice. In doing so, I realized that my work as a doctoral candidate is an example of authentic instructional practice. By writing and presenting my PAD, I am engaging in and experiencing the kind of authentic learning I am advocating for students in elementary, middle, and high schools across the public school district in my study and beyond.

As I considered the work of Fowler (2000), I became acutely aware of the potential power of teachers, administrators, and school board members to develop and implement public policy for the benefit of our students. As I analyzed the various needs of students related to this policy, I was particularly impressed with the information provided by Garcia (2014) relative to the political needs for this policy. Garcia addressed

the positive impact of capstone projects on democracy. She explained that the skills students gain through the authentic learning of capstone projects have a correlation to civic and democratic participation. I came to understand that while students are at the center of this policy, the positive impacts go beyond the students to society, at large. Perhaps the most important leadership lesson I experienced through this study is I must recognize and help other educators understand that while our students deserve an education that centers on authentic educational practices that lead to their complete self-development, there is more that needs to be done. I must teach them that such an education will help them learn to make more meaningful contributions to others, and thus these educational practices will even impact the broader society.

Another important leadership lesson for me was the understanding that it is important to have a broad focus when making decisions to change the way we educate children. By studying five distinct disciplinary areas – education, economic, social, political, and moral/ethical – I realized the far reaching effects of educational policy decisions. This study has caused me to realize that in considering innovative instructional strategies, I must consider not only what is good for students, but also what is necessary for the betterment of the quality of life and living for us all.

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## SECTION ONE: VISION STATEMENT

Educational practices in America during the 21<sup>st</sup> century are largely focused on assessment of students and accountability of teachers and administrators. According to Diane Ravitch in *The Death and Life of the Great American School System: How Testing and Choice are Undermining Education* (2010), the nation has not been successful in developing sets of standards to drive curriculum development. It has tried and failed to do so. Ravitch states that educators realize that it is important to identify what children should know and be able to do, but identifying standards to ensure that every class in every school in America is addressing what children should know and be able to do has yet to occur. Instead, the American educational and political communities have developed an accountability system based on high stakes tests to measure educators' level of success in enabling students to gain the knowledge they should know and be able to use without agreed upon standards.

A consequence of this dilemma is that educators have come to focus instruction largely on preparing students for high stakes tests rather than standards based upon what children should know and be able to do, according to Ravitch (2010). She said, "Excessive test preparation distorts the very purpose of tests, which is to assess learning and knowledge, not just to produce higher test scores" (p.160). She drove home her point with these additional comments:

Tests are necessary and helpful. Nevertheless, tests must be supplemented by human judgment. When we define what matters in education only by what we can measure, we are in serious trouble. When that happens, we tend to forget that schools are responsible for shaping character, developing sound minds in healthy

bodies..., and forming citizens for our democracy, not just for teaching basic skills. We even forget to reflect on what we mean when we speak of a good education. Surely, we have more in mind than just bare literacy and numeracy. And when we use the results of tests, with all their limitations, as a routine means to fire educators, hand out bonuses, and close schools, then we distort the purpose of schooling altogether. (p. 167)

Ravitch makes clear the responsibility of schools to educate the whole child and the danger of focusing on test preparation at the expense of holistic education.

Tony Wagner, in his book *The Global Achievement Gap: Why Even our Best Schools Don't Teach the New Survival Skills Our Children Need – and What we can do About it* (2008), suggests that we can increase student preparedness by using and pursuing what he refers to as the Seven Survival Skills for the 21<sup>st</sup> century. These skills include critical thinking and problem solving, collaboration across networks and leading by influence, agility and adaptability, initiative and entrepreneurialism, effective oral and written communication, accessing and analyzing information, and finally, curiosity and imagination. Wagner takes a bold position in his statement as follows:

The rigor that matters most for the 21<sup>st</sup> century is demonstrated mastery of the core competencies for work, citizenship, and life-long learning. Studying academic content is the means of developing competencies, instead of being the goal, as it has been traditionally. In today's world, it is no longer how much you know that matters; it is what you can do with what you know. (p. 111)

If we consider the inappropriateness of high stakes tests as a form of curriculum guide and a measure of teacher effectiveness, along with the lack of addressing what students

need to know and use effectively in the 21<sup>st</sup> century, then we must take a long hard look at the Seven Survival Skills proposed by Wagner (2008). Those skills point toward the implementation of authentic instructional practices. This leads to the next logical step which is to develop a more appropriate instructional model, and that is the implementation of capstone projects.

As a practicing educator and educational leader, I have been informally guiding the implementation of capstone projects for the past twelve years in schools where I have a measure of influence in my district. Now, as a doctoral candidate, I am prepared to guide formally this practice through my Policy Advocacy Document for the district in my study. Browder describes this as, “the taking of a carefully conceptualized policy position intended to guide professional practice” (1995, p. 40). Interestingly, writing and presenting this Policy Advocacy Document is a capstone experience, in and of itself, and thus, a model of the authentic education practice for which I am advocating for the district in my study.

### **Introduction to the Problem**

The problem, as described so clearly by Ravitch (2010) and Wagner (2008), is that public schools in America are over-utilizing high stakes tests and neglecting to prepare authentically students for life in the 21<sup>st</sup> century. This problem has manifested itself in my state and the school district in my study. The district implements an annual state assessment test upon which many decisions are made both statewide and locally. These include student promotions, qualifications to enroll in certain choice and magnet programs and schools, teacher salary levels and bonuses, school grades, and school state takeovers and school closures.

I became aware of this problem shortly after the passage of the No Child Left Behind Act (NCLB) of 2002. I was teaching in a large public high school of about 1,800 students in a very large school district of about 180,000 students at the time. Like Ravitch (2010), I became increasingly disillusioned about what was happening in my school district, as a result of NCLB. My students were agonizing over a test they had to pass to graduate, and, yet, the test preparation was adding little to their base of usable knowledge. The amount of time required for test preparation and test administration had a significant impact on our ability to implement truly meaningful curricula. Ravitch summarized the problem with NCLB very well when she said:

I came to realize that the law bypassed curriculum and standards... It required no curriculum at all, nor did it raise standards... I saw my hopes for better education turn into a measurement strategy that had no underlying educational vision at all. Eventually I realized that the new reforms had everything to do with structural changes and accountability, and nothing at all to do with the substance of learning. Accountability makes no sense when it undermines the larger goals of education. (2010, pp. 15-16)

Significantly, Ravitch pointed out that the changes with NCLB were structural rather than adaptive changes, and therefore had no impact on learning.

Pinder (2013) conducted a study in which teachers expressed their point of view on NCLB, high stakes testing, and the related impact on their students. Pinder found that the majority of educational practitioners in the study held the position that constant testing was ineffective and did not benefit their students. Among those interviewed,

100% of the educators said the goals of NCLB were unrealistic and failed to address the needs of students that were not prepared for the challenge of constant testing.

I continued to be discouraged by the condition of education in my state and district throughout the last decade, and my disillusionment peaked in 2012. The district in my study overhauled a middle school of grades 6 – 8 due to its consistently low performance on statewide tests, high discipline rates, and challenges with attendance. The district appointed a new principal, and the principal selected the other school site administrators and teachers. All those who wanted to remain at the school had to apply to do so. The *new* school became a magnet school. During its first year of operation, it had an enrollment of about 250 students with ethnic demographics of approximately 50 percent African American, 25 percent Caucasian, and 25 percent Hispanic, along with students from varied socio-economic levels. The faculty and administrators went through intensive professional development during the summer before the school opened on how best to educate their students.

During that first school year of 2011-2012, district administrators noted marked improvement in the school climate and student conduct. Character development was a strong focus area of the principal, and the faculty followed his lead. Students were excited about school and thriving in the new environment. Teachers expressed to the district their enthusiasm for working at the school. Parents demonstrated a high level of satisfaction, support, and involvement. All indications were that the school and its stakeholders were thriving.

In July, after the school year ended, the state grade for the school was released, and it was a D. That was a drop from its grade of C the previous year when the school

was enduring what the state called intervene status. That meant employees from the state department of education were regularly on the campus to ensure changes were implemented to improve the school.

That state assigned grade of D confirmed for me that the state was misevaluating education in our state by overinflating the statewide assessment test's impact on the evaluation of the students, teachers, and the school as a whole. The school grade had been determined by a complex formula that included students' academic gains as well as proficiency levels disaggregated by ethnicity and socio-economic status, as well as other sub-groups of students such as those with disabilities and those who were English Language Learners. The formula did not include student engagement during classes, students' character development, students' enthusiasm for learning, the culture of each classroom, or the climate of the school. I did not believe that the grade of D represented the teaching and learning I had observed several times a week throughout the school year. Thus, I became more acutely aware that the policy of using the statewide assessment test as the primary measurement of the school's effectiveness was inaccurate, insufficient, and flawed. What really matters – building character, developing sound minds, and forming citizens for our democracy (Ravitch, 2010); the Seven Survival Skills (Wagner, 2008) and the concepts of the Common Principles of the Coalition of Essential Schools (Coalition of Essential Schools, 2014) – was not being assessed, and therefore, not being taught.

In consideration of this awareness, I resolved that this practice of neglect must be addressed by policy designed to change curricula content and process. As Ravitch (2010) pointed out, such high stakes tests supersede the implementation of standards and

curricula. When I consider Wagner's (2008) Seven Survival Skills that students need to master in order to succeed in the 21<sup>st</sup> century, it is clear that they are not being measured by the statewide test, nor are they an element that determines the state grade assigned to a school. Teachers are neglecting the most important part of our children's education just to meet the demands of the statewide assessment test.

Fowler (2000) defined public policy as

The dynamic and value laden process through which a political system handles a public problem. It includes a government's expressed intentions and official enactments as well as its consistent patterns of activity and inactivity. In this definition, government includes elected and appointed public officials at the federal, state, and local levels as well as the bodies or agencies within which these officials work. Thus, school board members, school administrators, and classroom teachers in public schools are all part of government as are such individuals and groups as governors, judges, and Congress. (p. 9)

As I considered this definition, I became acutely aware of the potential power of teachers, administrators, and school board members to develop and implement public policy for the benefit of our students. In fact, I see the ability to design a policy to address the problem described above as my responsibility, along with the responsibility of those educators with whom I work.

### **Critical Issues**

To combat this complex problem, I am recommending that the school district in my study adopt a policy that promotes the kind of teaching and learning that Wagner (2008) describes as important for our students. I believe all students need authentic

learning experiences that are accompanied by authentic assessments. We still have to comply with the requirements of our state regarding high stakes tests. However, we also will meet the often unmet and non-assessed higher learning needs of our students.

TheodoreSizer's work with the Coalition of Essential Schools (Coalition of Essential Schools, 2002) includes similar teaching and learning concepts to Wagner (2008). The common principles of the Coalition include the following: learning to use one's mind well; less is more, depth over coverage; goals apply to all students; personalization; student-as-worker, teacher-as-coach; demonstration of mastery; a tone of decency and trust; commitment to the entire school; resources dedicated to teaching and learning; democracy and equity. These principles not only connect to Wagner's Seven Survival Skills, but also they reflect the philosophy of Ravitch (2010) that promotes schools as being responsible for shaping character, developing sound minds, and forming citizens for our democracy, not just for teaching basic skills. The combination of all these related concepts can be integrated into the curricula and addressed by implementing capstone projects.

Capstone projects incorporate the authentic teaching and learning strategies that accompany exhibition of mastery, project based learning (PBL), problem based learning, authentic learning and assessment, and inquiry based learning. For the purpose of this document, these terms are defined as follows:

- Capstone Project – is a thoroughly researched and executed project based on any topic of interest to the student that will stretch his/her knowledge and skills (Sparks, 2003, p. 23)
- Exhibition of Mastery – is a public exhibition through which the student

demonstrates his/her mastery of specific knowledge and skills in a technical or academic area based on the student's studies throughout school (Sparks, 2003, p.23)

- Project Based Learning – is an alternative to traditional, teacher-led classrooms wherein students engage in diverse skills including researching, writing, interviewing, collaborating, and/or public speaking to produce work products (Great Schools Partnership, 2014)
- Problem Based Learning – is learning that is driven by identifying a problem, studying the problem, finding a solution, and evaluating that solution (Chadwell, 2003)
- Authentic Learning – is a variety of instructional techniques focused on connecting students to real-world issues, problems, and applications (Great Schools Partnership, 2014)
- Authentic Assessment – is projects, presentations, or products through which students demonstrate what they have learned (Great Schools Partnership, 2014)
- Inquiry Based Learning – is an instructional approach in which students investigate and analyze real-world problems and issues (Great Schools Partnership, 2014).

### **Recommended Policy and Envisioned Effect**

I recommend that the school district in my study require all students to complete a capstone project at each terminal grade – grade 5 for elementary students, grade 8 for middle grades students, and grade 12 for high school students. This policy advocacy effort can be a model for districts throughout the state and nation. I believe that such a

policy will be effective in solving a large portion of the problem stemming from NCLB where curricula are being shaped by high stakes testing instead of identified authentic and more comprehensive student needs and standards. It will address the need for students to learn 21<sup>st</sup> century skills while preparing them for the higher level Common Core Standards and our state standards. It will necessitate the provision of a scaffold to meet individualized student needs as they meet complex learning challenges in preparation for the next step in their school career as we require all students at grade 5 to complete a capstone project prior to moving on to middle school, then again a more advanced capstone project at grade 8 prior to moving onto high school, and finally, at grade 12 a culminating capstone project to be completed prior to graduating from the school system and moving onto college and career.

Capstone projects are not a new concept in education. A pre-cursor to modern day capstone projects was the apprenticeship. The implementation of authentic learning activities was prevalent in the early days of apprenticeships as a means of preparing students for work (Hughes, 2007). According to Hughes, England transformed apprenticeship to a national system as early as the 1500s. The practice of manual training and tool training in America were presented at the Centennial Exposition in Philadelphia in 1876. Throughout the 1900s, the United States continued to offer a variety of practical education opportunities specifically to prepare students for work. The Carl D. Perkins Act of 1990 provided millions of dollars to states to fund vocational preparation to at-risk groups of students, and in 1998 the Perkins Act was reauthorized to include all students who were engaged in vocational preparation courses.

Relative to the Carl D. Perkins Act of 1998, Hughes (2007) said, “The purpose of the Act is to develop more fully the academic, vocational, and technical skills of secondary students and post-secondary students who elect to enroll in vocation and technical education programs.” The history of education for workforce preparation led to the introduction of capstone projects in the school district in my study at the turn of the 21<sup>st</sup> century. Inspired by this movement, I conducted at that time a thorough investigation into the implementation of capstone projects (Sparks, 2003). Capstone projects, as we know them today, are implanted sparsely throughout school districts in my state, the United States, and the world at every level including elementary school, middle school, high school, undergraduate bachelor’s level, graduate master’s level, and post-graduate doctoral level.

Noteworthy is that interwoven into the complex nature of capstone projects is the embedded element of core values. I identify this element as a critical outcome of my recommended policy. This outcome has been demonstrated and documented at the University of LaVerne in California (Redman, 2013). The University has promoted four core values since 1891 and now incorporates them in its capstone projects required at the bachelor’s, master’s, and doctoral levels. These four core values include ethical reasoning to promote reflection, diversity and inclusivity, a spirit and attitude of lifelong learning, and community and civic engagement. The connection to core values resonates with the philosophies expressed by Ravitch (2010) and Wagner (2008), as well as the Coalition of Essential Schools (2014).

I envision that the implementation of this policy, along with appropriate professional development for instructional staff and monitoring for fidelity of its use, will

result in a significant change of focus toward standards and curricula. Additionally, it will empower teachers to guide students toward developing the survival skills they will need to compete in our global community. In terms of assessment, it will enable teachers and parents to glean a holistic view of students' growth and achievement when used in concert with other assessments, such as, teacher-made tests and state assessments. This policy will require teachers to balance their forced focus on test preparation with authentic student activities and assessments.

## **SECTION TWO: NEEDS ANALYSIS**

In this section, I will demonstrate the need for change of focus and priorities in classrooms across the district in my study. I will analyze five distinct disciplinary areas to more fully explain the problem and to communicate the importance of implementing capstone projects in my school district. The five areas I will analyze are the education, economic, social, political, and moral/ethical relationships to the importance of implementing capstone projects across the district.

### **Education Analysis**

Many authors have identified the need to make education authentic for students and assessment authentic for teachers. Markham, Larmer, and Ravita (2003) identified eight needs of students that are addressed through PBL. These needs include: students' inherent drive to learn, their capability to do important work, and their need to be taken seriously by putting them at the center of the learning process; the need to engage students in the central concepts and principles of a discipline; and the need to highlight provocative issues or questions that lead students to in-depth exploration of authentic and important topics. They also include the use of essential tools and skills, including technology for learning, self-management, and project management. Next they include the need to develop products that solve problems, explain dilemmas, or present information generated through investigation, research, or reasoning. Finally, they include the need for frequent feedback and consistent opportunities for students to learn from experience; the need for performance-based assessments that communicate high expectations, present rigorous challenges, and require a range of skills and knowledge;

and the need to collaborate with others through small groups, student-led presentations, or whole-class evaluations of project results.

Several years later, Larmer and Mergendoller (2010) published seven essentials to help teachers guide students through meaningful PBL. These essentials include the following elements: a need to know, a driving question, student voice and choice, 21<sup>st</sup> century skills, inquiry and innovation, feedback and revision, and a publicly presented product. As we consider the aforementioned work of Ravitch (2010), Wagner (2008), the Coalition of Essential Schools (2014), and now Markham et al. (2003), along with Larmer and Mergendoller (2010), we begin to see a pattern of commonality in what selected experts perceive students need to authenticate their education. Newmann, Bryk, and Nagaoka (2001) described the project-based inquiry approach as authentic intellectual work. Their definition of authentic intellectual work is “construction of knowledge through disciplined inquiry in order to produce products that have value beyond school” (p. 14). I think it is important that I clarify the use of the word authentic in relation to student work. Newmann et al. explained it this way:

‘Authentic’ is used here not to suggest that conventional work by students is unimportant to them and their teachers, or that basic skills and proficiencies should be devalued, but only to identify some kinds of intellectual work as more complex and socially or personally meaningful than others. More specifically, authentic intellectual work involves original application of knowledge and skills, rather than just routine use of facts and procedures. It also entails disciplined inquiry into the details of a particular problem and results in a product or presentation that has meaning or value beyond success in school. We summarize

these distinctive characteristics of authentic intellectual work as construction of knowledge, through the use of disciplined inquiry, to produce discourse, products, or performances that have value beyond school. (p. 14)

Authentic work does not eliminate the need for basic skills, but rather enhances them with student work that is complex, original, and requires inquiry.

### **Economic Analysis**

Vega and Brown (2012) claim that modern workforce needs require students who started school at the beginning of the 21<sup>st</sup> century to have technology skills that are not learned through the traditional approach to teaching. They claim that PBL better meets the needs of our current students to be prepared for the world of work in this century. Vega and Brown explained that PBL was initially designed for medical school programs because young physicians were graduating students who lacked problem-solving skills. Their instructors had provided them with knowledge that lacked practical application. Since then, PBL has become part of the pedagogy that supports authentic learning experiences to develop 21<sup>st</sup> century skills. Based upon a study at the Buck Institute in 2010, Vega and Brown shared the comment of one teacher in the study who said, “PBL is a good thing; it’s a lot of work on the front end for teachers, but the kids will have skills that are going to be very beneficial not only in high school but also in the business work and in life” (pp. 20-21). The intention of implementing PBL is to better prepare students for life.

The obvious economic impact of students who are prepared throughout their education for the world of work is a positive one. In her article, “The Need to Address Noncognitive Skills in the Education Policy Agenda,” Garcia (2014) said,

Multiple traits compose a broad definition of what it means to be an educated person. Indisputably, being an educated person is associated with having a certain command of a curriculum, and knowledge of theories and facts from various disciplines. However, the term educated also suggests a more far-reaching concept associated with individuals' full development. Such development implies, for example, that individuals are equipped with traits and skills — such as critical thinking skills, problem solving skills, social skills, persistence, creativity, and self-control — that allow them to contribute meaningfully to society and to succeed in their public lives, workplaces, homes, and other societal contexts. These traits are often called, generically, noncognitive skills. (“Introduction,” para. 1)

Garcia's definition closely reflects the educational values stated above by Ravitch (2010), Wagner (2008), The Coalition of Essential Schools (2014), Redman (2013), Markham et al. (2003), Larmer and Mergendoller (2010), Newmann et al. (2001), and Vega and Brown (2012). Garcia also supports the idea that noncognitive skills should be an explicit pillar of education policy and an explicit goal of public education. Realizing that this objective contrasts with what Garcia considers an overemphasis on cognitive skills; she contends that without increased development of noncognitive skills, students' full development will not be nurtured.

Garcia further defines noncognitive skills this way:

Broadly, these skills encompass those traits that are not directly represented by cognitive skills or by formal conceptual understanding. Rather, these skills represent socio-emotional or behavioral characteristics which are not fixed traits

of the personality, and that are linked to the educational process, either by being nurtured in the school years or by contributing to the development of cognitive skills in those years (or both). (“What does research demonstrate,” para. 4)

Garcia claims that noncognitive skills matter not only for their own sake, but also for their correlation with other individual outcomes and societal outcomes. These outcomes include academic performance, labor productivity, and earnings. She also states her case that noncognitive skills have a positive effect on long-term labor market outcomes and economic returns.

Character development is another potential economic relief because of the positive contributions to our society by good citizenry. The potential economic impact of an increased high school graduation rate is another important area of consideration. In addition, there is cost avoidance in lower rates of incarceration and dependency on public assistance based upon the social analysis below.

As for the economic impact on the district in my study, the good news is that there is no need to change any of the existing curricula, or the state or local standards and benchmarks. By implementing capstone projects, the district will incorporate into the curricula the noncognitive skills described by Garcia (2014). Capstone projects should not become an additional element, or another thing to have to teach and learn, but rather the central element of the existing curricular expectations. That will cost the district nothing. However, in order to implement capstone projects effectively, teachers will need professional development specific to how to make capstone projects the central element of their particular curriculum, and how to design instructional delivery around the capstone project. This will have a financial impact on the district in the area of

professional development, especially considering that there are approximately 3,500 teachers teaching in the identified grades of 5, 8, and 12 who need to learn how to implement capstone projects. Additionally, it may be necessary to pay teachers who are experienced in successfully implementing PBL to develop sample PBL experiences by subject area or grade level to enhance the professional development of other teachers who will implement capstone projects. On the other hand, the effective implementation of capstone projects may actually result in some economic relief to the district because the academic growth is predictably high resulting in less need for costly remediation of students.

### **Social Analysis**

Georgia Tech's Scheller College of Business (Capstone Projects, 2015) sets a good example of how capstone projects can have a positive effect on society, as well as on the social attitudes of the students involved in the capstone project. Among the capstone projects implemented in 2013-14, Georgia Tech students were involved in the following: Centers for Disease Control, Office of Violence Prevention – Increase the Business Community's Awareness of Adverse Childhood Experiences; Developing an Outreach Program to Promote E-Recycling Behavior Among K-12 Students; Camp Twin Lakes (CTL) – Outreach Program to Advance the CTL Mission of Promoting Leadership, Service and Sustainability; Points of Light (PoL) – Market Research and Landscape Analysis for PoL's Civic Accelerator; and MedShare – Social Impact Assessment Framework and Plan. The communities and students each benefited from these relevant and important capstone learning experiences.

Georgia Tech students worked with the Centers for Disease Control to develop tools to increase awareness of adverse childhood experiences (ACEs). They worked to inform the business community of the impact of ACEs on employees, organizations, and communities. They also suggested programs and initiatives that might prevent or mitigate ACEs resulting in safer and more nurturing relationships (Capstone Projects, 2015).

Another team of Georgia Tech students worked with Reworx, a social enterprise that provides jobs for people with disabilities and other challenges via recycling electronics. Their project was to educate K-12 students about the impacts of recycling electronics. They implemented an E-Recycling Awareness Campaign with middle school students in grades 6-8. As a result of this project, middle school students collected more than 180 pounds of electronics to be recycled (Capstone Projects, 2015).

Three Georgia Tech students accepted the challenge of creating a program that would promote the mission of Camp Twin Lakes (CTL), a summer camp for children with serious illnesses and other life challenges. The college students developed a camp curriculum that focused on leadership, service and sustainability. These are issues that CTL considers to be fundamental to its mission. Then the students presented their curriculum proposal to several school leaders in the metro-Atlanta area. This resulted in three schools implementing new educational programs for their students and several additional schools exploring options for incorporating such a curriculum into their existing education programs related to leadership, service, and sustainability (Capstone Projects, 2015).

A Georgia Tech team of students conducted a landscape analysis of the civic accelerator market in America. The objectives were to identify opportunities for growth,

potential partnership, as well as to develop recommendations to maximize its impact in different regions of the United States for Points of Light, a non-profit organization that aims to promote social change through volunteerism and civic engagement. Over the course of a semester, the students developed a tool that generates entrepreneurship scores for each state, a reel of state snapshots and recommendations for future growth and potential partnerships, and pertinent qualitative data about each state. Points of Light considered these contributions by the students to provide crucial insights into markets around the nation that would be useful as Points of Light works to increase its programmatic reach (Capstone Projects, 2015).

Medshare, a medical surplus collection and redistribution organization, recently experienced a strategic planning process to prepare for near and long-term growth. Medshare determined a goal to implement a program to assess their social impact on a global scale. Georgia Tech students accepted this goal as the challenge for their capstone project. Through a study of other non-profits' work, a literature review of impact assessment, and interviews with professionals in the field, the students determined that Medshare needed to implement rigorous data collection around impact assessment on an on-going basis. The students proposed that as a result of this data collection, Medshare would reap benefits that include establishing performance tracking measures, enhanced accountability measures for their stakeholders and donors, and increased learning opportunities that may result in innovation and organizational growth (Capstone Projects, 2015).

The work done by Georgia Tech students through their capstone projects leads to the consideration of the social impact to the community, both locally and globally. It also

leads to the consideration of the capstone projects' impact on the social development of each student involved in such authentic work with results that proved to have a positive impact on other people. Students at a middle school in the district of my study are involved in a capstone project that has social implications on a national scale. While these are experiences utilized at the university level, such activities can be made more appropriate for students the ages of those in my study, as well as high school.

During the 2013-14 school year, a group of five eighth grade students at the middle school and their social studies teacher became inspired by a lesson provided by the Medal of Honor Foundation. They learned that the only living Medal of Honor recipient from World War II, Hershel "Woody" Williams, had set a goal to establish a monument in each of the 50 United States to honor the sacrifices endured by our fallen servicemen and servicewomen, along with their families, of each state. Such families who have lost a loved one through military service are called Gold Star Families. The students determined that they wanted to take on the responsibility of a long-term capstone project that would result in having a Gold Star Families Memorial Monument built on the front lawn of their school campus. This Gold Star Families Memorial Monument would be the students' gift to their state, and especially to all the Gold Star Families in their state. The students and their teacher prepared a presentation that they presented many times to school district leaders, the superintendent, the School Board, community leaders, military men and women, civic leaders, and other community members. Their stated mission said, "We will honor the sacrifices endured by our fallen soldiers and their families."

The students explained that their school was a perfect place for the monument based on several facts. First, their school was a two-time winner of the district's clean campus award indicating that they would take proper care of such a monument. Second, the students stated an unending gratitude for the sacrifices of service members and their families. Finally, the students claimed the values stated in their school creed demand that they care for and respect the monument and that the core values of the school are reflected in the message of the monument (In order to preserve the anonymity of the school and district, the student presentation is not included in the reference section of this paper).

In their presentation, the students recited the school creed that includes the core values of responsibility, respect, honesty, integrity, confidence, perseverance, courtesy, good judgment, and good sportsmanship. They connected the values stated in the creed to the purpose of the Gold Star Families Memorial Monument. Through the various presentations the students made over a period of about six months, they received approval from the Medal of Honor Foundation and Hershel "Woody" Williams to have their school serve as the site of the monument. They also received permission from the Superintendent of Schools to proceed fundraising the \$45,000 they would need to have the monument built, and to place the monument on the front lawn of the school for viewing by all the people of the state. On April 1, 2014, the students celebrated the ground-breaking for the project with a personal visit by Hershel "Woody" Williams to the school. Ranking officers from a local military base attended the ceremonial assembly at the school, as well as school district leaders, local and state political leaders, and community leaders.

During the next several weeks, the five students who began this capstone project took their state assessment test, their end of course exams, and were promoted to high school. They passed the torch of the capstone project to their underclassmen who continued the project into the next school year of 2014-2015. The new student leaders of the capstone project made more presentations to various groups of people to raise awareness of the project goal and to raise funds. On Veteran's Day, 2014, all the students involved in the capstone project since its inception in 2013, were awarded the "Keeping the American Spirit Alive" award by the local Veterans Association. That honor was timely and gave the students the impetus to push forward their efforts to complete the capstone project. In the weeks between Veterans Day and the December winter break, the students raised over \$2,000, ending the fiscal year approximately \$5,000 short of their financial goal.

In early February, 2015, they raised the last of the needed \$45,000 and the school paid to have the monument constructed. Next, the school scheduled the ribbon cutting ceremony when they unveiled the monument on May 21, 2015. Meanwhile, members of the original team of students maintained communication with the school regarding the progress of the capstone project, and several attended monthly planning meetings. The students from both school years met Gold Star Mothers and Gold Star Fathers. They listened to guest presentations by Hershel "Woody" Williams, members of the military, and Gold Star Family members. They learned from these people the true meaning of sacrifice, and the students witnessed the character traits they recited daily in their school creed. They experienced the hard work involved in preparing and making public presentations, as well as the kind of work it takes to raise \$45,000. The impact on the

social development of these students was immeasurable, and the social impact on the citizens of the state in which these students live was also immeasurable and is ongoing.

It is fair to expect increased academic performance among students who are involved in capstone projects like those described above. The nature of these capstone projects addresses the Seven Survival Skills described by Wagner (2008), the character development mentioned by Ravnich (2010), the common principles of the Coalition of Essential Schools (2014), and the student needs identified by Markham et al. (2003). Furthermore, the longevity and successful implementation of the capstone projects at LaVerne University that are consistently tied to its four core values (Redman, 2013) are testimony to the social value of capstone projects.

### **Political Analysis**

The very fact that my recommendation is for a new curriculum development policy makes this a political issue. Academic risk taking is an important educational element that seems to be missing in many schools within the educational context of high stakes testing. We must find a way to develop increasingly challenging academic goals while navigating the high stakes testing environment in which most American public schools live.

As mentioned above, Garcia (2014) states the case for the need to provide students with opportunities to develop noncognitive skills. “We subscribe to the idea that education is foundational both to sustaining a healthy democracy and to ensuring the ability of individuals to fulfill their natural personal and productive potentials, and that (public) schools are critical to fulfilling those goals” (“What does research demonstrate,” para. 6). Garcia went on to say, “These skills matter because they correlate with civic and

democratic participation” (para. 1). She also holds the position that “Since noncognitive skills matter and can be nurtured in schools, developing them should be an explicit goal of public education” (“Policy implications,” para. 2). Capstone projects provide the instructional pedagogy needed to propel students to reach their potential. In the capstone project environment, students tend to drive their own educational rigor.

Garcia proposed “a three-part set of actions: 1) build on growing momentum to shift to more positive and supports-based approaches to teacher and school accountability and student discipline; 2) learn from and adapt policies and practices in the areas of early childhood education, afterschool and summer enrichment, and special education—which have long emphasized noncognitive skills—to make them core components of K–12 policies; and 3) look to districts that are piloting noncognitive skills–related strategies as potential models and to state- and federal-level policies that support such strategies” (“Policy implications,” para. 4). If I take seriously these recommendations, and compare them to the capstone project experiences described above, I can see the connection. The authentic learning, inquiry based learning, project based learning, and problem based learning involved in capstone projects point to the kind of policy change that Garcia suggested. Garcia emphasized her point by saying:

Accountability practices and policies must be broadened in a way that makes explicit the expectation that schools and teachers contribute to the development of noncognitive skills. Making the development of the whole child central to the mission of education policy would help improve evaluation and accountability through changes to curriculum, teacher preparation and support, other aspects of schools’ functioning, and evaluation systems. Specifically, incentives promoted

by the enhanced accountability system would be aligned with widening the curriculum, cultivating the proper climate within the school, promoting teachers' investment in relationships with students, and ensuring teaching time for strategies that are conducive to the development of noncognitive (as well as cognitive) skills. ("Policy implications," Para. 5)

Garcia stated specifically the importance of including group projects in the curriculum to help promote the development of noncognitive skills. She also said that teachers will need preparation and support to address effectively the development of noncognitive skills, and therefore, education policy must be enhanced to ensure that teachers receive the needed professional development in process and subject area content, and also in how to teach it. She said, "Education policy needs to take action around these important skills that are nurtured in classrooms. Given the key contributions of both cognitive and noncognitive dimensions to our understanding of what it means to be an educated person, education policies must establish the strategies, actions, and safeguards needed to help individuals to become fully educated" ("Conclusion," para. 5).

### **Moral and Ethical Analysis**

We owe our students a better education than they are receiving in the current climate of high stakes tests at the expense of standards, curricula, and instructional strategies that empower students in this country. Charles Payne (2008), in his book, *So Much Reform: So Little Change*, titled the first chapter "Dimensions of Demoralization." Payne began by sharing the story of a Columbia University Teachers College graduate who took her first teaching position in an urban school. This teacher found herself in a school where distrust of higher authority abounded, following procedures took priority

over using common sense, and in a high-stakes environment, the curriculum had been narrowed to the point that the principal did not allow field trips. Certain courses had become low priorities including geography, history, music, art, social studies, and science. Discipline of students had morphed into a bureaucratic six-step procedure that resulted in teachers demonstrating harshness toward the children. Teachers had invoked a practice of only documenting disciplinary incidents to protect themselves from legal or disciplinary action, rather than to promote the learning environment of the school.

Payne shared another story of a teacher who had been recruited by Teach for America to work in an urban school in New Orleans. The teacher invested himself in student safety and student achievement. His students flourished, and his teacher colleagues ostracized him. In fact, the principal called him to the office to say, “You’re not doing anything wrong. But can’t you just tone it down and keep the peace?” (p. 21). Payne made the point that in demoralized schools, effective teachers have to do less than their best to keep peace with colleagues. Payne explained that due to hostility from older teachers toward new teachers, Teach for America developed a practice of clustering several teachers together to enter the same school so that, in part, they could support one another in ways veteran teachers would not.

Payne shared yet another demoralizing story about a high performing teacher who sought and earned National Board Certification. The teacher worked in a suburban school near Detroit. The teacher experienced being ostracized similar to that of the teacher in New Orleans. Payne used the term *rate-buster* to describe the perception of these teachers who excelled, and went on to say, “the fact that an institution needs to squelch and marginalize its most energetic, most enthusiastic, or best-prepared members tells us these

are demoralized institutions” (p. 23). Payne went on further to say, “...demoralized environments lead to people being invested in the failure of those around them” (p. 41).

The district in my study currently boasts over 250 schools that educate more than 200,000 students. It has urban, suburban, and rural schools. More than 160 of these schools, from all geographic areas, are Title I schools, indicating the high needs of their students. It cannot afford to have demoralized teachers and demoralized institutions. It needs to empower high performers, increase the performance of those teachers who are not rated highly effective, and create a district-wide climate of high expectations of its workforce. A singular focus on high stakes test preparation is not good enough. It has to move its workforce beyond direct instruction and test preparation to more authentic student experiences, as described above by Newman et al. (2001). The district can do so through the implementation of project based learning, inquiry based learning, problem based learning, authentic instruction, and authentic assessment which are the tools that scaffold students toward developing capstone projects.

Not only is the capstone project approach to education of moral significance to the workforce, but according to several of the authors identified above, it lends itself to the moral development of the students. Ravitch (2010) emphasized the obligation of teachers toward the character development of students. Wagner (2008) included citizenship in his Seven Survival Skills. Sizer’s work with the Coalition of Essential Schools (2014) emphasized decency and trust, as well as democracy and equity, as essential skills for students to develop. Redman (2013) pointed out the clear connection of students reflecting on core values through their capstone projects. All of these authors’ comments are compelling in regards to the ethical obligation of the education community

to implement authentic instructional strategies in our schools. Perhaps the most compelling, is the argument that can be made based upon the work of Wagner (2008). He clearly pointed out that in order for our students to be fully prepared to compete in the global community, the district in my study must prepare its students with the Seven Survival Skills. I submit that these Seven Survival Skills are developed through capstone project experiences.

### **SECTION THREE: ADVOCATED POLICY STATEMENT**

In this section, I will define the policy for which I am advocating. I will explain its goals and objectives including a discussion of whose needs, values and preferences are represented by the policy (Browder, 1995). I will conclude this section by answering the question, “On what basis are the goals and objectives that the policy aims to achieve validated as being appropriate and good?” (Browder, 1995, p. 59).

#### **Goals and Objectives of the Policy**

Browder (1995) explains that the move from the traditional doctoral dissertation model to a capstone project model that requires doctoral candidates to develop a Policy Advocacy Document, such as this one, is “an outgrowth of the changing intellectual climate in educational administration” (p. 43). Browder goes on to explain that the capstone project model for doctoral candidates is a response to educational reform that involves policy development, moral leadership, and reflective practice aimed at transforming society. Browder said,

The logical educational capstone experience of a ‘reformed’ educational administration doctoral program pursuing a vision of ‘moral leadership’ through reflective practice as traced through the use of portfolios should be ‘prescriptive’ and action-oriented in concept – that is, ‘policy advocating’ – rather than ‘descriptive’ and passive in orientation as most conventional Ed.D. dissertations. (p. 58)

Similar to Browder, the capstone project policy proposed for implementation in the school district in my study at grades 5, 8, and 12, intends to provide student educational experiences characterized by research-based, best practices that 1) are action-oriented

rather than passive, 2) promote the moral development of character, 3) provoke reflective thinking, 4) and develop skills and knowledge content that prepare students for life and ultimately transform society. Traditional educational models are no longer meeting the needs of students and of the greater community, as described in section two of this document. The change policy proposed is in response to an evidenced necessity for educational methods of greater effectiveness, relevance, and long-term benefit.

Furthermore, the goals addressed by the policy address the needs of 21<sup>st</sup> century students including the Seven Survival Skills described by Wagner (2008), the common principles of the Coalition of Essential Schools (2014), the embedded core values explained by Redman (2013), the eight needs of students identified by Markham et.al (2003), and the concept of authentic work described by Newmann et.al (2001). The goals of this policy also include development of the traits of a fully developed, educated person as Garcia (2014) described. In order to reach these goals, there are several objectives to address.

The objectives are as follow:

- Students will employ choice to identify important problems or issues that interest them, and then will use disciplined inquiry to develop conversations, solutions, and presentations.
- Students will engage in critical thinking and problem solving. They will use their minds well.
- Students will collaborate with other students and adult mentors, thus receive frequent feedback to guide exploration of important topics.
- Students will demonstrate the ability to make changes and adaptations while engaging in project based and problem based learning activities.

- Students will demonstrate socio-emotional characteristics including perseverance and good citizenry, along with other valued traits that are developed and nurtured throughout the capstone process.
- Students will demonstrate initiative in driving their own rigorous and authentic learning. They will delve deeply into content information, exploring important topics.
- Students will demonstrate effective oral and written communication skills embedded in authentic learning activities. They will explain dilemmas and present information they generate through research and reasoning.
- Students will effectively use technology for learning and project management.
- Students will demonstrate the ability to access information they need to implement their capstone projects and to appropriately analyze that information within the context of their projects.
- Students will demonstrate imaginative abilities in designing and implementing their capstone projects. They will evaluate project results.
- Students will be the workers and teachers will be the coaches throughout the capstone project experiences, thus students will be the center of the learning process.
- Students will engage in reflective practice that helps develop personal character during the capstone process.
- Students will engage in important work that positively affects their community through the capstone experience.

- Students will present publicly their capstone projects to an audience that includes peers, educators, and experts on the chosen topic.

### **Stakeholders Related to the Policy**

The most obvious stakeholders related to this policy are the students. Their educational needs will be addressed more appropriately as described by the various authors mentioned in Sections One and Two of this document. By requiring capstone projects at each terminal grade, the district will ensure a stronger development of the whole child as described by Garcia (2014), as opposed to the more singular instructional model that is driven by a specific and narrow focus on test preparation. This policy addresses the 21<sup>st</sup> century needs of the students in order that they may be prepared appropriately to compete in a global community. By providing authentic (Newmann et.al, 2001) learning opportunities for its students, the district will offer them an education that has value beyond school. The district will empower students to be successful at work, at home, and in society (Garcia, 2014).

Educators – teachers, in particular – are another stakeholder group directly related to this policy. As I consider the demoralization of schools and teachers, as described by Payne (2008), I realize that the district in my study can and must do better as an educational organization. The implementation of capstone projects and the related authentic learning has the potential to invigorate the instructional members of the school district. As teachers learn to facilitate rather than direct student learning, and as they provide student choice in identifying important topics of inquiry to which the students can relate, they will have the glorious opportunity to witness students driving their own rigor. Teachers witnessed student driven rigor through the Gold Star Families Memorial

Monument capstone project that I described in Section Two of this document. I witnessed students driving their own rigor through my investigation and implementation of capstone projects in my classroom during each school year from 2002 – 2007.

Since I left the classroom to work at the district level, I have been asked several times to judge students' capstone projects at the eighth grade level and twelfth grade level that were voluntarily implemented by teachers at two schools in my district. I was impressed by the authenticity of the projects that was verified by the presentation judges who were experts in the fields related to the students' chosen areas of inquiry. I was inspired by the positive comments of the teachers who have been involved in the authentic instruction and authentic assessments related to the students' capstone projects. These teachers expressed to me that while the facilitation of the capstone projects was rigorous for them, as teachers, they found the joy of teaching and the intrinsic rewards for which many teachers search by watching their students enthusiastically approach investigation of topics they had chosen because the topics were relevant to them. The teachers were gratified to see the high level of rigor the students created for themselves as they grappled with solutions to important problems they had identified and investigated. I noted a sense of fulfillment among these teachers that I had felt as a classroom teacher when I implemented capstone projects.

Society, at large, is another benefactor, or stakeholder, of this policy. According to Garcia (2014), student acquisition of traits and skills “such as critical thinking skills, problem solving skills, social skills, persistence, creativity, and self-control” (“Introduction,” para. 1) enable them to contribute to society in a meaningful way. Garcia also points to society as a stakeholder because of labor productivity and a positive effect

on long-term market outcomes and economic returns by students who are fully developed through noncognitive skills they gain through authentic learning experiences. Society also benefits by the character development, social attitudes, and good citizenry related to capstone projects.

### **Rationale for the Validity of the Policy**

As a graduate student working on a Master of Education degree in Curriculum and Instruction: Interdisciplinary Studies in 2001-2003, I conducted a field study on the implementation of capstone projects. I had been a long-time proponent and practitioner of PBL. I recalled that the most memorable experience I had from my own K-12 education was a civics project that involved my entire civics class in ninth grade. That recollection inspired me to implement project based learning, and I found the practice to be highly engaging for my students. I also found that my students worked much harder on student identified projects than they did on my teacher-generated assignments. The field study that was part of my master's program caused me to take project based learning to a more complex level of implementation with older students. I implemented the exhibition of mastery model of capstone projects with my twelfth grade students for two consecutive years during my graduate studies.

Ultimately, I wrote my master's thesis on the topic of my field study (Sparks, 2003). My findings stated, "First of all, and most importantly, we have concluded that exhibitions of mastery are truly an authentic learning experience and an authentic alternative assessment. We will continue to require exhibitions of mastery from our seniors" (pp. 120-121). I arrived at that conclusion after a thorough review of the relevant literature; surveying students, parents, and judges on the capstone project process

concerning its value, their suggestions for improvement, their impressions of the capstone presentations, and their views on the validity of the capstone projects as a way of demonstrating skills learned. I also discussed the senior exhibitions with my juniors, and I had many discussions with my teaching partner. My review of the relevant literature in 2003, my review of the relevant literature in my Change Leadership Project in 2014, and my review of the relevant literature for this Policy Advocacy Document all support and validate the goals and objectives I have provided here.

My experience with capstone projects as a classroom teacher led me toward becoming a teacher leader. I suggested to my school administrators that I lead an initiative to implement capstone projects school-wide among all seniors. Selected teachers and I then developed an integrated curriculum model wherein students conducted their research with support from both their English teacher and their technical program teacher. The English teacher provided the writing and formatting support and facilitation while the technical program teacher provided the content support and facilitation of the written research report, as well as the project implementation. Now, in 2015, all seniors in one of the magnet programs at the school, along with other technical programs, continue to develop senior capstone projects as a demonstration of the skills learned throughout high school. The longevity of this practice lends validity to the value of this practice and to the policy that I am proposing to implement capstone projects in all schools in the district of my study.

Browder (1995) asks the question, “On what basis are the goals and objectives that the policy aims to achieve validated as being appropriate and good?” My answer to that question is simple. I based my goals and my objectives on the relevant literature.

Specifically, I began with the Seven Survival Skills described by Wagner (2008). I then related the common principles of the Coalition of Essential Schools (2014) to Wagner's work. Then I connected those principles to the philosophy of Ravitch (2010).

Furthermore, I found a connection between the practices of incorporating core values into capstone projects, as described by Redman (2013), to the work of Ravitch, Wagner, and the Coalition of Essential Schools, as well as the work of Garcia (2014) related to addressing noncognitive skills in education policy.

I can further validate that the goals and objectives I have identified are appropriate and good through the literature that I reviewed to support my needs analysis. In the Education Analysis subsection, I presented the eight needs of students that are addressed through PBL, as identified by Markham et.al (2003). I noted a pattern of commonality among the writings of Markham et.al and Ravitch (2010), Wagner (2008), and the Coalition of Essential Schools (2014). I was able to connect this pattern to the writing of Newmann et al. (2001) who described authentic intellectual work in a way that demonstrates it to be appropriate and good for students and teachers.

In my economic analysis, I identified the writing of Vega and Brown (2012) that supported the positive economic impact of PBL. Garcia (2014) supported this point when she described the impact on economics of an educated, fully developed student. Garcia presented educational values that, once again, reflected those stated by Ravitch (2010), Wagner (2008), The Coalition of Essential Schools (2014), Redman (2013), Markham et al. (2003), Larmer and Mergendoller (2010), Newmann et al. (2001), and Vega and Brown (2012).

My analysis of the social impact of capstone projects includes a description of several recent projects completed by students at Georgia Tech (Capstone Projects, 2015). My discussion in that subsection demonstrates the impact on society and the impact on the social attitudes of students. I further described the social impact of capstone projects by explaining the Gold Star Families Memorial Monument capstone project that was implemented by students at a middle school. Again, I found connections between the capstone projects I described and the position of the authors of other literature I reviewed including Ravitch (2010), Wagner (2008), The Coalition of Essential Schools (2014), Markham et.al (2003), and Redman (2013).

My discussion of the political analysis of my proposed policy is largely supported by Garcia (2014). There is a direct correlation between my proposed policy and Garcia's policy recommendations. Garcia's position that we must consider seriously the importance of fully educating students as an educational policy provides strong validation of the goals and objectives I stated in this Policy Advocacy Document.

I identified the writing of Payne (2008) in my discussion of the moral/ethical analysis of my proposed policy. I was able to relate Payne's work to the importance of making sure that the district in my study has a climate of high expectations of all instructional personnel, including the practice of providing authentic student experiences. I connected that position to the work of Newman et al. (2001). Yet, again, I connected these concepts to those of Ravitch (2010), Wagner (2008), The Coalition of Essential Schools (2014), and Redman (2013).

Clearly, the practice of implementing capstone projects as a method of authentic instruction and authentic assessment is well supported by the relevant literature, along

with my own experiences as a teacher, as well as my observations as a district administrator. Capstone projects are appropriate and good for students, educators, and society. The goals and objectives of my proposed policy to require capstone projects of all students in grades 5, 8, and 12 across the district in my study are validated by the relevant literature, as well as my experience as an educator.

## **SECTION FOUR: POLICY ARGUMENT**

As I advocate for the requirement to implement authentic instructional practice through capstone projects among students at each terminal grade across the school district, grades 5, 8, and 12, it is important that I present the pros and cons relative to the merit of this policy. I consider the pros to be the benefits to the students, first and foremost. The pros may also include benefits to the teachers, the school and its leaders, the school district, as well as benefits to society. I consider the cons to be the challenges presented by such a policy that may negatively affect the students, teachers, school leaders, the school district, and society. I intend to present a balanced argument demonstrating both support for the policy for which I am advocating, as well as opposing points of view. In order to do so, I will consider research findings that include public and professional opinions on the implementation of capstone projects. I intend to demonstrate moral leadership as I objectively present both sides of the case, despite the fact that I have already expressed clearly my bias toward this policy.

### **Arguments for the Policy**

When I conducted my original review of the relevant literature in 2003 on the topic of implementing capstone projects, along with a field study using the exhibition of mastery format of capstone projects over the course of two years, I concluded that they are, indeed, authentic learning experiences and authentic alternative assessments. I realized that capstone projects were implemented in countries throughout the world at grade levels from the elementary level through the doctoral level. At that time, I surveyed the twelfth grade level students involved in the capstone experience, as well as their parents and their capstone judges. The results of the surveys were resoundingly

positive. Perhaps the most compelling responses from the students pertained to the question, “Do you think the senior capstone project is a valid way of demonstrating the skills you’ve learned in the Academy of Journalism?” One hundred percent of the seniors answered yes to this question. One student wrote, “Yes, because I saw myself grow as I finished my capstone. I started as this girl with a dream since fifth grade to become a journalist and write for [*The Tribune*], and at the end of my capstone lies my first story [published] for [*The Tribune*]” (Sparks, 2003, p. 110). Another student wrote, “I believe the capstone is a valid way of demonstrating the skills that I’ve learned in journalism because it covers everything from writing to broadcast. We demonstrate the skills that we’ve acquired throughout our years in the Academy of Journalism” (Sparks, 2003, p. 110).

When I reviewed the responses from the evaluators of the capstone project public presentations, I found one to be particularly noteworthy. It was written by an evaluator who had been the most critical among all 17 evaluators on the survey questions. He had been a newspaper publisher at one time, and was 84 years old at the point of his comments. He wrote, “For a combination of speech, production and presentation, I have not seen better from college sophomores! You have trained them better than some professional journalism schools” (Sparks, 2003, p. 120). This comment, when combined with other research cited in this document, supports the notion that capstone projects address and help students develop the Seven Survival Skills that students need to be globally competitive in the 21<sup>st</sup> century, as explained by Wagner (2008).

Many capstone projects involve service learning as the foundation of the students’ work. This is true for the capstone projects at Georgia Tech described earlier in my paper,

at the middle school in the district in my study, and at LaVerne University. Such capstone projects provide an element of character education that may not be available to students at any level, including K-12, undergraduate, graduate, and post-graduate, through a traditional curriculum model.

The College Board (2015) has shown a strong commitment to the benefits of capstone projects at the high school level. It has developed a model called AP Capstone that is “an innovative diploma program that provides students with an opportunity to engage in rigorous scholarly practice of the core academic skills necessary for successful college completion” (“AP Capstone,” para. 1). The College Board further explains,

AP Capstone is built on the foundation of two courses – AP seminar and AP Research – and is designed to complement and enhance the in-depth, discipline-specific study provided through AP courses. It cultivates curious, independent, and collaborative scholars and prepares them to make logical, evidence-based decisions. (para. 2)

The AP Capstone benefits students in numerous ways. It helps them develop skills in research, argumentation, and communication. It helps students build on the rigorous course work of Advanced Placement classes through an interdisciplinary approach. Students are provided an opportunity to distinguish themselves when applying to colleges and universities. Students are provided space for creativity and input into their own educational experience. It provides students with externally validated measures of their ability through the College Board (College Board, 2015).

AP Capstone is designed for students to take the AP Seminar course in grade 10 or 11, followed by the AP Research course. Students who earn a College Board score of 3

or higher in these courses, along with four additional AP courses of their choice will receive the AP Capstone Diploma (College Board, 2015). “This signifies their outstanding academic achievement and attainment of college-level academic and research skills” (“How AP Capstone Works,” para. 1). High schools in 26 states and 16 countries are currently implementing the AP Capstone. Three high schools in in the district of my study are implementing the AP Capstone.

According to the College Board (2015), the AP Capstone experience “was developed in response to feedback from higher education” (“Combining Scholarly Practice,” para. 1). The content and standards of the AP Capstone are based upon collaboration with colleges and universities. Its objectives align with core AP skills. Considerable professional development is required of all teachers who instruct the AP Seminar and AP Research courses.

The College Board (2015) has demonstrated support for its AP Capstone program from higher education with quotations from administrators at leading universities in the United States. Two examples of these are as follow:

- “[Through this program] you get students turned on to higher education in a way they are not currently and they enter university with a different kind of attitude.” — Susan Roth, Vice Provost for Interdisciplinary Studies, Duke University (“College and University Support for the new AP Capstone Program,” para. 1).
- “The AP Capstone program will help students to develop critical thinking skills that allow them to think independently, to analyze issues from different perspectives, to communicate clearly, and to conduct

independent research. These are exactly the types of skills that they will be expected to utilize in college and the AP Capstone program will give them a terrific head start.” — Zina L. Evans, Ph.D., Vice President for Enrollment Management and Associate Provost, University of Florida (“College and University Support for the new AP Capstone Program,” para. 2).

Additionally, the College Board (2015) has identified 75 colleges and universities “that have conveyed support for AP Capstone” (“College and University Support for AP Capstone,” list).

Gretchen Mosher of Iowa University said in her paper presented at the American Society for Engineering Education (ASEE) North Midwest Section Conference (2014), “In addition to an excellent learning experience, a positive project gives the students confidence in their skills and abilities” (p.10). Mosher added that students may also benefit from a positive relationship to their sponsoring industry partner, as well as the college, and these relationships may lead to further opportunities for the students. Mosher claims that capstone projects are “one of the best ways to evaluate how well students have learned to apply the technical content they have been taught” (p.11). She listed the positive aspects of industry-sponsored capstone projects for college students, faculty, and the community this way: “Enhances student motivation; creates realistic problems and environments; faculty can observe student in non-academic environment; means of financial support and outreach with industry; may assist with career placement of students” (p. 4). Mosher also said that a successful capstone project “energizes all participants – the students, faculty, and the industrial client” (p. 10).

David Schachter and Deena Schwartz (2015) of New York University found that capstone projects at the graduate level that combine theory and practice for the benefit of an outside agency have met the goal of serving the community. They said,

New York University's Robert F. Wagner Graduate School of Public Service (NYU Wagner) has devoted a great deal of thought and effort to strengthening and sustaining its Capstone program from the students' perspective, and it has seen significant improvement. But we knew less about whether the project work our students performed was helpful to participating Capstone client organizations, as well as what factors made certain projects more successful from the clients' point of view. In an effort to assess and understand this perspective, we undertook a post-project survey of recent Capstone clients. The results indicate very strongly that the services offered and tools created by our Capstone teams are useful to these outside agencies, and the feedback offers indications of how to increase the value of these projects going forward. (p. 445)

According to Schachter and Schwartz (2015), most of the research on authentic learning programs has focused on the benefits to the students. It has not focused on client organizations that students seek to serve through their capstone projects. "Yet, implicit in the development of these programs is the assumption that students are providing a valuable public service. Input from organizations that participate in such programs supports this assumption" (p. 446). They found through surveying all 57 client organizations involved in the 2006-2007 capstone projects of NYU Wagner students that "many projects provided a needed foundation of knowledge or an approach for the client..." (p. 449). Furthermore, the study of these surveys indicated that the "three

primary variables of interest (respondents' ratings of the Capstone team project's helpfulness to their organization, their assessment of the Capstone project's lasting impact, and their overall satisfaction) all were significantly and positively correlated to one another" (p. 450). Further evidence of the positive impact of capstone projects on society is explained by Schachter and Schwartz this way:

Universities have a responsibility to give back to their communities in ways that enrich and deepen the relationship. Capstone programs provide a valuable way to do this. These findings give us more confidence that we are living up to New York University's motto as "a private university in the public service." (p. 456)

Perhaps one of the most compelling arguments in favor of the benefits of the capstone project at the post-graduate level is that of Browder (1995) in support of using the kind of Policy Advocacy Document that I am writing here in lieu of the more traditional doctoral dissertation. National Louis University's National College of Education has adopted the policy of requiring a capstone project as described by Browder for its doctoral candidates seeking the Doctor of Education degree. Additionally, National Louis University's National College of Education is now requiring its candidates in the Master of Education in Educational Leadership program to complete capstone projects in lieu of the traditional master's thesis. These candidates identify a school based or district-wide problem. Then they develop a capstone project through which they design and implement an action plan in order to positively affect student achievement. The goal of these capstone projects is to provide master's degree candidates with the opportunity to synthesize the knowledge and skills acquired from their courses, leadership experiences, and field experiences into one project. I have observed

candidates implement capstone projects that address topics such as improving Exceptional Student Education services in charter schools, using The New Teacher Project to improve conduct and academic achievement in a school identified as failing for two consecutive years, increasing parent involvement through student-led conferences, and improving text-based opinion writing among fifth grade boys by implementing Socratic seminars.

### **Arguments against the Policy**

According to Mosher (2014), the disadvantages for students and professors of industry-sponsored capstone projects at the college undergraduate level include the following:

Consequences of failure have greater impact; recruitment of projects may be challenging; intellectual property and liability may be of concern; administrative procedures and protocols must be developed and managed carefully; faculty may be uncomfortable outside of expertise. (p. 4)

Mosher also states that although industry-sponsored projects provide authentic learning experiences for students, the “nature of such projects can be risky because of the high stakes challenges and technical issues that must be resolved by student teams” who are typically novices in project management and problem-solving techniques (p. 4). As for professors, Mosher says that one of the biggest challenges lies in developing a fair and consistent system of assessing the students’ capstone experiences, “Teaching a capstone course to technology students is a challenging endeavor with many considerations” (p. 10).

Vega and Brown (2012), as mentioned above, collected interview data from 15 participants during a weeklong summer training on Project Based Learning (PBL) presented by the Buck Institute in 2010. They found that one of the biggest concerns of teachers and administrators regarding PBL is the struggle between implementing PBL fully and meeting the curriculum and benchmark requirements of their school district. They found that this struggle created additional stress among the faculty and staff of all three middle schools involved in the study.

Vega and Brown (2012) reported that changes were needed to structure the flow of the school day when implementing PBL. Administrators in the study reported that they had to alter their master schedules to accommodate PBL. Administrators also reported that they had experienced some push back from teachers at their schools who did not think that teachers and students could handle PBL and that it might negatively affect test scores.

Some of the teachers in the study identified a concern over students' lack of specific skills such as collaboration, organization, speaking, and time management that are needed to be successful while implementing PBL. Teachers expressed that they needed support in terms of modeling PBL, as well as additional training to successfully implement PBL. Some students also resisted PBL because it was more challenging than the traditional schoolwork to which they were accustomed. It is important to note that Vega and Brown reported that while teachers and students from all three middle schools in their study gave mixed reviews on the pilot of PBL, almost all of the 15 participants in the study agreed that PBL was worthwhile.

I have found several challenges to implementing capstone projects through my own experiences as a teacher of capstone projects at the high school and graduate school levels, as a district administrator and supporter of teachers implementing capstone projects, as well as through two extensive and separate reviews of the relevant literature in 2003 and 2015. These challenges include developing a timeline that is realistic and is neither too short nor too long. Finding just the right timing for beginning and ending a capstone project can be tricky when trying to balance the school schedule with the established course curriculum, as well as the state assessment testing schedule, and the district calendar.

Another very important challenge I discovered through my experience as a teacher of capstone projects is developing an appropriate rubric. The quality of the rubric can enhance the capstone experience and it can also destroy the capstone experience for the students and the teachers. Developing a capstone project rubric involves thoughtful reflection, collaboration with others, and research (Sparks, 2003).

Making sure that each student identifies an appropriate capstone project topic is critical. The topic must be neither too narrow nor too broad in scope. It has to hold interest for the student in order to drive engagement, yet it has to be relative to the curriculum. It has to hold authentic meaning for the student and the community to be authentic (Sparks, 2003).

For a teacher successfully to help each student in his or her class to identify a topic that meets all these requirements is no small task. In addition, in order for the capstone projects to be authentic learning experiences, experts from the community must be involved. To help each student identify one expert in the community who has time and

is willing to give it to the student to support the capstone development and review its outcomes can be very difficult.

Perhaps the biggest challenge facing the successful implementation of capstone projects is figuring out how to devote the time required to facilitate deeply authentic learning experiences while maintaining pace with required course curricula. This is especially challenging for teachers of students in kindergarten through twelfth grade. While teachers are held accountable for successfully addressing Common Core Standards or state identified standards, along with meeting the district and school expectations of course curricula and benchmarks, they often struggle to identify when, where, and how to implement capstone projects with fidelity. In fact, without support from school administration and district administration, implementing capstone projects at the K-12 levels may be nearly impossible. However, if the implementation of capstone projects becomes a district policy, then appropriate administrative support will be in place that is needed to implement effectively authentic instruction through capstone projects.

Another challenge, particularly for teachers and school administrators, is that the kind of work involved in implementing capstone projects requires steadfastness. I wrote in my master's thesis, *Portraits of Potential - Exhibition of Mastery as a Graduation Requirement: An authentic method of knowledge acquisition and assessment* (2003), "A teacher cannot expect immediate results. We must remember to stay the course, even when we do not see results. In due time we will experience the glory of success through the successes of our students. But it takes a lot of time" (p. 79). The problem in our current educational climate of accountability is that teachers do not always have the

luxury of time to demonstrate student success. They often find themselves mired in test preparation to help their students show nearly immediate success (Ravitch, 2010).

The challenges to implementing capstone projects are undeniable. It is noteworthy that in my review of the relevant literature on this topic, I did not find a source that said capstone projects are bad for students, teachers, schools, districts, or society. Some sources honestly identified challenges with negative connotations, as I have shared, but they ultimately claimed that capstone projects were beneficial. Based upon my experience, the needs analysis I presented in Section Two of this paper, and the works of Wagner (2008), the Coalition of Essential Schools (2014), Ravitch (2010), Redman (2013), and Garcia (2014), I have concluded that when teachers and administrators find the wherewithal to implement successfully capstone projects, the benefits to students, teachers, schools, districts, and society are too promising to ignore and not to expand their use.

## SECTION FIVE: POLICY IMPLEMENTATION PLAN

Throughout the previous sections of this document, I have demonstrated that my proposed policy to require authentic learning by implementing capstone projects with each student in fifth grade, eighth grade, and twelfth grade has merit. I have demonstrated its positive impact on students, educators, and society by discussing the policy's benefits to these stakeholders economically, socially, politically, morally and ethically. Since the policy has merit, it is important to now discuss the details of the implementation plan for such a district-wide initiative. "Implementing policies is one of school leaders' most important tasks" (Fowler, 2000, p. 277). Considering the importance of policy implementation, the plan for implementation must be carefully developed and detailed.

I intend to use the eight steps outlined by Kotter (2014) for leading change to implement this policy. The first step is to create a sense of urgency. If the decision makers within the organization can see the need for change, then they will understand the importance of acting quickly. According to Kotter, people who are focused on making real progress every day characterize true urgency. I intend to use the Seven Survival Skills that students need to succeed in the 21<sup>st</sup> century, as presented by Tony Wagner in *The Global Achievement Gap* (2008), in concert with the district's current achievement data, including its graduation rate of less than 75 percent, to create a sense of true urgency among district leaders. Fowler (2000) explained that only two good reasons exist for implementing a new policy – to solve a genuine and well-recognized problem, and to build capacity for future changes. I believe both reasons apply here.

The second step toward adaptive change is to create a guiding coalition to lead the initiative (Kotter, 2014). It will be critical to include enough key players to develop and

maintain momentum. The team members must develop trust in one another quickly. They must also have credibility and have respect by others in the organization, so that others will take them seriously.

The third step in this change process is to develop the change vision (Kotter, 2014). The vision must be clear, easily communicated, and strategically feasible. It must be realistic and include goals that carry credible strategies so that educators are able to see the potential realization of the vision. It is critical that the vision not seem to be constricting and cause a loss of empowerment among stakeholders, particularly teachers. The vision must be imaginable, desirable, feasible, focused, flexible, and communicable. Fowler (2010) presented guidelines for determining the appropriateness of a new policy. This step in the change process is a good time for the coalition to consider those guidelines including whether the policy is consistent with the district's vision, the district's assessed needs, the district's priorities, the available and potentially available resources, and the values of the community. Fowler also suggested that leaders consider whether evidence exists that the new policy has been effective with student populations in terms of age, racial or ethnic background, gender, socioeconomic status, English language proficiency, and life experience.

Step four involves communicating the vision to stakeholders and creating buy-in (Kotter, 2014). The vision must be communicated to all stakeholders in as many ways as possible. This communication may include meetings, emails, presentations, printed literature, and other methods developed by the guiding coalition. Those who are tasked to communicate the vision must do so simply and vividly. They should use metaphors, analogies, and examples to ensure the message is clear and memorable. The ideas of the

vision should be easy to repeat by anyone to anyone. Fowler (2000) said that leaders should ask themselves, “Does the policy we are considering have sufficient support among key stakeholders?” (p. 281). Kotter’s (2014) fourth step in the change process is the time for leaders to seriously consider Fowler’s question.

The next step is to empower broad-based action (Kotter, 2014). The change leaders must remove as many barriers as possible to enable educators to perform at their highest level when implementing capstone projects. Any structural barriers must be addressed, such as discord between levels of management – between district administrators and school leaders, between school leaders and teachers, between teachers and students or parents.

The sixth step is to generate short-term wins (Kotter, 2014). The change leaders need to create visible success as soon as possible in order to move the organization forward through this instructional change. One possible way to do so is through the use of student-led conferences that involve students developing portfolios that they present to their parents. If this is done during the first quarter of the school year, then three key stakeholder groups will experience a short-term win, the students, their parents, and their teachers. This can help increase the sense of urgency, promote optimism related to the change, increase morale and motivation, and build momentum. Short term wins like this will also help educators to fine tune the process of successfully implementing capstone projects. These short-term wins must be planned carefully and skillfully to cement the change initiative.

Kotter (2014) says that the seventh step mandates not letting up. Change leaders must keep pushing the capstone project initiative so that momentum is not lost. New

behaviors and practices among all stakeholders must become part of the organization's culture in order for this change to last. At this point in the process, employees at every level will be empowered, and there should be a constant effort to keep energy high. Leadership is very important at this stage in order to drive the change deeper into the school district.

Relative to Kotter's (2014) seventh step, Fowler (2000) maintains, "Successful implementations depend on continuous monitoring and feedback" (p. 289). The district will need to assign a project director to closely watch the implementation process by making frequent site visits and holding conversations with those who are implementing capstone projects. The project director must be responsible to find solutions to problems that may arise.

Finally, step eight requires leaders to make the change stick (Kotter, 2014). This change will be nearly meaningless if it is abandoned after a year or so of implementation. Leaders must make sure that the instructional changes needed to implement capstone projects across the district are firmly established in the culture of the district. This culture must now include shared values surrounding the use of capstone projects to set up students for success at the next level of education, whether that is middle school, high school, or college and work. It will be important for leaders to remember that cultural change comes last, not first, in the change leadership process. It will be incumbent upon the change leaders to prove that implementing capstone projects, and all the strategies they encompass, are superior to the old way of preparing students for success. The majority of the organization must embrace the new culture of authentic instruction and

project based learning that lead to successful capstone projects in order for there to be long-term, lasting change.

### **Professional Development Plans**

The guiding coalition will need to identify an appropriate leader to work with the Professional Development Department to form a subcommittee that will develop the design and delivery model for providing the necessary training to teachers of fifth, eighth, and twelfth grade students. This model will include intensive training during the summer prior to the first year of implementation of capstone projects, as well as ongoing follow-up training for teachers delivering PBL instruction.

I envision a summer training model similar to that described above by Vega and Brown (2012). The teachers involved in the PBL summer training studied by Vega and Brown said they felt they needed more training to be fully prepared to effectively implement PBL. Therefore, it will be very important to include a carefully planned professional development model that includes ongoing workshops throughout the school year, as well as site visits that include classroom observations and feedback to teachers of PBL. This kind of support and ongoing training will require the district to prepare professional development trainers to understand PBL and capstone projects and be able to support teachers in that kind of work.

It will also be important to provide opportunity for teachers who are implementing capstone projects to have a community of practice that will serve as a support system of other teachers who are doing the same kind of work across the district. A good model to use for such a community of practice is the Critical Friends Group (CFG) developed by the National School Reform Faculty (n.d.). Each CFG will consist of

of six – 12 teachers who are implementing capstone projects. These groups will meet monthly for two hours per session to discuss challenges, successes, student work, teacher work, and the practical application of PBL as it relates to the development of capstone projects. These CFGs should be made up of teachers of the same grade level to maximize a spirit of understanding, connectedness, and collaboration. Each group will utilize protocols designed by the National School Reform Faculty to guide their collaboration and their practice.

The use of CFGs to support the capstone project initiative will address, in part, steps six, seven, and eight of the change process described by Kotter (2014). Relative to step six, the teachers will experience short-term wins as they discuss their successes with each other. They will also learn from each other ways to address the challenges they are experiencing through the initial process of implementing capstone projects. The CFGs will enable teachers to address step seven – not letting up – as they encourage each other to stay the course. Step eight – making the change stick – is also ensured by the work of the CFGs, as they hone their practice of PBL and support one another’s work.

Fowler (2000) said, “Although pressure is essential in successful implementation, so is support” (p. 290). One professional development training the summer prior to implementation is not sufficient to make the change stick. Help should be ongoing and relevant “until the completion of institutionalization” (p. 290) when the policy has become part of the organization’s regular practice.

### **Time Schedule**

This policy will have to be approved by the superintendent of the district in my study and by its school board. This is usually a six-week process. During the first quarter

of the 2016-2017 school year, I will schedule a meeting with the superintendent during which I will present the policy plan. I will use the superintendent's stated concern over the district's current graduation rate of less than 75 percent, along with the Seven Survival Skills students need to be successful after high school, as described by Wagner (2008), to create a sense of urgency to use the authentic learning associated with the implementation of capstone projects to address the need to improve the graduation rate and to develop the Seven Survival Skills among our students. Once I have the superintendent's approval, then I will submit an item that describes my proposed policy to be placed on the agenda of an upcoming school board meeting.

After school board approval, I will then work with the superintendent to identify the guiding coalition that will lead the implementation of my proposed policy. I will work to have the guiding coalition in place by January 2017. It will then take about six months for the guiding coalition to work through steps one through five (Kotter, 2014) of the change leadership plan I described above.

By July 2017, the district will begin training intensively the teachers who will be involved in implementing capstone projects when school begins in mid-August. At that point, the district will implement follow-up training and Critical Friends Groups, as described above, from August 2017 through May 2018. Capstone presentations will take place across the district during May 2018.

### **Financial Impact**

Implementation of capstone projects has no financial impact on the district, in and of itself. However, the cost of professional development to ensure the successful implementation of the policy plan must be considered. The costs will involve the creation

of necessary professional development, delivery of training to teachers, and on-going follow-up training.

The first expense will involve developing the training model, and preparing the professional development instructors who will deliver the training. The district will need a cadre of ten instructors – six with elementary teaching experience, two with middle school teaching experience, and two with high school teaching experience. These instructors will work with the supervisors of professional development and others to design the teacher training that they will deliver to the teachers who will implement capstone projects. They will each be paid the district rate for 30 hours of work to create new professional development courses.

The next expense will be to pay each of the instructors at the district rate for 24 hours of face-to-face training with the identified teachers who will implement capstone projects. That will provide the teachers with four days of training for six hours per day. If funds are available, each teacher will receive a stipend at the district rate for the 24 hours of training to prepare for implementing capstone projects.

The ongoing follow up training will also involve expenses. Each of the professional development instructors will be paid for six hours of face-to-face training in October and again in March, so they can provide formal, continued professional development to the identified teachers, as they implement capstone projects throughout the year. If funds are available, the district will pay each identified teacher a stipend for the October and the March training days. The district may consider piloting capstone projects during the first year of implementation in one elementary school, one middle school, and one high school in each of the eight areas of the district. Implementing such a

pilot group would be a cost savings in terms of the number of teachers who would require professional development before and during the first year of implementation. The pilot group would then have the opportunity to demonstrate the value of the investment to the district.

### **Progress Monitoring**

Some of the necessary progress monitoring will naturally occur through the professional development experiences in the summer, fall, and spring, as well as the monthly Critical Friends Group sessions. Principals will also be responsible for site-based monitoring of the capstone project initiative. They will report challenges and success on a monthly basis to their Area Superintendents. The Area Superintendents who oversee the schools across the district will make progress reports to the guiding coalition. Additionally, the guiding coalition will identify a monitoring and evaluation subcommittee that will provide support and guidance to schools as needed based upon feedback from the Area Superintendents.

### **Community Involvement**

It will be necessary for the guiding coalition to work with the district's Director of Community Involvement to develop a committee that will work to identify and involve members of the community in the capstone project process. Each school will need to have community members who will serve as mentors for the students who are developing capstone projects. Each school will also need community members, perhaps the same ones who have served as mentors, to serve as judges for the students' public presentations of their capstone projects. All capstone projects will be presented at each school site during the month of May.

## **Reflective Practice**

It will be important for the district to engage in reflective practice regarding its inaugural year of implementing capstone projects district-wide as a means to prepare students for post-secondary education and work, as well as to increase the district's graduation rate. The guiding coalition will need to identify an evaluation committee to work with the district's department of Assessment, Accountability, and Evaluation. While some measures of success may evidence themselves through state assessment test scores and standardized test scores, along with the graduation rate in 2017 as compared to previous school years, there are other qualitative measures that the district will need to assess via surveys and interviews.

As I described in previous sections of this paper, capstone projects enhance students' development of the Seven Survival Skills identified by Wagner (2008), the common principles of the Coalition of Essential Schools (2014), service learning, and character development. Many of these traits are not measured by assessment tests, standardized tests, or even graduation rates. Based upon my own experience with capstone projects, a good way to measure the attainment of such skills and character traits is by asking questions of the students, parents, teachers, and community members who have been involved in the capstone project process (Sparks, 2003).

Once the evaluation team has completed its collection of surveys and conducted interviews with representatives from each stakeholder group, then they will need to compile these data and present them to the guiding coalition. At this point, the guiding coalition will engage in one of its most important tasks – that of reflecting on all the quantitative and qualitative data gathered from the inaugural year of capstone project

implementation. Then they will need to consider areas of strength and areas to focus on improving. Next they will need to make recommendations to the superintendent on how to best proceed with successful implementation of capstone projects across the district.

## **SECTION SIX: POLICY ASSESSMENT PLAN**

I mentioned in Section Five that progress monitoring is a necessary part of successful implementation of the policy to implement capstone projects across the district. I also said that progress monitoring and ongoing professional development go hand in hand. It will be important for the district in my study to provide effective progress monitoring and appropriately correlated professional development in order to make the plan stick, as Kotter (2014) put it, and to institutionalize the policy, as Fowler (2000) described.

### **Characteristics of Assessments**

Fowler (2000) has set forth characteristics of policy evaluations that I recommend the district use to formally assess the policy implementation of capstone projects. These characteristics include the following basic steps:

1. Determine the goals of the policy
2. Select the indicators
3. Select or develop data-collection instruments
4. Collect data
5. Analyze and summarize data
6. Write evaluation report
7. Respond to evaluators' recommendations (p. 306)

The district in my study has a well-established department of Assessment, Accountability, and Evaluation. It would be logical to assign one of the supervisors in this department to lead the assessment of the policy and implementation of capstone projects. This person should be identified early in the planning stages of the policy

implementation and be an integral part of the guiding coalition. If the evaluation process puts undue strain on the district's existing employees, then I recommend that an external evaluator be contracted to handle interim and final evaluation reports.

According to Fowler (2000), the usefulness of the assessment is important, and that usefulness to the organization is dependent upon having a qualified evaluator or team of evaluators. Patton (2008), also emphasized the usefulness of evaluation in his book, *Utilization Focused Evaluation: 4th Edition*. He said that evaluations could improve the quality of people's lives. "That only happens, however, if the evaluation process and findings are used" (p. 57). In the case of the school district's implementation of this proposed policy, useful evaluations can improve the lives of several stakeholder groups, especially the students. A caution that Patton explained is the distortion of reality through evaluation by confirming bias or looking for "evidence to confirm our preconceptions and biases" (p. 47). If we are truly to prepare students to be globally competitive in the 21<sup>st</sup> century, as described earlier in this paper, then we must ensure policy assessments that are useful and valid.

### **Purposes of Assessments**

Assessments of this policy can serve multiple purposes. One purpose is to provide a summative assessment of the quality of the policy after capstone projects have been in place for several years and have become institutionalized. Another very important purpose is to provide formative evaluations to "enable the implementers of [the] policy to make necessary changes throughout the life of [the] policy in order to improve it" (Fowler, 2000, p. 310). This kind of formative evaluation is ongoing and data may be collected regularly.

Other types of assessments that the district must consider using include accountability assessments to ensure that resources are well-managed, monitoring assessments to provide internal accountability for program implementation, developmental assessments to help the change leaders who make up the guiding coalition as they work to bring about adaptive change, and knowledge generating assessments “to inform general practice and design” (Patton, 2008, p. 139). As the monitoring team implements the various types of assessments to ensure appropriate implementation and growth of capstone projects across the district, it will be important to remember that “there are no perfect studies” (p. 392). Patton explained that “evaluations are to be judged on the basis of appropriateness, utility, practicality, accuracy, propriety, probity, credibility, and relevance” (p. 392). Patton’s position is based upon a consensus articulated by Omnibus Metaevaluation Checklist, the Joint Committee on Standards, and the American Evaluation Association’s Guiding Principles. In other words, the district must consider the findings carefully, while keeping them in perspective so as not to distort reality.

### **Methodologies of Assessments**

The two primary methodologies of assessment are quantitative and qualitative. “Quantitative research designs involve the collection and statistical analysis of numerical data (Fowler, 2000, p. 310). Fowler provided examples of such quantitative educational data that include test scores, retention rates, attendance figures, dropout rates, per-pupil expenditures, teachers’ salaries, teacher-pupil ratios, percentage of students on free and reduced-price lunch, enrollment figures, and percentage of teachers with master’s degrees. On the other hand, according to Fowler,

Qualitative research designs involve the collection of verbal or pictorial data...

Qualitative research designs often involve collecting several types of data and comparing them, a process called triangulation... When a policy under consideration is very new or is a pilot program, a qualitative study can yield valuable insights into a problem. Moreover, qualitative evaluations sometimes make unexpected findings that quantitative ones miss..." (pp. 311 - 312)

Fowler provides examples of qualitative data that include transcripts of interviews, transcripts of focus group discussions, notes on observations, open-ended surveys, personal statements, diaries, minutes from meetings, official reports, legal documents, books and materials, and photographs.

I recommend that the district in my study use a combination of quantitative evaluations and qualitative evaluations to assess the policy, itself, as well as the implementation of the policy. Patton (2008) calls this a mixed method of evaluation. Fowler (2000) calls it a holistic method of evaluation. "The major advantage of the holistic evaluation is implied by its name; it provides a holistic view of what is happening. This means that the findings are often more valid than the findings of a study that uses only qualitative or only quantitative data" (p. 312). The district in my study will need this kind of holistic view to determine its next steps.

## **SECTION SEVEN: SUMMARY IMPACT STATEMENT**

The overall impact of my proposed policy will be to provide a solution to the problem I identified in Section One. That is, the district's focus as an educational organization will be reformed in such a way as to shift from emphasizing state assessment test performance almost exclusively to also emphasizing the successful implementation of capstone projects. The positive effects of this shift in focus are multi-faceted.

The district's students will learn 21<sup>st</sup> century skills through their capstone project experiences that will prepare them for higher level Common Core Standards and the state standards. The district's focus will be on standards and curricula. Teachers will balance their focus on test preparation with authentic student activities and assessments. Teachers will be encouraged to help students develop critical thinking skills, problem solving skills, social skills, persistence, creativity, and self-control. Therefore, students will be better prepared for the next step in their school career than they currently are.

The implementation of this policy will enable teachers to meet students' needs that I identified in Section Two based upon the work of Markham et al. (2003). Students will have the opportunity to learn to do important work, to be taken seriously, to be at the center of the learning process, to engage in important concepts and provocative issues, and to deeply explore important topics. Students also will have the opportunity to learn how to use technology, to learn self-management and project management skills, to develop products that solve problems, and to learn from experience. Students will learn how to explain dilemmas, present information, and collaborate with others.

Students will gain the skills needed to contribute in meaningful ways to society. They will have an increased opportunity to develop core values and character traits that contribute to good citizenry. As I demonstrated through my description of the capstone projects implemented at Georgia Tech (Capstone Projects, 2015) and the capstone project at the middle school in the district of my study, the capstone experience provides an impact on the social development of individual students that leads to a positive impact on other people. Thus, society becomes a beneficiary of the positive impact of this policy on our students' learning and future quality of life and living.

Garcia (2014) addressed the positive impact of capstone projects on democracy. She explained the value of students' developing noncognitive skills and that capstone projects contribute to such development. She claimed that these skills have a correlation to civic and democratic participation.

The goals of my proposed policy, as described in Section Three, are to provide students with an educational experience that is action-oriented rather than passive. They are to promote the moral development of character, to cause students to think and reflect on issues that matter, and ultimately become agents of societal transformation and improvement. These goals include development of the traits of a fully developed person.

While students are at the center of this policy, the positive impacts go beyond the students to society, at large, as previously mentioned. It is also important to note that teachers are also at the heart of this policy. This policy requires teachers to make a significant change in their thinking and their actions, and it also provides a benefit to them. When teachers implement capstone projects with fidelity, they are empowered to facilitate authentic learning. This policy has the potential to invigorate teachers as they,

themselves, experience authentic learning through their students. Teachers may be empowered to have a much greater positive impact on their students than simply preparing them to pass high stakes test, and through their students they truly can have a positive impact on society.

The current count of students in grades 5, 8, and 12 across the school district in my study is more than 42,000. The potential impact of implementing capstone projects with that many students annually is huge. As I consider the vision behind this policy based upon the problems in American education stated so poignantly by Ravitch (2010) and Wagner (2008), as well as my own observations as a teacher and district administrator, I believe my policy will have a positive impact on students, teachers, schools, the district, and society. The implementation of the policy will be driven by the goals and objectives I described above and in Section Three. It is most important that the implementation of this policy be consistent with the vision behind it.

My description of the problem in Section One makes a clear case for the need to address better the needs of students, teachers, and society. My proposed policy addresses the needs of all three stakeholder groups. Furthermore, I feel a moral imperative to move forward in proposing the actions involved in the policy I have described in this paper, as well as assisting the district in implementing it. When I become aware of an important issue, concern, or problem, and I have the wherewithal to do something about it, then I am obligated to do so; therefore, I will request to be a part of the guiding coalition, if the superintendent and school board decide to approve and implement my policy proposal.

We have a serious problem across America in our public education system, and that problem is that we are neglecting to prepare our students to be globally competitive

in the 21<sup>st</sup> century. My review of the literature combined with my action research has demonstrated that capstone projects will propel us toward a solution to this problem.

While the problem is complex, and the implementation of capstone projects cannot be the sole solution to such a complex problem, this policy will certainly help the school district in my study to focus on the genuine needs of its students and how best to prepare them for their future.

## REFERENCES

- Browder, L. H., Jr. (1995). An alternative to the doctoral dissertation: The policy advocacy concept and the doctoral policy document. *Journal of School Leadership, 5*, 40-66.
- Capstone Projects 2013-14. (2015). Georgia Tech, Scheller College of Business. Retrieved from <https://scheller.gatech.edu/centers-initiatives/ile/leadership-minor/capstone/capstone-projects-2013-14.html>
- Chadwell, D. (2003). Motivating students in a year long PBL experience. *Accountability for educational quality: Share responsibility*. Annual meeting of the American Educational Research Association, Chicago, IL.
- Coalition of Essential Schools. (2014). Common principles of the Coalition of Essential Schools. Retrieved from <http://www.essentialschools.org/items>
- College Board. (2015). *AP Capstone*. Retrieved from <https://lp.collegeboard.org/ap-capstone>.
- Fowler, F. (2000). *Policy studies for educational leaders: An introduction*. Columbus, OH: Merrill.
- Garcia, E. (2014). The need to address noncognitive skills in the education policy agenda. *Economic Policy Institute; Research and ideas for shared prosperity*. Retrieved from <http://www.epi.org/publication/the-need-to-address-noncognitive-skills-in-the-education-policy-agenda/>
- Great Schools Partnership. (2014). The glossary of education reform. Retrieved from <http://edglossary.org/>

- Hughes, Charlotte. (2007). *Early beginnings of vocational education in America: History and philosophy of career education*. Poster session presented at the meeting of public schools, (location redacted to maintain anonymity).
- Kotter, J. (2014). *The 8-step process for leading change*. Retrieved from <http://www.kotterinternational.com/our-principles/changesteps>
- Larmer, J., & Mergendoller, J. R. (2010). 7 Essentials for project-based learning. *Educational Leadership*, 68(1), 34-37.
- Markham, T., Larmer, J., & Ravita, J. (2003). *Project based learning handbook: A guide to standards-focused project base learning for middle and high school teachers*. Novato, CA: Buck Institute for Education.
- Mosher, G. A. (2014). Enhancing team-based senior capstone projects: Opportunities and challenges. In ASEE, *The 2014 ASEE North Midwest section conference*. Conference conducted in Iowa City, IA. Retrieved from <http://ir.uiowa.edu/cgi/viewcontent.cgi?article=1002&context=aseenmw2014>.
- National School Reform Faculty (Eds.). (n.d.). *National School Reform Faculty resource book: Adult learning in the service of student achievement*. Bloomington, IN. Harmony Education Center.
- Newmann, F. M., Bryk, A. S., & Nagaoka, J. K. (2001). *Authentic intellectual work and standardized tests: Conflict or coexistence? Improving Chicago's schools*. Chicago, IL: Consortium on Chicago School Research.
- No Child Left Behind Act. (2002). Public Law 107-110-2002.
- Payne, C. M. (2008). *So much reform: So little change*. Cambridge, MA: Harvard Education Press.

- Pinder, P. J. (2013). Exploring and understanding Maryland's math and science teachers' perspectives on NCLB and increase testing: Employing a phenomenological inquiry approach. *Education, 133*(3), 298-302.
- Ravitch, D. (2010). *The death and life of the great American school system: How testing and choice are undermining education*. New York, NY: Basic Books.
- Redman, P. (2013). Going beyond the requirement: The capstone experience. *Peer Review, 15*(4), 12-15.
- Schachter, D. R., & Schwartz, D. (2015). The value of capstone projects to participating client agencies. *Journal of Public Affairs Education 15*(4), 445-461. Retrieved from <http://www.naspaa.org/jpaemessenger/Article/v15n4-schach&schwa.pdf>
- Sparks, C. (2003). *Portraits of potential – Exhibition of mastery as a graduation requirement: An authentic method of knowledge acquisition and assessment*. (Unpublished master's thesis). National Louis University. (location redacted to maintain anonymity).
- Vega, A., & Brown, C. (2012). The implementation of project-based learning. *National Forum of Educational Administration & Supervision Journal, 30*(1), 4-29.
- Wagner, T. (2008). *The global achievement gap*. New York, NY. Basic Books.