Exploring Student Centered Learning and Its Effect on the Self-Efficacy of Students

A doctoral thesis presented
By

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In partial fulfillment of the requirements for the degree of
Doctor of Education

In the field of
Education

College of Professional Studies
Northeastern University
Boston, Massachusetts
March 2018
Abstract
With the advent of technology and the move away from a manufacturing economy, there is currently a paradigm shift occurring in the expectations for graduates entering the workforce in the United States. Today’s workers are expected to be fluent in 21st century skills and will most likely transition between various jobs throughout their working career. However, most schools are still educating students in a way that was developed for the industrial economy of decades ago. In addition to not providing adequate preparation teacher perception, a key indicator for student engagement and success, can be negatively affected by the structure of today’s schools. One pedagogy, Student Centered Learning (SCL), has been used by some schools to help combat these issues.

The purpose of this case study was to explore whether SCL could help prepare students with the skills they need for today’s workforce while also increasing student self-efficacy. Social Cognitive Theory was used as the theoretical framework for this study. Participants included three teachers, one administrator and six students from a SCL school located in the Northeast of the United States. Through the review of interviews, observations and other artifacts collected, two themes, each with three subthemes, emerged as key factors in the increase of student self-efficacy. First, it was obvious that finding student passion was at the heart of what this SCL school accomplishes. Once this was found, the sub-themes of student led learning, student happiness and 21st century skills were found to flow naturally. Secondly, the theme of changing the educational system emerged, which included the sub-themes of the advisory approach, connecting learning to the real world and community.

Keywords: Student-Centered Learning, Teacher-Perception, 21st Century Skills, Self-Efficacy
Acknowledgements

To begin, I would like to thank my advisor, Dr Corliss Brown Thompson. Her keen insight, patience and ability to inspire me to keep working whenever we spoke reflects the talents of a true educator. Through her guidance and teaching, I feel like I have grown immensely as a scholar-practitioner and am now ready for the next phase of my career.

I would also like to thank the other readers on my dissertation committee, Dr. Nancy Young and Dr. Jacob Conca. From when I had Dr. Young in class to our talks about this work, she continued to be a source of positive encouragement throughout this journey. Jake, who took a chance by hiring me in 2010, has continued to provide support, guidance and friendship to this day and has shown me what it means to be a true leader. I hope to use these lessons in my work going forward.

I would also like to thank the participants at the site where I did my research. Your openness and flexibility in allowing me to come and spend time there helped me to focus on the wonderful work you are doing. I continue to be inspired by the amazing community that you have created.

To the students I have taught. Your interest, curiosity and quest to be the best you can be has constantly reminded me of why we, as educators, do this work. I hope that I can continue to guide you on your way to becoming adults and continue to be inspired by your zeal.

To my brother, Pat, thank you for providing your talents in editing this paper. Your ability to see the salient points in drafts of writing and then make it flow into a final product is truly fantastic. Your feedback and support provided encouragement to keep me working towards the goal.
To my parents, Thomas and Priscilla, throughout my entire life you both have cheered me on and encouraged me to be my best no matter what I was doing. That lesson helped to instill a sense of drive and passion for which I will forever be grateful. Thank you for your assistance throughout this process and jumping in to help whenever is needed. I hope I can continue to live your example and let my light shine so that others may benefit.

To Jude and Louise. While you two are too young to understand what this process has meant, I hope that one day you know how vital you were to this doctoral journey. The daily joy, distraction and love you bring to our house was necessary to remind me what is truly important.

Finally to my wife, Kate. To say that this would not have been possible without you is an understatement. Your ability to deal with all that happens throughout the course of a year, while still finding time to support and adapt to the stresses of a dissertation schedule is truly amazing. More importantly, your love for me and belief in what I was I doing made it so I never doubted in my ability to achieve this goal. I am eternally grateful for you being the rock that has supported our family for the past few years.
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Chapter 1: Introduction

A paradigm shift is currently occurring in the expectations for workers entering the workforce in the United States (Selingo, 2013; Watson, Watson & Reigeluth, 2015). With the advancements in technology and a shift away from an economy based on manufacturing, workers are expected to be able to collaborate, work with a large amount of unknown data and adapt to new information on a regular basis. Additionally, workers are no longer likely to stay in a single job for the entirety of their careers (Selingo, 2013). Unfortunately, this shift has not yet been matched in education, and the skills being taught today in traditional school settings are the same ones that have been taught since the industrial revolution (Aslan & Reigeluth, 2013). As a result, the educational system is not adequately preparing the majority of our students to enter the workforce (Selingo, 2013; Watson, Watson & Reigeluth, 2015).

While this shift in employer expectations of the workforce has a negative effect on all students, it is especially hard on students who are low achievers. In a traditional school setting, low-achieving students are often tracked, or grouped together in the same classes. This can affect self-image, as well as earning potential (Moller & Stearns, 2012; Werblow, Uerick, Duesbury, 2013; White, 1996). At first glance, tracking seems to make sense. If you put students of the same academic achievement level in the same class, it allows the teacher to target instruction to the abilities of the students and thus give them what they need to achieve at a higher level. However, upon further investigation, however, it has been shown that low-achieving students often start to believe they are less capable, falling into poor academic habits and displaying higher rates of misbehavior and truancy (Werblow, Uerick, Duesbury, 2013; White, 1996). Teachers of low achievers, meanwhile, unwittingly lower the bar for class expectations and tend to expect less of the group, feeding into the poor self-perception of low
achievers (Gregory et al, 2012; Jones, Miron, & Kelaher-Young, 2012). While strategies such as detracking and heterogeneous grouping have been implemented to some degree of success, tracking of some sort still occurs, leaving low-achieving students underserved by the public education system and less able to adapt to the changing nature of the workforce (LaPrade, 2011).

Education is more complicated than trying to get students to achieve high grades. While there are varying views on its ultimate purpose one aspect of education is to prepare students to enter the workforce and be learned and productive members of society (Cogan, 2004). In today’s world, this means instilling skills in students that are dynamic and will allow them to adapt to a rapidly changing society. This includes skills such as inquiry, collaboration, problem solving and time management that have been largely ignored by traditional teaching (Lee, Tsai, Chai & Koh, 2014). All students need to learn such important twenty-first-century skills and pursue complex problems that interest them in the relative safety of their schools, as opposed to in a higher pressure situation later in life when it could mean whether or not they retain their jobs.

**Student Centered Learning**

What if there was a way to teach these twenty-first-century skills while keeping all high school students engaged, making them less likely to skip classes and putting their chances of graduation at 92%? Given the effectiveness of the educational system in the United States, this would seem like a minor miracle (http://nces.ed.gov/programs/coe/indicator_coi.asp). Over the past few years, institutions that utilize Student Centered Learning (SCL) have been shown to successfully achieve this level of success in the United States, Australia and the Netherlands (www.bigpicture.org). The idea of SCL is to put decisions about curriculum focus, as well as how to demonstrate mastery of knowledge, in the hands of the students. By including student
choice and voice into the educational process, SCL allows students to choose a course of study that focuses on their passions, thus providing more engagement and commitment to school (Nellie May Educational Foundation, 2015). Along with an advisor, these students design their areas of study and then participate in classes that allow them the freedom to pursue various aspects of their interests while still learning the traditional material associated with school (Schuitema, Peetsma & Van der Veen, 2012). The difference is that students learn these skills in the context of real world applications and at their own pace, not in a vacuum or at a time determined by age alone. SCL has shown signs of being effective in increasing student engagement while teaching content and skills determined by the curriculum (Lee, Tsai, Chai & Koh, 2014). However, its success has generally been realized in schools that are created solely for the purpose of SCL, leaving the majority of students in the United States without access to this type of learning and possibly costing them the opportunity to learn skills that will help them in the future.

SCL, if implemented properly, represents a change from traditional methods of instruction, shifting the focus of the classroom from the teacher, as the dispenser of knowledge, to the student, who becomes the main agent responsible for their own learning (McCabe & O’Connor, 2014). Curriculum that used to be determined by age and grade, is now being designed by the interests and passions of each student. The teacher takes on the role of mentor and guide, assisting students in discovering the content that is necessary in order to pursue individual and group goals. In this way, students become invested in their own learning, and they practice skills that will be invaluable as they enter the workforce (McCabe & O’Connor, 2014).
Because this method is vastly different than the instruction that has been happening in most classrooms for the past one hundred years, SCL presents a challenge for students and teachers alike as they try to transition to this new way of learning (Gunel, 2007; McCabe & O’Connor, 2014). Students coming from traditional classrooms that tend to be goal oriented haven’t yet had the opportunity to hone valuable skills that are required to be successful in SCL and are therefore unable to ‘jump in’ and be successful (McCabe & O’Connor, 2014).

Scaffolding and support need to be provided in order to allow students the space to build up the skills needed to be self-reliant learners. During this transition, students may be uncomfortable, get frustrated and revert back to old habits. Students may also expect the teacher to just ‘give them the information’ since they are used to that from traditional schooling and therefore see the teacher as not doing their job (McCabe & O’Connor, 2014). These problems may be worse in the high school setting as incoming students have spent more time in traditional schools, possibly creating more challenges for those students transitioning to SCL. Furthermore, if they were tracked into a low level previously in their academic career, either officially or de facto, they may lack the belief in their abilities and not be able to direct their own learning, thus needing more support, guidance and time as they make the transition (McCabe & O’Connor, 2014).

A student-centered format can be challenging for teachers as well. They are no longer able to plan what will occur every minute of the class. Instead, they need to be mentors and follow the students’ lead, oftentimes providing different support for different students in the same classroom. It requires teachers to be clear about class expectations, so that students feel like they are in a place where learning can occur and that school is more than just a space for assessment (McCabe & O’Connor, 2014). For educators that have never taught this way, it requires reimagining a course to support students and teach them the skills they need to achieve
success (Hollenbeck et al, 2006). The amazing thing is it may turn out to be just as a transformative an experience for the teachers by engaging them in the act of guiding real world learning experiences where they no longer feeling like they are teaching to tests (McCabe & O’Connor, 2014). However, in order to be successful the teachers cannot be left on their own to navigate through the transition. They should be supported by staff and administrators who can guide them through the process (Brackin, 2012).

Teacher perception is another aspect of education that could be affected by SCL. In a traditional school setting, teachers may not see all of the skills and interests that their students have, leaving them to view students only as an amalgamation of scores and grades. In SCL, where the students are choosing topics that are of interest and showing their understanding in unique ways, teachers will perhaps see the students in a different light, which may lead to a shift in perception by the teacher (Smit, Brabander & Martens, 2014). This change in perception could be critical for students who are low achievers, as it could break the cycle of low teacher expectations feeding low learner self-confidence.

While the idea of shifting to an SCL environment is challenging to both students and teachers, research suggests that teenagers and adults who believe they are capable of achieving goals set for them will be more likely to achieve them (Kogan & Laursen, 2013). In a traditional setting, students are often judged (and judge themselves) based on the grades they receive on a curriculum that is not always correlated to the real world and which may not result in them learning for mastery (Tippin, Lafreniere & Page, 2012). If those learners can be assessed on the skills they develop and the processes they use to achieve goals, then they will gain confidence in their ability to achieve their goals and take that confidence with them into college and the working world.
This research was done to illustrate how using SCL affects student perception of their own academic abilities, thus enabling them to acquire the skills and content needed for college and beyond while also leading to higher attendance and graduation rates.

**Previous Research**

Since the turn of the century, there have been numerous studies that have examined the need for a change in the skills being taught in the classroom. Many point to the changing nature of the workforce and expectations of employers in today’s world (Aslan & Reigeluth, 2013; Jaros & Deakin-Crick, 2007). No longer will workers be in a ‘job for life’. Instead, they will most likely move careers a few times, thus needing the ability to critically think, collaborate and problem solve throughout their lives (Jaros & Deakin-Crick, 2007). Additionally, the world is becoming more connected, and people will need to learn and understand the background and experiences of various cultures (Bolhuis, 2003). This lifelong learning will require workers to have the necessary skills and self-belief to be able to adapt and achieve goals they set for themselves.

In order to best prepare students for the changing expectations that await them upon graduation, studies suggest that a shift needs to occur in the way in which information is delivered in the classroom away from a teacher-centered approach (Millar, Osborne, & Nott, 1998). Research indicates that the teacher-centered mode of instruction is more suited for dispensing information at a rapid pace and does not adequately address the idea of skill acquisition and student readiness for today’s world (Millar, Osborne, & Nott, 1998). One of the best candidates for a method of instruction that can address these issues is SCL. SCL has been shown to be effective in developing the collaborative and problem solving skills that are vital for success in the twenty-first-century workforce (Lee et al, 2014).
While SCL has been shown to be successful in teaching much needed skills, the question still remains if those skills will last beyond graduation. Since it is no longer enough for a graduate to only memorize a variety of facts, there needs to be some type of measure to indicate future success so that school systems can know if they are being truly effective. Currently, there is no research that addresses retention of skills; however, some research suggests that self-efficacy, or the belief in one’s own ability to achieve goals, may be the key to indicating future success. If the self-efficacy of a student can be built up, they will be more likely to find success and utilize those skills in the future (Greene et al, 2004; Shi, 2016).

**Deficiencies in Research**

While much research has been done on the effectiveness of SCL, very little has been conducted on the effect that SCL has on student self-confidence in their academic abilities. If it could be shown that, in addition to positive results in skill acquisition, SCL has a transformative effect on the intrinsic motivations of students, then a case could be made for this type of curriculum to become more widespread throughout the educational system. Additionally, research into the change of teachers’ perceptions of students who experience SCL is needed. Since teacher-student relationship is an important ingredient for student success, if it can be shown that SCL allows for a deeper student-teacher relationship is formed when compared to a traditional setting, then another argument could be made to implement aspects of SCL into traditional classrooms.

**Problem Statement**

The purpose of this study was to explore the ways in which SCL changed the self-efficacy of students, making them more confident in their academic abilities. Furthermore, ways
in which SCL allowed students to practice twenty-first-century skills in the context of real world as well as its effect on their self-efficacy was studied.

**Audience**

By utilizing a qualitative approach, an understanding of the changes that a student perceives happening as they embrace a student-centered curriculum was explored. Additionally, SCL’s effect on the development of twenty-first-century skills that are desired by employers was assessed. If SCL can be shown to be a teaching method that not only instills much needed skills in students, but also increases engagement and motivation for students in school, then educators in primary and secondary schools would be more likely to invest the time and energy needed to incorporate SCL into their classrooms. For primary and secondary administrators, this study could go a long way in convincing them to develop curriculum and support for their teachers to switch over to SCL instruction. At the collegiate level, this study could be used to convince teacher training programs to incorporate specific courses to address the implementation of SCL into new teachers’ classrooms. Finally, at the governmental level, studies like this one can be used to convince policy makers to implement the use of SCL into public schools so that more students can receive the benefits of this methodology.

**Significance Statement**

When one looks at the current education system, it appears as if a third educational paradigm is slowly being entered (Watson, Watson, & Reigeluth, 2015). The first paradigm occurred when schools provided remedial instruction in single-room schoolhouses during the eighteen hundreds so that people could be educated enough to vote and interact within an agrarian society. The second paradigm was during the industrial revolution, when the goal was to educate workers who could be guaranteed to learn a basic set of skills needed to work in the
various factories and industries being created in the United States. The current paradigm shift is to an information society where students need to effectively problem solve and deal with previously unknown information in collaborative groups. The problem is that many schools have not caught up with this change and are still training students for the outdated twentieth-century world, leaving them at a disadvantage upon graduation (Watson, Watson, & Reigeluth, 2015). If students in a traditional learning environment are able to learn new skills through modalities such as SCL, then perhaps they would be better prepared to navigate the intricacies of this third paradigm and flourish upon graduation.

A student who is not prepared for this shift will be at a disadvantage almost from the moment they leave school. The workforce is changing, and the skills employers expect of their new employees are dynamic and collaborative in nature. Someone who hasn’t honed these skills in the safety of the classroom will be scrambling to catch up and may miss key opportunities to advance within their career (Selingo, 2013).

It is imperative for educators to lead the way in preparing students by giving them the space to develop the modern-day skills they need in order to be successful. In a private high school just outside of Boston, the teaching style is traditional and has historically prepared students very well for standardized type tests. However, it has been observed through internal surveys that many students who are considered ‘outstanding’ based on the school’s grading system struggle when it comes to more twenty-first-century skills, such as critical thinking, problem solving, public speaking and collaboration. It can be even worse for low-achieving students at this school. Usually, these students are only taught how to memorize information, organize themselves and get work done in order to be able to recite back information on exams, leaving them disadvantaged for college and beyond. SCL may not only teach the necessary
skills for today’s workforce, but also provide all learners with a better self confidence in their work, thus giving them a strong sense of self to build upon as they enter college and the workforce (Lee et al, 2014). This strong self-confidence and understanding of their own learning will help them as they encounter the changing nature of the working world as adults.

On a larger scale, the world is no longer a place where the United States is the economic leader that other countries follow blindly. The world is more connected and it is never clear where the next opportunity for jobs will come from. If other countries are producing students who have the skills needed to manage the new world economy and the United States is not, then the United States will see its status as a world leader begin to erode. However, if the incorporation of these skills could be worked into the traditional schooling system, then the United States will be able to educate more individuals with these skills and thus have citizens who can successfully navigate the new world markets.

Positionality Statement

**Personal Bias.** While examining my background, there are some obvious areas that may influence the way in which I view this topic. As Machi and McEvoy (2012) mention, it is typical to have these biases, however they cannot be allowed to influence my research. In light of this fact, I examined my history of schooling from all perspectives. As a student, I was always in the honors or high-level courses in a traditional, teacher-centered school setting. This could mean that I am not as able to understand the unique challenges, feelings and experiences of a student that is switching to a student-centered environment. I may be even further removed if that student is a low achiever. I recognize that this may lead to me projecting what I think it is like for these students without ever experiencing it myself.
When it comes to the idea of SCL, I may exhibit bias in the area of its effectiveness and timeliness. I was tasked with writing the middle school science curriculum at my school and, in the research process, discovered the idea of student-centered and problem-based learning. The end result of the curriculum is a two-year program that immerses students in the skills needed to be successful in science. Instead of a traditional middle school science program, where the only skills taught are those needed to learn the content, our program focuses on the skills; the content serves as a way to hone those skills. It’s hard not to see it as a success when one passes the eighth grade science room during lunch – instead of students spending time in the cafeteria, the room is packed with students working on their various course projects. The collaboration, problem solving and resiliency being learned is almost palpable, and the administration has called the ‘cornerstone’ of the middle school.

During this process, I also experienced the effect this type of curriculum has on students’ self-perception. The classes I taught with this curriculum were evenly mixed with all levels of achievers. Even though they were only in seventh grade, many had preconceived notions about their abilities in science based upon their previous grades. This curriculum forced to see their learning as a process that had to be worked on like any other skill. Students realized they had abilities in areas they may not have previously known about. Based on comments from students and parents, many began to judge themselves based on their abilities to complete tasks, and they became more motivated to perform coursework.

Around the same time as I was creating and implementing this curriculum, I also took courses at Northeastern University explored alternative methods to traditional education. One of the methods discussed was SCL. Through the readings and case studies used in these courses, I was able to learn more about SCL’s impact on a broader level than what I saw in my school
alone. The more I learned about SCL and its successes, the more convinced I became of its broad application to all areas of education. As a result, I came to believe it imperative for all schools to implement SCL.

Because of my previous experiences, I admit that I may see SCL as a sort of panacea that may work for all levels of education. Additionally, literature about the state of education in the Unites States has resonated with what I have experienced in the classroom both as a student and as an educator. Selingo’s (2013) discussion of the United States’ educational system not preparing our students for existing jobs made sense to me based on what I have observed in class and heard from graduates. After these readings, I began to question what my role in education if not to best prepare students for the world that lie ahead. Because of this, I may be convinced that SCL is the best approach to educate all students, when perhaps it may only work for a select few or need other supports in order to be effective. Conversely, I have never taught anywhere but in a traditional school setting. After careful research and implementation on a small scale in my own classroom, I believe I have a good understanding of what SCL implementation entails, however, my inexperience with using SCL could mean I am unaware of some important aspects of its role in education. As a result, I need to be sure I understand from my subjects exactly how the mechanics of SCL work and how it is presented to both students and teachers.

**Research Bias.** One potential bias in terms of applying my research to the larger educational system is that the school in which I conducted my study has been incorporating SCL into their curriculum for about twenty years. If the research shows an increase in self-efficacy for students at this school, it may be because they enroll at this school by choice and are already open to learning in this way. To account for this potential bias, I hope to find and document the experiences of some students who either didn’t know about the school’s teaching method or were
unhappy with the idea of SCL. Similarly, teachers at this school have chosen to work in a student-centered environment simply because they have applied for the job and continue to work there. They may have come in with a more open view of low-achieving students than a teacher in a traditional setting. In order to overcome this, I asked teachers about their experiences transitioning to SCL.

**Conclusion.** When looking at the ways in which SCL can transform a student’s self-efficacy, it was important that I truly examined the information I received from the subjects. I am confident SCL can teach twenty-first century skills to students today and, more importantly, give them a sense of belief in their own abilities that will be transferable to other aspects of their lives. However, I was careful not to assume positive effects simply because I wanted them to exist. I also was respectful of the journey that many of the learners are on. They may not have had the time to reflect on the transformations they have experienced, especially if they are in the midst of such change.

**Research Question**

Watson, Watson and Reigeluth (2015) discussed the idea that the United States’ educational system has not yet adapted to prepare students for the current shift in our workforce from an industrial age economy to an informational one driven by technology. They argue that without this adaptation, students in the United States will continue to fall behind their counterparts in other parts of the world. One pedagogy that has shown to help develop those skills needed for an informational workforce is SCL; however, its implementation has proven to be difficult in traditional school settings (Schuitema, Peetsma & Van der Veen, 2011). This paper aims to gain insight into the experiences of students and the larger community at a school
that implements SCL, as well as to discover how the self-perceptions of the students change over the course of their time at the school.

**Main Research Question.** The primary research question that served as a guide and provided bounds for this study is as follows: How does the self-efficacy of a student change as they move from a traditional, teacher-centered school setting to one that is student-centered? Since SCL involves students taking more active roles in their own education while actively practicing twenty-first century skills, it would seem that confidence in their abilities would be positively affected as they find success in the new setting. These skills and increased self-confidence would lead to their success in both college and their subsequent time in the workforce.

The effects of SCL on students alone, the researcher believes, is only half the story. Often, teachers can have preconceived notions of students simply based on their previous history. Often, teachers may not even realize they are treating students differently. If students can show they are engaged and learning, as those successful in an SCL environment show, then perhaps they can develop a deeper relationship with the teacher, this altering teacher perception.

While the effects of SCL are important to understand from a student perspective, it is also important to understand if SCL has an effect on a traditionally underserved segment of our population, low-achieving students. To that end, how low-achieving students experience SCL will also be explored. Low-achieving students tend to be adversely affected by traditional schooling when compared to their peers. If today’s students are at a disadvantage because they are not practicing twenty-first century skills, then low-achievers are even further behind due to the fact that they are often tracked into slower paced classes and are not always given the resources needed for success. If SCL can help low achievers succeed at a higher level, as well as
increase their self-efficacy, an area that is traditionally low for them, then a case can be made for broader implementation.

Finally, since this case study was conducted completely in one school, the researcher first aimed to see how SCL effects those particular students and teachers in their community, and then explored common themes and ideas that could be implemented in other schools to find similar success.

Theoretical Framework

The social cognitive theory is a theory that was developed and utilized first by Albert Bandura from Stanford University in 1986. Its origins come from the field of psychology when trying to understand what compels people to act. Traditionally, psychologists studied the behavior of people in response to situational cues or by observing the consequence of their actions. However, as research in the field progressed, it was realized that these factors alone were insufficient in describing human behavior (Bandura, 1999). Using the social cognitive theory, Bandura started to explore what was going on inside the mind that could explain and give context to behavior. While this was a step in the right direction, envisioning the mind was a challenge. In the beginning, researchers viewed individuals and their decision making process much like a computer: Information is entered, a series of computations are made based upon that information, and then a behavior is ‘outputted’. This simplistic model, however, did not take into account changes in the individual as they gained experiences. Instead, it assumed someone’s personality was stagnant and ‘pre-programmed’ from a young age. While models became more complex and gave weight to various factors, they still viewed individuals as automatons responding to an onslaught of stimuli (Bandura, 1999).
In the social cognitive theory, however, “…people are agentic operators in their life course, not just on looking hosts of brain mechanisms orchestrated by environmental events.” (Bandura, 1999 p. 22) In utilizing this theory, researchers take into account the sensory, motor and cerebral systems of the individual and recognize that those three systems interplay with one another to accomplish tasks that give meaning to their lives. Furthermore, human behavior is not attempted to be understood in terms of sociostructural factors or psychological factors alone. Instead, it is believed that to have a full understanding, researchers need a way to integrate the causal system along with the sociostructural influences and how they work with the psychological constructs within the person to produce behavior (Bandura, 1999).

**Social Cognitive Theory and Education.** If one was to simply assume that humans can learn from experience alone, then the process of one person maturing into an adult would be tedious and perilous. That one person would have to attempt many permutations of a task in order to experience the outcome, which would be time consuming, if not deadly. Humans, unlike most animals, are able to learn from one another by ‘living through’ the experiences of others. In fact PBS’ *Evolution* (Robison & Benjamin-Phariss, 2002) describes just how unusual that makes humans and argues that is part of how our minds have evolved. In the video, it shows an experiment where the subject is asked to see a situation from someone else’s point of view. When the subject is three years old, they are unable to do so; however when five, they can imagine the point of view of another individual. This is what Bandura sees missing from the original model of human behavior as an input/output machine that learns from past mistakes. In fact, he sees human behavior as a result of experiences and interactions people have throughout their lives as well as the quality of those interactions, a trait he calls self-efficacy (Bandura, 1986). Based on these interactions, humans have the ability to form ideas about possible
outcomes, predict consequences based on information they receive and then change those thoughts before taking action. This unique ability makes humans able to learn from one another without having to directly experience the results.

Therefore, the social cognitive theory, aims to explore how, in addition to lived experience, one’s self-efficacy – or belief in one’s own abilities to accomplish a task based on what they have experienced and observed – effects the behavior of an individual. Self-efficacy has been shown to be a product of one’s experiences in the world, as well as able to influence one’s future endeavors (Greene et al, 2004). In other words, the successful experiences an individual has and observes will increase their self-efficacy in similar situations in the future. Additionally, the higher the self-efficacy an individual has concerning an upcoming task, the more perseverance and resiliency they will show in order to complete that task (Greene et al, 2004). In terms of SCL, this shows that the more situations a student can practice that will mimic skills and situations they will experience upon graduation as well as interact with people who have had similar experiences, the more their self-efficacy will increase. As their self-efficacy increases, they will be more likely to try new and novel situations starting a positive loop of success that can continue throughout their life.

**Self-Efficacy and Self-Regulation.** In order, then, to fully comprehend the social cognitive theory in education, one must explore self-efficacy a bit more. After all, for educators to know they have been truly successful, especially in terms of SCL, is to know that students possess self-efficacy before they graduate to the working world. Zimmerman (1990) argued that a student who possesses self-efficacy would demonstrate self-regulation and therefore be a master learner. Most educators have observed a self-regulated learner and know one when they see one, but inkling alone is not enough for reliable research. Instead, Zimmerman (1990) notes
that self-regulated learners can be identified because they “…are aware when they know a fact or possess a skill and when they do not.” (p. 4). A self-regulated learner will be more confident in their abilities and possess self-efficacy that will cause them to take more ownership over their learning and proactively seek out help to learn skills they need to master (Zimmerman, 1998).

Self-regulation has three phases that can be focused on in research: the forethought phase, the performance control phase and the self-reflection phase (Zimmerman, 2000b). In the forethought phase, the individual thinks about the skills they have and compares them to those they perceive are needed to complete the task. A student with high self-efficacy would recognize which skills they possess and which are needed. They then make a plan based upon this information in order to be successful. The student would be proactive in seeking help in the areas they perceive as weak and seek advice on the viability of their plan. A student who has successfully incorporated skills from SCL would be able to identify skills that are lacking, and then research and learn those skills by finding the appropriate resources. Additionally, they would know which skills they already possess that can help them achieve their goals.

In the performance control phase, the individual performs the task, monitoring their progress along the way (Zimmerman, 2000b). A student high in self-efficacy would not be comparing themselves to other students and would not be as interested in artificial measures along the way. Instead, they would be monitoring their abilities to learn the skills they had set out as needed for the task in phase one and how well they were executing their plan. A student who has developed skills through SCL would be working on their own, asking questions of their mentors and peers to learn. Additionally, they would be actively seeking out resources in the community to help achieve their goals.
In the final self-reflection phase, the individual compares their outcome to the desired results and reflects on what they need to do in order to improve upon or achieve that result again (Zimmerman, 2000b). An individual high in self-efficacy would be able to compare their results to their original goals and be able to analyze the difference. This would be how the student identifies success, not by grades or amount of knowledge alone. A student who has successfully learned skills through SCL would incorporate lessons learned and seek out ways to improve areas they feel need improvement. These students would also then feel more confident in their abilities to achieve a similar goal in the future.

**Social Cognitive Theory’s Impact.** Bandura’s social cognitive theory has expanded beyond psychology and education into other areas of study. Bandura wrote in 2002 about how this theory could be applied to cultural studies in sociology. For this, Bandura notes that one individual has three modes in which to ascertain whether or not their goals may be achieved in a communal setting. The first is the personal mode. This mode includes the personal experiences and self-efficacy as described earlier. The second is the proxy mode. This addresses whether or not an individual thinks someone who is speaking for, or represents, them has the tools and ability to achieve the desired outcome. The final mode is the collective mode. In this mode, it is the collective group in which the individual is a part that has an effect on the desired outcome (Bandura, 2002). Any person who is trying to achieve goals on a day-to-day basis within a community will be using the beliefs they have in these three modes to inform their motivation in still working toward their goals (Bandura, 2002).

In addition to being used in various studies, the social cognitive theory has also been a basis for new theories, such as the Whole Trait theory (Fleeson & Jayawickreme, 2014). This theory built upon the social cognitive theory and trait theory to try and explain what the authors
perceived as weaknesses in both. Trait theory assumes that an individual’s outcome is based on that individual’s innate traits, but it lacks inclusion of lived experience (Fleeson & Jayawickreme, 2014). Social cognitive theory focuses on an individual’s experiences, but Fleeson and Jayawickreme (2014) felt it lacked the influence of individual attributes. By combining elements of both, the Whole Trait theory aims to discover the intersection of innate traits and experience.

While social-cognitive theory has been utilized within education, there are some that disagree with aspects of how the theory is implemented. Deci & Ryan (2000) agree with the general concept of the social cognitive theory, but do not think that self-efficacy is the best variable to study. Instead, they argue that self-determination would be a better variable. They feel that self-efficacy only takes into account a person’s beliefs based on their own experiences and what they have seen others achieve. Self-determination, they argue, focuses on intrinsic motivation which in and of itself includes one’s own experiences. It also adds the unknown element of what the person believes about themselves.

Despite this, I believe that the social cognitive theory as Bandura describes it is still viable in education as a stand-alone theory. While it is important to know an individual’s intrinsic motivation, it cannot be relied on to determine the success of educational theory. It is unlikely that every student in a classroom will have positive intrinsic motivation, therefore the success of a school or methodology should be based upon how well educators can provide the experiences and nurture the skills that give individuals confidence in their own abilities, regardless of their intrinsic motivations. I believe this is especially true when studying SCL. The goals of SCL are to provide students more say in the curriculum they choose and to provide a curriculum that focuses on skills that are needed in the twenty-first century. If SCL can be
shown to increase a student’s belief in their own abilities, then a case could be made that aspects of SCL should be incorporated into curriculum at more schools around the country. Therefore, it would be beneficial to make sure that self-efficacy is positively affected and that it is not something that has to do with the intrinsic motivation of a particular individual.

**Conclusion.** The social cognitive theory focuses on how individuals incorporate their experiences with their observations of others to explain why those individuals behave in a particular way. Additionally, it explores how self-efficacy changes when one’s own strengths are compared to those needed to accomplish a specific task. My research question was looking to describe the experience of students as they go through this process of skill acquisition as well as to understand how their engagement and belief in their own abilities changed in response to SCL. Additionally, I think it is important to understand how teachers perceive changes in student engagement as they go through the SCL process. I am ultimately trying to make a case that schools should implement SCL into their curricula, showing increases in both necessary skills learned and student self-confidence would be a strong argument in favor of this. Bandura talks about the three modes that are possible to explore using social cognitive theory: personal, proxy and group modes. For this study, however, I would only need to examine the personal mode since the focus is on the individual and their belief in their own ability to achieve goals. Overall, the social cognitive theory can be used to show that an individual can achieve goals they have set because the experiences and skills they learn through SCL will increase their self-efficacy and thus engage them to succeed.
Chapter Two: Literature Review

Introduction

The economy of the United States is in the midst of a shift from one that is defined by the industrial age to one that is shaped and structured by technology and the service industry (Watson, Watson and Reigeluth, 2015). Without a shift in education to provide robust skills necessary for this new economy, our students will not be adequately prepared to transition into the workforce. One possible pedagogical shift that could provide students with the opportunity to learn the skills needed for this twenty-first century economy is Student Centered Learning (SCL).

While SCL has proven to be successful in schools that are created with the sole purpose of using it as their main pedagogical method, the transition for traditional schools and classrooms has proven to be more challenging. The main obstacles to the implementation of SCL are a lack of professional support for teachers as they attempt to implement it in their classrooms, the time needed to fully implement SCL in the classroom and an agreed upon way to assess students in order to assign grades. However, if SCL could be shown to be an approach that could truly prepare all students for the recent shift in the US economy, then perhaps more resources could be put into assisting educators in their transition to an SCL classroom.

With the variety of backgrounds, experiences and educational systems from which students come, it may seem a monumental task to evaluate whether or not one pedagogical method achieves a particular effect. Relying on grades alone can be misleading and standardized tests are subject to their own issues. One model that could provide more reliable insight is that of self-efficacy. Self-efficacy is a student’s belief in their own ability to achieve a goal or task. A student with high self-efficacy will have the confidence in their abilities to learn new skills,
seek out answers to new information and work with groups of people to collaborate on tasks – all skills that are useful in the new economy. The research in this study focused on how the self-efficacy of students changes as they move from a traditional, teacher-centered classroom to one that is student-centered.

In this review of literature, the traditional set up of schools will be examined, looking at how they have been tasked with doing more for a larger variety of students, leading to friction and frustration among its constituents. Then, the current shift in today’s economy and the need for a corresponding shift in education will be reviewed. In the next section, the effect of traditional schools on low-achieving students will be explored, focusing on learning and self-perception. In the following section, teacher perception in traditional schools will be explored along with how the set-up of traditional schooling affects their perception of low-achieving students. In the next section, the methodology of SCL will be introduced, looking at how it is implemented in the classroom and the associated benefits. The following sections will focus on how SCL can alter teacher perceptions, as well as the course of low-achieving students in school. Next, the idea of self-efficacy as a tool to measure student preparedness for goal achievement will be discussed. Finally, current research on SCL in the classroom will be reviewed.

Traditional Schools

The history of schooling in the United States has changed rapidly over the course of the last one hundred years. Schooling has traditionally taken care of the academically “gifted” students, but over the course of the past century it has been tasked to do more (Graham, 1998). Our schooling system has been asked to perform assimilation, adjustment, access and achievement for the wide range of students that are enrolled (Graham, 1998). Early on, schools provided the main way for European immigrants to be assimilated, or “Americanized”, into the
culture of the United States. After World War II, schools added the notion of adjustment into their mission, becoming more involved in providing ways for the whole child to mentally and physically succeed. After Brown v. Board of Education, schools were used as the main point where those who had been denied access to education were granted it. Finally, in the past few decades, schools have become a place where achievement for all students, not just the gifted, has become the focus (Graham, 1998).

While most would agree that teaching and learning have always been the emphasis of schooling, the evolving focus over the past decades demonstrates that the controversial nature of schooling is not because what schools are meant to do, but what their focus is and how they go about doing it (Roberson, 2011). The frustration with the educational system comes when these changes in philosophy occur but the rate of actual change in schools is too slow to have a noticeable effect, alienating constituents who expect rapid change (Graham, 1998). This apparent lack of progress frustrates those involved. Often, more changes are added to speed things up, and the cycle continues (Graham, 1998). Additionally, most people view education through the lens of their own children, who attend school for a relatively short amount of time. So, many assume there is a one-size-fits-all answer to the ills they are facing and then get disenchanted when that answer doesn’t materialize or have a rapid desired effect (Graham, 1998).

This expansion of focus and multitude of policy requirements from state and federal levels has led to a current ‘assembly line’ system of education where teachers are the focus of the classroom, dispensing instruction, while all students are treated similarly and taught the same information at the same age (Roberson, 2011). Despite the evolving focus of education over the past century, no corresponding changes have occurred within the model of education, causing
our students to continue to be underserved by their education and less equipped for the world into which they graduate (Roberson, 2011).

**Society’s Third Paradigm Shift.** While the goals of education have expanded, the educational approach in the classroom has remained relatively stagnant. Additionally, the world outside of the classroom has been changing at a rapid pace. Due to technology, a paradigm shift has occurred in society over the past two decades that has affected every aspect of life, including transportation, business, family and education (Aslan & Reigeluth, 2013). This radical shift has emphasized the disconnect between what students learn and what they need to know. As a result, the educational system in the United States is in need of a major change from the path of the last one hundred years in order to match the current paradigm shift in society. If this were to occur, it would be the third educational shift in the history of education in the United States (Aslan & Reigeluth, 2013; Selingo, 2013; Watson, Watson & Reigeluth, 2015). The first shift occurred during the nineteenth century, when one room schools were set up in order to provide students from the local area the basic skills they needed in order to manage their own households and be productive citizens. The second shift occurred in response to the Industrial Revolution when education was used to graduate people with an expected skill level that could be used in the manufacturing economy. This shift required that students learn the same material and for all students who reached graduation had been exposed to the same concepts. As a result, curriculum was based on age and grade (Watson et al., 2015). Currently, we are in the early stages of a third shift defined by the information age. Students entering today’s workforce no longer need to know the same content and, in fact, they shouldn’t. Instead, they should be instilled with skills that will help them navigate the many unknowns they will face. Skills like problem solving, collaboration, inquiry and information gathering will be necessary to be successful in the
workforce. The problem is that the educational system is lagging behind the required needs of the working world. As a result, students are graduating without a set of skills that they can transfer into a successful career (Aslan & Reigeluth, 2013; Coca, 2013; Selingo, 2013; Watson et al., 2015).

Without a new educational paradigm shift, it would be illogical to assume that a person can spend sixteen or more years in the current, traditional school setting and then be able to perform twenty-first century skills in the workplace. A shift like this requires a radical departure away from the way in which education occurs. Evidence of such a shift would be seen in overarching principles, practices seen in the classroom and expected learning outcomes (Duffy, 2009). The major principle changes would see standard, one-size-fits-all instruction become more customized and tailored. The classroom environment would become more democratic, allowing students to be more systematic in their thinking. They would learn by doing, as opposed to by being told (Duffy, 2009).

If principles change, then teaching practices would have to alter as well. Teachers would need to stop directing the learning (teaching at students). Instead, teachers would need to partner with students as they directed their own learning. Teaching should become less focused on content and more focused on the process, skills and performance. Additionally, motivation would need to move away from extrinsic factors such as grades, test scores and meeting others’ expectations and instead shift to intrinsic student motivation (Duffy, 2009).

While this shift in motivation would be beneficial to all students, it could be especially impactful for low-achieving students. In a traditional school setting, many factors can often trap low-achieving students in a cycle that has negative effects on their self-esteem and future success, leaving them disengaged from school (Crumpton & Gregory, 2011). This shift in focus
to customized learning and twenty-first-century skills would perhaps break this cycle and allow education to provide a foundation for future success.

**Low-achieving Students**

Low-achieving students are often grouped, if not officially, then by default, into classes that are at a slower pace than their peers. While this may seem to be the correct approach because it allows the teacher to tailor curriculum to that groups’ needs, it actually tends to have a negative effect on the students.

Traditionally, schools have been set up for low-level learners with a high differentiation model, or separating students based on their achievements - a practice commonly known as ‘tracking’. This, in turn, has led to long-term effects on these learners. For instance, tracking can be a strong predictor of student dropout. Simply being placed in the lower track makes a student 60% more likely to drop out of school (Werblow, Uerick & Duesbury, 2013). In addition to dropout rates, it has also been shown that the earlier tracking begins for students, the likelihood of them completing a program in higher education decreases. Students who enter tracking early will decrease their likelihood of reaching higher education by 5% (Van Elk, Van der Steeg & Webbinik, 2011). In Denmark, where tracking is very rigid and therefore can be more easily controlled for research, a study confirmed the notion of tracking ‘pre-ordaining’ one’s future outcomes. The study, by Holm, Jæger, Karlson, & Reimer (2013) showed that students who were tracked in vocational education only (as opposed to academic education) were 15% less likely to pursue higher education later in school. It appears that placing students in separate tracks or groups has a long-term effect on the potential of those students and the amount of school they will be inclined to pursue. While the exact reasoning isn’t known, it seems that on
average, those placed in lower level groupings don’t complete as much school as their higher grouped counterparts.

Even more alarming is the fact that this high differentiation model of education can affect a student’s life long after their school years are over. Moller and Stearns (2012) showed that tracking in an educational setting has an effect on income earning later in life. As an example, a Caucasian male will earn $45 an hour if he is on a rigorous college preparatory track, however this drops if they are on a basic college prep track to $42 an hour and even lower to $39 an hour if they are on a vocational track (Moller & Stearns, 2012). Furthermore, this difference is more dramatic for other ethnicities. African American men who were enrolled in a rigorous college prep track only start at an income of $41 per hour, compared to a Caucasian male’s $45 (Moller & Stearns, 2012). The data also indicates that women, overall, are disproportionately affected by tracking. Women who are placed in a lower academic track will earn a lower percentage of their female counterparts placed in higher tracks than males in the same situation (Moller & Stearns, 2012). This begins to build a case that decisions that are made early in an individual’s academic career can have a significant effect on their entire life, not just their academic career. If current graduates are coming away from school lacking the skills to be successful in the new workforce, then those on a lower level track are at an even greater disadvantage.

**Low-achieving Students and Self-Perception.** It is important to note the effect that being a low achiever and being placed in a lower level classroom within today’s teacher centered school system can have on the self-image of a student. White (1996) showed years ago that students who are placed in low-achieving groupings start to see themselves as the stereotypical low-achieving student. No matter what euphemism is used to label a class, students will figure out what group they are in and start to embody the stereotypes of that group (White, 1996).
Teachers, too, will treat groups differently based upon their perceptions of those groups’ learning abilities (Upadyaya & Eccles, 2014). What begins is a cycle of the teacher treating these students as lower ability, the students acting like they belong in that group therefore reinforcing the teacher’s behavior. This continues indefinitely. One can only imagine how this cycle would affect a student’s self-image after twelve years of schooling. It is not surprising that after an entire academic career of being shown they are unable to succeed as well as their peers, low-achieving students earn lower incomes than students who were in higher level classes (Moller & Stearns, 2012). Granted, data does not exist on whether they earn lower wages due to a lack of skills or of poor self-image, but either of those reasons may be caused from placement in lower level classes for their academic career.

The original purpose of tracking and age based grade for each ability level. However, it is clear that some aspects of that original idea have not come to fruition. It is fine to focus pedagogy on a specific level, but if each level ends the year with a less content and fewer skills learned, higher ability groups will be further ahead. If this trend continues year after year, then by the end of a school career, lower level students will be at a distinct disadvantage, lacking skills and content needed to succeed at a higher level or to compete with their peers in the working world.

Another argument made would be that we ‘shouldn’t throw the baby out with the bathwater’ and eliminate the current educational model altogether just because low-level students are poorly affected. It would seem logical that homogeneous grouping would help higher-level students because they would not be distracted and time would not be taken from their instruction. To answer this question Huang (2009) studied the math performance of students all over the world in various types of tracking systems and at various ability levels.
What he found was that, except for the highest percentage of learners (those who score above 95% on standardized tests), homogeneous grouping has no effect on mean test scores when compared to heterogeneous grouping. Furthermore, he did notice that homogeneous grouping increases inequality among abilities by favoring higher-level performers at the expense of lower-level performers. When this data is combined with the fact that lower level classes tend to be disproportionately comprised of minority students, students with learning disabilities and students from low socio-economic statuses, it becomes apparent that something is wrong with the system. If this type of tracking or leveling is allowed to continue, students from these groups will continue to get less of an education and enter the work force at lower level jobs further perpetuating any gap that already exists. The equality that was originally hoped for with the current educational model will be an ideal that can never be reached.

A new way to educate students is needed that will not only reflect the needs of today’s learners, but also provide a way for low-achieving students to find success in the classroom. If such a method could be found, perhaps students could graduate armed with a basic understanding of valued skills in content areas that interest them. This would necessitate finding a methodology that not only teaches the skills and content, but also engages and motivates students.

It is not the case that all low-achieving students are stuck in a rut for their entire educational career. There is one aspect of education that can have a transformational impact on all students and has been shown to be able to counteract other negative factors. This aspect is the teacher (Ruzek et al, 2016). The relationship students have with teachers, as well as the perception the teacher has of the classroom, can go a long way to boost student behavior, performance and content retention (Rosenthal & Jacobson, 1992; Ruzek et al, 2016).
Unfortunately, in the current model of education, low-achieving students often get the least effective teachers, perpetuating a negative cycle.

**Teacher Perceptions in the Traditional Classroom**

Almost every adult can recall at least one teacher that had a positive influence on their school career. Likewise, almost every teacher has a former educator they use as a model for their own classroom demeanor. More often than not, the reason these memorable teachers have such an influence is because they believed in their students’ abilities to achieve at a high level. How they develop this relationship can be varied and individualized, but the effect is clear, teachers who have high expectations for their classroom will have students that succeed (Rosenthal & Jacobson, 1992; Weinstein, 2002).

In their seminal book, *Pygmalion in the Classroom*, Rosenthal and Jacobson (1992) discuss multiple examples that show how a teacher’s perception of their students has a profound effect on those students’ achievements. For example, teachers who were told certain students had higher IQs than what they actually scored were shown to treat those students in such a way as to improve their reading and math scores significantly more than could be explained by chance. Alternatively, students whose teachers thought they scored lower than they actually achieved didn’t see the same improvement (Rosenthal & Jacobson, 1992).

Perhaps the specific quality of teacher motivation that sets the successful educators apart is teacher expectations. In fact, it is so powerful, in fact, that first grade students whose teachers underestimated their abilities ended up scoring significantly worse on standardized tests *in high school* than their early test scores predicted (Sorhagen, 2013). Conversely, first grade students whose teachers overestimated their abilities showed significantly higher test scores in high
school than their early test scores predicted (Sorhagen, 2013). This should have a profound impact on how teachers view their potential to impact students, as they have the ability to affect students’ entire academic career and beyond.

In addition to obvious cues, teachers also send indirect messages to their classes about their perceptions. An example of this type of indirect message could be when a student who has a documented learning disability starts struggling academically. Woodock and Vialle (2011) showed that as an average student starts to perform poorly, their teacher provides positive feedback and has both increased sympathy and frustration levels. This is presumably because the teacher thinks the student can perform the work. However, with the learning disabled student, the teacher still provides positive feedback and has increased sympathy levels but their frustration levels decrease (Woodcock & Vialle, 2011). Along with this, the teacher’s expectation of future failure by the learning disabled student increases. The authors believe this reaction by the teacher is due to the fact that the teacher can point to the learning disability as the cause of poor performance (Woodcock & Vialle, 2011). However, the learning disabled student senses that the teacher isn’t as concerned with their failure and that the expectations are somehow different for them. While this study focused on learning disabled students, one could see how this could easily happen in any classroom. If a teacher treats the student they think has a better chance at success differently than the one they think will fail, then those students are sure to pick up on it and respond accordingly. Teachers may not even be aware of the messages they are indirectly sending their students, but the effect on the students seems to be that they meet the teacher where the expectations are set.

The way a teacher perceives their class can also have implications beyond the achievement levels of the students. In fact, the ways in which teachers conducts their
classrooms can profoundly affect the culture of their schools. Wentzel, Battle, Russel, & Looney (2010) showed that teachers who are consistent in their approach to class and classroom management, as perceived by the students, will motivate positive social and behavioral attributes in their classes. In addition to being consistent, the idea of fairness is also important. Fairness in the ways teachers approach students increases positive academic and social behaviors in their classes (Wentzel, et al, 2010). Furthermore, teacher perception and expectations can be linked to student misbehavior. When students perceive that teachers do not care about their success, they can feel like they are not in control of their academic lives. This leads to a sense academic futility. When this academic futility sets in, students are more likely to engage in misbehavior (Demanet & Van Houtte, 2012). At schools in this study, teachers perceived the students as unteachable because of earlier misconduct in their academic careers, low achievement in other classes or the fact that they even attended a school set up for students who had been asked to leave other schools in the community. Clearly, there seems to be a relationship. When teachers see their students as unteachable, the students perceive this and feel academically futile. They then act out, entering a downward spiral where real education cannot occur (Demanet & Van Houtte, 2012).

Teachers can do many things to ensure their classrooms are a space where learning can occur. The first is to provide a nurturing environment for all students. This means that teachers not only set clear expectations for their classrooms, but also are responsive to the academic needs of the students (Lee, 2012). Furthermore, a nurturing environment has also been shown to increase student perception of a positive teacher-student relationship (Lee, 2012). This type environment is one in which the teacher shows concern for the well-being of the students, pride is taken in the teacher’s own work and there is a sense of community at the school. In addition,
teachers who show empathy often have higher quality relationships with their students (Wiesman, 2012). Student choice, responsibility and decision making can also lead to higher student motivation and increase the perception of a positive student-teacher relationship (Wiesman, 2012). However, in order for this to occur, however, teachers first need to believe their students are capable of doing these things without waiting for students to demonstrate such abilities. The teacher has to create a structure that allows for students to work towards and reach age-appropriate academic and social goals (Wiesman, 2012).

Another factor that seems to help learners achieve is a high expectation teacher (Rubie-Davies, 2007). These teachers don’t group students according to ability. Instead, they allow students to choose to work with various peers. They also create a supportive classroom environment by focusing on the mastery of skills on both the class and individual level, encouraging collaboration, and using positive, preventive behavioral management (Rubie-Davies, 2007). Finally, these teachers monitor student progress closely, helping them set individual learning goals while providing feedback on progress. When teachers trained in this approach implemented this in elementary schools in New Zealand, they found that students increased their math ability significantly when compared to the control (Rubie-Davies, Peterson, Sibley, & Rosenthal, 2015).

**Teacher Perception of Low-achieving Students.** A disturbing trend in literature with low-achieving students and how teachers view them. Low-achieving students are more likely to have teachers that perceive them as less able. Therefore, they will continue to be low achievers. It has been shown that teachers make judgments about the students based on student achievement. (Kaiser, Retelsdorf, Südkamp & Möller, 2013; Rubie-Davies et al, 2014). This, in turn, affects a teacher approaches a class. As students perceive these judgments, they respond
accordingly with a lower level of engagement. Unfortunately this affect can occur as early as in kindergarten, and it can follow students throughout their academic careers (Rubie-Davies et al, 2014). Engagement also affects the judgments a teacher makes (Kaiser et al, 2013). One can imagine a teacher who isn’t self-aware poorly judging of students in a low level class and treating them differently just because they are labeled as a low achievers. Student perceive this judgment and start to disengage and act out. The teacher then pulls away from the student even more, creating a cycle. Using this example, it’s not surprising that students labeled as low achievers early in their academic careers continue to be treated in this way. Each year, they are confronted by a teacher who knows they are labeled as ‘low-performer’ from the previous year and forms a judgment based upon that information. This leads to a compounding effect of low expectations that is passed on and accumulates from year to year (Rubie-Davies et al, 2014).

It is clear that students are graduating from schools today lacking the skills needed to be successful upon graduation. While this is an issue in and of itself, the lasting influence of teacher centered schools on low-level learners is something that needs to be examined. In order to graduate students who are able to nimbly navigate through the various skills needed to be successful, as well as to have the belief in their own ability to do so, a new approach to education needs to be taken.

**Student Centered Learning (SCL)**

Simply adding material to curricula or adding more hours to the school day will not make the change needed to truly help all students succeed. Instead, a shift in how material is presented and accessed by students needs to occur (Selingo, 2013). Historically, education has been teacher centered, making the teacher the dispenser of information and arbiter of which information is covered. Combined with the focus on standardized testing, this has led to a
factory model of education: teaching the same material at the same time, regardless of the variety of skillsets and abilities in the classroom. With the advent of the internet, this model has become increasingly obsolete: a new model is needed to educate today’s students in ways that are similar to how they experience the world. One such method that shows promise is Student Centered Learning (SCL).

When SCL is employed properly, it has been shown to be “…an important means to develop students’ metacognitive capacities for the 21st century worker who constantly needs to be able to solve ill-defined problems.” (Lee, Tsai, Chai & Koh, 2014, p 426). This is the exact skillset that would be useful in the current paradigm shift (Selingo, 2013). In SCL, information is retained for a longer period of time, skills are learned and mastered because they are applied to real world situations and student motivation increases as they feel more ownership over their own work (Lee et al, 2014).

In SCL, the learners are in direct control of their learning processes, including the learning plan, behavior, motivation and ways of demonstrating understanding in order to reach their personalized learning goals (Schuitema, Peetsma & Van der Veen, 2011). In a successful SCL program, there are three phases. The first involves planning for the learning goal the individual wants to achieve. This may involve investigation on the learner’s part to discover what they are interested in, as well as speaking to teachers/mentors to discover what may be the best area to study for them. Phase two is the performance phase. In this phase, the learners actively pursues their goals and follow the plans they set out for themselves. The final phase involves students producing a final product and then reflecting upon and evaluating the process. In an effective SCL process, this is a cycle that will continues with the learner evaluating each process and then using that to determine goals for the next round (Schuitema et al, 2011).
It should be made clear that while the roles of student and teachers change with SCL, it is not a case where students are able to do whatever they want (Zion & Slezak, 2005). Instead the relationship shifts from one where students move from being a passive recipient of information with the teacher dispensing that information at the same time each year, to one where the teacher manages and plans for student learning while the student is makes individual decisions about their own learning (Zion & Slezak, 2005). In fact, this relationship is sometimes described as neither teacher-centered nor student-centered, but rather an association of learners between the students and the teacher (Zion & Slezak, 2005). In order to implement SCL most effectively, the teacher must form relationships with students so as to best guide them to discover their interests (Zion & Slezak, 2005). Interestingly, the relationships created in SCL between teachers and students are different in nature than those formed in teacher centered learning (TCL). In TCL, the relationship is based on intellectual explorations of material selected by the teacher (or state standards); however, in SCL the relationship is based more on a student’s unique interests, skills and a student’s processing of his own strengths and weaknesses (Brown, 2003).

**Implementation of SCL.** Successful implementation of SCL in the classroom can be difficult, especially if a teacher is unsure about the process or is ill-prepared (Lunenberg & Korthagen, 2003). If a teacher is unsure of the true nature of SCL, there can be a disconnect between what the teacher says they expect, what the students produce and what the teacher actually expects, thus creating a sense of uncertainty in the classroom which can end up negatively affecting students (Lunenberg & Korthagen, 2003). Since students have difficulties relating what they are learning to reality and everyday life, a teacher needs to be well-prepared to be a partner with the students as they discover their interests and passions within a subject (Lunenberg & Korthagen, 2003).
Understandably, it is not easy for a teacher unfamiliar with SCL to transition to a classroom that is wholly student led. Teachers who have been successful have found three areas on which to focus on in order to make the transition easier. The first has to do with prior knowledge. Often teachers assume that prior knowledge is defined by what classes the students have taken previously and don’t take the time to truly elicit what students fundamentally understand in the classroom (Gunel, 2008). In order to be successful, it helps if the teacher can shift their normal classroom approach to one that can help them (and their students) truly understand what they already know (Gunel, 2008). The second area revolves around the teacher’s beliefs in student ability to change in regard to their knowledge of the subject and their ways of learning (Gunel, 2008). If a teacher either doesn’t believe that their students can learn the material or does not know how to ascertain if students are learning, then they will not be able to make a shift to SCL (Gunel, 2008). Finally, teacher questioning can have an effect on successful SCL implementation. Many teachers don’t ask questions in an effective way. They either ask “yes or no” questions, don’t allow time for students to reflect, focus on only a few students, or don’t know the correct type of questions to ask in order to tease out student knowledge (Gunel, 2008). To implement SCL, a teacher must reflect on the questions they ask to ensure they’re getting to the heart of the problem and inspire higher level thinking by the students (Gunel, 2008). Overall, it appears that successful transition to SCL is rooted in a teacher’s expectations and beliefs in their class. If they believe their students can adapt, it seems as if they will be more successful in ‘letting go’ and allowing the process of SCL to take over.

**SCL’s Effect on Teacher Perception.** Often, teachers may feel like they are doing all the right things, but it is important to remember that student perception is important to the success of a class. There may be things outside of a teacher’s control or they can’t see that are
causing students to feel disconnected to them, and therefore the subject matter. No matter what teachers think they are doing to foster a certain type of atmosphere, if the students do not perceive those things, then the teachers are, in effect, not doing them (Siegle, Rubenstein & Mitchell, 2013; Skaalvik & Skaalvik, 2013). SCL may be able to provide the change in atmosphere that allows teachers to alter their perceptions of students and therefore the class dynamics.

In addition to allowing students to pursue their own interests and igniting their passions, SCL can have a positive effect on teacher practice as well. Research has indicated that if teachers show they care about the class and put effort into preparation, then students tend to work harder in that class (Siegle, Rubenstein & Mitchell, 2013). Additionally, if teachers focused on the growth of the students and not just their grades, literature shows that student self-efficacy could be increased. Students reported enjoying those classes the most and remembering those teachers fondly (Siegle, Rubenstein & Mitchell, 2013). While not studied directly, the skills that have been shown to increase student-teacher relationships are the same skills that SCL uses as its foundation for instruction.

Other qualities that are helpful to increase student motivation and relationships with teachers are teacher knowledge of content, ability to change pedagogy and relating things to the real world (Siegle, Rubenstein & Mitchell, 2013). Teacher knowledge of content is important because it allows the teacher the freedom to discuss ideas in depth as students show interest. Teachers who lack deep knowledge of content cannot stray from textbooks, and students perceive this type of classroom style as rigid and boring (Siegle, Rubenstein & Mitchell, 2013). Changing pedagogy is an important skill for teachers because students have noted that when teachers can adapt their teaching style it keeps things engaging and shows that the teacher is
interested in the material. Finally, the ability to relate things to the real world is an important step toward helping students recognize that what they are learning has implications outside of the classroom (Siegle, Rubenstein & Mitchell, 2013). Today’s students respond to a teacher who demonstrates that the material they are teaching has relevance outside the classroom, a required aspect for successful implementation of SCL.

Although not directly studied, teachers who demonstrate the skills that are hallmarks of successful SCL implementation improve student motivation and self-efficacy – an important measure of a student’s ability to succeed in the future (Vera, LeBlanc, Taris, & Salanova, 2014). Additional research has shown that once self-efficacy is present, student engagement can remain steady for many hours, as opposed to waning if there is little or no self-efficacy (Vera et al, 2014). Putting all of this information together paints a clear picture that teachers have the unique ability to motivate students at a level that is far beyond what can be instilled by subject matter or grades alone. Teachers need to be given the skills, resources and professional development that will allow them to create the type of classroom that will be most beneficial for their students. With the correct guidance, almost every teacher can become relative experts in their content, can learn various methods of pedagogy and can find ways to connect material to the outside world (Gregory et al, 2014). Since teachers can be trained to be more effective and are not just ‘born educators,’ then aspects of SCL could be added to teacher programs in order to best equip them to assist students.

While all of these factors seem to be too many for one person, let alone an entire school system to control, SCL can provide a pedagogy that can alter these factors all at once. In order for SCL to be successful, teachers need to show interest in their students’ individual projects and help them meet their unique educational goals. This would then go a long way toward creating
the nurturing and responsive environment to which students positively respond. Additionally, SCL is about providing students with choices in what they pursue and how they demonstrate their knowledge, another hallmark of a positive classroom environment. Finally, for any teachers with a ‘fixed mindset’ about their students, SCL provides a lens in which they would be forced to see their students differently. Perhaps, they would see their students as not just a grade, but rather a unique mix of skills and interests.

**SCL and Low-achieving Students.** While entering into the Information Age is difficult for all students, it is especially difficult for low-level learners (Doppelt, 2003). The worry is that any gap that currently exists between the options for those that graduate with high marks and those that don’t graduate at all will continue to grow at a faster rate as this paradigm shift occurs (Selingo, 2013). Historically, the high school diploma was a guarantee that one could get a job that would allow for basic living expenses to be met. Increasingly, the needed diploma seems to be a college degree, which places those not getting the support they need to matriculate to college at a further disadvantage (Selingo, 2013). In order to provide the same promise as previous generations to our students, something needs to change within the classroom to instill needed skills in our students, while also increasing their engagement and likelihood of going to college.

There are some programs that seem to be having success in this area, and they are based on SCL. One example of this type of institution is the Big Picture Schools\(^1\) that have campuses all over the United States and in some other countries (Big Picture Learning, 2018). Beginning in their freshmen year, students in these schools design their own curricula with the assistance of

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\(^1\)Big Picture Learning ©is a group of schools with a unique learning model geared towards student centered learning
mentors (Big Picture Learning, 2018). They also decide how they will present their learning and how they will be graded (Big Picture Learning, 2018). The founders felt that if teachers could assist students in finding their passions, students would want to come to school and want to pursue their learning (Goode, 2005). The results speak for themselves. In the flagship school in Providence, RI, approximately fifty-five percent of students were graduating and went on to college before Big Picture took over. Currently, ninety-five percent of their students go on to college. In another school in Detroit, MI, approximately forty percent of students were graduating before Big Picture took over. Now over ninety percent of students graduate from their schools and go on to college (Goode, 2005).

Another example of a successful program is NuVu Studios, located in Cambridge, MA. Students attend this program for thirteen weeks in lieu of their traditional high school. During this process, they are engaged in the architectural model of design and learning, working in cohorts to solve problems and create new ideas (NuVu Studios, 2018). The creators of this program feel this gives students the real-world experience they need in order to work in this type of setting in the future. Students who have been in the program find confidence in their engineering, design and computational abilities and start seeing the STEM fields as possible career options. One principal noted that “the creative students become more technical and the technical students become more creative.” (N. Caruso, personal communication, July 17, 2015). Overall, the program has been a huge success; however, the timing of the program, the need to miss school and the $8000 per semester cost is difficult for many students in traditional educational settings to integrate into their existing, regimented schedules. It is often difficult for schools to understand what NuVu is doing and how to incorporate it into the needed credits to
graduate, creating a barrier for students who wish to take advantage of the program (S. Ghole, personal communication, August 12, 2015).

While these examples are promising, it still leaves one to wonder if SCL pedagogies could be implemented into a traditional school setting. Big Picture Schools and NuVu both operate as entire schools where students drive the curriculum. The teachers know the system and want to be a part of it, making community buy-in very high and increasing the likelihood of success. But what about more traditional school settings? There is not much literature that specifically looks at student-centered learning and problem-based learning for low-achieving students in the traditional school setting. One study, by Watson (2011), looked at the implementation of SCL ideas in an alternative school that served students who were failing or had been expelled from the local traditional high school. The results of the school were impressive. The school typically had its students - ones that had given up on school - taking (and passing) the graduation qualifying exam (Watson, 2011). As in other studies that looked at SCL, students enjoyed the flexibility of the curriculum and the relationship with the teachers while the teachers noted the way students reflected on took ownership of their learning (Watson, 2011).

**SCL and Self-Efficacy.** School-wide results are not enough to fully understand SCL. To gain a comprehensive understanding of how SCL affects the learner, it would be ideal to see how it affects students of all levels. One measure of future success is self-efficacy, or the belief in one’s ability to achieve a certain goal (Vera et al, 2013). In SCL, the focus shifts from what knowledge a student knows to how a student learns that knowledge. Throughout the process, students develop skills needed for future success while beginning to shape belief systems related to the ability to reach self-determined goals. If the focus of schooling shifts from achievement alone to the self-efficacy of students and their beliefs in their own skills and abilities, then
perhaps a better understanding of student preparedness could be attained. This dynamic would not only shift the relationship between teacher and student, but also better prepare the student for the current workforce.

Self-efficacy has been shown to not only be a strong predictor of student success, but in some cases the only predictor of success. Shell, Murphy & Bruning (1989) looked at performance on reading and writing activities and compared self-efficacy and expected outcomes with regard to predictors of success in a variety of areas of the students’ lives. Results showed that self-efficacy was the main variant in reading ability and the only factor predicting effectiveness of student writing (Shell, Murphy & Bruning, 1989). This shows that self-efficacy is a more important predictor of future success than many other related measures, such as outcome expectations in motivation (Zimmerman, 2000). Given this information, a process that can measurably increase self-efficacy would be a valuable asset for educating today’s students.

If one views self-efficacy as a trait that can be worked on and improved, then ways to increase it should be a focus of education. Zimmerman (1990) notes that self-regulation and self-efficacy are on a self-oriented feedback loop. Students monitor their progress and then change things as subtle as confidence or as overt as behavior, based upon the results they see (Zimmerman, 1990). It should be noted that this feedback is not always negative; good changes can be reinforced based upon the results the student observes (Zimmerman, 1990). Therefore, in order for self-efficacy to be increased by this feedback loop, students need the opportunities in class to plan, attempt and internalize learning processes on their own. If they are just told facts and problems to memorize, the feedback loop will be short-circuited, and students won’t have the self-efficacy to rely upon when they graduate. SCL can provide the opportunities for
increasing self-efficacy, while also still providing the basis of knowledge needed to meet educational standards.

**Current Research Regarding SCL.** While there are no studies that look specifically at SCL and its influence on the self-efficacy of students, there are some studies that give insight into the effects that SCL can have on students and teachers. One document that provides major insight into this area is a qualitative study on SCL in a sampling of New England High Schools (Nellie May Educational Foundation, 2015). This study was undertaken in order to understand what SCL looks like in schools attempting implementation as well as any benefits or roadblocks that the students and educators involved may have noticed. Most educators interviewed found that the student engagement increased, especially involving those who were previously lower level achievers (Nellie May Educational Foundation, 2015). They also found that skills that were important for students in the twenty-first century were taught more efficiently, and that they were even able to add in social justice aspects into the curriculum - ideas missing in the traditional school setting (Nellie May Educational Foundation, 2015). However, this study, along with other research, did point out some obstacles as well. Schools that found the most success were charter schools that were specifically developed as SCL programs. Schools that were transitioning from a traditional structure found difficulties in getting teachers to ‘buy in’ to the process. They also faced challenges in providing the proper amount of professional development to support teachers’ new roles (Cubucku, 2012; Nellie May Educational Foundation, 2015). An obstacle faced by all schools was establishing agreed upon competency assessments to determine if students achieved the intended educational outcome. This led to difficulties in providing accurate grades for student work (Nellie May Educational Foundation, 2015). Another issue was the feeling that there wasn’t enough time to allow full SCL practices
to be undertaken by the students. Despite these concerns, the students still found success according to traditional assessment methods, while also becoming more engaged in school and practicing twenty-first century skills.

Other research that is pertinent to SCL has been done in specific subject areas. While the varying subjects include math, science, geography, pre-vocational secondary school and learning a language, the results all suggest that implementing SCL in the classroom can have a positive effect on student engagement while also helping students to retain information for a longer period of time (Granger et al, 2012; Hollenback et al, 2006; Kogan & Laursen, 2013; Shi, 2016; Tasch & Tasch, 2016). What wasn’t explored were any ideas of future success or improvement of self-efficacy.

Other studies have looked at implementing aspects of SCL into traditional schools and have found success (Kicken, Brand-Gruwel, van Merrienboer & Slot, 2009; Lee et al, 2014; Schuitema et al, 2013). Whether it was having students assist in creating assessments, designing pieces of curricula, or simply connecting the curricula more specifically to students’ lives, it seems as if SCL had a positive effect in the classroom on any student because the perception of students was that they had more ownership over the material and were therefore be more engaged (Brooker & MacDonald, 1999; Kicken et al, 2009; Lee et al, 2014; Schuitema et al, 2013)

**Summary**

Education has long been the key to future success for many generations of students. By providing a foundation, education can arm students with the knowledge and skills needed in order to become a productive member of society. However, the United States’ educational
system has not changed in decades, and it prepares students for a workforce that is quickly becoming obsolete. Students graduating from this system do not have the skills that are valuable to today’s employers. Skills such as critical thinking, collaboration and in-depth data analysis are often lacking in today’s graduates, leaving them to learn on the job, if they are even hired.

While this is a disturbing trend for all students, it is especially difficult for low level learners. These students have not only been learning out-of-date skills at a slower pace, but also often have lower self-esteem and less belief in their abilities due to years of being treated as poor learners. These students may often lack the desire or self-confidence needed to succeed in college, barring them from a college degree, which is becoming more of a necessity in today’s working climate.

While students struggle to reconcile the way they learn in school with the expectations set for them in the workplace, the effect of the traditional learning environment on the teachers is almost as bad. Teachers in the traditional setting are the dispensers of information and are limited in the ways in which they can assess students. As a result, students can become an amalgamation of numbers in a gradebook. Students who are successful in the traditional model get routed into higher level courses, while those who aren’t have to repeat until they get it right. This one-size-fits-all approach rewards those who can memorize and take tests, but does a disservice to those with other skills and interests. Teachers, meanwhile, start to create expectations of students based upon those grades and may miss the unique variety of individuals and interests that sit in their classrooms.

One change to the pedagogy that could improve this dynamic is SCL. In SCL, students become an active participants in their learning partnering with their teachers to pursue projects and activities that are of interest to them. This process has been shown to be more engaging for
all learners, while providing the same amount of content knowledge and focusing on those twenty-first century skills that graduates will need in the workforce. It also allows teachers to see different aspects of their students, challenging any perceptions they may have previously held.

One of the main factors SCL affects is the self-efficacy of the student. This attribute measures the belief a person has in their ability to achieve a goal. The process of SCL allows a student to continually go through the process of setting goals, working towards them and then analyzing the results and trying again. This process builds confidence in the student’s ability to tackle novel situations. It also builds skills that are not tied to individual facts or subjects, but instead can be applied to any problem or set of information the student encounters. This development of self-efficacy could be invaluable to students as they enter today’s ever-changing workforce.

If it could be shown that SCL not only provides students with the practice they need in order to perfect twenty-first century skills, but also provides them with adequate content knowledge, then a case could be made for providing the necessary resources for schools to transition to SCL. If the self-efficacy of students could be improved through SCL as well as challenge the perception teachers have of students in their class, it would be incumbent upon teacher preparation programs to include courses on how to set up an SCL classroom. If more classrooms became SCL environments, then perhaps more graduates would be ready to thrive when they enter the workforce.

SCL has the potential to provide students with the necessary environment to practice and perfect twenty-first century skills while also giving them adequate content knowledge. Further, the literature suggests that SCL could help challenge teachers’ perceptions of their students,
forcing them to see their students as more than just a grade. However, the following question remains: Does the self-efficacy of students change as they go through a school that uses SCL in the classroom? If this were found to be true, then one could conclude that the skills and content learned using SCL would lead to future success in today’s workforce, where these same skills will be necessary. This study intends to explore this question.
Chapter Three: Research Design

Methodology

This research aimed to understand how student self-efficacy (Bandura, 1999) changes as they move from a traditional, teacher-centered classroom to one that is student-centered (Schuitema, Peetsma & Van der Veen, 2011). Self-efficacy is the belief of an individual in their ability to achieve goals which they have set for themselves even in unknown or novel circumstances (Vera et al, 2013). Ideally, a proper school setting would foster self-efficacy, thus arming students with the confidence needed to be successful upon graduation. Unfortunately, this does not seem to be the case in most of today’s schools, as teaching is still being approached in the same way it has been done for decades. This results in students being inadequately prepared for today’s workforce (Aslan & Reigeluth, 2013; Coca, 2013; Selingo, 2013; Watson et al., 2015). Student-Centered Learning (SCL) requires students to take more active roles in their own learning and seek out ways to solve novel problems, effectively practicing twenty-first century skills that are valued in our changing economy (Lee, Tsai, Chai & Koh, 2014).

Logically, it would seem to follow that after practicing these twenty-first-century skills in various forms throughout years of schooling, student self-efficacy - as well as their ability to perform these skills upon graduation - would increase, and students would be better prepared for today’s job market. In this study, an attempt was made to understand how student self-efficacy, especially in regard to students’ skills, improves while learning in an SCL environment.

In addition to student experience in an SCL classroom, this research also looked to understand how the relationships between students and teachers change over the course of implementing SCL in their classrooms. Teacher perception has been shown to have an impact on student performance that can last long after students leave the class, having an enormous

Unfortunately, teachers can often have preconceived notions of students based on their performance in previous classes that can lead to a bias toward groups of students and a negative experience for the year (Kaiser, Retelsdorf, Südkamp & Möller, 2013; Rubie-Davies et al, 2014).

It is not hard to see how students can get caught in a cycle of low expectations and low performance, which then leads to low expectations by teachers the following school year. After twelve years of this style of education, the concern is that a student could be negatively affected for the rest of their life. One thing that could work to change a teachers’ perceptions is the chance to get to know students as individuals and understand their unique strengths and interests (Lee, 2012). In SCL, teachers become mentors and work with students to help them achieve their individual goals (Zion & Slezak, 2005). Putting these ideas together, one could assume that a teacher’s perception of their students would become more positive as they employ SCL in their classroom, a premise that will be explored in this research.

While all students benefit from SCL, the most dramatic change could potentially be seen in students who have been low-achievers in more traditional classroom. Historically, there has been a cycle of these students’ low self-perception being fed by the low expectations of educators, leading to issues with achievement as well as behavior (Rubie-Davies et al, 2014). A dramatic change of pedagogy, like implementing SCL, could break that cycle and allow students to see themselves in a different light. The final part of this research will focus on low-achieving students and trying to ascertain how their self-efficacy changes as they transition into an SCL classroom from a more traditional one.
Research Approach - Case Study

In order to achieve the above stated research goals, the research was conducted with a qualitative research design approach. It is the belief of the researcher that the case study approach, more specifically the explanatory approach within the case study genre, would provide the ability to explore the research questions with the most depth in order to fully understand the phenomenon. As Baxter and Jack (2008) report, case studies are ideally used when there are questions of ‘how’ in regard to a phenomenon, and this research question is looking to understand how a change from teacher-centered to student-centered education affects all constituents involved. While there is certainly testing data that could be compiled to give an overview of student achievement during the implantation of SCL, numbers alone would not be able to fully explore the various changes that go into a student’s transformation, especially in terms of self-efficacy. Additionally, this researcher believes that a causal link exists between student-centered learning, student-engagement and skill development, so the explanatory approach would be a good way to explore and report on this relationship.

Theoretical Framework

In order to answer these research questions, the problem was looked at through the lens of the social cognitive theory. This theory, first discussed by Alfred Bandura in 1986, looks at human learning as more than just a series of computations. The social cognitive theory states that human learning is more than simply trying a specific task until achieving success. Instead, humans learn skills that can then be transferred to other situations (Bandura, 1999). In addition, humans can also observe other people and gauge their own chances of success based on what they observe and know about other people’s abilities compared to their own (Bandura, 1999).
The research in this study aimed to understand how student self-efficacy, or belief in one’s own ability, changed when they were taught with the SCL pedagogy. A student ready for today’s workforce would be one who, beyond specific content knowledge, also possesses transferrable skills such as collaboration, inquiry and the ability to solve ill-defined problems that will provide the confidence to undertake and succeed at a variety of unknown tasks. Self-efficacy is the main measurable aspect of the social cognitive theory that Bandura uses as an indicator of one’s ability to achieve their goals and ultimately be successful.

By looking at the implementation of SCL through the lens of the social cognitive theory, one can explore how the self-efficacy of an individual changes as they enter an SCL school and are immersed in the program. Furthermore, since the social cognitive theory takes into account more than just individual experience, looking at how the student-teacher relationships changed can be seen in relation to increased student confidence in their abilities. If it can be shown that self-efficacy increased with the length of time students spend in an SCL setting, then an argument can be made that their beliefs in their abilities to accomplish tasks will increase, and they will therefore be more prepared for today’s workforce. Additionally, low-achieving students should theoretically have a lower level of self-efficacy when compared to their peers due to years of being subjected to low expectations. If it could be shown that low-achieving students had a significant increase in their self-efficacy after attending an SCL school, then a case to implement SCL for more students could be made.

**Research Design**

The design of this study was qualitative in nature, as it aimed to understand the changes that occurred in the self-efficacy of individuals as they entered an SCL environment. In order to truly understand if an individual felt confident in their ability to achieve goals, it required an in-
depth conversation and processing by both researcher and subject. While one could have objectively measured test scores, skill acquisition and confidence levels without talking to the participants, it would have been difficult to ascertain if the results were long-lasting. Test scores could fade, skill acquisition could be lost and confidence could be shaken; however, if someone can articulate how their beliefs have changed, they can talk about why those changes occurred and they actively seek out novel ways to find answers, then they are more likely to have been permanently changed and possess the self-efficacy needed to be successful (Zimmerman, 1998).

In order to best understand how SCL affects the skill acquisition of students as well as their self-efficacy, the research was done using a case study approach. While data analysis and test scores would be useful to see if SCL had an effect on content knowledge, using a case study approach allowed the researcher to delve into ‘how’ SCL does this. Additionally, by interviewing the students and teachers involved in the SCL approach, a richer understanding of their experiences was ascertained, and therefore a more compelling argument for the usage of SCL can be made.

Research Tradition

The case study approach is one that is used commonly in qualitative research. However there still are not well defined protocols, so the legitimacy of the approach is somewhat in question (Yazan, 2015). In the case study approach, while the methodology may look similar to the IPA or narrative approach, the focus shifts slightly, meaning that the researcher is tuning into different pieces of information. The case study approach is best used when one is looking to answer ‘how’ and ‘why’ questions about a particular event and/or when the researcher believes that the context of a situation or phenomena is important to the outcome of the individual (Baxter & Jack, 2008). In this, the focus shifts to the understanding of a particular situation and how the
interplay of the specifics of the event, as well as the individual, have had an effect on the outcome. In this respect, it is more similar to a quantitative study where a researcher is looking for a connection between cause and effect. While there are many types of case study analyses, usually the focus is less on an individual and more on a phenomenon or an intervention (Baxter & Jack, 2008).

**History of the Case Study Approach.** When it comes to the case study method of research, there are three major researchers – Robert Yin, Robert Stake and Sharan Merriam – who have helped to define this approach. Since there is no single, agreed upon method for case study, it is important to look at the differences between these researchers’ points of view. To begin, they each slightly disagree on the paradigm from which the case study method is best approached. Yin seems to approach the case study method from a positivist point of view, believing that the researcher should have an idea of the outcome they predict from the study (Yin, 2014). In this respect, he sees case studies as being useful when conducting either qualitative or quantitative research and even, according to Yazan (2015), seems to shy away from discussing his epistemological background so as not to muddy the waters and favor one over the other. Stake and Merriam seem to be a little more definite about their points of view and encourage case studies for use with a more constructivist tradition (Yazan, 2015). In their view, there is no one reality, but it is made by the experiences and points of view of those who live it. In this way, case studies serve as a way to understand an individual’s experience of a phenomenon and to get an idea of how they view and interpret that experience.

It should be noted here that what makes case study different from other methodologies used in qualitative studies is, as Merriam (1998) suggests, the researcher can ‘fence in’ what they are studying. All three researchers talk about the need to define the boundaries of what one is
studying in order to make it a case that can be studied. Whether it be a single phenomenon, a
group of people or an entire community, the researcher needs to define the boundaries in order to
use the case study approach (Baxter & Jack, 2008; Yazan, 2015). Some authors offer guidance
by saying it may be easier to define a case study by saying what it isn’t, and in that way one can
home in on what they should be paying attention to in their research. According to Yin (2014),
even if a subject may be easily bounded, it may be unclear what causes the phenomenon to
occur: the phenomenon itself or its context. This is when it is important to use a case study
approach in order to understand the nuances of the phenomenon and its causal nature, as opposed
to other methodologies.

Yin, Stake and Merriam also have varying opinions on data gathering. The one thing that
they agree on is the need for multiple sources of data, that including interviews, direct
observation, documentation, archival records, artifacts and participant observations (Yazan,
2015). The idea is that the information from these various sources should agree in order to allow
for an in-depth view of the phenomenon. Yin, coming from a more positivist approach, espouses
the idea of having a sense of the phenomenon’s anticipated effects before the experiment (almost
like a hypothesis) so that the researcher knows if the sources they are using and the data
collected are the right ones (Yazan, 2015). Stake and Merriam, because of their constructivist
approach, would rather collect data and change the focus depending on the information they are
analyzing. Because of this, Yin is more in favor of researchers piloting the tools they use for
data research while Stake and Merriam prefer researchers to pilot their interview questions and
are more in line with traditional qualitative research methods (Yazan, 2015).

As one could imagine, the approach taken to validate data is also different depending on
the point of view. Yin emphasizes the idea of choosing research tools that have proven validity
and then comparing data points to one another to see if the match one another (Yazan, 2015; Yin, 2014). Yin also looks to see if the results of the data match up to what one believed would have happened prior to conducting the research (Yazan, 2015). Stake and Merriam, who talk more about the holistic nature of qualitative studies, aim for results that ‘make sense’ to the reader and provide flow in their reading (Yazan, 2015). However, all three emphasize the idea that in order for the research to be valid, the researchers must state their points of view and identify potential biases so readers are aware of possible blind spots. If the researchers can show they understand where their biases may be and then provide evidence that the results obtained from various sources are in agreement, then the analysis of the data can be trusted and possibly used to predict outcomes in similar situations.

**Case Study in this Research.** In this research, the case study approach was more closely related to the tradition of Stake (1995) and Merriam (1998). The research attempted to understand how the individual students and teachers experienced SCL in their classrooms and asked them to make sense of those experiences. The idea that the researcher and participant can work together in order to make sense of the experiences will be something that was focused upon throughout the study. Additionally, while there was a hypothesis on what could happen as SCL was introduced into the classroom, the research tried to take all of the results and make a holistic analysis of them, even when it disagreed with the initial hypothesis.

The case in this study looked at the effect of SCL on the skill acquisition and self-efficacy of students as they transitioned from a more traditional school setting. Additionally, teacher perception of students as they make the transition was studied since it is understood that teacher perception has a major impact on student success. While it is difficult to separate the phenomenon and context of the study, boundaries were still needed for the research. In this case
the boundaries were the students who are in their first year of a transition from a traditional school to one with SCL, specifically The Omni School (a pseudonym). Additionally, only teachers who instruct students in their first year of transition were interviewed and the focus was on skills that are needed for twenty-first century success.

Participants

For this study, the participants came from a school located in a city in New England (“The Omni”). This school, begun in 1996, was designed to be a public high school that uses SCL as its main pedagogical method. Since its inception, the school has found incredible success in its implementation of SCL. Graduation rates have risen from 55% to 96% and have stayed in that range for over a decade. College acceptances and class attendance have also risen. In fact, this school has been so successful, that they have opened sixty-five schools in in the United States, as well as and many more abroad. They have all seen similar results (Goode, 2005).

Teachers interviewed were chosen first and with the aid of administrators. All teachers interviewed teach students that are in their first year at school. This was done to understand how teacher perception changed over the course of the Fall as students transitioned into the SCL environment. Another goal was to identify teachers who were from a variety of subject areas and levels of instruction (AP, college prep, etc.) so that a cross section of SCL’s effects on teacher perception could be gathered. Upon visiting the school, the researcher learned that the structure of the school was so different from a traditional one that teachers don’t have discrete subjects or levels, but instead teach all subjects to a heterogeneous mix of students. First, the researcher observed teachers in the classroom to get a feel for how they implement SCL and to observe their relationships with the students. The teachers were then interviewed to understand
their background, perception of SCL and the positives and negatives aspects they perceive with the SCL pedagogy. On another visit, more observations were made and then three students were interviewed. On a final visit, observations of the final presentations for students were made and interviews with three more students, along with an administrator, were conducted.

The teachers interviewed were asked to identify three to five ‘typical’ students from their classes to be interviewed. Care was taken to talk to students who were representative of the general school population and not just ‘model students’. Since the students interviewed were in a traditional school until enrolling at The Omni, particular attention was paid to how they viewed the experience of transitioning and their opinions of any changes they experienced. One limitation was that originally, all students were supposed to have just completed their first few months in the SCL environment so they could compare it to the previous year, when they were in a traditional setting. In practice, four of the students were new to the school, while the other two were juniors. In the end, this allowed the researcher to see the growth of students as they spend more time in the SCL environment. In order to identify low-achieving students, the researcher worked with the administration to ensure that some of the students interviewed were from a group that had some of the lowest grades coming into the school. While the school itself doesn’t focus on these metrics, their experience was valuable to understand.

To be more specific, sampling of participants was done in a purposeful way, with an attempt to identify information-rich cases in order to provide the most information from a limited amount of time and resources (Creswell & Plano-Clark, 2011). While this purposeful or specific sampling may have lent itself to more bias, it is believed that with the help of administrators at The Omni School, individuals identified provided rich experiences about transitioning to SCL.
Recruitment

Access to the participants was obtained by contacting the co-director of the school, Ms. Patricia Bellum, and asking permission to do research (Appendix A). After explaining the purpose of the research, administrators at the school helped to identify three teachers that teach first-year students. Potential participants were then contacted via email and invited to sign up for a meeting time if they were willing to be interviewed (Appendix B). This step was facilitated by the teachers who also helped to inform the parents. Participants were given free choice to decline at any point throughout the process and were free to ask questions pertaining to clarification and understanding of the research. Once teachers were identified, observations of their classes were made in order to get an understanding of their class culture and structure of the school. The observations were done by taking field notes, being sure to not passively describe what was factually happening, but instead paying attention to specific things that happened and that related to the overall focus of the research (Emerson, Fretz & Shaw, 2011). The teachers were asked to be observed on a day when they were introducing a new project, however they all noted that the traditional assignment/project dynamic doesn’t really occur at the school. Instead, they informed the researcher that the research/project portion of the class is happening all the time, so that any day attended would be valuable. These teachers were asked to help identify three students from each of their classes that they thought would be representative of the average student at their school. Those students were contacted via email, asking them to get a permission form signed by their parents if they were willing to participate. On the day of the student interviews, the researcher explained the research again and the students were then asked to verbally agree to being interviewed. Again, these students were given free choice to decline at any point and were free to ask clarifying questions if needed.
In order to protect the participants and to assure that the process will be ethical for all involved, approval was sought from the Institutional Review Board (IRB) at Northeastern University (Appendix C). Before each interview, participants were given a consent form that was specific to their role (student, teacher or administrator) to sign that informed them of the purpose and parameters of the study as well asked their permission to be recorded (Appendix D, E and F). Since the student participants were under the age of eighteen, they were asked to have their parents read and sign the consent form in order to participate. In conjunction with this release, the researcher also verbally explained the purpose of the study and answered any questions the participants may have had. The interviews were conducted in a private location at The Omni School and any minors were asked to have an adult of their choice in the room with them, however all declined.

**Data Collection and Storage**

Interview data was collected by the researcher on site following the protocol established prior to the interviews for the students, teachers and administrators (Appendix G, H & I). A semi-structured interview protocol was followed for this research (Galetta, 2013). This type of interview allowed the researcher to ground the interview questions in theory, yet draw participants more fully into the process by weaving their lived experiences in with follow up questions that were specific to each individual (Galetta, 2013). The goal was to interview five students, with at least two of those being low achieving. In the end, six students were interviewed with two being low-achieving. The purpose of the interviews was to understand the experiences of the participants as they transitioned from a traditional school setting to the SCL environment of The Omni School. The interviews lasted between forty-five to ninety minutes and were done in one sitting with a break offered about forty-five minutes into the session. The
first part of the student interviews was used to gain a bit of background information from the participant and to build rapport. The next section of the interview shifted to discovering more about their typical day in an SCL environment. In the next part, the researcher aimed to discover what the student’s more traditional school was like and how the transition to the SCL environment went. Finally, the researcher attempted to determine the level of confidence each students had in their own ability to complete novel tasks going forward and what they thought had given them their confidence. In the teacher interviews, it was much the same at the beginning, but particular focus was placed on why they chose to teach in an SCL environment and how they compared it to their other teaching experiences. The final part of the teacher interview was used to understand the changes teachers observed in student confidence at an SCL school. In addition, teachers were asked how their perception of students changed as they and the students participated in a SCL setting. The researcher recorded the interviews using a digital device and then transferred those interviews to a private computer at his home. The transcriptions of these interviews were also kept on the home computer. Once the research was complete the recordings were deleted and the transcripts were stored without any names to identify them.

Data Analysis

When data was compared and analyzed, it was important for the researcher to remember that there was a need to be careful not to treat each piece of data separately, but rather “…that the data are converged in an attempt to understand the whole case, not the various parts of the case…” (Baxter & Jack, 2008, p. 555). With this directive in mind, data analysis was conducted in a holistic method and relied on the idea of in-vivo coding (Saldaña, 2009). While this served as a good approach for the interviews, it was slightly more difficult to integrate observations and
other data into the same format. This, along with the fact that there is no formalized way to do case study research, necessitated that the data be looked at as a whole in order to understand the parts and draw out meaning.

During the first cycle of analysis, the researcher listened to the interviews along with the transcripts in order to get a feel for each. This data, along with the notes taken during the interviews, provided a strong foundation for further analysis. The next cycle consisted of coding the interviews using an in-vivo approach, letting salient ideas emerge from the data (Saldaña, 2009). In addition, the researcher endeavored to use phrasing from the interviews as codes in order to keep the concepts as close to the participants’ words as possible (Saldaña, 2009). This cycle was repeated a second time for each interview so as not to miss anything important and to ensure that the initial ideas were still consistent. For the last cycle, the researcher went through the data and collapsed the codes into a few major themes that were interwoven throughout the data and emerged as common ideas. Along with interviews, the observations made of the teachers’ classrooms were analyzed in order to provide examples and first-hand accounts of what the themes described. Additionally, other data collected, such as test scores, attendance records, learning plans and transcripts were added in order to illustrate some of the themes.

Once themes were generated, they were analyzed through the lens of the social cognitive theory (Bandura, 1999). More specifically, the researcher deductively analyzed the themes using the major components of social cognitive theory (how the self-efficacy of the student is effected). Also, the researcher analyzed the themes using key concepts from related literature. For example, the researcher not only looked for evidence that the students who participated have learned twenty-first century skills (Lee, Tsai, Chai & Koh, 2014) but also examined the effect of
SCL, if any, on student self-efficacy (Bandura, 1997). Another example related to teacher participants and how their relationships with students have evolved (Lee, 2012).

When analyzing, the researcher needed to be open to allowing the data to dictate the ideas and trends that emerge. Naturally, as results started to emerge from the interviews and other data, the researcher compared these results to what he expected and a form of pattern matching occurred (Yin, 2014). This initial comparison allowed the researcher to know if he was discovering useful information, but he also had to be sure to be open to other things that emerged from the data that he may not have expected. Additionally, the researcher continued to analyze all data as the process continued in order to reinforce any emerging themes or ideas that were present in the data (Merriam, 1999). To this end, the other data analyzed was categorized in a way so that it could add to the information gathered in the interviews and serve as a way to further illuminate the effects of SCL on students’ lives.

**Limitations**

One thing to be mindful of is that the students are from the same school, so there may be a limit to any generalization that can be made about how SCL can help a more general student population. Care was taken to remember that there may be something at the school or in the community that supports these students addition to the SCL pedagogy and that would be missing in other SCL communities. However, the fact that the network The Omni belongs to has been successful elsewhere in the country and around the world supports the notion that the phenomenon happening in this school is related to something that goes beyond any single community.

Another area of concern for the researcher was that the teachers all have chosen to teach at this school, actively agreeing to teach in an SCL environment. Therefore, they may be biased
to the effectiveness of SCL and may not be as open to any negative aspects of its implementation. This could have caused them to underemphasize potential negative aspects of SCL in their interviews.

Since five of the six students interviewed happened to be female, one limitation may appear to be that SCL works best with female students. However, this was just an anomaly specific to this study. By chance, the students that were randomly chosen to participate happened to be a larger percentage female than the student population at the school. However, based on previous research, as well as conversations with educators at The Omni, this researcher believes that SCL works equally as well with any student.

Throughout this process it was also important for the researcher to maintain a proper balance of impartiality, while still expressing interest in the participants’ experiences so as not to appear detached. As discussed in chapter one, the researcher believes that SCL can have a tremendous impact on student learning in today’s society. However, the researcher was careful to not allow this belief to unintentionally lead participants to affirm that bias. In order to avoid such bias, the researcher had his interview questions reviewed by his advisor and a few peers close to the project to ensure that they were fair and balanced. Additionally, he strove to listen to the transcriptions in an unbiased manner and allowed the data to form the themes and drive the analysis of the research.

**Trustworthiness**

Throughout the course of this research, steps were taken to ensure that the results found were true to the experiences of the participants. While it is expected that in any case study research the researcher will be part of the process, care was taken so as to not provide a point of
a view for the participants. To begin, researcher bias was clearly stated in the final paper so as to allow readers to fully understand the point of view of the researcher.

The researcher used a form of triangulation by collecting multiple forms of data including interviews, observations and school artifacts. Each piece of data was analyzed separately to find themes and trends. These pieces of ‘evidence’ were then compared to see if they corroborated one another, which allowed a larger understanding of SCL to emerge (Creswell, 2013). Additionally, the researcher provided rich descriptions of the individuals involved, in addition to the setting in which this study took place. This allows the reader to draw their own conclusions on the transferability of the findings based on the similarities of the settings (Creswell, 2013). Finally, after the first draft of the themes and impressions of the data was written, the researcher allowed the participants to review it for accuracy and feedback.
Chapter Four: Research Findings

Introduction

The purpose of this study was to understand how the self-efficacy of students change as they go from a teacher-centered environment to one that is student-centered. Using the case study approach, The Omni High School (The Omni) located in a city in New England was studied. The Omni is the first of many schools in a network that strives to educate one student at a time using student-centered learning (SCL). For over twenty years, The Omni has successfully implemented the SCL approach to prepare students for college and life after schooling. In this research, six different students were interviewed, along with three teachers and an administrator in order to understand how the self-efficacy of students changes over their time at the school as well as the variety of ways in which they are supported in their education. Additionally, data such as multiple observations and learning data was used to gain insight into how the school operates in order to best serve the students.

The first research question focused on the effects of SCL on the self-efficacy of students. More specifically, the research focused on how the self-efficacy of a student changes as they move from a traditional, teacher-centered school to one that is student-centered. Currently, a paradigm shift is occurring in education in that twenty-first century skills are becoming increasingly required by employers, but the traditional way of schooling is not necessarily instilling these in today’s graduates (Aslan & Reigeluth, 2013; Jaros & Deakin-Crick, 2007; Watson, Watson, & Reigeluth, 2015). SCL allows students to practice these skills while also allowing them to take the lead in the focus of their education (Nellie May Educational Foundation, 2015; Schuitema, Peetsma & Van der Veen, 2012). As a result, SCL can potentially
increase student engagement in school, as well as the likelihood of completion. This increase of engagement, enjoyment and independence can lead to better skill retention and solidify long term learning (Lee et al, 2014). In order to learn more about these relationships, a case study of The Omni was done to see if an increase in the self-efficacy of students could be observed in a setting where SCL is implemented.

In addition, teachers can have expectations of students that are based upon previous student achievement or grades (Kaiser, Retelsdorf, Südkamp & Möller, 2013; Rubie-Davies et al, 2014). This can be changed if the teachers form a strong relationship with the students and get to know them as more than grades or numbers (Wiesman, 2012). Since SCL uses teachers as mentors and advisors, it could follow that they would form strong relationships with their students and therefore find their perception of students changing over time.

This chapter presents the findings of the case study of this particular institution. It begins with context for the reader in which to understand the learning environment. It then gives an overview of the six students, three teachers and one administrator who participated in the interviews. Next it reviews the two domains and related themes that emerged from the research. Finally, it ends with a summary of the findings.

**Context of the Learning Environment**

In order to truly understand the research, one must first have insight into how the school operates in order to best support the students in the SCL environment. This description of the learning context is based on interviews with faculty and students, observations of typical school days and the examination of school documents. In almost every aspect, The Omni is different than a traditional high school. In fact, once I began interviewing the teachers, I realized that
some of the questions I had prepared were written assuming the structure was similar to a traditional school. As a result, those questions were irrelevant as they didn’t apply to the daily life of the school.

**School structure and schedule.** To begin, The Omni has a little over 900 students and is divided into four different buildings. Each building has its own principal and consists of two or three classes of each grade, ninth through twelfth. Each building has its own personality that is fostered by the individual principal and the other adults in the building. This personality develops in response to each building’s students and their interests. School days start with community meetings where the entire building comes together to talk about issues that are specific to that group. The administrator I interviewed, Patricia, spoke of how this gives a small school feel to each building and serves as another way for students to feel supported.

Each classroom, or advisory, is composed of fifteen to sixteen students and is led by one teacher, called an advisor. Not only do the students stay with the same advisor for most of the school day, but they stay with the same advisor, and the same peers, for all four years of high school. Practically, this puts the advisor in charge of the entire curriculum for their cohort of students. All subjects and approaches to teaching and learning are decided upon by the advisor, with input from their colleagues. This group model allows for strong relationships to form – both between the students and the advisor, and also the students with one another. In fact, a common description was that this approach made it ‘feel like a family’ for many of the students.

In addition to the set-up, the school schedule is very different from a traditional school. A typical day starts with community time for a half hour. As mentioned earlier, this is when the entire building comes together and celebrates accomplishments and birthdays as well as listen to presentations on various topics such as student council, fundraisers and a principal advisory
council. After this, the advisories go to their room until lunch. After a building-wide lunch, it is back to the classrooms until the end of the day. During the advisory times, it is up to the advisors to design a schedules that makes sense for their groups. This will include independent work time in segments of sixty to ninety minutes as well as lessons in things such as science, history, English or current events.

**Teaching and learning at The Omni.** The first major difference between The Omni and a traditional school is that the content and curriculum is almost solely up to each advisor. While the school provides benchmarks and professional development for various subject matters, an advisor can structure lessons and content however they see fit. Through reflection and collaboration with their principal, they try to recognize content that may need more focus and work to get it in. Each advisor discussed how there were certain areas that they weren’t strong in themselves, so they often avoided it their first year or two of teaching. Danielle put it this way “History is not the thing I'm most interested in, so that's the hardest, I think for me, but I am really interested in social justice and current events, so I've tended to just lean more in that direction.” This is the point of The Omni. The focus is not on getting through content because it’s what every high school student gets exposed to; instead it is about finding students’ interests and teaching them the skills to learn more about those topics so they can eventually do it on their own. For Evan, this freedom was overwhelming at first. His thoughts were “…you have so much autonomy it's kind of daunting because it's like what's important? What's important is what's important to the students.” His idea of what makes a strong curriculum is what his students find important indicates the true student-led nature that occurs at The Omni. This autonomy is not just found in the way in which curriculum is taught. Danielle thought there would be benefit to structuring her advisory in a way that included a two year gap, so ninth
graders would be with eleventh graders. Additionally, she felt having an all-female advisory would allow for more open and frank discussion. As a result, she has been able to have this advisory set up for the past nine years.

**A typical school day.** It should be noted that these lessons do not look like traditional teacher-led instruction with a textbook as the source of information and the teacher doing most of the talking. Instead, emphasis is placed on discovery based learning and teaching ways to find answers and critically think about what those answers mean. Advisors described the initial discomfort of their first year without a textbook or a specific curriculum. However, once they got used to how things work, they enjoyed discovering the answers with their students or finding resources that help their students learn. Additionally, during a typical school day, the advisory attends physical education and math as a group. Math, or quantitative reasoning, was added as its own class after the school received feedback that their graduates’ math skills were not at the level needed for collegiate success. Other ways to approach learning may happen during a school day in response to advisor’s ideas. For example, a book club was started this year where each advisor in the building chose a different book they wanted to read. The students signed up for a group based on their interests and met with that group’s advisor (not necessarily their own) once a week to discuss the book and its associated themes.

During independent times, students may be scheduled to do other things around the school, such as meet with clubs, meet with potential internship sites or even participate in interviews by an individual doing research. The advisor starts the day by going through the schedule, and then it is up to each student to manage their time accordingly. With help from the advisor, each student learns how to manage blocks of time and schedule various commitments throughout their tenure at The Omni. Obviously, advisor involvement changes from the first few
weeks of freshmen year to junior and senior year, when the students have acquired more skills
and can better manage time. Felicia, a veteran teacher, put it this way, “I tell them freshmen and
sophomore year, they work for me. Junior and senior year, I work for them.” From her
explanation, freshmen and sophomores students need more direction and guidance from her, and
they follow what they are told to do. By the time they get to be upperclassmen, students have the
skills to manage things on their own, and they ask her for the specific help they need.

From observations, the time in the classroom seemed to reflect the feel of a typical
workplace. Students know what work they have to do and can get it done in their own way
working in groups or on their own - and in whichever workspace they like. During independent
work time, students chat quietly, listen to music on headphones or excuse themselves to run an
errand in the building. It was obvious that the students, from day one, were given a level of
independence and trust that is not always present in traditional schools.

After school, there are a variety of extracurricular activities and clubs that students are
encouraged to attend. Opportunities such as yoga, foreign languages or music lessons are there
to give students a chance to find and pursue additional interests. As students get older there is an
opportunity to take college courses (not just AP) for credit through Rhode Island College. This
allows students to experience college level work and earn in high school so they can graduate
college sooner, saving money and time. These courses may be during the school day or in the
evening, and it is up to each individual to manage their own workload.

*Connecting learning to the real world.* The last major difference at this school is that for
most of the year, a typical school day only happens on Mondays, Wednesdays and Fridays. On
Tuesdays and Thursdays, students are expected to be at an internship that reflects a personal
interest. These internships are as varied as the students themselves. For example, I talked to one
student who was at the New England Aquarium in Boston, one who was in the AI department at
Brown University, one who was at a dog grooming business and one who was an assistant nurse
at an elementary school. Both the student and educators feel that these internships are key to
overall student success. Advisors routinely visit the internships and work with on-site mentors to
support students’ growth. Back in the classroom, the students are expected to work on a research
project that not only explains the details of their internship, but also delves into something
interesting about their topic. In addition to their research, each student is expected to propose
and possibly implement a positive change in their internship community. At the end of each
trimester, every student gives a forty-five minute presentation encapsulating their internship and
research. These presentations are peer-reviewed to allow students to practice critiquing one
another as well as receiving feedback from all types of people.

Assessment and planning. Because of the marked difference between The Omni and
traditional schools, assessments, curriculum maps and report cards are different. To begin, each
student has a specific learning plan that is tailored to them (Appendix J). The learning plan is
key to a student’s progress. Periodically, the advisor, mentor, student and student’s family will
meet to discuss the plan and any necessary additions or amendments. The goal is to have the
student lead the discussion and identify areas of strength and weakness as well as where their
interest may lie. This learning plan becomes the basis for future assessment as progress is
measured against it. As students finish the trimester, the advisor meets with the student and the
student’s family to update the plan and set new goals. This plan becomes a roadmap of student
growth and achievement, as it is a living document that contains samples, or links, to student
work, research and writing.
After four years, this learning plan becomes the information that goes into The Omni’s unique transcript (Appendix K). After more than twenty years of graduating students, this transcript is widely accepted by colleges in the northeast; however, it took work to explain how to read it to higher education admission departments. Even today, The Omni’s own counselors travel to various colleges to walk admission counselors through the transcript and to explain the unique set up of the school.

This background became apparent after I spoke with the advisors during the first round of interviews. Based on their information, I was able to tailor my questions for the students to better understand their experiences with SCL. Additionally, it allowed me to focus my observations on aspects of the school that helped to illuminate their unique process for teaching and learning.

Participants – Faculty and Staff

Patricia. Patricia is a high-level administrator at the school. She came to teaching from a traditional school of education and had experiences while student teaching that led her to doubt if that education was the right field for her. During her first position, which was in the city, she felt like an outsider because, as she said “…nobody wanted to be there, the kids didn't want to be there, the teachers didn't want there.” As a result, the veteran teachers wouldn’t talk to her, as they felt most new teachers didn’t last, and they didn’t want to waste their efforts getting to know her. In her second position, she was in the suburbs and was isolated because she was the only person of color in the school. Luckily for her, she took a random walk through the art gallery at her college. She heard an educator discussing the art with high school students and couldn’t believe how engaged they were with the material. She spoke with the educator, who happened to be just starting The Omni. She took a job as an advisor in 1992 and in 2003 became an
administrator. Patricia believes that SCL and the model at this school can work for any student. When I asked her specifically about it, she said, “Absolutely. I think every kid and any kid can come here and be successful.” The few who haven’t found success, she believes, are because they needed resources that no public school has – they either had personal issues that needed to be addressed before they could focus on education, or they were drawn into activities in their neighborhoods that took them away from education all together.

Danielle. Danielle is in her thirteenth year as an advisor at the school. She has worked with groups of students through the cycle of starting at The Omni through to graduation three times. Before coming to this school, she was an English teacher in New York. While she enjoyed working with the students, she wanted to be in a progressive school one that wasn’t teacher-centered. She had attended a middle school that was started by the same person who founded The Omni, so she visited The Omni and applied. Danielle described the first year as very challenging as she wasn’t ready for the focus on team building and relationships that was needed in order for the advisory to succeed. As she said, “I think there were a lot of skills I didn’t have that I needed to acquire to be able to do that well. I did not have the skills to do team building stuff or there was a whole advisory culture piece that I had not done anything to prepare for.” Additionally, she didn’t quite understand the idea that as the advisor, you had four years to work on all of the skills and content you wanted to cover. As a result, she learned she needed to take time to build foundations in order to allow the students to progress the best they could. After her first time through the cycle, Danielle decided to change her class to a mix of students who were two years apart, ninth and eleventh one year who would become tenth and twelfth the next. Additionally, she has made her advisory all female. Danielle believes that this
combination allows the girls a chance to be themselves, learn and get inspired from students who are older than they are.

Evan. Evan is in his fifth year teaching at the school. He has been through the cycle once and is now back with ninth graders for the first time since he started. Evan began his career as an EMT worker and transitioned to working in group homes for developmentally disabled adults. He then worked in a group home for teenagers with emotional disorders that caused them to not be successful in the general population. His last job before this school was at a small school specifically for special education. He loved the work, but the school disbanded, and he spent a year substitute teaching in the Providence area. During that year, Evan heard about The Omni through a former coworker who thought he would be a good fit for the environment. In his previous school, Evan was responsible for all aspects of his students’ learning, so his colleague thought he would be comfortable with the unique and autonomous structure of The Omni. Evan’s first year was also challenging. He was comfortable with the team building and relational aspects, but had problems envisioning how to prioritize and when things needed to happen. Like Danielle, he tended to avoid subjects that he wasn’t comfortable with, which were mostly science and history. As his first group of students reached eleventh and twelfth grade, he realized he needed to expose them more to those subjects, so he used professional development time to get more comfortable with ways to teach those areas. Now, he enjoys discovering answers with the students if he doesn’t know them already. Evan also admitted that it was tough using the learning plan to drive student needs. He felt that he got better at it as the years went on, so he is looking forward to applying the knowledge he learned during his first cycle through to this current group of ninth graders.
Felicia. Felicia has been teaching at The Omni for twelve years and is now starting her fourth cohort of students. Felicia started teaching as an adult education teacher in Pawtucket, RI teaching ESL, GED and citizenship classes to the Cape Verdean community there. Felicia always shied away from being the center of attention, but realized that she enjoyed - and was a very good - teaching. She wanted to stay in adult education, but the piecing together of part-time work was difficult. So Felicia moved to teach at an alternative school for students who weren’t able attend traditional schools for a variety of reasons. While she enjoyed being able to work with a small number of students and teach a variety of content areas, which she enjoyed, she ultimately felt unsafe in some of the situations. She saw an ad for The Omni and thought it would be a good fit for her skillset. During her first year, she was confident in her classroom management skills; however, she wasn’t ready for the lack of a prescribed curriculum. Luckily, she was put into a team of veteran teachers who supported her, but it was still unnerving to be responsible for every aspect her advisory’s day. Now, Felicia is the veteran advisor working with two new ninth grade advisors. She loves this role, as she enjoys the collaboration and remembers how important that support was for her.

Participants - Students

Violet. Violet is a junior in Danielle’s advisory at The Omni. She has always been a good student. Violet was going to attend a well-respected traditional high school in the Providence area, but heard about The Omni from her aunt, who worked there as a bus driver. When she visited, the idea of internships and the fact that she could wear a hat during the school day appealed to her, and she felt The Omni would best prepare her to attend college. While she thought she would be able to adjust easily, learning the flow of the day and how to manage her own time was a challenge. However, as a junior she is now confident and excited about her
future. She has had internships at a woodwork design firm that gives back to the community, at Rhode Island School of Design (RISD) in their IT department and now at Brown University assisting in research on self-driving cars. She talked about how she has grown from being shy and introverted to someone who is not afraid to speak up, ask questions and advocate for herself. When I pressed Violet on this more, she said, “I didn't really realize it while I'm in school, but once I'm doing other activities out of school, I tend to speak up more than others. It made me realize, wow, if I was going to a traditional school, I would probably be sitting here in silence.” Indeed, from her demeanor during our conversation, I would never have guessed that she was shy just two years prior, which demonstrates the impact that The Omni has had on her life.

Faith. Faith is also a junior in Danielle’s advisory at The Omni. Faith attended a private school before coming to The Omni, and she felt that her old school was stressful and made her not enjoy learning. In her own words, “I struggled a lot. I hated doing homework, I hated math, I hated reading. I hated everything. I didn't want to be there.” She only stayed because her parents liked the school and thought it would be good for her success. After reflecting on her previous school, Faith mentioned that it wasn’t the way she learned best. At The Omni she has found success, noting that she gets 100% of her work in on time. Faith said the atmosphere at The Omni is something that pleasantly surprised her. She was scared when she started because she was the only person from her old school to attend, so she thought she would be an outsider. At first, she was not used to sharing what she did over the weekend with her advisory, but she slowly came out her shell. Now, she says, “… I feel more comfortable telling them, ‘Oh I did this, this is really fun.’ We all enjoy sharing a part of ourselves.” Additionally, she now feels comfortable participating and being a leader in her advisory as well as the school itself. Faith
has had internships at an elementary school and is currently at the New England Aquarium. She is interested in going into education or marine biology.

**Tracy.** Tracy is a freshman in Danielle’s advisory at The Omni. Tracy heard about the school from her guidance counselor in middle school. She has always been a good student and actively sought out the best high school situation for herself. When I asked why she chose The Omni, her answer was, “Probably the whole internship thing, because I want to better my future as early as I can so I'm set up and ready [for the real world].” Since the school has been around for twenty years, its reputation for providing real life training has grown and is now attracting students from all over the state.

Tracy has an interest in becoming a mammal trainer, so she is interning at a college for marine science and technology. At the moment, she is helping to care for the animals and assisting in research projects, but she hopes to develop her own research when she is old enough to legally do so. While Tracy has always been a very good student, she feels that the skills she currently lacks and is working on are professionalism and public speaking. She also feels that the experiences she will have at The Omni will help with these skills. Additionally, despite only being at the school for eight weeks, she already feels a bond with her advisor that she never experienced with any of her teachers in her previous school. As she put it, at her old school they “…[didn’t] try to make everyone close as possible, they kind of just, [treated students like] you're here to learn. Here, they try to make you like a family.”

**Quinn.** Quinn is a freshmen in Felicia’s advisory. Quinn found out about the school when her brother, who is in eleventh grade, visited and took a tour. After going on the tour, she liked the way the school was set up and its focus on actually understanding the material. While Quinn has always been a good student, she felt like the teachers at her old school were only
trying to get through material so they could say they completed it. She never felt supported in her understanding and as a result, didn’t care about the material. At The Omni, she feels like the adults in the building want her to have a deep understanding of the material, and she enjoys that. When I asked Quinn for an example, she said, “Here, it's at your own pace, so if you don't understand something, they'll go more in depth with it, and they'll help you whichever way you need to be helped, so it's more hands on with us. So we get more understanding.”

Quinn is interested in studying education or criminology, so she is currently interning at her old elementary school assisting a former teacher by leading reading groups and helping with math. Eventually, she will be leading her own lessons that she will create with her mentor and advisor.

**Veronica.** Veronica is a freshmen in Felicia’s advisory. When I spoke with Veronica she had just finished her first exhibition at The Omni. She was noticeably excited as it had been worrying her for weeks. When I asked her how it went, she noted how the familial aspect of the advisory was supportive. She said, “It was a bit scary at first, but then I got more into it and I liked just speaking to the people. Especially cause my friends were there, so like if I looked at them I felt more calm”.

Veronica was going to attend another, more traditional, high school in the area, but upon further examination, she realized it was just more of what she was doing in middle school. She was bored in middle school and felt like most of the teachers were focused on moving through curriculum as opposed to making sure the students learned the material. Her description of her math class is telling: “She [the teacher] would spend 20 to 30 minutes explaining how to do all this and that, and we never really got to learn all the stuff. So when it came to taking a test, a quiz, and we had a question, she would be like, ‘I don't know, I don't know what the questions
are, just figure it out on yourselves.” In contrast, Veronica mentioned how the current QR (math) teacher asks them individually about what they need in order to understand the material. Veronica is interested in medicine, so she is currently an assistant nurse at an elementary school where she takes the vitals of students and calls parents to explain what may be ailing their children.

**Frankie.** Frankie is a freshmen in Felicia’s advisory. Frankie attended an academically good middle school academically; however, he said the community of students was not positive. He recognized that the group of people he was friends with in middle school was having a negative impact on his life. When he heard about The Omni, he liked the idea of how the school was run and also looked forward to going to a place with new people. Like others, Frankie appreciates how all of the adults take the time to make sure students understand the material and make it relevant to their lives, as opposed to just getting through it. He also appreciates the way his advisory operates and how it feels more natural than a traditional school. For example, he said “…sometimes we goof around while doing the work. She [Felicia] even goofs around with us. But when its work time, we have to work and when it's fun time, we have fun.”

Frankie has an interest in starting his own business, so he is interning at a dog grooming business that is owned by a former Omni student who started it from scratch. While he loves animals, he is especially interested in learning how this individual started and is running their own business.

**Research Findings**

The findings in this study point to two major themes that help support the research question (see table 1). The first theme, ‘Finding Student Passion’ and the sub-themes
associated, illustrates that once students find things they are interested in, they can then engage in activities that promote self-efficacy in their abilities through a supportive and structured environment. This then translates into the transfer of those skills to college and beyond. The second theme, ‘Changing the Educational System’ and its supporting sub-themes, provides insight into how, in order for authentic student-centered and student-led education to take place in the way envisioned by The Omni’s founders, the traditional school set up had to be significantly changed. It should be noted that both themes have aspects that address the research question. This will be discussed in the last chapter. The remainder of this chapter will explore these themes and sub-themes using information from the interviews, the researcher’s field notes from observations and supporting data provided from the school.

Table 1.

<table>
<thead>
<tr>
<th>Themes</th>
<th>Sub-Themes</th>
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<tr>
<td>1. Finding Student Passion</td>
<td>a. Student Led Learning</td>
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<td>b. Student Happiness</td>
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<td></td>
<td>c. 21st Century Skills</td>
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<td>2. Changing the Educational System</td>
<td>a. Advisory Approach</td>
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<tr>
<td></td>
<td>b. Connecting Learning to the Real World</td>
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<td>c. Community</td>
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**Theme One – Finding Student Passion**

What was readily apparent throughout this process was how the passions, or interests, of each individual student was at the heart of everything the school does. From day one, students
are asked to explore their interests and attempt to find things they are excited about. At The Omni, it is understood that if a student finds something that interests them, then they will be more likely to undertake the steps needed to achieve a job in a related field. It is only after the passion is found that teaching and meaningful learning can happen. As Danielle said,

The best way to engage a student in learning, in deep learning, is finding something that they're really excited about and interested in. … [When students] get an experience of getting really excited about something and [they] want to learn, and it doesn't feel like work. You have that experience of flow. And that is what I want my students to experience as often as possible.

From what I observed, almost nothing else can happen at The Omni without a student exploring their own interests and passions. This was obvious with the freshmen I spoke with and observed. For at least the first month of school, the advisors were doing different activities to help the students find their interests and passions. These activities involved many skills, such as collaboration, presentations, interviews, research and professional writing. The students completed most of the work, as evident from their completion charts, and then began looking for internships in these areas. Interestingly, the process was deliberately shared with the students so as to involve them in their own learning. Felicia, used the following example of how she talks to her students about how their passions can lead to learning. “You don't just get an internship. You have to make a call. You have to make that cold call...that's your first impression. Then you have to go on an interview, so let's practice basics of interviews.” She went on to talk about how hard it would be to teach any of those skills if the students weren’t already motivated to want to get an internship in an area of interest.
This idea of students finding their passions is at the center of SCL at The Omni. Once a student finds something that excites them, they will be more likely to do what they have to do, and learn skills that are necessary, to find out more about their interests. During the first month of school at The Omni, advisors weren’t focusing on a particular skill day after day. Instead they were assisting the students in researching things that interested them, writing résumés in order to obtain internships, practicing public speaking skills and working on how to interview for jobs. At The Omni, it was apparent that the students were driving the skills and information they needed to learn, while the advisors were there to assist them.

Obviously, not every student is going to find their passion during the four years they are in high school. However, even showing students that there are people who work in areas they are passionate about, through internships and conversations with their peers, can be eye opening and expand their expectations of what they want from life after graduation. This was one reason why Danielle chose to have a mix of ninth and eleventh graders in the same advisory. She felt that having freshmen see juniors who were excited about and discussing their internships motivated the freshmen better than any lesson she could give. Once students find their passion, or at least something they are curious about, it allows the other sub-themes discussed in this chapter to take place. These sub-themes of student-led learning, student happiness, and 21st century skill learning all are possible when students have interests that drives them.

**Sub-theme one – Student-Led Learning.** The first thing that happened when visiting Danielle’s class was a review of the daily schedule. During this process, each student received a copy of their responsibilities and commitments for the day, including meetings, work and extracurricular activities. Immediately following, some students broke into groups of two or three, while others worked quietly on their own. For the next two hours, students worked on
their various assignments, checking for guidance from Danielle as well as one another on a
frequent basis. At no point were there bells to signify when to change classes, and Danielle
never told a student to work on a specific task. Instead, the students were trusted to work on
what they felt was most important to them. In walking around the room, all of the students were
engaged in their own individualized work. In practice, this meant some were on their computers
doing research for their internships, some were in small groups working on Psychology, others
were working on a paper that was due that day, and a few were talking to Danielle. In addition
to getting their work done, they were also talking excitedly with one another about their
internships, interviews and college level classes they were taking. In fact, it felt a lot like any
modern work environment where all that was needed was a workspace and an internet
connection. It was also during this time that Danielle met with some students one-on-one, to
review their learning plans and to check in about major projects that were approaching.

All students who attend The Omni have the freedom to decide what to work on and
when, giving them control to manage things as they see best. Many students often have trouble
at first, as many talked about their first few weeks being overwhelming without being told what
to do all the time. When asked about her first year, Violet said she used to procrastinate all the
time and had a lot of late work. She has since tried a variety of approaches and now knows how
to schedule her day in order to complete her work on time.

Two other key aspects of the student-led learning are learning plans and trimester
presentations. Each student meets with their advisor, family members and mentor to come up
with a learning plan unique to their goals. These meetings, while facilitated by the advisor, are
meant to be directed by the student. During their freshmen year, students are given major topics
to cover, but they establish their own methods for demonstrating growth and learning. By the
time they are juniors and seniors, they determine which aspects of their trimester should be included, as well as how they will demonstrate that learning took place. Over time, the advisor’s role becomes more supportive and less prescriptive, helping students create timelines and find additional resources. The goal is to develop a plan that encompasses all of an individual student’s interests, research and hands-on internship experiences. These learning plans, in addition to the material used as evidence of attaining the goals set forth in the plan, are usually what the students work on throughout a regular school day. During the exhibitions at the end of trimester, the students present their learning plan as well as the materials they have created for that plan. Students can present in any way they choose, and it is a chance for them to walk the audience through their recent growth. The key to each of these steps is that the student drives the various aspects of their learning, as well as gathering the evidence they will use to present the ways in which they have learned.

The advisor. An advisor’s role is to support the interests and direction in which a student is leading and to ask the essential questions that will challenge their students to think about things in a more holistic way. In fact, Patricia mentioned much of the professional development that happens at the school revolves around how to support students in creating in-depth projects that are challenging and give back to the community in some way. An example of a successful student-led experience comes from a student in Evan’s previous advisory. This student was passionate about protecting elephants in danger of harm due to the illegal ivory trade. He had no idea what this student could do with her passion, since she lived in the city and was talking about elephants in Asia. His approach was to keep saying yes to her ideas and support her in any way he could. Instead of making her change her mind, Evan encouraged his student to keep exploring ways to have an impact. At first, she came up with the idea of raising money to
support a charity that protected the elephants. Once she reached that goal, she incorporated another passion of hers, filmmaking, and had the idea to visit the charity in Thailand to make a movie. Evan again supported his student by letting her figure out how her idea would work and not dismissing it outright. This doesn’t mean that Evan was not a resource; he acted as a mentor and sounding board for the various ideas she presented. In the end, she raised more money and spent winter break volunteering and filming in Thailand. Her final exhibition was a screening of the documentary she made. This graduate is now a freshman in college, and she already has the experience of financing and producing a movie, something that probably would not have happened at a traditional school.

**SCL assessment.** The student-led learning concept follows the student to assessments, again with the student leading the process. Felicia noted that in the follow-up meetings after presentations, “the student…can talk about [how] ‘I didn't meet my goals at all, but I feel stronger as a person.’ ‘I feel more confident,’ or ‘I feel like I can go into a business and shake their hand and introduce myself,’ or ‘I can submit an article and have it be published,’ or whatever it [the evidence] is.” This allows the students to be involved in reflecting upon their own successes as well as what they still need to work on. Hopefully, it not only instills in them the idea of being a lifelong learner, but also gives them the skills to be able to reflect on their own progress.

For many, the lack of traditional grades is something that takes getting used to, causing concern and worry for many new families to the school. Danielle spoke of how she gets many calls the first few months from families who want to know how their children are doing. It isn’t until they see the first exhibition and have that ‘Aha’ moment that they see how much their children have grown. When I pressed her more on how she knows, as a teacher, that students
have grown, she equated it to being a parent. As she put it, a parent just knows when their child has grown. They don’t need early learning standards to know when growth has happened because of their relationship with, and their holistic understanding of, their child. Danielle then spoke of the students’ four-year journey, saying she couldn’t “…think of a single student who at the end of four years had not very obviously, to everybody who knows them, their teachers, their parents, their mentors, [had] grown from where they were when they started.” To her and the rest of the advisors, assessment is obvious as they journey with students through their four years and let them lead toward their interests. The key to the success of every student lies in the fact that they are responsible for leading their own learning, yet have the support of a group of adults that are not only there to help them succeed, but want them to as well. As a result, an Omni graduate, as Evan said, is one “…that's got a vision and they've got experience…they know how to seek out opportunities and how to apply skills that they've learned.”

Sub-theme two – Student Happiness. Another aspect of The Omni that stood out was the engagement and happiness of the students on campus. Whether formally interviewing them or just speaking to them in class, most students seemed happy to be at school. This is also evident by the fact that the school received recognition for being the number one high school in the state for school engagement in 2017 by the State Department of Education. Every student interviewed spoke about the change in atmosphere they felt at The Omni compared to their middle school. Tracy spoke of how most of her classmates in her middle school had given up on getting good grades because they felt no one cared about their interests, voices or success. Likewise, Frankie spoke about how he felt material was just presented to him in middle school so the teacher could say they got through content. Whether it was true or just perceived, many of the students felt that schooling in general was not for them until they came to The Omni.
**Student voice.** At The Omni, the unique approach to student voice seems to increase student engagement and happiness. While this starts with the students finding their passions, it continues with the way their advisors and other adults take the time to help them understand material. Quinn put it this way, “I feel like they really want us to improve, they don't really care about the time limit.” The advisors see this as part of their job as well. In talking about what sciences she was planning on teaching to her students, Danielle didn’t talk about topics, instead she said, “I want my students to know what the different sciences are and to have tasted enough of it to know if it's something they're really excited about and want to pursue more.” The advisors don’t present curriculum to simply check off a box dictated by the time year. Instead, they present material aimed to expose their students to a variety of topics and to build a curriculum in conjunction with, and in response to, student interest. As a result, students feel like the adults care about their learning and really want them to succeed. When I asked Violet how her performance at The Omni compared to her middle school, her response illustrated this: “I feel like I get more done, because she's [Danielle] there for us trying to support us to be our best, and do our best.” From my research, it was obvious that the students felt supported in their learning and as a result were excited to be there.

**Student accountability.** Often, SCL can be misunderstood as being all student led with no accountability. At The Omni, it was obvious that students are held accountable for all work, including when it’s late, which they all actually appreciated. As part of their learning profile, each student receives a pie chart that depicts the status of various work assignments. The chart designates work as “handed in on time,” “late,” or “missing.” Every student interviewed spoke about the benefits of this pie chart, which they receive updated copies of continuously throughout a trimester. First, they liked the way it held them accountable. Tracy said it showed
that her advisor actually cared about her education. She mentioned that in her old school, her teachers never cared if she got things turned in or not. At The Omni, Felicia will ask her why things aren’t turned in and follow up with suggestions on how she could get it done. Additionally, if her work is late, Tracey doesn’t just get a zero, which she said would make her give up on the assignment or class. Instead, she and Felicia work on a way to get the project done well and have it still be worthwhile to her end goal. As Evan noted, the main focus is not only to get the students to turn things in on time, but also for them to learn something useful from the material. The students mentioned how this makes them enjoy the process and feel connected to the material at The Omni, whereas in middle school if they missed an assignment and got a zero, they wouldn’t make it up.

This combination of accountability, taking time for understanding, and including student voice seems to result in students who feel supported and are therefore more engaged, confident, and ready to continue learning.

Sub-theme three – 21st Century Skill Learning. Throughout the ebb and flow of the academic year, students at The Omni are constantly exposed to 21st century skills that they continually work to improve upon during their time at the school. This is no accident. When asked what they see in their graduates, Patricia responded, “We expect that every kid who graduates here is confident, is a life-long learner, can figure out how to find resources, can network, can ask for help.” These are valuable skills that many high school students at traditional schools don’t always get to work on. During my time at The Omni, I saw students actively engaging in skill-developing tasks, such as interviewing for internships, cold calling potential mentors, performing research and managing their workloads based on their personal schedules.
Advisors take this part of their job seriously. It can also be difficult for new advisors to incorporate this into everyday lessons. All three advisors interviewed spoke to the importance of building relationships as the foundation for all they do. According to them, this community and relationship building allows for the rest of the learning to happen. Danielle said, “[I]t took me a while to figure out the importance of doing those things [relationship building], and that if the advisory culture wasn't there nothing else was going to happen well.” Evan described the overnight camping trip he took with his new students as an important first step for the group. Not only did it pull them together as a unit, but he used their discussions on the trip to fuel the topics he would explore with them for the first few months of school. This relationship building reflects real work environments, as it models the benefits of being a positive member of a community- a valuable skill in today’s workplace. As with other aspects of their learning, advisors involve students in the process, explaining the reasoning for many of these community building activities.

Once these relationships are established and students have started to find things they may be passionate about, the learning process easily follows. While this learning includes traditional subjects such as writing, math and reading, 21st century skills are taken just as seriously. Almost every aspect of the school day is tailored to encourage students to put these skills to use in a supportive environment. This focus on skills is noticed by the students. Tracy, when talking about her upcoming exhibition, noted how nervous she was. She then thoughtfully added, “I'm nervous because I hate presenting… but I feel like I'll do kind of good, because I just feel like they've prepared me.” For a student who has only been at the school for two months to have recognized that she is gaining expertise in needed skills says a lot about the The Omni’s approach.
Time management and real world relationships are two skills that were repeatedly mentioned by both students and advisors value as an advantages gained from attending The Omni. In regard to time management, students are expected to schedule their days in ways that makes sense for them. I observed advisors speaking with students about their commitments and workloads, and then guiding them with ideas for appropriate deadlines to complete their work. I never saw an advisor tell a student to do something instead, they would allow students to make their own decisions and support them along the way. As a result, students seemed to be more confident in their ability to handle various commitments and were comfortable taking responsibility for them. The two juniors I spoke to, Violet and Faith, discussed how much they had grown since freshmen year in terms of time management. Initially, they each would procrastinate and put things off during the school day, but they quickly discovered that strategy didn’t allow them to get work done efficiently or effectively. With Danielle’s help, they were able to structure their days to better match the needs of their various commitments while still accomplishing assigned tasks. Currently, they schedule all of their own commitments, including college level classes, internships and extracurricular activities.

Students and advisors also spoke about important skill of interacting with adults in the ‘real world’ in order to build relationships. Throughout their internships, students interact with adults from various walks of life and are expected to be contributors in the workplace. These experiences allow students to create professional relationships and navigate the fluctuations of work life while being supported by their school community. Danielle has received comments from people outside The Omni about how well adjusted students from the school are when they enter a workplace. This skill can only help students as they pursue future careers.
At The Omni, students learn 21st century skills within the context of pursuing their passions. While traditional high schools may teach similar skills, they are usually presented in an almost artificial way: explained by teachers and therefore not as likely to be retained well by students. At The Omni, students need to internalize these skills in order to be effective in the various aspects of school life. As a result, they take these learned skills with them to college and beyond.

**Theme Two – Changing the Educational System**

The other prevailing theme that emerged from the research is the idea that in order for SCL to work and for true relationships to form, The Omni had to change the traditional educational system. None of what happens at The Omni has come about by accident. Instead, it has been purposefully implemented to create an environment that supports students in developing skills that will empower them for lifelong learning. The sub-themes that support the idea of changing the system are the advisory approach, the opportunities to connect learning experiences to the real world and the focus on community.

**Sub-theme one – Advisory Approach.** The most striking change to the traditional education system at The Omni is the advisory approach. In most high schools, students would be switching classes every forty to sixty minutes meeting with six or seven teachers per day. While many excellent teachers in traditional schools find ways to connect with their students, students can still hide or slip through the cracks if they wish. At The Omni, students spend all day with the same advisor, forming a relationship that becomes the foundation for that student’s educational progress. Additionally, the students stay with that advisor for all four years. This model allows advisors to get to know the students and their families on a level that would be almost impossible in a traditional setting. Not only does this create strong bonds between
advisors and students, but it also forms them between students and their peers. All of the students interviewed referred to their advisory as either a community or a family that they knew they could rely upon when needed.

During the exhibition, these close relationships become invaluable to the success of the students. Family members attend and listen to what their child has been working on throughout the trimester, while their peers listen, encourage and provide feedback. After the exhibition, it’s common for the advisor, student and family to meet in order to celebrate the successes and decide what needs to be focused upon next. These meetings also serve as opportunities for the advisors to get families involved in supporting their children’s successes. Felicia described how she used this time to gain the confidence of a particular family of a student she was concerned wasn’t learning how to be independent. This student had an internship in a part of the city her parents felt was unsafe, so they would drive her there and pick her up daily. Felicia was concerned that this student would not gain the skill of navigating public transportation on her own if she was always given rides. Through the relationship built with the family, she was able to develop a timeline where the parents would drop her off and pick her up for a few weeks, then just drop her off for a few more weeks, then let the student take public transportation after that. This type of coordination between advisor, student and family would be almost impossible to create in a traditional setting.

As mentioned earlier, the advisory model allows the students to stay together for four years. This results in the students building relationships with peers that go a long way to provide support and guidance. Many students referred to their advisories as ‘their family’ and mentioned how they know so much about one another. Faith talked about how in middle school, she found herself pushing other students away and not connecting with them due to insecurity and shyness.
However, at The Omni, she says “[H]ere in the classroom since you’re with these people for all four years, you get really close. You get to know everyone and it's a really comfortable theme here, you can talk about whatever.” In fact, Monday mornings usually begin with each student talking about their weekend and what they were excited or concerned about in the coming week. In Danielle’s class, this led to discussions about birthday parties, local football games and current events, where students honestly expressed their thoughts and concerns. Throughout the discussion, Danielle let the conversation flow naturally and asked questions that showed concern and interest for each student. Never did it feel like she was rushing the students to finish in order to get to the next thing.

This is another part of the advisory model that is obviously different, the feeling that there is enough time to get things done and everyone is working at their own pace. In fact, the most important aspect of any ninth grade advisory is building trust and relationships among the group. The idea is that if this foundation of trust can be built, then students will be better able to learn the things they need in order to be successful. As a result, advisors and administrators have the long term view in mind. They are not trying to get through material by a certain date. Instead, they are trying to build relationships and instill certain skills in the students so they then can use those tools to grow. This idea came up when I asked Patricia if The Omni was suitable for every type of student. She believes that every student can find success at The Omni if given enough time. Most students respond over four years, but a few have had other issues that have gotten in the way. However, she thinks with enough time, they would have found success as well.

As a result of the advisory model, the students at The Omni have a group of people that become the foundation with which they build the rest of their high school experience. Since so
much of today’s world, both in college and beyond, is built on relationships, the advisory model allows students to practice all aspects of relationship building in a real way. Students are exposed to things like collaboration and conflict resolution in ways that are healthy and supported. As a result, they leave The Omni with the ability to navigate many types of social situations. Even after a few months, these changes are obvious. Veronica noted how shy she was in middle school, but now she says hello to everyone because of the confidence she has gained from her advisory’s support. It could be argued that if she stayed in a traditional school, she may not have had the opportunity to grow out of her shyness.

**Sub-theme two – Connecting to the Real World.** Throughout their four years at The Omni, students are constantly challenged to connect their learning to the real world. The most obvious iteration of this is the internships that happen on Tuesdays and Thursdays. These internships are tangible ways in which students can see their interests in action. They become the heart of the students’ experiences at The Omni and can be as varied as the students themselves.

Each student’s internship is the cornerstone of their school experience and is a major topic during their exhibition at the end of each trimester. When students secure an internship, their next step is to design a research project that addresses the internship. The goal is not only to explore some aspect of their experience, but also to design a project that gives back to the internship in some way. As one example, a student of Evan’s who was interested in health care was interning at a senior living facility. Instead of simply researching aging, she also designed a workout regimen to help keep seniors active. She then taught this regimen to the senior group she was working with. At her exhibition, this student spoke about her research and demonstrated what she had created. It is this multifaceted connection that is fostered at The Omni.
The internship also provides practical, real world skills that are carried throughout the student’s career. In order to get an internship, the students need to cold call potential employers, write a résumé and interview. With an average of two internships per year, this gives the students a variety of practice working with all types of people. This real world experience doesn’t end once they secure an internship. On site, students are interacting with various members of the community and are required to be professional. Danielle spoke of her student from a previous year who, as a freshmen, interned at the University of Dartmouth’s Marine and Technology building. This student was 14 years old and found success while working with people who were PhD students or older. As Danielle states, one unique aspect of The Omni is “…just putting them in those situations where they’re out of their comfort zones. And most of the time very quickly they adapt and they step up, and they are asking questions and doing real work in real situations that we don’t usually ask them to do [in traditional settings].” These tangible, hands-on experiences serve as a connection to the real world and could not be readily recreated in a traditional school.

The internships also introduce students to other adults that are outside of The Omni community. These connections often prove invaluable, as they teach students how to interact with many types of people. Veronica talked about how scared she was of the possibility that her mentor would get mad at her when she made a mistake. When the inevitable happened and she made a small mistake, her mentor talked her through why it was wrong and instructed her on how to do it right. Not only did this teach Veronica the correct way to do the task, but it showed her that her fear was unfounded.

**Sub-theme three – Community.** Upon entering The Omni, the strong sense of community was obvious. Almost everyone greeted and held doors for each other. Students and
adults alike asked to assist visitors in any way they could. This is not to say that other schools don’t have this feeling, but The Omni has made efforts to intertwine the idea of community into the everyday life of the students. In interviews, the idea of community arose in a variety of ways. The students spoke of their advisory as their family, describing how they have one another’s back and would do anything for them. Violet talked about the group text consisting of all the students in her advisory and how they keep tabs on one another when they aren’t in school. Danielle, the teacher, spoke about how she takes the responsibility of creating community very seriously, and she creates spaces and prompts for students to develop relationships with her and one another. Patricia summarized it best, noting that by the time November comes, it’s difficult to tell who the freshmen are because of the community and its unique ability to create authentic relationships. She said, “They're [the students] in an environment that's respectful, that's loving, and it allows them to be who they are and that includes them in their education.” This is ultimately the heart of an SCL education: creating an environment that not only includes elements of real world learning, but also allows students to feel supported as they learn. As Evan said, it’s the process of creating “…opportunities to work together, communicate, [and] understand each other in all our differences.”

It was evident that once students experienced this type of community, they not only felt more comfortable in their own learning, but they also were eager to create that community for others. Danielle recognized this during her first cycle through the advisory. During her second time through the process, she purposefully asked to have a mix of eleventh and ninth grade students. She felt that the eleventh graders provided a nice example and created a great atmosphere for the ninth graders coming into the school. Her students echoed that sentiment. Violet and Faith both talked about how as juniors, they have made it a point to check in with
ninth graders, knowing how nervous they were those first few months. Not only does this focus on community help the incoming students, but it also hones the skills of the older students as they figure out ways to assist and mentor younger peers. This is yet another example of how 21st century skills are developed in ways that could almost never be replicated in a traditional setting.

The idea of community doesn’t just end with the students. The school makes a concerted effort to create a feeling of community for the staff as well. First, the structural design of the school encourages this goal. The four separate buildings, each with their own academic leader, is purposefully creates the feeling of a small school. Each building has its own identity and is able to respond to the needs of its students while sharing in a common vision. Next, every advisor is part of a team of three or four colleagues who work together to create lessons and curricula that is challenging and relevant to the students. The team members usually have different backgrounds (language arts, science, history etc.) so they can work together to create multi-disciplinary content. As a result, the advisors need to collaborate in a positive way to create the material that will be used throughout the year. Felicia spoke of working on Friday afternoons and most Sundays with her fellow teachers to make sure they were not only creating curriculum, but also responding to the needs of their students. In order to support these teams, much of the focus of professional development revolves around using the various backgrounds of the advisory teams to help students create well rounded research projects that delve into topics in a multi-dimensionally and community relevant way.

Finally, community extends beyond the walls of The Omni. A student’s learning profile involves input from all stakeholders - advisor, student, family and mentors. This input from multiple individuals allows the student to incorporate multiple points of view into their work,
thus providing a richer learning. This community approach is similar to most workplaces, where multiple points of view determine the outlook and future of the team.

Perhaps the most striking part of the community aspect was observed during the exhibition portion of the trimester. Each student who was not presenting was assigned to attend an exhibition and not only take notes, but also come up with both written and verbal feedback for the presenter. In watching the students give feedback, I was struck at how they did so in a way that affirmed and encouraged the presenter. The students were clear on what they liked, but then spoke of ways to improve the presentation by relating it to their own experiences, or by giving clear reasons on why it would help. For example, in one presentation by a new student, who was clearly nervous, one junior observer suggested she use notecards so she could have something to refer to during her talk. The observer related it to his own first presentation and how he left out a five minute section because he was so nervous. He said he used notecards the next time, and he felt more confident this student could have easily just pointed out that the presenter’s nervousness was distracting. Instead, he related his own experience and gave the advice in a way that is more likely to be used. In another presentation, the presenter spoke about all that she did at her internship (taking pulses, using a stethoscope and taking forehead temperatures). A sophomore observer suggested she show the group what she did, not just talk about it. The observer said “I was very interested in what you said you did at the clinic, however I didn’t understand some of the words you were using. It would have been great to see what you did so I could really understand it.” Again, this observer related her own experience and not the perceived failings of the presenter. The presenters also showed unique qualities in the ways in which they responded. Each piece of advice required a response and the presenters did so graciously. This type of give-and-take would not have been possible if the community didn’t
have a strong foundation of respect. However, because the students were all active participants of same community built on trust and respect, the feedback was presented and received in a constructive manner.

From the multiple interviews and observations, it became obvious that The Omni community was carefully created and is purposefully maintained. In fact, Patricia discussed this as being one of her main responsibilities. Her job is to ensure that, regardless of building or advisory, there is the same feel of community and respect present. It is this community feel that allows for all of the other successful aspects of education to occur daily.

**Summary**

This chapter summarized the themes and sub-themes that emerged from the case study at The Omni. The information was gathered through interviewing six students, three teachers and one administrator as well as field observations and the analysis of other school artifacts. The school’s unique structure was described in order to give context for the study. This was followed by a description of the administrator, three teachers and six students who were interviewed. Next the findings were discussed, which pointed to two themes, each with three sub-themes encompassed in them. The first theme, finding your passion, was supported by the sub-themes of student led learning, student happiness and 21\textsuperscript{st} century skills. The second theme, changing the system, was supported by the sub-themes of the advisory approach, connecting learning to the real world and the community aspect of the school.

The data first showed that student engagement and true learning could truly happen when the students were shown how to find and pursue their passions. When students were pursuing things that were important to them, they then took ownership of their education and enjoyed school more, all while developing 21\textsuperscript{st} century skills. At The Omni, students were expected and
encouraged to take the lead in their own learning. With proper support, students designed their own learning plans and associated work that would demonstrate success. They also pursued internships and other learning opportunities. The adults at The Omni fulfill mentor roles, as students come to them not for answers, but for guidance in the pursuit of their interests.

It was evident that students were happy to be at The Omni. In comparing it to their former schools, every student spoke about how they felt cared for and as if the adults really wanted them to learn. This happiness translated into the classroom as students mostly got along with one another and assisted each other with various types of work.

This environment goes a long way to foster student growth. Since each student is on their own timeline, there is no pressure to get through the material in a predetermined timeframe. This freedom not only allows advisors to respond to student interests, but it also allows students to understand the material. This lack of artificial constraints relieves pressure, and the result is evident in the comfort of the students.

While learning traditional subjects is important at The Omni - as evident in the offering of college level courses - there is a definite focus on 21st century skills. From day one, students work on skills that will be easily transferred to life beyond the walls of The Omni. Students engage in tasks that develop the kinds of skills that can only be attained through practice. Through internships, they learn how to write résumés, work with a variety of people and interview, among a host of other skills. Through their exhibitions they practice public speaking, giving and receiving feedback, creating evidence of success, and interpersonal skills that would be hard to develop any other way. Throughout this process, they are supported and guided by a team of adults so they find success, increasing their self-confidence in these skills over their four years at the school.
What is evident from the data is that much of what is done at The Omni could not be accomplished within the confines of traditional education. As a result, The Omni has had to change the system of education in order for things to work for their students. The first major change, the advisory model, is at the heart of this shift. The advisory model provides a cohort of fifteen students and one advisor who, together, become the central base, or family, during the student’s time at the school. This advisory is where students spend most of their time, and the relationships formed allow the student the confidence to pursue things that are interesting to them. The advisory functions almost like a workplace, which gives students the chance to practice the interpersonal skills they will need throughout their working lives.

Everything at The Omni is also focused on connecting experiences to the real world. While the most obvious iteration of this is the internships that occur two days per week, every other aspect of the school strives to connect educational experiences to the real world as well. It is in this way that students see the value of what they are doing, as well as gain experiences that they can then apply to life once they graduate. Uniquely, the advisors encourage these connections to the real world not through illustration or by telling students about them, but by asking questions in ways that force the students to make the connections on their own. To aid in this, much of the teachers’ professional development is focused on helping them connect learning to real life experiences.

Finally, the community at The Omni is a major reason why the school has found success. More than once, students and advisors referred to the feel of the school as a family. This intentional community allows for interactions that further a student’s growth in their abilities and develops their confidence. The community feel allows students to give and receive feedback in a positive way, and it allows for advisors to create a group of self-reliant individuals. It draws also
upon the various adults in the students’ lives to help support them as they try new things and, ultimately, find success.

During the next chapter, the observations at The Omni will be connected to the theoretical framework and research questions in order to show how The Omni’s approach to education can have a positive impact on the self-efficacy of students and the relationships between the advisors and students.
Chapter 5: Discussion of Research

Introduction

This research was a case study conducted at The Omni School in the Northeast of the United States in order to understand how Student Centered Learning (SCL) could be used to educate students for today’s economy. The expectations placed on current graduates are markedly different than those of even twenty years ago (Aslan & Reigeluth, 2013). As a result, they need to be prepared with skills and experiences that match those differing expectations (Lee, Tsai, Chai & Koh, 2014). However, most schools are educating students in the same way they have been for the past seventy years, leaving graduates potentially lacking in areas that would help them to successfully navigate modern workplaces. In order for education in today’s schools to be effective, it needs to not only prepare students academically, but also provide opportunities to practice and master the kinds of dynamic skills that would allow them to adapt in an ever-changing society (Lee, Tsai, Chai & Koh, 2014).

In this case study, three teachers, six students and one administrator were interviewed about their experiences. Additionally, hours were spent observing aspects of school life and other artifacts were collected. There was one research question that helped to guide the case study: How does the self-efficacy of a student change as they move from a traditional, teacher-centered school setting to one that is student-centered?

In this chapter, the findings from the research will be discussed in detail. To begin, the results will be looked at with respect to the theoretical framework. Next, the findings will be discussed in relation to the review of literature. With that background, a discussion of how the findings address the research questions will follow. Finally, recommendations for practice as well as implications for future research will be discussed.
Findings as they relate to the Theoretical Framework

The theoretical framework that drove this research was the social cognitive theory, as described by Alfred Bandura (1986). In this theory, Bandura explored the factors that regulate, and give context to, human behavior. Before his theory, scientists treated human behavior as a simple input/output type machine (Bandura, 1986). In other words, certain stimuli were inputted into a human mind, something happened inside the brain, and an output was then observed (Bandura, 1986). According to Bandura, this model was lacking because it treated humans as preprogrammed and not capable of change (Bandura, 1999). To Bandura, it was obvious that there was more to the story, since humans can change their response to stimuli over the course of their lives.

The key to Bandura’s model is that humans don’t just react to stimuli, but can process events, imagine possible outcomes and learn from past behavior (Bandura, 1999). Additionally, human response is not only due to psychological processes, but also sociostructural processes. Bandura believed that to truly understand human behavior, the interplay of these influences would have to be studied (Bandura, 1999). In the case of students at The Omni, this study described how they process experiences, learn from their past behavior and incorporated their observations of others’ experiences (Bandura, 1999).

Self-Efficacy. For the social cognitive theory, self-efficacy is the key to understanding how an individual’s response may change over the course of their lifetime (Bandura, 1999). Self-efficacy, or the belief in one’s ability to achieve a specific task, can increase over the course of time as an individual attempts other tasks and learns skills that apply directly to the goal task that they may have (Greene et al, 2004). In the instance of students in high school, the hope would be that students practice skills that are directly related to life beyond graduation, in order
to increase their individual beliefs in their ability to be successful (Greene et al, 2004). Additionally, self-efficacy can be affected by observing others performing a task. In essence, this means that a person can compare their skills to another individual while observing their experience, and then reflect on whether or not they would have a similar result (Bandura, 1986; Schunk, 1985). So at the Omni, the research looked for specific instances of students having the opportunity to observe others performing tasks related to life beyond the classroom and then attempted to understand how they reflected on those observations (Bandura, 1986; Schunk, 1985). In addition to a person becoming more confident in their abilities as self-efficacy increases, higher self-efficacy also increases a person’s resilience when attempting a task. They are therefore more likely to persevere as obstacles arise (Greene et al, 2004). As such, the research in this study looked for instances of students persevering through obstacles, thus indicating the likelihood of increased self-efficacy.

**Self-efficacy in the SCL environment.** Based on the observations and interviews with adults and teenagers, it was apparent that students had opportunities to practice skills and have experiences (Bandura, 1986) that directly related to their future working careers. Student experiences at The Omni varied from straightforward logistical issues to high-level problems, all of which they will face in the working world. For example, Stacey spoke of figuring out the public transportation system and how that was a skill she didn’t realize she needed in order to get a job. Meanwhile, Violet spoke of how she needed to research artificial intelligence in order to understand the work she was doing with self-driving cars. These kinds of experiences give the students opportunities to develop self-efficacy in various areas of their lives that will be applicable going forward.
Students also had the opportunity to practice self-regulatory behavior, or reflection, in all aspects of their life, including social skills that support career and personal development (Bandura, 1991). For instance, Violet talked about how shy and quiet she was during her freshmen year. But after finding herself in a variety of social situations, she realized that most people are nervous. She now has the confidence to move conversations along and is quite outgoing. She recognized that if she had stayed at her old school, she would most likely still be sitting quietly in class and hoping no one calls on her. At her old school, Violet said that she could have easily put her head down, gotten good grades and never been forced out of her comfort zone. However, it seems as if her confidence in her own voice has grown during her time at The Omni.

As mentioned in the findings, the heart of The Omni is helping students find and pursue opportunities in areas they are passionate about. This process is done in community with an advisor and peers, and this also helps to build an individual’s self-motivation mechanism - a necessary key for self-efficacy (Bandura, 1991). When the various tools are in place for effective self-motivation, then a learner is ready to explore their own interests and monitor their own performance more successfully (Bandura, 1991). These key skills are needed for individuals to understand their own drives and to find success in a long-term career. At The Omni, students have ample opportunities to try different internships in varying fields and then reflect on those experiences both as a group and on their own. As Schunk (2010) described, in order to build, and maintain, self-efficacy, individuals must have the opportunity to not only try various tasks, but to self-evaluate both during and after the task they are performing. While this exposure is important for any student, it is especially important for the students that attend The Omni. As Felicia pointed out, most students come to the school thinking they will be either a
policeman or a teacher, since those are usually the most common jobs they see in their communities. As a result, many students are not aware that there are various opportunities available for them upon graduation. This means that many are also not aware of the skills they will need to work on in order to be successful in those careers. By having opportunities to try various internships while reflecting on what went well and what they could improve upon, they can develop their skills with the help of their peers and advisors. This cycle will lead to increased self-efficacy throughout their time at The Omni. On a practical level, it also exposes them to a wide variety of careers – both those they experience through internships and those their peers are exploring - so they get an idea of the opportunities available.

Bandura (1991) discussed the importance of social influences on ones self-efficacy. With many tasks there is no absolute way to measure success, so it is often in comparison to others that one can determine what success looks like (Bandura, 1991). Students at The Omni are involved in a wide variety of internships, each requiring a unique set of skills that would be impossible for every advisor to master. Therefore, it is imperative that students at the Omni are exposed to adults who work in those fields to not only widen their expectations for their own lives and future careers, but also to establish benchmarks for success. As a result of working with those adults, students gain self-efficacy in the skills needed to work in those fields, and they are exposed to careers that may interest them in the future.

The environment at The Omni also supports the growth of interpersonal skills. From spending all day with the same cohort to having internships at businesses across the state, students are expected to cultivate both personal and professional relationships on many levels. Because of this, they practice dealing with the various obstacles that arise in any relationship. Practicing interpersonal skills connects to the idea of self-regulation (Bandura, 1991). Self-
efficacy in this area will allow students to navigate the various types of relationships they will encounter upon graduation. During my time in Felicia’s class, one student complained that another student didn’t do their share of the work for a collaborative project. Felicia listened compassionately to the student, then walked her through the steps of conflict resolution, describing the process as she went. Teacher coaching is another way that The Omni supports students as they move through the self-evaluation process to maintain high self-efficacy (Schunk, 2010). Afterwards, Felicia mentioned to me that they work on these types of interpersonal skills constantly with the students. This student, who was clearly nervous confronting her classmate, walked away a little more comfortable with a plan, but what she will gain from this process she likely won’t know until the future.

The mentor, an adult supervisor at each internship experience, is involved in various aspects of the student’s learning. Therefore, the internship is a major piece of the learning process and important contributor to the ultimate success of students at The Omni. The mentor is responsible for giving feedback on student performance, helping define student success in mastering various skills, assisting students with research related to topics based on the internship, and connecting them with other professionals in the field. The mentor may even be involved in designing learning goals for the trimester. In this way, the mentor becomes a key figure in the student’s perception of success, thus having a major impact on student self-efficacy (Bandura, 2010).

The Omni is intentional in providing a connection to mentors. For example, The Omni provides time for advisors from the school to spend time with the mentors, specifically Tuesdays and Thursdays when students are on internships. This allows advisors to observe a typical internship day and educate the mentors on the expectations of the process. Additionally, it
allows the advisors the time to provide support for the mentors as issues arise. Each advisor seemed to have a successful partnership with their students’ mentors; however, each approach seemed individualized, stemming from the personality of the advisor. Being that the mentor is critical to the development of self-efficacy of students (Bandura, 2010), that mentor-advisor relationship becomes an important piece of the puzzle that leads to student growth. Interestingly, in speaking with Patricia about professional development, the focus seemed to be on helping advisors push students to find authentic essential questions in their research, with little mention of the mentor-advisor process. This brings to the forefront another area for concern. Since each advisor seems to be approaching mentors training from their own perspective and using their own unique set of skills, care needs to be taken in training the advisors to be effective in managing and supporting mentors throughout the internship process.

**Self-Regulation.** Self-efficacy alone is not an easy thing to explore, especially in the classroom. In practice, a student that has high self-efficacy will demonstrate excellent self-regulation (Zimmerman, 1990). Self-regulation has three phases that are evident in a student with high self-efficacy: the forethought phase, the performance-control phase, and the self-reflection phase (Zimmerman, 2000b).

**Forethought phase.** During the forethought phase, a student high in self-efficacy will recognize the skills they need in order to achieve a task and then make a plan to achieve that goal (Zimmerman, 2000b). Additionally, they will recognize which skills they may be lacking and seek help in order to strengthen them (Zimmerman, 1990). At The Omni, evidence of this forethought phase was abundant, especially in the ways students used their learning plans. For example, at the beginning of each trimester students work with their advisors to determine their own learning goals will be for the upcoming few months, as well as how they will demonstrate
achievement of those goals during exhibitions. Violet spoke at length about how this planning process has changed for her during her time at The Omni, especially in regard to the research aspect of her work. During her first few trimesters, she would just dive in and start writing without any thought to the final product. Through trial and error, as well as support from her advisor, she has now learned to plan things out so she can be more effective in her writing. This cyclical process of repeatedly practicing a skill until one improves increases self-regulation (Zimmerman, 2000b).

This example highlights the importance of learning plans in the self-regulation of students (Zimmerman, 2000b). By continually using this document as a touchstone throughout their high school career, it allows the student to practice planning for goals, identifying skills needed to reach those goals, and assessing themselves on the acquisition of skills. In effect, this practicing of strategic planning forces students to go through the forethought phase (Weinstein & Mayer, 1986) on a regular basis, enhancing the student’s self-regulation process (Zimmerman, 2000b). As Felicia pointed out, even if a student doesn’t attain the goals they have set, they are still involved in the act of reflecting upon how they have grown and developed particular skills. This focus on the process helps to engrain true learning in the students.

The unique nature of the advisories at The Omni allows for each student to be individually supported as they plan for their goals, yet they are able to work at their own pace. This gives students control over their own learning, a strong indicator for increasing self-regulation and self-efficacy (Zimmerman, 2000b). For example, Quinn spoke of how she is confident in her time management capabilities, but is overwhelmed by the public speaking aspect of the exhibition. She mentioned how she likes that Danielle can work with her on her public
speaking, while addressing time management with her friend. As a result, Quinn feels that she and the other students in her advisory are each able to get the focused support they need.

The forethought phase (Zimmerman, 2000b) is also evident as students prepare for their internships. For a student to obtain an internship, they need to research, contact a potential mentor, write a résumé, apply and interview at the location. Again, the advisors are supporting the students, but it is up to each student to plan how they will accomplish this task. Having the intentional time to plan while receiving support allows students to recognize the skills in which they may be lacking and receive help (Zimmerman, 2000b) from advisors to strengthen them.

Performance-control phase. In the performance-control phase, a student high in self-efficacy will not be interested in comparing themselves to their peers or in artificial benchmarks (Zimmerman, 2000b). Instead, students are focused on plan execution and personal progress monitoring. (Zimmerman, 2000b). Based on that progress, or lack thereof, students find resources to support areas of weakness as well as use feedback to inform their progress in that particular area (Zimmerman, 2000b).

Once again, the learning plan supports students in working through the performance-control phase (Zimmerman, 2000b). Throughout the course of each trimester, students and advisors continually refer to the learning plan and focus on progress in relationship to that document (Zimmerman, 2000b). In fact, many of the one-on-one meetings that occur throughout the advisory time involves the advisor and student consulting the learning plan and discussing if the student is progressing toward their goals, what still needs to be addressed and what resources may still be needed. As a student progresses from freshmen to senior year, this process shifts from the advisor leading the discussion to the student taking ownership of the analysis.
In speaking with the students, the researcher could see evidence of this shift in roles. The two juniors, Faith and Violet, were less focused on artificial benchmarks like due dates and page counts, and more on the skills they could be using, and enhancing, right now in order to be prepared for life beyond graduation. In fact, Violet interviewed me, the researcher, asking about the skills she should focus on in order to best be prepared for college. Her reaching out for help as she assessed her own skills was an aspect of performance control as she seemed to be making a checklist of the skills she had already mastered as well as those she needed to improve upon during her final eighteen months at The Omni. In contrast, the freshmen, being newer to the school, were still focused more on artificial benchmarks, such as completion rates or what their advisor found acceptable. It wasn’t until I observed feedback during exhibitions that I saw the freshmen start to realize there may be more to the process. The student feedback during exhibitions was focused on presentation skills, effective communications and the demonstration of learning. Never was there mention of content specificity or factual correctness. This could potentially be an example of growth towards personal management of performance instead of external management (Zimmerman, 2000a). In our interview afterwards, Veronica said the feedback was helpful and more worthwhile than she thought it would be. Over the course of twelve trimesters, students have the potential to become more comfortable with the process and more able to self-identify the things they need to do well in order to succeed. This points to an area in need of further research in order to fully understand.

**Self-reflection phase.** As implied in the name, the final phase of self-regulation involves the student’s assessment of their work based on the originally intended goals. A student high in self-efficacy will be able to identify things that went well and things that didn’t, as well as the
specific skills they may need to improve upon in order to attain a better result (Zimmerman, 2000b).

Once again, the evidence of self-reflection at The Omni is abundant. Informed by their experiences and guided by their goals, as well as their advisors, students are constantly reviewing and reconfiguring their learning plans to reflect things they have learned. For example, after her first exhibition, Quinn actively incorporated the feedback she received from her peers and advisor into an action plan going forward. She spoke of what she was going to do at the next exhibition in order to be ready and more effective. In addition to feedback at The Omni, students constantly receive feedback from their mentors at their internships to identify skills they need to focus on while working. This feedback, first initiated by outside entities, becomes more internalized as the students grow older and eventually graduate. This constant reflection and adjustment, a key part of self-regulated learning (Bembenutty, 2011), is a strategy built into the core of student work at The Omni.

This process of self-regulation is not something that will just occur naturally. Based on my observations at the Omni, students need to be prodded, reminded and held responsible for deadlines in order for the process to work. The advisors indicated that even though parameters are in place for the process to occur, there are still setbacks, stress and frustration for both educators and students because the process takes time to be effective. As a result, the processes of self-efficacy and self-regulation development (Bandura, 1986; Zimmerman, 2000b) require the advisor, and sometimes classmates at The Omni, to hold students accountable. In practice, this means that educators who are attempting to provide an SCL environment that truly allows the self-regulation process to occur need to support students in their attempts to adhere to timelines and schedules. If deadlines are set, then they must be held firm, barring a legitimate
excuse. When this is done, it creates a social aspect that can act in a similar way as the forethought and performance phases, having a positive effect on self-regulation (Zimmerman, 2000b).

It is also up to the individual advisor on how to use the learning plan as a tool for education. The social and external environments can have positive effects on self-regulation (Zimmerman, 2000b), so the way in which the advisor uses the learning plan will go a long way toward helping students. If the advisor can successfully model the use of the learning plan, they can effectively help students practice the three phases of self-regulation and, hopefully, get them to the point where they do it on their own (Zimmerman, 2000b). During the interviews with advisors, they spoke of increased emphasis by the school leadership on ways to include the plan as more of a central part of the learning process, indicating to me that not everyone was using it in the same way. This, again, seems to be another area where the individual qualities of the advisor are key to ensuring a positive learning environment for the students.

**Revisiting the Research Question based on the Theoretical Framework.** The purpose of this study was to explore the effects that moving into an SCL learning environment would have on the self-efficacy of students. Human learning is unique in the way that self-efficacy, or belief in one’s own ability to achieve a task, can be affected by previous experiences (Bandura, 1986; Schunk, 1985). Additionally, the observation of others performing similar tasks can allow a person to gain (or lose) self-efficacy as they compare their own skills to that of the individual they are observing (Schunk, 1985). As a result, humans can gain confidence in their ability to perform a task by undertaking the skills associated with that task, as well as surrounding themselves with others performing similar tasks (Bandura, 1986).
The SCL setting studied in this research seemed to provide ample opportunity for students to practice 21st century skills in real world situations, increasing the likelihood that their self-efficacy in these skills increased. Whether it was in a classroom leading their own learning, during their exhibitions when they were providing evidence of their educational journeys, or at their internships interacting with adults on a regular basis, these students appeared to be honing their skills in a real and tangible way. In addition to practicing skills, students were also able to articulate how they have grown in certain key skills during their time at The Omni, indicating an increase of self-efficacy (Bandura, 1986). Finally, all of the teachers and students interviewed noted how ready their alumni are to function in the world after graduation because of the skills they learned at The Omni.

In education, the increase of self-regulation can also help to indicate a student high in self-efficacy (Zimmerman, 2000a). If a student can successfully navigate through the three phases of self-regulation – the forethought phase, the performance/control phase and the reflection phase – then it can be assumed that they have high self-efficacy for that task (Zimmerman, 2000b). Interestingly, increases in self-efficacy can occur whether students go through the self-regulation process on their own or in conjunction with educators (Zimmerman, 2000b). At The Omni, students are constantly going through this self-regulation process as a normal part of their school year by utilizing their learning plans and working with their advisors and peers. What is unique is that the flexibility of this school allows advisors to offer specific, individualized support to each student in the areas they need. This creates a culture of personalized learning, driven by the student’s passion. It seems as if the changes made to the traditional school structure at The Omni force all students to consistently go through the three-stage self-regulation process for all of their work, but with the assistance and support that each
individual needs. Ideally, over the course of four years, that support is needed less, and students are able to navigate the process on their own. This enables them to perform various 21st century tasks, as well as college level work, at a high level and with high self-efficacy upon graduating.

While this process seemed effective in terms of education, there appeared to be a need for constant attention on various elements to ensure that students were learning skills that were valuable to them. For the internship model, there was a necessary cultivation of mentors in order for them to be positive aspects of the process for the students. There was also a need for students to be held accountable for their work in ways that allowed them the freedom to choose their own schedules and attain benefits from their efforts, yet still have consequences if they missed deadlines. Additionally, the learning plan needed to be a central part of the student’s education. Care was taken with its creation and it was referred to, refined and updated on a regular basis in order for students to truly benefit. Much of the work and much of this attention came from the educators in the building whose responsibilities were to constantly assess if they were assisting in the best way possible and using the available resources available in effective ways.

**Findings as they relate to the Review of Literature**

This study of The Omni and how it implements the SCL learning environment aligns with and builds upon literature as it applies to traditional schools, the paradigm shift in education, low-achieving students and teacher-student relationships. Effective education of a student for today’s world often involves the orchestration of many aspects that intertwine and relate to one another (Cogan, 2004; Hämäläinen, Kiili, & Smith, 2017). Likewise, it seems as if the way an SCL environment educates its students cannot be seen as a checklist of discrete phenomena that is uniform in each case. As a result, the themes and subthemes from the
findings intertwine and are incorporated into many of the following areas from the review of literature.

**Traditional Schools.** Traditional schooling, for this discussion, means schools that are separated into discrete blocks of time, each with teacher-led and text-heavy instruction on specific subjects, and where the material is delivered at the same time to all students of the same age, regardless of individual student readiness (Sullivan & Downey, 2015). This one-size-fits-all approach is often frustrating for the constituents involved, as it often leaves some feeling alienated or unheard (Graham, 1998). This frustration often comes from the apparent lack of progress in change, perhaps due to the difficulty in gaining consensus from all parties who can affect long lasting change (Graham, 1998). Additionally, parents in the community are often only invested in schools when their children are attending, so the continuity can be lacking in progress that is made (Graham, 1998). To combat this alienation, emphasis has been placed on providing space to allow for student voice (Cook-Sather, 2002; Johnston & Nicholls, 1995). When students are able to voice their challenges and concerns, they can further their education not only by honing their own thinking, but also through educators who are keyed into what may help them learn (Cook-Sather, 2002). However, in order for this to be done correctly, schools need to be intentional in the situations they create in order to allow student voice to be valued and for students to, in effect, learn how to give their input (Johnston & Nicholls, 1995).

The Omni’s education model seems to have been created with the intention of combating many of the problems that stem from a more traditional education model. At the student level, student voice leads the classroom curriculum. Students are encouraged to find their passions and to pursue research and internship opportunities in those areas. As a result, students feel empowered to find their interests and that the lessons in their advisories directly relate to their
goals. This process begins almost immediately, as all students start with a “Who am I?” project that directs them to search for the things that make them unique. Additionally, the advisors probe student interest in various ways. Evan talked about a camping trip where he keeps track of the topics discussed and uses them to inform his curriculum. Felicia spoke of continually asking students why they are interested in the various topics they bring up, what about them they like and how they can apply them to their lives. Regardless of the approach, the research showed that students start to see the connection between their voice and what they are working on during school advisory time as the year progresses.

At the educator level, advisors are given the opportunity, as well as the time, to develop relationships with their students. The advisors are then able to see the growth and change in their students as they shape them toward their futures. Danielle spoke of how in traditional teaching, an educator may only hear how they affected a student’s life years after the fact, and even then it is rare. Whereas at the Omni, an educator can see the effect they are having on a student’s life as they reflect on how much that student has grown in four years. These bonds are so strong that they often last past graduation. Each advisor talked of past students that still call or text them for advice or just to chat. Patricia still keeps in contact with her last group of graduates from 2002.

The unique situation for these educators was evident when we discussing the kind of people make good advisors. Patricia mentioned that when she hires new advisors, it has to be people who have spent a lot of time on their campus. They need to understand the model and buy into the concept. She wants advisors who have chosen to be there because they believe it works. She added that when the network that runs the schools has tried to go into other schools and use existing staff, it is inherently more difficult, if not impossible, because this model can’t be forced upon people who haven’t sought it out. When I spoke to Danielle about this, she said
that for those who grew up in a traditional school and were trained as an educator in a traditional system, it is a very different feel and uncomfortable at first. To her and the other advisors, it is worth the growing pains because of the impact they know they have on students’ lives in a place like The Omni.

At the familial level, families are expected to be active participants in student learning. They become partners with the advisor and the student to decide which learning goals are important and how the student will reach them. Families also develop close ties with advisors, allowing them to have greater input into the kind of environment they feel would be best for their child. As a result, a support system is created for the student to help them through the inevitable difficult times in high school.

At all levels, this newfound freedom at all levels can be disconcerting for people as they enter an SCL environment. Students at The Omni who were used to a traditional setting don’t immediately lose the habits they developed over their academic careers just because they are in an SCL school. They often look for the parameters they were used to receiving in their traditional schools because that is all they have ever known. For some students, this leads to confusion or frustration during the first weeks in their new setting. A few students may never be able to make the transition and could be more comfortable, and even learn better, in a traditional setting. For this reason, care was taken to check in with students in order to understand their comfort levels and what could be done to help support their transitions.

For educators, the change seemed to be even more drastic. Most adults at The Omni have gone through traditional schooling and have only that experience as a reference point for school. Although they may support the idea of SCL, in practice there are challenges to the transition. Most educators have never had to work on group dynamics or team building in a traditional
classroom, so the idea of SCL-specific classroom management is completely new. Additionally, all curriculum is decided by the educator in the room. Most teachers are used to having specialists for each subject matter, so being in charge of all topics can not only be daunting, but can also put pressure on the educator to make sure they provide all the right material for their students. Finally, most educators never have to ask their students the essential questions that delve into the heart of their interests and passions. This combination of skills is something that takes time to develop, which can be frustrating. As a result, new faculty need to be able to ask for help, while leaders need to be able to recognize if advisors are struggling and be able to step in when needed.

Finally, for the families, this may be the first time they see an SCL school. They are no longer getting the constant grade updates, discipline records or report cards associated with traditional schools. Even though they know the school focuses on SCL, most have not experienced it before, and it is hard for them to understand how learning can happen. Therefore, extensive family education is necessary so they can appreciate the growth in their child.

Paradigm Shift. As society continues to adapt to the changes caused by the Information Age, the skills needed by high school and college graduates who enter the workforce are rapidly changing (Aslan & Reigeluth, 2013). In the past, major paradigm shifts like these have been met with shifts in education to arm students with the knowledge and skills needed to succeed (Watson et al., 2015). Currently, however, most schools are still teaching students in the same ways they did fifty years ago, leaving students without the skills needed for today’s world (Aslan & Reigeluth, 2013; Coca, 2013; Selingo, 2013; Watson et al., 2015). In order to be relevant for today’s students, major shifts in the approach to education would need to occur. Instead of a
one-size-fits-all approach, classrooms would become more customized in terms of instruction, as well as more democratic, allowing students to learn by doing (Duffy, 2009).

It is obvious that The Omni has purposefully changed the way in which it schedules a day in order to allow for more customized instruction. As evidenced in the theme of *Changing the Educational System*, mechanisms are in place at The Omni to create the democratic environment of students learning by doing and not by being told, in addition to them having a say in the topic and direction of the curriculum (Duffy, 2009; Johnston & Nicholls, 1995; Laux, 2017). The sub-themes of advisory approach, connection to the real world, and community building are all aspects of the school that break the mold of a one-size-fits-all approach. However, these changes alone to the educational approach don’t appear to be the only things that lead to student success. At The Omni, there is an additional infusion of these changes with a focus on finding the students’ passions. Once students find things in which they are especially interested, they then seem more equipped to take advantage of the unique structure of The Omni to become better prepared for today’s world. As a result of finding their passions, students could be seen actively seeking out opportunities in their areas of interest while practicing skills needed to succeed in their internships. As they practice these skills, they are supported by the advisory structure in an individualized way. They are also encouraged to connect their learning to the real world, embedding their passions into concrete examples of how they can be pursued outside the walls of their school. Finally, the community aspect of The Omni supports these students as they try things that put them out of their comfort zones. Additionally, the community of the school helps to teach students how to be supportive and productive members of a group, as they are expected to support their peers. The combination of these aspects is very different from the one-size-fits-
all, teacher-led instruction of a static curriculum that has been commonplace in the education system for the past century.

When looking at the research from an engagement perspective, the students seemed to recognize that they were learning differently than they did before, and they seemed to like it better. With the freshmen, the most striking difference was the quantitative reasoning (QR), or math, course. Both Quinn and Frankie spoke of how their previous math classes were either boring or rushed, and as a result, they didn’t learn much. Interestingly, they were both good students based on their grades, but they each commented on how they could tell their teachers were just getting through material to meet a deadlines. As a result, they disengaged from learning. In contrast, when they discussed their current QR class, they spoke of how interactive and applicable to the real world it was, and how they felt they could get individualized assistance when needed.

By virtue of being at the school for a longer period of time the juniors, Violet and Faith, had more to say about the unique model of The Omni. When discussing her upcoming exhibition, Violet reflected on how nervous she was for her first one. She said, “…my lips were literally trembling, and I just wanted to leave.” When I asked her about the upcoming exhibition, she responded “…I’m so amped…because I know I’m doing a lot. I just want to show off what I’ve been doing [to] show my improvement.” Violet recognized that she had improved in a variety of areas. She had learned a lot about her passion, computer programming and artificial intelligence, and she wanted to share it with her peers. It appeared that over the course of her two years at the school, she had learned to take pride in her work, recognized the growth she had made, and was excited to show her progress.
Faith expressed similar feelings about how much she had grown, but for her it was more social. When she talked of her previous school, she said that during the school day the students “…just had to pay attention for all of that seven hours just sitting there writing, it was really boring.” As a result, she felt she was never able to really get to know anyone at her old school. However, with The Omni’s unique set up, she had formed deep relationships with those in her advisory. She now felt she could talk about any topic and that she would be heard. She also recognized her growth; before, she felt like she was pushing her classmates away, but now she “…understands people and people understand me ….We're understanding [of one another] and we try to help.”

While it is impressive that Violet and Faith have learned these valuable skills, it is almost more encouraging that they recognize their own growth and their abilities to improve. This implies they have a ‘growth mindset,’ which has been shown to lead to students who are more likely to overcome difficulties in the learning process (Ehrlinger, Mitchum & Dweck, 2016),

**Low-Achieving Students.** While all students have the chance to be negatively affected by schooling, it seems that a disproportionate amount who are negatively affected are low-achieving students (Crumpton & Gregory, 2011). Often, this is because they are grouped into classrooms with students of the same ability, and as a result their chances of dropping out or going far with their education significantly decreases (Van Elk, Van der Steeg & Webbinik, 2011; Werblow, Uerick & Duesbury, 2013). While this obviously impacts a student’s earning potential, it also has a negative effect on a student’s self-esteem as they start to see themselves as ‘stuck’ in that low-achieving situation (White, 1996).

With the way The Omni has intentionally changed the traditional educational system, low-achieving students seem to get a fresh start. With the advisory model, all students are on
equal footing from the first day of school and are held to the same standards, regardless of how they achieved in the past. In fact, when asked about how advisory groups are made, Patricia said they intentionally mix them so there are all types of students grouped together. Interestingly, the advisors never see the past transcripts of their students and only find out about their past aptitude if and when the students decide to talk about it.

Instead of focusing on a student’s past performance, the advisors are encouraged to respond to the students as they currently present themselves. Patricia and the advisors spoke of it as keeping one’s finger on the pulse of the group. If it’s obvious that the group needs a lot of work on writing, then the advisor should respond by adding more writing work. If the group seems to be lacking in math, then the QR teacher should review basic material before moving on. However, if it’s just one or two students who are struggling in an area, then the nature of the school allows for the adults to assist each student one-on-one in that discipline. The nice thing, especially for students who have been previously labeled as low achievers, is that there is no stigma for getting one-on-one time because everyone receives individualized attention. Danielle talked about how each of her fifteen students need focused help in some area, so she is constantly giving individual attention to all of her students. No one is singled out; it’s just the regular flow of the day.

Because of low self-esteem, low-achieving students typically lack engagement in school, which leads to more tardiness and missing school (Demanet & Van Houtte, 2012). This, of course, compounds the problem as more material is missed and the student falls further behind. The Omni seems to have combatted this by encouraging students to find their passions. Students appear to be engaged and look forward to school because they are pursuing areas of interests that they have chosen and find worthwhile. Advisors, while supportive, don’t dictate how students
should pursue interests, but rather allow the students to find their own answers, this giving them a sense of control over the process. For example, Felicia had one student who had an interest in both professional wrestling and teaching. It was obvious to Felicia that the student wouldn’t be able to find a suitable internship related to professional wrestling during the school day. However, if she just told the student that, the student may have felt defeated or pushed back. Instead, Felicia had the student search for opportunities. Sure enough, after a few hours, the student couldn’t find anything, so Felicia suggested broadening her search to include similar things. The student settled on Cross Fit, but again that only occurred after school. Eventually, the student settled on interning at a school with a teacher and then going to the Cross Fit gym after school as an added activity. Figuring all of this out on her own, this student felt a sense of accomplishment that she never would have felt if Felicia had just told her what to do from the beginning. In this way, all students get a new chance at education as they are learning and practicing skills they haven’t had to use prior to attending The Omni.

Frankie is a good example of a student who was a low achiever and, after only a few months, had been changed by the positive learning experiences at The Omni. Frankie mentioned he was labeled a bad student at his old school, despite doing his work. Although he didn’t elaborate, it may have been because the group of students with which he was friends frequently got into trouble and didn’t get good grades, and so Frankie was included in judgments against them. At The Omni, he found an advisory that supports him and a group of people with whom he feels he can share his concerns, challenges and successes. Additionally, he stated that Felicia lets them have fun, but also has them get serious when it’s time to work, which he appreciates. Finally, his internship, while not in his primary area of interest, was with an Omni graduate and an entrepreneur, something Frankie aspires to be. When he talked of learning about how a
business runs, how independent the owner was, and how the owner was a graduate of The Omni, he was visibly excited. It was obvious he saw the clear connection between what he was doing now and how it could lead to fulfilling his dream of opening his own business. Additionally, when I asked if he was going to attend college, he immediately answered, “Yes.” He commented that they talk about college and the necessary skills almost daily, so he knows what it takes and that he can do it.

This seems to be typical of The Omni. No single aspect of the school is the reason why it works for all types of students, including low achievers. Instead, it is the combination of the way the school is set up, the focus on student interests, the democratic advisory and the community support that forms these young people into adults who possess the skills and confidence to succeed upon graduation.

If there isn’t a single, specific aspect of the school that can be credited as the sole reason it works, then there also can’t be a formula for success that can be applied to every student. Instead, each student needs specific attention in order to understand what will work for them. As an educator, the temptation would be to replicate what has previously worked for successful students with new students, but this would not respect the individual learner entering the school. This dynamic then requires the educators to treat each student like a blank slate and figure out their unique set of strengths and weaknesses. This allows them to provide the proper support, though even this is not a guarantee of success. The student must be open to the process and want to learn. Without the buy-in from both sides, the process would not be nearly as effective.

**Teacher Perception.** One aspect of education that seems to be a strong indicator of student success is the idea of teacher perception and expectation (Rosenthal & Jacobson, 1992; Weinstein, 2002). It appears that teacher perception not only has an effect on students’
performance for that year, but can also have an impact on the future achievements of those same students (Rosenthal & Jacobson, 1992; Sorhagen, 2013). Unfortunately, despite an educator’s best efforts, their expectations may be tainted by their preconceived notions based upon a student’s previous achievements. Even if a teacher tries to treat each student equally, their expectations are often betrayed by their non-verbal cues that students perceive (Sorhagen, 2013; Woodock and Vialle, 2011). By design, happy accident or a mix of both, The Omni has created a situation that practically eliminates any preconceived notions a teacher may have.

To begin, every student that comes into the school has never been in a true SCL environment before. Therefore, each student is somewhat uncomfortable with the structure and faces challenges over their first few months as they transition to SCL. In practice, advisors expect that their group of students will be a mix of individuals each with their own strengths, interests and areas for improvement. Danielle talked about this in her current advisory. Two of her ninth graders already had internships in October, while the other six were still trying to figure out their options. In her mind, this was completely normal. For the students who already had internships, she would support them as they researched aspects of those careers and how to connect them to their own lives. For the others, she would help them identify the areas in which they may be interested in finding opportunities to pursue.

This brings to light another aspect of The Omni that helps to break down any possible expectations teachers may have. The environment of SCL means, by definition, that every student is at a different place in their education, and that they are supported along that journey by an association of learners (Zion & Slezk, 2005). Since the educators at The Omni are fully invested in SCL, they expect to be providing fifteen different experiences for the fifteen individuals in their classes. Without the structure of testing at the end of each year (or every few
years) along with content curriculum that is not dependent on the age or grade of the students, there are no external benchmarks with which to compare the students. As a result, no student can be labeled as being deficient or behind their peers. Instead, each student is at a different place in their educational journey, and their advisor is working with them to strengthen those areas in which they are weak while honing the areas in which they are already strong.

This idea of an educational journey was reflected when I asked the participants if they thought The Omni would be a good place for any type of student. Overall, the answer was a resounding yes. Each of the students agreed that The Omni was better than their old school and that they thought their friends would enjoy being there. Frankie even discussed a friend of his who was getting Ds and Fs at his old school because of a language barrier. He felt being at The Omni would allow his friend to develop confidence and work on language skills that would be invaluable for his future. In his current school, Frankie’s friend can remain silent all day and get by, whereas at The Omni, as Frankie pointed out, his friend would be involved in a supportive atmosphere that would allow him to constantly practice his English along with other skills.

The adults, while still agreeing that the school would work for any student, recognized that the student needs to be ready for that type of environment. Danielle spoke of one student who wanted to be at a school where she could hide in the corner and not be recognized. Obviously, The Omni is not that type of place, so she left after a year. Interestingly, after another year or two, she recognized her immaturity and would have liked to be back at The Omni. Patricia felt that for some students, four years isn’t long enough to undo the experiences they have had in the past while also instilling the unique learning The Omni provides. As a result, some students don’t progress quite the way they would hope; however, the majority make major gains and are ready for life beyond graduation.
The responsibility to recognize students who may be resistant to the process falls on the educators. Since there are no common metrics to indicate success, such as a passing grade or test scores, it is incumbent upon each educator to recognize when a student may not be finding success and to identify the correct resources to assist that student.

**Teacher-student relationship.** Another aspect of The Omni that allows for educator expectations to be tempered is the relational aspect of the community. The fact that students are with the same advisor all day and for all four years creates a relationship that goes beyond almost any teacher-student relationship in a traditional school. The advisors get to know almost every aspect of the students’ lives, and the relationship often continues beyond graduation. This allows the advisor to get to know the student as more than just a grade or performance, but as an individual with their own challenges, stresses and goals. This has been shown to overcome preconceived notions that educators may have about their students (Wiesman, 2012).

As mentioned in chapter two, Siegle, Rubenstein & Mitchell (2013) demonstrated that if a teacher shows they care for a class by putting in the time and effort to prepare, students will work harder for that class. This was clear at The Omni. All of the students commented in one way or another on how hard their advisors work to make their experiences better. Violet recognized how much personal time Danielle puts into their class. She even noted how some days they recognize she may have had a hard night with her young child, so they try to be nicer to her. These acknowledgements were usually followed by how much they like their advisors and how they want to do well because of the work their advisors have put into their advisories.

Additionally, Siegle, Rubenstein & Mitchell (2013) also noticed that students whose teachers focused on growth and not just achievement reported enjoying those classes more and remembering those teachers fondly. Again, the structure of The Omni promotes this type of
relationship between students and advisors. The entire grading process is based upon the growth of the student over the course of a trimester, year and career at the school. As mentioned in the findings, the advisors described the grading process as something that, while structured and codified, is obvious when you know the students so well. The growth, they said, is clear when looking back at all of the experiences they have had throughout their time at The Omni. Since growth is the main focus, it makes sense that the students have so much fondness for their advisors and the school. Again, this is evident by the number of students who keep in touch with their advisors upon graduation, as well as those who come back to visit or even offer to be mentors for current students.

While all of these aspects of The Omni may help reshape teacher perception, educators will still have biases and points of view based upon past experiences. Perhaps the most important area this can affect is a student’s passion. If an advisor thinks a student’s interests are ‘not good enough’ or implausible, the student may sense this and not pursue those interests. This could have a cascading effect, where the student changes their pursuits based upon their advisor’s reaction and therefore is not invested in their own goals. As hard as it may be, the educator needs to support the student in any way possible and try to create a space where the student can learn for themselves the plausibility of their interests as a career.

**SCL and Implementation.** While some schools have tried adding aspects of SCL to their curriculum, full implementation is often difficult, as it requires a large scale change to the traditional method of education (Lunenberg & Korthagen, 2003; Selingo, 2013). This can leave schools with some student choice, but it usually exists within certain parameters set by the teacher. In contrast, The Omni has undertaken this large-scale change and implemented it in what appears to be a successful manner. While there have been changes in response to student
needs, as a whole they have been able to educate students in ways that truly revolve around their interests and passions.

This is evident in the fact that the network that runs The Omni has opened over fifty other schools with similar success. These schools are found all over the country in every type of setting: urban, suburban and rural. Often the concern with successful charter schools is that they cannot scale well. The success is frequently due to the fact that they have found an innovative way to work with a specific population in a specific area, or the personnel at the original school has a dynamic that attracts and retains students. However, The Omni and its sister schools have replicated the model and success with various types of students and with many types of educators. This alone points to the viability of the model and how it is implemented.

Looking at things from a technical point of view, The Omni is implementing its program in a truly student-centered way. The students drive their individual curriculum through choosing an internship, which then serves to define their research and determine the content of their exhibition. Even within the advisory, the curriculum is created through a partnership between the students and the advisor, allowing room for student voice during a ‘typical’ school day. This reflects what Schuitema, Peetsma & Van der Veen (2011) described as a truly student-centered experience with students in charge of their learning plans, motivations, behaviors and the demonstration of knowledge.

While The Omni is truly student-centered, the students are not free to simply do whatever they choose. Instead, the situation agrees with the observation by Zion & Slezak (2005) wherein the relationship has changed between students and teacher, or in this case the advisor. As they describe, the teacher manages and plans for student learning, as the student makes individual decisions about certain aspects of their education. This could be seen in the way freshmen were
assimilated into the culture of The Omni. They all worked on some version of the ‘Who Am I?’ project while concurrently searching for internship opportunities. The advisors were planning for aspects of these tasks by introducing writing prompts about finding one’s interests and providing instruction on interview preparation, résumé writing and presenting. However, the students made the actual decisions about where they will intern, how they will prepare themselves for the interviews, and how they will present material. As a result, one truly sees the ‘association of learners’ at The Omni that Zion & Sleza (2005) described.

While The Omni seems to be successful at implementing SCL, it should not be assumed that it has been easy to do so. An obvious challenge is hiring the right people for the advisory roles. Patricia spoke of how she has to find individuals who possess the right blend of skills. As she said, they are looking for someone who “…is flexible, is able to multitask, is extremely organized, is collaborative [and] is willing to work with people.” This takes an intentional search that involves bringing candidates to the campus multiple times, having them volunteer and getting to know them well. Patricia added that, “…[I]f you’re the kind of teacher…that wants to close your room and not be bothered…” then you wouldn’t last long at The Omni. This is evident in some cases where the network that runs The Omni has been asked to implement SCL at existing schools. When they have tried to keep the staff that had been at the school, it hasn’t been successful. To get the school going and to stay successful, it takes a group of educators who believe in SCL and how much it can change students’ lives.

Another area of difficulty lies in explaining the school’s methods to various constituents. When most student enroll, parents don’t understand how the school works and question what the students do on a daily basis. According to the advisors, those concerns usually go away once the parents see their child’s first exhibition. When they see how much their child changes in just
three months, they understand that the process works. Even so, it takes good communication from the advisors to keep the parents informed and a part of the process.

This explanation was also necessary for area colleges. Colleges were not familiar with The Omni’s transcripts, so dedicated professionals were required to translate them into metrics the colleges could understand. Admissions counselors from The Omni travelled to various institutions to explain the process, and they worked to get students accepted into the appropriate colleges. Once students from The Omni started attending colleges and finding success, those colleges knew what to expect and got better. However, counselors still travel when needed in order to better educate the colleges to which their students apply.

When dealing with hundreds of individuals and their specific interests, there are bound to be necessary and frequent adjustments. However, this is the nature of SCL. It seems that since The Omni expects to adapt and meet each individual where needed, they are willing to deal with unexpected occurrences. Change in response to student need is a part of normal operations. Each adult spoke to this, whether in the advisory, where the advisor adapts curriculum and topics based on student interests or need; or school-wide, where the principal notices a need in a specific area and finds a way to remedy it.

An SCL environment, by definition, is a multi-faceted, ever-changing one that supports individuals as the need arises (Zion & Slezak, 2005). In a school setting, SCL puts the onus on the educators to be flexible and ready to respond to individual needs on a daily basis. In a practical sense, the adults need to possess myriad traits that include organization, flexibility, empathy, thoughtfulness and passion in order to be effective. It is easy to see how if the wrong educator was in charge of a group of students, an effective SCL environment could easily shift
toward a more chaotic situation, with individuals not moving forward in skill development or knowledge.

**Revisiting the Research Question based on the Review of Literature.** This research attempted to explore the effect an SCL learning environment would have on the self-efficacy of students. Throughout literature, there are references to a changing educational landscape that is currently occurring in the United States. Traditional education that utilizes a one-size-fits-all approach based on age and year appears to be insufficient in preparing students for the current workforce (Graham, 1998). Instead, students need ways to learn 21st century skills, such as collaboration, time management, critical thinking and self-motivation within a framework that supports and encourages student growth. The SCL model at The Omni provides an opportunity for students to pursue areas that interest them while working on a variety of skills that will be necessary as they enter the workforce. The structure of The Omni allows students the freedom to discover their passions, while also allowing advisors the freedom to meet student needs through individualized instruction. This combination seems to result in students who can adapt to the educational paradigm shift and graduate with the knowledge, as well as the skills, to enter today’s workforce.

While traditional schooling can fail to train students for today’s economy, it has historically been difficult on low-achieving students (Moller & Stearns, 2012; Werblow, Uerick, Duesbury, 2013; White, 1996). Whether students get tracked because of low achievement or because teachers perceive them as less able to achieve, the effect is similar: low student self-esteem and higher dropout rates. SCL, as seen at The Omni, can combat both of these issues. First, the advisors get to know the students well. This allows the adults to get to know and understand the students in a more holistic manner. This strong understanding has been seen to
foster a more positive teacher-student relationship. Second, advisors fully expect to meet each student where they are and understand that everyone has a variety of strengths and weaknesses. They know that every student will have things they are very good at and things they need to work on. Therefore, the advisor’s job is less about making sure every student achieves a certain level of proficiency on an exam, and more about asking each student the right questions to inspire them to pursue their interests while supporting them with the needed skills. This structure goes a long way in increasing student self-efficacy, as students have the opportunity to practice a multitude of skills in a supportive environment.

Finally, in order to create a true SCL environment, the decision making, time management and learning goals need to be led by the student (Schuitema, Peetsma & Van der Veen, 2012). In such an environment, students decide the internships they will pursue, the areas they will research and the ways in which they will demonstrate their learning. However, students aren’t meant to go through this learning process on their own. It is the advisor’s job to support them as well as help them navigate through the process, especially as they transition from a more traditional school. While the hope is that the student will take over the process by the time they are an upperclassman, it is evident to the educators that each student makes significant growth in these processes by the time they graduate.

**Implications for Practice**

This research was focused on SCL and its implementation in order to improve student self-efficacy and readiness for a rapidly changing working world. While this research was focused on one high school in the northeast of the United States, it is the belief of this researcher that there are elements from this school that can be applied to the broader educational community. After all, if there are aspects of this school that work well, then perhaps elements
could be brought into the more traditional school setting to have a positive effect on more students.

**Finding Student Passion.** From my time at The Omni, it was obvious that students stayed motivated because they were actively pursuing things that were important to them. While many initially liked the school because they perceived it would be easier or it allowed them freedom, they quickly realized there was just as much, if not more, work at The Omni. However, they kept working when they encountered obstacles because they were interested in the topics they had chosen.

While not all schools can let students choose every topic they are working on, an effort could be made wherever possible to allow students choice as well as a say in how they demonstrate their knowledge. This little bit of autonomy will not only engage the students more, but it will also allow students to practice independence and possibly increase their self-efficacy in this area.

These changes shouldn’t be implemented all at once, however. Care would need to be taken to plan how to best introduce the idea of student voice so as to limit frustration for the students and educators. Since all involved would have only had experience with more traditional schooling methods, lessons would have to be scaffolded so as to introduce student voice incrementally. For example, during the first part of the year, students could be given topic options to choose from, as well as ways to present the material. For the teacher, this would allow some idea of what to expect and the ability to provide parameters for the students. Based on their comfort level, teachers could allow students to explore more independent topics and presentations over the course of the year. Obviously, teachers would need to be supported
throughout this process in order to learn how to ask the right essential questions, know what constitutes a successful project and incorporate these ideas into the existing curriculum.

**Practicing 21st century skills.** By design, The Omni allows ample opportunity for students to practice a variety of skills that will be needed when they enter the workforce. As a result of this practice, they seem to gain self-confidence in their abilities to succeed in these tasks and are hopefully better prepared for life beyond graduation than if they had stayed in a traditional school. While the students are engaged in attempting these skills, they are immersed in a community that is ready to support them as much or as little as needed. Because each student is treated as an individual and provided support accordingly, they can move through the development of skills at their own pace until they are fairly self-sufficient.

Regardless of school setting, an attempt should be made to provide opportunities for students to engage in 21st century skills on a regular basis. An effort should be made by schools to identify those skills and find ways to incorporate them into curricula. While it would likely be better for skill retention if students could learn them while pursuing their interests, engaging in these skills in some capacity would be better than not being exposed to them at all.

**Community and Relationships.** When walking through the halls of The Omni, the feeling of community was evident. The students cared about one another as well as the adults in their community. Similarly, all of the adults cared about the students, with the advisors having an even more meaningful relationship with their groups. This community feel created a learning environment that allowed students to take risks and challenge themselves to try new things. Additionally, it allowed for a degree of peer-to-peer learning that would not have been possible without a foundation of respect. As a result, students were able to practice interpersonal skills that will be invaluable to them in the future. From an advisor standpoint, this community
environment enabled advisors to get to know their students on a deeper level and see them for the individuals they were, as opposed to a collection of grades.

An effort should be made to create a community with strong relationships in any school. Students should walk into their school and feel like they are cared for and in a place where they are supported in their learning. While this may be more difficult to achieve in a traditional setting, it is not impossible. This community feel would not only give the students a chance to learn, but it could also help to break down any preconceived notions the teachers may have.

**Importance of the Educators.** In comparison to a traditional learning environment, the SCL school seemed more chaotic, with more moving pieces and a feeling of less control. While this is not necessarily negative, it could easily become so if the wrong type of educator were in charge of a group of students or in a leadership position. In a traditional setting, a teacher can fall back on curriculum, class management protocol and the external reward of grades if needed. However, an educator in an SCL environment has none of this to rely upon. As a result, this person needs to possess an important mix of qualities to be effective.

To begin, this person needs to be incredibly organized. Because they are managing a group of people with various needs, abilities and goals, the educator needs to have a plan for each day and a way to manage multiple people doing various tasks at once. If they aren’t ready, they will constantly be reacting instead of being proactive in helping their students. As a result, things could quickly get out of hand with little learning taking place. In addition to their classroom responsibilities, the educator also needs to cultivate relationships with mentors, implementing and update learning plans, and support families as they navigate the SCL environment. With so much happening, one of these responsibilities may get overlooked if the educator is not organized, which would have a negative impact on student learning.
Secondly, this person needs to be flexible. They need to know that each day will probably not go as planned and be comfortable with that idea. They need to be ready to adapt as needed and work through issues they may not have foreseen. While this may be true for any educator, it seems that in an SCL setting, problems are more likely to range from the personal to the academic, as opposed to primarily relating to the subject matter one would be teaching in a traditional school. This presents the need for an educator who has a mix of skills and talents that may be put to use in a variety of ways. A person who relies on things going as planned with little deviation would not be comfortable teaching in an SCL environment.

An SCL educator also needs a great deal empathy. At an SCL school, the educator needs to be able to work with students as they are challenged in various areas of life. They also need to be ready to work with families who are trying to understand the process and may be questioning if their child is actually learning. This educator cannot simply shut their door and teach as they are constantly involved in all aspects of their students’ lives. It seems this empathy often creates the connections that give students the confidence to try new things and expand beyond their comfort zones. While many upperclassmen seemed to be able to do this on their own, the freshmen definitely treated their advisors as anchors of support and guidance.

Finally, this educator needs to possess the ability to challenge each student in a way that is unique and personal. There is no final exam or unit test that can be given to discern student mastery. Instead, each student will have their own circumstances that will necessitate a set of expectations, essential questions and motivations that are unique to them. This requires an educator who can ask those questions and motivate in ways that are both supportive and effective. Additionally, this person needs to be effective at holding students accountable in ways that will challenge them appropriately and allow them to progress in their learning.
Because of the wide range of these necessary skills, it is difficult to find educators who will fit in an SCL setting. Most teacher preparatory programs do not prepare teachers for this type of work, and most teachers are not familiar with an SCL environment. Therefore, the leaders of the school must screen applicants to find the type of people that would be effective in the classroom. This can be challenging, as it may be hard to assess the myriad necessary qualities during a traditional interview process.

Furthermore, once a candidate is hired, it will take a significant investment in training to help them become effective educators in the SCL environment. This type of professional development would need to focus on the aspects of the job that don’t come naturally to them as an individual, so that the educators could continually improve. In practice, this would mean identifying the strengths and weaknesses of each educator and providing personalized training in necessary skills. In addition, teacher support through complimentary teaching teams and common planning time would be useful in continuing teacher education by learning from others in the classroom.

**Implications for Research**

This study was conducted at one school during the fall of one year. The aim was to understand how students’ self-efficacy changes as they transition into an SCL environment. From speaking with some of the juniors, a new question arose around the idea of how self-efficacy would change over the course of a high school career. Specifically, a study could be designed to try to understand the reasons why some students gain more self-efficacy than others over the course of their time at an SCL school.
While not common, it does seem that SCL at this school does not always work for every student. Research could focus on students who don’t stay at the school and explore the reasons why they left. Perhaps there needs to be a baseline of preparedness to find success in an SCL school. If this were the case, then efforts could be made to prepare students well before they enter so they could get the most from their experiences.

Expanding beyond this particular school, it would be interesting to see how students from other areas of the country respond to an SCL school. The students at this site were all from a similar geographic area and from urban or suburban backgrounds. A research study could focus on the unique needs of SCL schools in other areas of the country. Part of the success of this school was the internship program. Since this school was in a city, there were many internship opportunities and access to public transportation. Future research could focus on areas where these internships are not as readily available to determine if the same growth and preparedness occurs in the graduates.

It was obvious from this study that the advisors at The Omni are a vital part of the success of the school. Without the right advisors, the school would not have the same outcomes. An area for further research would be to understand the screening, hiring and training processes of effective advisors. If the process could be understood, then perhaps hiring could be more focused and effective, especially since most educators do not have a background in SCL. Additionally, if a new advisor was struggling, perhaps this understanding would make it easier to identify the type of support needed for improvement. Finally, with this understanding, SCL methods could be integrated into teacher training programs in order to give educators more options for employment.
Perhaps the biggest area for further research would be to determine if aspects of SCL could be implemented in traditional school settings. Since it would be very difficult to completely change the traditional educational system in the United States, perhaps there is a way to identify the best aspects of SCL and apply them to a traditional school structure. In order for this to work, a multistep process would be necessary.

First, the major elements of SCL – finding students’ passions, allowing student choice, and practicing 21st century skills – would have to be developed into a curriculum that fits the structure of a typical school. Next, that curriculum would have to be taught to teachers who are invested in the idea of SCL. This step would be important as the teachers are integral to the process. They would need to be comfortable with the ‘association of learners’ concept and giving up being the dispensers of knowledge in their classrooms. After that, SCL would have to be piloted in the school, and the success of the SCL student group would need to be compared to students in traditional classrooms. It would also be beneficial to compare the SCL students group to true SCL students (like those at The Omni) to observe any differences. Assuming that the results were positive, the last step would be to convince school districts that making a change to SCL is in the best interest of their students.

**Limitations**

This case study focused on one SCL school during the first few months of the academic year. It only included the voices of six students, three advisors and one administrator. From the conversations and observations it was obvious that the methods used at the school had been developed over the past twenty years to address the needs and concerns of this particular school and its constituents. Therefore, it is not clear that these techniques and approaches would work as well in other settings.
Additionally, the school doesn’t have to follow the same testing schedules or expectations as traditional public schools. As a result, administrators can structure the school day, expectations and learning goals however they feel will best serve the needs of their students. Therefore, it would be particularly difficult to implement this school’s entire approach into a public school that is required to meet funding standards determined by the local town and state. Even if schools implemented portions of the SCL approach observed in this study, it would be difficult to know if they would work in the same way.

Finally, due to the nature of the research, I was not able to observe the overall flow of the school year at The Omni. As a result, there may have been some aspects of the school, and about SCL in particular, that I was unable to observe. For example, my first two visits to the school occurred as the freshmen were focused on finding internships. As a result, I observed them practicing interviews, writing résumés and researching possible sites. My next visit to the school was on the day of the students’ exhibitions, so the focus was on their presentations and the feedback they received. Consequently, I was not able to observe the moments during class time when students connected the work at their internships to the work they were doing for independent research. While the students and advisors spoke of this as an integral part of SCL, I was not able to observe it in action. Likewise, there may have been other aspects of the school and SCL that only could have been observed if I had been able to immerse myself in the daily life of the school for an entire year.

**Summation**

This research was guided by the question, ‘*How does the self-efficacy of students change as they transition to an SCL environment from a traditional one?*’ From the case study performed at one school, two major themes, each with three sub-themes emerged.
The first theme of *Finding Student Passion* encompassed sub-themes of *Student-led Learning, Student Happiness and 21st Century Skills*. From this theme it emerged that as students find things in which they are interested or engaged, they will take the steps needed to learn the necessary skills to pursue those interests. Instead of having to be told what to do, they will be more likely to take the initiative and seek out the help they need. In addition to leading their own education, students will enjoy the process more and be more likely to think positively about the experience. Finally, when they have interests and are pursuing them in the real world, they will be practicing skills that will be valuable to them upon graduation. The practice of these skills and the success found by implementing them will lead to increased self-efficacy in the areas in which their interest and passions lie.

The second theme of *Changing the Educational System* included the sub themes of *Advisory Approach, Connecting Learning to the Real World and Community*. From this theme it emerged that in order for SCL to be fully implemented, a change to the traditional schooling model needs to be made. The major changes The Omni made was to create an advisory approach, where there is a cohort of students assigned to one teacher for their entire four years of high school. This allows for deep relationships to develop and for progress to be monitored on an individual basis. There is also a focus on connecting learning to the real world and having an impact in the community. This aspect seems to allow for deeper learning to occur and for students to practice authentic skills in actual situations. Finally, a key aspect noticed was the community feeling of the school. An emphasis was placed upon creating a culture of support for all learners in the building and it seemed to allow for individuals to be comfortable in taking risks and challenging themselves to try new things.
**Reflections as a Scholar-Practitioner.** While conducting this research, it challenged me to rethink my ideas of education both as a researcher and as an educator in the classroom. From the research perspective, it made me realize that SCL, while difficult to implement and maintain, is an effective way to teach the whole student. If the school has the right adults in both educator and leadership positions, then the students can gain valuable skills, in addition to knowledge, that serve to expand their goals and help ready them for college. I also realize that SCL includes some valuable aspects that could possibly be implemented in a traditional classroom. The biggest obstacle to using SCL in the classroom seems to be its unfamiliarity of it for both educators and students, as most have never been exposed to anything other than the traditional model of education. The second challenge would be the need for restructuring of the traditional school model to fully implement SCL. It would require further study, curriculum development and testing to convince the various constituents in a school system to fully implement an SCL model. However, I am hopeful that aspects of the model could be implemented on a small scale basis, providing evidence for its success in a traditional school and leading to more widespread use of SCL pedagogies in the future. As of this writing, there are some public school systems in New England that are attempting this version of implementation and have found success. It would be valuable to connect these various districts so they could support one another and make their results known.

As an educator, this study has challenged me to think beyond the way that I am used to teaching. While I have always strived to form relationships with my students, I now see how important an aspect this is to education. This research has centered my attention on creating genuine relationships with my students as a basis for all I do in the classroom. I also realize the responsibility I have to prepare my students for the world they will face upon graduation. As a
result, I know that it is my job to continually look for ways to instill in them the skills, knowledge and values that will best help them to succeed. Finally, I realize even more so that there isn’t one perfect way to teach, whether the method is traditional, SCL or something else. Instead, a mix of pedagogies is most likely needed to best connect and educate every type of learner in the classroom. With this research, I hope I will find ways to incorporate more aspects of SCL into my classroom in order to give my students access to this type of education, thus furthering their development on multiple levels.

**Going Forward**

SCL is a valuable educational tool that incorporates student voice, real world experience and 21st century skill learning into the curriculum. In order for it to be successful, a school needs a dedicated group of adults who are willing to respond to individual needs on a daily basis, while challenging each student improve upon their weaknesses and hone their strengths. From this research, it seems like this approach works well to engage students in aspects of education that have traditionally excluded them. By encouraging students to find their passions and pursue aspects of research in related areas, they become actively engages in skills that will be relevant throughout their lives.

Because of this research, I feel it is now incumbent upon me to bring SCL to more students. To begin, I would like to actively pursue ways I could introduce ideas of SCL into my classroom and the school where I teach. I would like to look at the department curriculum, and the school as a whole, to find areas where student voice could be integrated and SCL could be used. By working with other school leaders, I hope to identify ways the tenets of SCL could be incorporated into the curriculum, while also supporting the educators as they do so. Ideally, these efforts could develop into a program that builds from freshman year to senior year so
students could get the benefits of growth from the process, thus better preparing them for today’s world.

Secondly, from my larger research, I know that various entities are implementing SCL in a multitude of ways throughout the country. However, each seems to be operating in isolation and dealing with the implementation on their own. I would love to use my background to assist in connecting these various constituents so they could use one another as resources. While the nature of SCL probably means that each iteration would look different depending on the students and educators in the schools, some lessons could be universal. This central place for SCL information could also be used by new districts and educators as they begin to implement SCL for their students.
References


doi:10.1080/00220670903567398


Teaching Laboratory to the Research Laboratory. *Journal of Chemical Education, 83*(12), 1835-1843.


84. doi:10.1016/j.learninstruc.2013.06.001


Appendix A

Initial Contact with Administration

Dear Ms. ****,

My name is Bryan Dunn and I am a doctoral candidate at Northeastern University’s College of Professional Studies in Curriculum, Teaching, Learning and Leadership. My dissertation is exploring the effect of Student Centered Learning on student acquisition of twenty first century skills as well as its effect on their self-efficacy as they transition from a more traditional middle school. Additionally, I am interested in exploring how teacher perception changes as students enter a Student Centered Learning environment.

In order to do the study, I was hoping to interview students and teachers at your school about their experiences in a Student Centered Learning classroom. I would interview each participant for about sixty to ninety minutes in a space that was private, yet acceptable to all parties. For those participants under the age of eighteen, they would have the opportunity to have a trusted adult in the room if they so choose. All of the participants will be able to opt out at any point.

After receiving your permission, I would need assistance from you or others on your staff to help identify students and teachers that would fit the profile of what I am looking for so that I could reach out to them and ask for their assistance. Specifically, I would look to interview three teachers who teach first year students and observe their classes. After interviewing them, I would ask their assistance in identifying three to four students in each of their classes to interview.

In addition, I would also ask for access to other data about the students interviewed. Things such as grades, attendance records and standardized test scores that would be used to help get a better understanding of the students’ time at your school. This information would be kept confidential and no names would be used in the final research. After the research is completed, all data would be deleted as you best see fit.

Thank you for your time and please let me know if you have any questions.

Sincerely,

Bryan L. Dunn
Appendix B

Interview Sign up Form

By signing up below, you are indicating that you are interested in being interviewed concerning your experience in a Student Centered Learning environment. If you sign up, you will be contacted about setting a time that is convenient for you to speak with the researcher, Bryan Dunn. Signing below does not require you to be interviewed, only to be contacted with further details. All contact information will be kept confidential with the researcher.

Name_________________________________________________________________
email_________________________________ Phone_________________________
Preferred mode of contact? (circle one) email/phone

Name_________________________________________________________________
email_________________________________ Phone_________________________
Preferred mode of contact? (circle one) email/phone

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Appendix C
IRB Application

NOTIFICATION OF IRB ACTION

Date: August 7, 2017  IRB #:  CPR17-06-17
Principal Investigator(s):  Corliss Brown Thompson  
Bryan Dunn
Department:  Doctor of Education Program  
College of Professional Studies
Address:  20 Be Cabrera  
Northeastern University
Title of Project:  Exploring Student Centered Learning and its Effect on the Self-Efficacy of Students
Participating Sites:  [redacted]
DHHS Review Category:  Expedited #6, #7
Informed Consents:  One (1) signed parent/guardian consent and child assent form  
Two (2) Administrator and Teacher signed consent forms
This project is approved under 45CFR46.404 which applies to children as research subjects and involves research not involving greater than minimal risk. Adequate provisions are made for obtaining the assent of the children and the permission of their parents or guardians, as set forth in 45CFR46.408.
Monitoring interval:  12 months
APPROVAL EXPIRATION DATE:  AUGUST 6, 2018

Investigator’s Responsibilities:
1. The informed consent form bearing the IRB approval stamp must be used when recruiting participants into the study.
2. The investigator must notify IRB immediately of unexpected adverse reactions, or new information that may alter our perception of the benefit-risk ratio.
3. Study procedures and files are subject to audit any time.
4. Any modifications of the protocol or the informed consent as the study progresses must be reviewed and approved by this committee prior to being instituted.
5. Continuing Review Approval for the proposal should be requested at least one month prior to the expiration date above.
6. This approval applies to the protection of human subjects only. It does not apply to any other university approvals that may be necessary.

[Signature]
C. Randall Colvin, Ph.D., Chair  
Northeastern University Institutional Review Board

[Signature]
Nan C. Regina, Director  
Northeastern University Human Subject Research Protection
Appendix D
Parent/Student Interview Consent Form

Northeastern University, Doctor of Education

Name of Investigator(s): Dr. Corliss Brown Thompson – Principal Investigator, Bryan L. Dunn – Student Researcher

Title of Project: Student-Centered Learning and its Effect on the Self-Efficacy of Students

Informed Consent to Participate in a Research Study

We are inviting your child to take part in a research study. This form will tell you about the study, however the researcher will explain it to you first. You may ask the researcher any questions that you have. When you are ready to make a decision, you may tell the researcher if you will allow your child to participate in the research or not. Your child does not have to participate if you do not want them to. If you decide to allow your child to participate, the researcher will ask you to sign this statement and will give you a copy to keep. Additionally, the researcher will ask your child if they want to participate as well.

Why is my child being asked to take part in this research study?

We are asking your child to be part of this study because they are a student who is in their first year of a student-centered learning environment.

Why is this research study being done?

The purpose of this study is to understand how the self-efficacy (or self-confidence) of a student is effected as they are exposed to a student-centered learning environment for the first time. A hope will also be to understand how educators create an environment conducive to student-centered learning.

What will my child be asked to do?

If you and your child decide to take part in this study, I will ask to interview your child where we will talk about their background in education, what drew them to apply to this school, how they feel about accomplishing projects and what type of classroom environment helps them to best learn.

Where will this take place and how much of my child’s time will it take?

Your child will be interviewed at a place of their choosing, and it will take about an hour. Your child will have a parent or guardian of their choice with them at the interview.

Will there be any risk or discomfort to my child?

There is no major risk or foreseeable discomfort that can be thought of by the researchers. However, there may be questions from peers about your child’s involvement which could be a minor distraction.
Will my child benefit by being in this research?

There will be no direct benefit for your child from this study. However, the researchers believe that if it can be shown that a student’s self-efficacy increases as they go through a student-centered learning environment then a case could be made that more schools should adopt this method of instruction, thus preparing more students with the necessary skills for today’s changing world.

Who will see the information about my child?

Your child’s part in this study will be confidential. Only the researchers on this study will see the information about you and your family. No reports or publications will use information that can identify your family in any way or any individual as being of this project. The observations will not contain any names and the researchers will use generic terms like ‘teacher’ and ‘student’ to describe what is happening. The interviews will be recorded and then transcribed by Rev.com (an online transcribing service). The audio files, along with the transcriptions, will be kept on a researcher’s home computer that is password protected. One year after the research is complete, the researcher will delete all the files.

In rare instances, authorized people may request to see research information about your child and other people in this study. This is done only to be sure that the research is done properly. We would only permit people who are authorized by organizations such as the Northeastern University Institutional Review Board to see this information.

What will happen if my child suffers any harm from this research?

No harm is expected from this research.

Can my child stop their participation in this study?

Your child’s participation in this research is completely voluntary. They do not have to participate if they do not want to and they can refuse to answer any question throughout the interview. Even if they begin the study, they may quit at any time. If your child does not participate or if they decide to quit, they will not lose any rights, benefits, or services that they would otherwise have as a student at their school.

Who can I contact if I have questions or problems?

If you have any questions about this study, please feel free to contact Bryan Dunn, Tel: 617.470.3932, Email: dunn.bry@husky.neu.edu. You can also contact Dr. Corliss Brown Thompson, Email: co.brown@northeastern.edu, the Principal Investigator.

Who can I contact about my child's rights as a participant?

If you have any questions about your child’s rights in this research, you may contact Nan C. Regina, Director, Human Subject Research Protection, 490 Renaissance Park, Northeastern University, Boston, MA 02115. Tel: 617.373.4588, Email: n.regina@neu.edu. You may call anonymously if you wish.

Will my child be paid for their participation?

There is no compensation for participation in this research.
Will it cost me anything to participate?

There are no costs expected for your participation in this research.

Is there anything else I need to know?

Since your child is not yet 18 years old, they cannot participate without your consent.

I agree to [have my child] take part in this research.

________________________________________
Signature of parent agreeing to their child to take part
________________________________________
Printed name of person above

________________________________________
Signature of person who explained the study to the participant above and obtained consent
________________________________________
Printed name of person above

Consent of Student Participant

As the student involved in this research, you have the final decision whether or not to participate. Even though your parents have agreed, your involvement is voluntary and you have the right to stop your participation at any point throughout the process. Additionally, you may skip any questions you wish during the interview without any risk of penalty. By signing below, you acknowledge that you have freely decided to participate and that you have had the opportunity to ask the researcher any clarifying questions about the study.

________________________________________
Signature of Student agreeing to take part
________________________________________
Printed Name of Person Above
Appendix E

Teacher Consent Form

Northeastern University, Department

Name of Investigator(s): Dr. Corliss Brown Thompson – Principal Investigator, Bryan L. Dunn – Student Researcher

Title of Project: Student-Centered Learning and its Effect on the Self-Efficacy of Students

Informed Consent to Participate in a Research Study

We are inviting you to take part in a research study. This form will tell you about the study, but the researcher will explain it to you first. You may ask this person any questions that you have. When you are ready to make a decision, you may tell the researcher if you want to participate or not. You do not have to participate if you do not want to. If you decide to participate, the researcher will ask you to sign this statement and will give you a copy to keep.

Why am I being asked to take part in this research study?

We are asking you to be part of this study because you are a teacher who uses student-centered learning in your classroom and because you teach students in their first year at a student-centered learning school.

Why is this research study being done?

The purpose of this study is to understand how the self-efficacy (or self-confidence) of a student is effected as they are exposed to a student-centered learning environment for the first time. A hope will also be to understand how educators create an environment conducive to student-centered learning.

What will I be asked to do?

If you decide to take part in this study, I will ask you if I can observe your class for a typical lesson, or lessons. I would hope to observe a lesson where you are introducing a new project/topic in order to see how the students respond. I will then ask to interview you where we will talk about your background in education, what drew you to student-centered learning, and what you do in your classroom to support your students through the transition into your school.

After the interview, I may email you for follow up questions and/or to read the work and check for accuracy.

Where will this take place and how much of my time will it take?

The observations will take place in your classroom at a time of your choosing and will take no more than three visits.

You will be interviewed at the school, or a place of your choosing, and it will take about an hour. After the interview, I may email with follow up questions.
**Will there be any risk or discomfort to me?**

There is no major risk or foreseeable discomfort that can be thought of by the researchers. However, there may be a disruption to your class with a stranger observing. If it were to become problematic, the researcher would leave the room to allow things to get back to normal.

**Will I benefit by being in this research?**

There will be no direct benefit for you from this study. However, the researchers believe that if can be shown that a student’s self-efficacy increases as they go through a student-centered learning environment then a case could be made that more schools should adopt the pedagogy, thus preparing more students with the necessary skills for today’s changing world.

**Who will see the information about me?**

Your part in this study will be confidential. Only the researchers on this study will see the information about you. No reports or publications will use information that can identify you in any way or any individual as being of this project. The observations will not contain any names and the researcher will use generic terms like ‘teacher’ and ‘student’ to describe what is happening. The interviews will be recorded and then transcribed by Rev.com (an online transcribing service). The audio files, along with the transcriptions, will be kept on the researcher’s home computer that is password protected. One year after the research is complete, the researcher will delete all the files.

In rare instances, authorized people may request to see research information about you and other people in this study. This is done only to be sure that the research is done properly. We would only permit people who are authorized by organizations such as the Northeastern University Institutional Review Board to see this information.

**What will happen if I suffer any harm from this research?**

No harm is expected from this research.

**Can I stop my participation in this study?**

Your participation in this research is completely voluntary. You do not have to participate if you do not want to and you can refuse to answer any question. Even if you begin the study, you may quit at any time. If you do not participate or if you decide to quit, you will not lose any rights, benefits, or services that you would otherwise have as an educator at your school.

**Who can I contact if I have questions or problems?**

If you have any questions about this study, please feel free to contact Bryan Dunn, Tel: 617.470.3932, Email: dunn.bry@husky.neu.edu. You can also contact Dr. Corliss Brown Thompson, Email: co.brown@northeastern.edu, the Principal Investigator.

**Who can I contact about my rights as a participant?**

If you have any questions about your rights in this research, you may contact Nan C. Regina, Director, Human Subject Research Protection, 490 Renaissance Park, Northeastern University, Boston, MA 02115. Tel: 617.373.4588, Email: n.regina@neu.edu. You may call anonymously if you wish.
Will I be paid for my participation?

There is no compensation for participation in this research.

Will it cost me anything to participate?

There are no costs expected for your participation in this research.

Is there anything else I need to know?

There is no other information to know at this time.

I agree to [have my child] take part in this research.

____________________________________________  _______________________
Signature of person agreeing to take part                     Date

____________________________________________
Printed name of person above

____________________________________________  _______________________
Signature of person who explained the study to the
participant above and obtained consent

____________________________________________
Printed name of person above
Appendix F
Administrator Consent Form

Northeastern University, Doctor of Education

Name of Investigator(s): Dr. Corliss Brown Thompson – Principal Investigator, Bryan L. Dunn – Student Researcher

Title of Project: Student-Centered Learning and its Effect on the Self-Efficacy of Students

Informed Consent to Participate in a Research Study

We are inviting you to take part in a research study. This form will tell you about the study, but the researcher will explain it to you first. You may ask this person any questions that you have. When you are ready to make a decision, you may tell the researcher if you want to participate or not. You do not have to participate if you do not want to. If you decide to participate, the researcher will ask you to sign this statement and will give you a copy to keep.

Why am I being asked to take part in this research study?

We are asking you to be part of this study because you are an administrator at a student-centered learning school. In your role, you support teachers as they create lessons in this style and provide feedback as to their effectiveness in the classroom.

Why is this research study being done?

The purpose of this study is to understand how the self-efficacy (or self-confidence) of a student is effected as they are exposed to a student-centered learning environment for the first time. A hope will also be to understand how educators create an environment conducive to student-centered learning.

What will I be asked to do?

If you decide to take part in this study, I will ask to interview you where we will talk about your background in education, what drew you to student-centered learning, and what you do in your role to best help teachers create a student-centered learning environment. Additionally, your view of how students change as they move from a traditional, teacher-centered school to a student-centered one will be discussed.

After the interview, I may email you for follow up questions and/or to read the work and check for accuracy.

In follow up, I may also ask you for general records of attendance, grades and other data about the students at your school. This data would be asked for without any reference to names or other identifying information.

Where will this take place and how much of my time will it take?

You will be interviewed at a place of your choosing, and it will take about an hour. After the interview, I may email with follow up questions.
**Will there be any risk or discomfort to me?**

There is no major risk or foreseeable discomfort that can be thought of by the researchers.

**Will I benefit by being in this research?**

There will be no direct benefit for you from this study. However, the researchers believe that if can be shown that a student’s self-efficacy increases as they go through a student-centered learning environment then a case could be made that more schools should adopt the pedagogy, thus preparing more students with the necessary skills for today’s changing world.

**Who will see the information about me?**

Your part in this study will be confidential. Only the researchers on this study will see the information about you. No reports or publications will use information that can identify you in any way or any individual as being of this project. The researcher will use generic terms like ‘teacher’ and ‘student’ to describe what is happening. The interviews will be recorded and then transcribed by Rev.com (an online transcribing service). The audio files, along with the transcriptions, will be kept on the researcher’s home computer that is password protected. One year after the research is complete, the researcher will delete all the files. Any data from the school will be asked for without any identifying information and will be stored at the researcher’s home in a locked file cabinet. One year after the research is completed, those files will be destroyed.

In rare instances, authorized people may request to see research information about you and other people in this study. This is done only to be sure that the research is done properly. We would only permit people who are authorized by organizations such as the Northeastern University Institutional Review Board to see this information.

**What will happen if I suffer any harm from this research?**

No harm is expected from this research.

**Can I stop my participation in this study?**

Your participation in this research is completely voluntary. You do not have to participate if you do not want to and you can refuse to answer any question. Even if you begin the study, you may quit at any time. If you do not participate or if you decide to quit, you will not lose any rights, benefits, or services that you would otherwise have as an educator at your school.

**Who can I contact if I have questions or problems?**

If you have any questions about this study, please feel free to contact Bryan Dunn, Tel: 617.470.3932, Email: dunn.bry@husky.neu.edu. You can also contact Dr. Corliss Brown Thompson, Email: co.brown@northeastern.edu, the Principal Investigator.
**Who can I contact about my rights as a participant?**

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**Will I be paid for my participation?**

There is no compensation for participation in this research.

**Will it cost me anything to participate?**

There are no costs expected for your participation in this research.

**Is there anything else I need to know?**

There is no other information to know at this time.

**I agree to take part in this research.**

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<th>Signature of person agreeing to take part</th>
<th>Date</th>
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<tr>
<th>Signature of person who explained the study to the participant above and obtained consent</th>
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Appendix G

Student Interview Protocol

Interview Questions:

1. Tell me a little about yourself: Where are you from?
2. Tell me why you chose to attend the Omni School.
   a. What were your expectations/concerns as you came into the school?
   b. Did the school meet those expectations? How so?
   c. If they didn’t, what was different and how do you feel about that?
3. Tell me about your school experience before the Omni.
   a. How would major assignments/projects be assigned?
   b. How was your class set up?
   c. What would you do in your typical day?
4. How would you compare the way the classes are taught?
   a. Specifically, how do you compare the assessments in your old school compared to the Omni?
   b. How would you compare the classroom activities?
   c. How would you compare the demeanor/relationships in the classrooms?
5. Walk me through a typical school day for you.
   a. How often are you in lectures?
   b. How often are you collaborating with others?
   c. How do you choose your classes?
   d. With the project I saw, is that how things are usually done in that class?
6. How would you describe your relationship to this type of school environment?
   a. Has that changed at all during your school experience?
7. Describe your favorite teachers at the school? Why do you like them?
   a. Do you feel you have a good relationship with your teachers?
8. Describe your least favorite teachers? What don’t you like?
   a. Compare your relationship in this teacher’s classroom to the one you described in the previous question.
   b. Compare your confidence level in this teacher’s classroom to the teacher you described in #7. Why do you think that is the case?
9. How would you describe your relationship with your teachers in your previous school?
10. Tell me about the most interesting project you worked on last year.
    a. What was the hardest part?
    b. What did you enjoy?
11. Do you think there is a difference between the student you were last September compared to now?
    a. Describe the changes you noticed in skills/confidence.
    b. Why do you think these changes occurred?
    c.
12. In projecting towards your future, do you feel ready to try new things?
    a. How would you feel about entering a new class next year?
b. Suppose you take on a new summer job, how confident would you be in your ability to perform tasks that were assigned?

c. Has this changed over the past year?
Appendix H
Teacher Interview Protocol

Interview Question:

1. Tell me a little about how you got into teaching.
   a. Has it been everything you thought it would be? Can you give details?
2. What drew you to teach at the Omni School?
   a. Describe the school you taught at before?
3. How would you describe your teaching philosophy?
   a. In your mind, what makes an ideal learning environment?
4. How did you find the transition to teaching in a student centered environment?
   a. What were some of the challenges? How did you overcome them?
5. Can you describe what a typical class is like for you?
   a. What role do you find yourself in most often?
6. What have been some the rewards of teaching in an SCL environment?
   a. How do you know students are learning?
   b. Do you think they are learning different things than in a traditional setting? How do you know?
7. How do you see students change from when they come in the door the first day of freshmen year to the last day in June?
   a. Are these changes common? Do you think they are positive?
   b. Do you think their confidence is effected by their experiences in class?
   c. How do they approach novel experiences/tasks in your classroom? Day 1? Last day?
8. In the lesson(s) I observed, how did you prepare for that class?
   a. What prior knowledge did you expect the students to have and how did you assess if the students were ready?
   b. How did you come up with that project?
   c. What was your lesson plan for that class?
9. Throughout the course of this project/year, how will you know if the students are learning?
   a. What things will you look for to know that the students are successful?
   b. How will you go back over material if you feel the students haven’t learned?
10. How do your relationships with the students change throughout the year?
    a. How do you think this happens?
11. How do you think your perceptions of the students change throughout the year?
    a. Is it different with low achieving students? How do you view them on day 1? Last day?
    b. Do you think your style of teaching helps with your perception change?
12. Knowing what you know about education, would you want your own children taught in this way?
13. If, as I go through my notes, I have more questions – can I email you in order to follow up?
Appendix I

Administrator Interview Protocol

1. Tell me a little about how you got into education.
   a. Has it been everything you thought it would be? Can you give details?

2. What drew you to work at the Omni School?
   a. Describe the school(s) you have worked at before?

3. How would you describe your educational philosophy?
   a. In your mind, what makes an ideal learning environment?

4. How did you find the transition to working in a student centered environment?
   a. What were some of the challenges? How did you overcome them?

5. Can you describe what a typical class is like at this school?
   a. What do you think make it unique to this school?
   b. What things do you expect to find in a successful classroom?

6. What have been some the rewards of working in an SCL environment?
   a. How do you know students are learning?

7. How do you find the right teachers to work at the Omni school?
   a. What are some of the important factors you are looking for in candidates?

8. What are some of the challenges that you see your teachers face?
   a. Is this the same as in a traditional school?
   b. How do you recognize those challenges?

9. What type of continued support do you need to provide teachers in order for them to be effective?

10. Why do you think this approach to education is effective?
    a. What do your graduates say was most helpful to them during their time here?

11. How do low-achievers do at this school?
    a. Do you think this is different than at a traditional high school? Why? How?

12. If, as I go through my notes, I have more questions – can I email you in order to follow up?
# Appendix J

Omni School Learning Plan

<table>
<thead>
<tr>
<th>Student Name:</th>
<th>xxx</th>
<th>Advisor:</th>
<th>xxx</th>
<th>LTI:</th>
<th>New England Aquarium</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Grade:</td>
<td>11</td>
<td>Trimester:</td>
<td>2</td>
<td>Mentor:</td>
<td>xxx</td>
</tr>
</tbody>
</table>

**For Advisors:** Learning Objective Overview | [Bloom’s Word Starters](#) | [Depth of Knowledge starters](#) | [LP Cover Sheets](#) |

## Learning Experiences

<table>
<thead>
<tr>
<th>Real World Learning/LTI</th>
<th>Career Readiness Skills focus: <em>(Highlight 1-3 main focuses)</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>(New England Aquarium)</td>
<td>Effort and Engagement</td>
</tr>
</tbody>
</table>

## Learning Objectives

### Workplace Knowledge and Skills objectives: *(National S&K | Ariz. Statements)*

- Recognize the physiological needs of living animals
- Analyze the symbiotic relationships among various organisms and their environment
- Identify species in the different aquarium galleries and become increasingly comfortable teaching visitors about those species

### Academic or Additional Learning objectives:

- Earn certification in as many of the aquarium’s galleries as possible
- Increase comfort level in approaching visitors

**Resources to help me with these objectives:** advisor, Sam, Other NeAq mentors

<table>
<thead>
<tr>
<th>Final Products/Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Weekly LTI blog</td>
</tr>
<tr>
<td>● Other NeAq mentors</td>
</tr>
<tr>
<td>● LTI Anthropology</td>
</tr>
<tr>
<td>Workplace Knowledge and Skills objectives:</td>
</tr>
<tr>
<td>------------------------------------------</td>
</tr>
<tr>
<td>Create a script for the penguin cart with a conservation message</td>
</tr>
<tr>
<td>Use penguin cart to teach visitors about penguins and conservation</td>
</tr>
<tr>
<td>Academic Learning objectives:</td>
</tr>
<tr>
<td>Write a research-based paper about stress management (using DBT) using a variety of at least 6-8 sources</td>
</tr>
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<td></td>
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</table>

<table>
<thead>
<tr>
<th>Communication:</th>
<th>Learning Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>● <strong>Reading Objectives</strong></td>
<td>● Reading bookmark log showing evidence of at least 30 minutes of reading each night</td>
</tr>
<tr>
<td>o Identify books that interest and challenge me</td>
<td>● Reading logs or projects for each of my three books</td>
</tr>
<tr>
<td>o Read in a variety of genres</td>
<td>● Reflective journal entries both in notebook and online journal</td>
</tr>
<tr>
<td>o Utilize a vocabulary strategy</td>
<td>● Calendar or alternate time management system</td>
</tr>
<tr>
<td>(vocabulary.com, vocab scrapbook, etc.)</td>
<td>● Evidence of advisory lessons and learning</td>
</tr>
<tr>
<td>o Increase the amount of time I spend reading on a regular basis</td>
<td>● Community service documentation</td>
</tr>
<tr>
<td>o Identify and describe the elements of fiction in the books I read</td>
<td>● Evidence of homework on Khan Academy website</td>
</tr>
<tr>
<td>o Participate in advisory reading of the play Othello</td>
<td></td>
</tr>
<tr>
<td><strong>Foreign Language Objectives</strong> -</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td></td>
</tr>
<tr>
<td>○ Use Mango languages to complete 2nd year of Spanish credit</td>
<td></td>
</tr>
</tbody>
</table>

### Quantitative Reasoning: Algebra II

**Learning objectives:** For 1st trimester I will do all of my Khan 100% on time

- Complete weekly homework assignments
- QR1: Make sense of problems and persevere in solving them.
- QR2: Reason abstractly and quantitatively.
- QR3: Construct viable arguments and critique the reasoning of others.
- QR4: Model with mathematics.
- QR5: Use appropriate tools strategically.
- QR6: Attend to precision.
- QR7: Look for and make use of structure.
- QR8: Look for and express regularity in repeated reasoning.
- CO1: Learn and implement problem solving strategies for solving quantitative word problems and present them to peers
- CO2: Expand upon QR language by learning and using new mathematical vocabulary

### Social Reasoning:

**Learning objectives:**

- Analyze controversies, select and evaluate evidence, and construct and refute arguments through participation in advisory conversations about social justice topics, specifically pertaining to the lives of women and girls around the world
- Improve understanding of local, national, and global current events through weekly advisory discussions

### Empirical Reasoning:

**Learning objectives:**

- Gain a basic exposure to/understanding of biology concepts through weekly advisory lessons

### Personal Qualities:

- **Physical Fitness/Health:**
  - Participate actively in gym class
  - Learn strategies for living a healthier, happier life through weekly advisory Health lessons
- **Time Management:**
  - Turn in at least 95% of work on time
<table>
<thead>
<tr>
<th>Additional Projects and Experiences</th>
<th>Post Omni Planning:</th>
<th>Resources to help me with these objectives: advisors</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Learning objectives:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>● Continue research into post-Omni options, and work with advisors to ensure that work at the Omni meets all requirements for post-Omni options</td>
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<tr>
<td></td>
<td>● Work with advisor to design an individualized preparation plan for the SAT exam</td>
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</table>

**CCRI: Intro to Helping & Human Services**

<table>
<thead>
<tr>
<th>Learning objectives:</th>
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<tbody>
<tr>
<td>● Describe the theories of psychologists including Maslow, Erickson, Freud, Piaget and Montessori and apply them to the work of a social worker</td>
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</tbody>
</table>

**Resources to help me with these objectives: Professor Hassoun, Beccy**

**Honey Dew Donuts Job**

<table>
<thead>
<tr>
<th>Learning objectives:</th>
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</thead>
<tbody>
<tr>
<td>● Customer Service skills</td>
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</table>
Appendix I
Sample Student Transcript