FROM THE GROUND UP:
THE CHALLENGES AND POSSIBILITIES OF USING DESIGN THINKING TO
DEVELOP ADULT AUTONOMY IN ONE SCHOOL

Gabriel Kuriloff

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Supervisor of Dissertation:

_____________________________________
Rand Quinn, Associate Professor of Education

Dean, Graduate School of Education:

_____________________________________
Pamela L. Grossman, Dean and Professor

Dissertation Committee:

Rand Quinn, Associate Professor of Education

Sharon Ravitch, Professor of Practice in Education

James H. Lytle, Adjunct Professor of Education
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Dedication page

It is with profound appreciation and love that I dedicate this doctoral dissertation to my family—my parents, Peshe and Peter Kuriloff, both professors and educators who never gave up on me; my in-laws Dianne and Robert Klein whose support kept my family above water; my three beautiful, patient, and proud children Ruth, Nathaniel, and Lucy; and my inspiration and my heart, my wife, Valerie Klein.
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ABSTRACT

FROM THE GROUND UP:
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Gabriel Kuriloff

Rand Quinn

In this study I examined the obstacles and possibilities in using design thinking as a tool for building teacher autonomy. Design thinking, a human-centered problem-solving methodology which has been impacting the edges of educational reform for over a decade, is a potential tool for supporting school based continuous improvement. Design thinking is becoming increasingly common as a tool both for classroom learning and school improvement, but little research has been done on the impact of using design thinking as a tool for empowering teachers and helping them gain agency in improving both classroom instruction and the broader structures, policies, and procedures of a school. Data was collected over the course of three years on my experiences implementing design thinking as a leadership practice as school design practitioner. Between the fall of 2015 and the spring of 2017, I worked with teachers and staff to use design thinking to address different challenges faced by our school community. “Design sprints”—examples of design thinking-in-action—served as the basis for the analysis that is the focus of this dissertation research; the foci were: 1) Attendance intervention design; 2) Teacher led flexible scheduling; 3) The iterative design of our student conferencing systems. Three major findings emerged from my work. The first was that by learning and
practicing design thinking, and more specifically, design sprints, teachers developed flexibility and adaptivity—they were willing to accept and support change efforts and the associated risks entailed in change. This second major finding, which was that teachers also developed self-efficacy and agency and were willing to take these risks in taking leadership of different aspects of the school program. Finally, this research found that while teachers did develop increasing confidence in their creative capacity, their capacity to maintain the mindsets and discipline entailed in an inquiry stance was sometimes limited both by the time allowed and pressured placed on a given design sprint.
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Chapter 1: Introduction

In the past two decades, American public schooling has seen an explosion of newly created schools and schooling models (U.S. Bureau of the Census, 2014). Since 1990, the number of public schools has grown by 16% as an additional 13,790 public schools have been created, most to give parents and students more choice over the kind of school children attend.

Across the nation, a broad array of schools has emerged—ranging from small, independent, community-based charter schools to large school-district-run-schools that are managed by corporate educational management organizations (EMOs). Each of these schools is designed by its founders—it has specific structures designed or adapted for specific purposes. Some new schools evidence highly effective designs, prove able to transform and adapt as needed over time, and are able to generate or make effective use of resources. Other new schools, however, struggle to develop a specific model, flounder in the vast marketplace of educational support companies, or fail to create effective and transparent operating procedures and norms. Although at this time in our nation's history many new schools are designed through top-down decision-making processes, in the current era of local control and educational entrepreneurship, there are sometimes unique opportunities for creative educators to build schools that are engaging, rigorous, and serve as catalysts for and centers of neighborhood and community change—a form of locally led design that makes those closest to the school the agents of continuous learning and improvement.
The underlying assumption of this research is that effective design process is a necessary, but not sufficient condition for the creation of new schools or for improving schools that succeed in accomplishing their missions. To some this assertion is a self-evident statement in the vein of “leadership matters”; however, over the past century, a multitude of school reform efforts have featured templates for design that are implemented in a school without significant consideration for local context or without continuous adaptation based on the needs of the students in a specific context (for a primary example, see the New American Schools effort as studied by Bodilly, 2001). Some of school design templates have been effective in meeting the needs of students and communities, but many, especially in the context of low-performing urban high schools serving mostly low-income students of color, have failed to continuously adapt to meet the evolving needs of today’s teenagers.

Design theory has much to contribute to understanding what has worked, what might work and what has failed to produce new ideas leading to significant school improvement. Specifically, design theory posits that the design team and the design process and how it is understood and implemented by the team are central drivers of the resulting school. The designers and their beliefs about schools and school design shape the structures and the elements of a school. Design teams that are collaborative and learn together to leverage their optimism and creativity will be oriented towards continuous improvement. This is particularly important in the application of design theory to schools, because the processes and tools that the designers create impact the culture of the organization and the modes of behavior that predominate it (Senge, Cambron-McCabe,
Lucas, Smith, Dutton, & Kleiner, 2000; Boland and Collopy, 2004). The design process impacts the culture of the organization and the day-to-day behaviors of the members of an organization respond to this structure and ultimately shape the basic operating procedures of the school (Senge et al. 2000). These organizational patterns can either enable or inhibit organizational growth, improvement, and adaptation over time.

There is a great deal of national conversation about what schools should be like and who should run them. However, there is relatively little that speaks to what the work of school design means for those who participate in and lead such efforts in the modern context. Nationally, many school districts and schooling models emphasize standardization (Cuban, 2013). There are Educational Management Organizations in states across the nation that manage independent public schools (for example Green Dot Schools, KIPP, or Uncommon Schools) and implement prescribed designs. District, state, and federal policies over the past twenty years similarly almost always feature standardized, top-down changes to schools (Cuban, 2013).

Design thinking has been impacting the edges of educational reform for over a decade. Various organizations (ex. IDEO, Lime Design, DTech High School, The d. School at Stanford University) that provide workshops, consultancies, or other forms of support to help educators incorporate design thinking into their educational practices. In the midst of the expansion of independent public schools, there have also been some that are focused entirely or partially on design thinking as pedagogy and organizing principle. These models, mostly concentrated in California, teach design thinking as part of their educational programs. A notable example of this work, Design Tech High School near
San Francisco, has even published tools for school-based “design sprints” centered around school improvement. At “DTech” they run design sprints to leverage students and staff in the improvement of the school (Tran, 2018b). These efforts are very similar to those studied in this dissertation. What is missing from the field at this point is research that specifically examines this use of design thinking as a method of leadership and continuous school improvement.

This study is designed to help us better understand the impact of leveraging ground-up school planning and design as a tenant of school leadership. By critically examining one case of ground-up continuous improvement work that attempted to use design thinking as a methodology and process, I hope to be able develop and share understandings of some of the implications of this form of leadership on teacher motivation, adaptivity, and willingness to learn from their students. I hope to uncover strategies for managing ongoing school design and for helping school leaders understand the school design process through the lens of design thinking.

This investigation is an inquiry into the impact of a design thinking approach to school design and leadership on me, my leadership, my leadership team, and on the school and the adults that serve it. I have examined the implications of starting with the client and working backwards rather than the much more common process (in this era) of employing externally validated practices. The logic of my argument is that efforts at redesign that are imposed on local circumstance are bound to fail. They are impositions that are not connected to the contextual realities of the community. It is this
transformation in leadership perspective and practice that I have documented and examined in this research.

The focus of this work is on the use of design thinking as a means for ground-up, user-driven continuous improvement of a public, alternative high school in a northeastern city in the United States. Design thinking is a problem-solving process that uses iterative, human-centered methodology to identify and solve for individual needs (Brown and Martin, 2015). In an era of top-down, externally imposed school-design, there remains a strong counter current for continuous improvement (Murphy, Elliot, Goldring, and Porter, 2006) and local design (Brown, 2009; Wiggins and McTighe, 2007).

This research examines one attempt at enacting design-thinking as a tool for distributing leadership with the aim of school improvement. My focus is on the impact of the design thinking process and on the impact of the leadership actions I took in an effort to instill a design thinking mindset. This research works to better understand how the use of design thinking influenced the actions taken and work products generated by the teachers at Northeastern Leadership Academy who participated in our collective design sprints for improving the school over the course of a three year period. My research questions were:

- How are the beliefs, behaviors, and mindsets of the teachers at Northeastern Leadership Academy impacted by the use of design thinking as a leadership methodology for continuous school improvement? Specifically, do teachers engage in behaviors and develop programming and materials that demonstrate three core design thinking mindsets?:
  1. Flexibility and adaptive thinking in how they approach their individual, team, and collective work;
2. Agency and self-efficacy in their actions suggesting that they see themselves as central change agents and demonstrate the belief that they have the power to enact meaningful change;
3. Teachers taking an inquiry stance and focusing continuous improvement efforts on the real, specific needs of the young people we serve.
   - What are the leadership behaviors that teachers display in a context that values and emphasizes design thinking and the ground-up mindsets that design thinking entails?
   - How do teachers respond to the design thinking focus on understanding students and consumer ethnography?
     - Do teachers internalize the consumer-focus and iterative consumer-oriented piloting of ideas as evidenced by the implementation of ethnographic practices during the design process and the revisiting of student needs throughout the piloting and adaptation stages of continuous design?
     - How do teachers enact the design thinking principle of designing for one consumer?
   - Do teacher actions suggest increasing generativity and flexibility through a willingness to pilot ideas and to pivot from these ideas as the evident needs of students dictate?
   - Does design thinking prompt continuous learning and greater teacher engagement in all aspects of school improvement and beyond work associated with individual classrooms?

A key assumption underlying this work is that all community members have a role to play in improving all aspects of the school and that best results are achieved by asking community members themselves to engage in design thinking (Murphy et al., 2006). For this reason, I am specifically examining several examples of design thinking "sprints" or whole-community problem solving activities. These activities ask teachers to "crossover" from their traditional realm of academic teaching and learning to the broader engagement needs of the school. As noted previously, I am interested specifically in understanding how this form of leadership impacts teacher flexibility and adaptive thinking; their demonstrated efficacy and willingness to engage in school improvement
and leadership; and their use of student need, derived through their observations, to drive and shape their change efforts.

**Why focus on the teachers?**

I chose to focus this research on the impact of design thinking on teacher practice in part because the work of the teachers is both rich with potential data on how design thinking can impact a school community and because the teachers are a practically manageable group limited in size (I focus on 10 returning teachers) and whose behaviors are easily observable through the existing, natural lens of my leadership practice and the data I collect in order to improve my leadership practice.

More importantly, the focus of this research was rooted in my belief that teachers matter and their local knowledge and expertise matters for creating effective school change. As Senge, Cambron-McCabe, Lucas, Smith, Dutton, and Kleiner (2000 et al.) indicate in their work on human systems, it is the daily habits, behaviors, and ways of doing of the community members themselves that most immediately determine organizational outcomes. In addition, I wanted to discover if design thinking can be an effective tool for increasing teacher motivation, participation, and understanding as well as a tool for building stronger school and teacher community. If this is so, it may result in a more effective organizational growth and development and in doing such, is inherently valuable.

If our use of design thinking was having its desired impact, teachers should have demonstrated behaviors and produced programming and materials that represent three core developmental goals: 1) Flexibility and additivity; 2) Self-efficacy and a willingness
to take leadership in designing and implementing change including taking initiative over the need for change; 3) Teachers employing an inquiry stance that roots change efforts in student needs and leverages ethnographic methods to determine these needs.
Chapter 2: Review of the literature

For over a hundred years, the educational community in the United States has proposed, modeled, and debated the best way to design secondary schools. The literature that has historically examined these school models has tended to investigate the particular educational, pedagogical, economic, or managerial philosophies of a given model and how these design elements are implemented and to what effect. In contrast, this examination was intended to look closely at the design process itself and at the impact of leadership, community values, design strategies, processes, and tools on the ultimate design of the school. Design thinking suggests that regardless of model, the interactions of team members, their shared and enacted values, and the systems they use and create have a powerful impact on their design work (Kelley and Kelley, 2013).

In the sections that follow I will review educational literature that focuses on school design. This literature is drawn from work on school reform and school change and the smaller body of literature on design theory and how to design and implement new schools and school models. Together they present a host of design models, leadership frameworks, and pedagogies for the consideration and use of school designers. However, this review will also highlight the limited inclusion of design thinking itself in this field. I will also examine how those educational design texts that do address design thinking contrast with the structural and prescriptive tendencies in the central body of school reform and leadership literature.

Design Thinking Literature: A 21st Century organizational ideal
Design thinking is a mindset-based approach to design—design is understood as a learning and meaning-making process. Brown (2009), the CEO of the international design firm IDEO, for example, defines design thinking as “a set of principles that can be applied by diverse people to a wide range of problems… a thought process” (p. 7). This emphasis on problem solving, learning process, and change over time make design thinking a compelling fit for schools (Beckman and Barry, 2007). For this reason, although there have been hundreds of books written evaluating, supporting, or exemplifying particular school designs, this research will focus on the objectives of design thinking—local design for local needs.

Design thinking entails a process that incorporates the intended community of users in formulating the design challenge and shaping the ultimate design itself. Significant research, including design theory itself and national studies such as those that reviewed the New American Schools federal program in the 1990s have found that without local adaptation, any given school design model is unlikely to match the specific needs and goals of a given local community (Bodilly, 2001; Hatch, 2000). In a design thinking approach, the burdens of problem formulation and of problem-solving fall on the local actors. These local designers make their own meaning of the wide range of research and resources available to school creators from a variety of both education-related and non-education-related disciplines. School planning and design processes, therefore, may

1 By users or consumers, I mean all members of the school community including the staff, students, caregivers, and local community.
be vastly different from each other. This is supported by organizational design literature (Senge, Cambron-McCabe, Lucas, Smith, Dutton, & Kleiner, 2006; Boland and Collopy, 2000) and educational research (Boddily, 2001; Rowan, Correnti, Miller, and Camburn, 2009) both of which contend that regardless of design template, every new school will be a unique combination of its original design, its staff, its community, its students, and its circumstances.

Often, when literature in education refers to school design, it refers to a template or design model that is created by educational experts and implemented in the local settings (Boddily 2001; Rowan et al., 2009). Design thinking points school founders, in contrast, to a deliberately open-ended process that is iterative and non-linear (Bolland and Collopy, 2004). The more open to new ways of thinking a design team is, the more likely they are to break through the limited modes of thinking that dominate the field. Bolland and Collopy use a description of famous modernist architect Frank Gehry’s design attitude to emphasize this point. In describing working with Gehry on the design of a new university building, Bolland and Collopy appreciate the architect for “his relentless search for openness” (p. 14). The authors explain the fierce openness of Gehry’s approach to design thinking:

[Gehry] sees a model as a kind of three-dimensional sketch to stimulate thinking and explore ideas about possible ways that the project could go. We, in contrast, tend to use the concept of model as a theory of a situation and its solution. When we model, it is much more serious and stable—meant from the beginning to be a kind of truth that captures a situation in an abstract, compressed way…For Gehry Partners, the model was a physical tool for thinking, not a representation of the building they were designing. Frank Gehry would often point to the model, saying, “This isn’t what we are doing—it’s not the building. (p. 14)
For school designers to fully adopt the design thinking mindset they must be prepared, as Sizer (1992b) encourages, to envision a “better and more powerful school” (p. 12), but they must also be prepared to think “what we are building is not a school at all.”

IDEO (2012), in their Design Toolkit for Educators, further explain the inclusive, collaborative, and optimistic nature of design-thinking. They describe four requirements of design—that it is “human-centered,” “collaborative,” “optimistic,” and “experimental.” Underlying this theory is “the fundamental belief that we all can create change” (IDEO, 2012, p. 11). The authors write, “Design thinking is about believing we can make a difference, and having an intentional process in order to get to new, relevant solutions that create positive impact” (P. 11). Relevance and positive impact are functions of being human-centered, collaborative, and optimistic. The fourth requirement, that design is experimental, also serves to empower the local community to drive the design process. It implies that effective design is not a function of the expertise of outsiders, but a process of experimental improvement driven by insiders who make meaning of the design through the process of engaging with it.

The requirement that design is experimental is challenging in the school context because it acknowledges the basic truth that there will be some missteps in any design process (Tran, 2018a). Because public education is inherently political and serves children, our most vulnerable citizens, it can be difficult for school designers to acknowledge that there might be failure inherent in the organizational learning process. Given this, it is not surprising that a great deal of educational reform has focused on
imposing “expert” design models on local communities (Boddily, 2001; Hatch, 2010; Kirst, 1983).

In an inclusive, open-ended design process, change is never complete. Design-thinkers continue to adapt structures to changing contexts and needs. Both the formulation of problems and the formulation of effective solutions are conducted as community endeavors and must become part of the habits and day-to-day worldviews of the members of the design community—in this case, the leaders, staff, students, families, community, and partners of the school.

Localized Design as Outlier in American Schooling

Kirst (1983), an educational historian, describes the history of modern American schooling as a steady and constant increase in external demands beginning with instilling citizenship and culminating in schools taking a significant amount of custodial responsibility over students. These demands have only increased in the past two decades during the era of the No Child Left Behind Act (NCLB, 2001) and its exam-based accountability measures. In the face of ever-increasing requirements and expectations however, the core of schooling has developed inertia over time while the peripheral demands made of schools are constantly changing (Elmore, 2007; Tyack and Cuban, 1996). As Tyack and Cuban (1996) detail, local schools were centralized into school districts as part of an effort to put schooling in the hands of “experts.” This approach was aligned to the modernist design principles of the early 20th Century (Beckman and Barry, 2006). The result of this effort, however, was a fundamental “grammar of schooling” that has endured a host of attempts at change and has created a shared cultural understanding.
of schools that is limited to a basic structural model established over a hundred years ago (Elmore, 2007; The Commission on Reorganization of Secondary Education, 1918).

These conservatizing forces are, at least in part, the product of largely prescriptive rather than open-ended educational design theory as implemented in schools. Design thinking is process focused and solution agnostic and it is specific in its application to a given context. Much of the educational literature that addresses the organizational design of schools, which I will term organizational planning, comes from the underlying fields of educational philosophy and learning theory as well as the history of school reform in America (Bryk et al., 2010; Darling-Hammond, 2010; Elmore, 2007; Sizer, 1992; Ravitch, 2010; Tyack and Cuban, 1996;). Organizational planning literature lays out solution specific and generally content agnostic design models. A second subset of the literature on school design comes from more recent literatures rooted in organizational design theory and business management and tailored towards the creators of new schools (Cornwall, 2003; National Association of Secondary School Principals, 2006; Senge et. al., 2000; Vermont Restructuring Collaborative, 1994; Wiggins and McTighe, 2007). These literatures, which are called practitioner theory in this paper, tend to be prescriptive in fewer of their mandates and more focused on human processes and so are more similar to design thinking. They are theoretical frameworks and process manuals, however, and not investigations into what happens when design thinking is applied to school design and school change.

Having said this, there is a small subset of educational literature stretching back at least to the 1970s that supports localized and iterative design practices (IDEO, 2014;
Senge et. al., 2000). This literature includes at least one text (Senge et al. 2000) that explicitly bridges the gap between design thinking and school design—Senge et al’s (2000) autopoetic systems theory offers a model for understanding design thinking as an organizational tool for leading schools and well as for restructuring schools. This bridge has allowed me to engage in design thinking as leadership practice, my investigation of which is be the focus of my dissertation research.

Two Central Bodies: Organizational Planning and Practitioner Theory

I have identified two broad categories that are prominent in the literature of school planning and design and can illustrate how literature in this sub-discipline may be useful to school creators: 1) Organizational Design and Business Management Theories; and 2) Practitioner Theory. Each of these categories includes of a range of texts supporting design practices that exemplify different priorities and assumptions about what is important in a school design process as well as what elements of a school are most important for the achievement of school purposes. Each also provides a range of design processes and resources to support these processes. Together they represent a knowledge base that can serve as either support for or constraint of school designers.

Each of the organizational planning models I review in this section represents a focus on an essential structural aspect of schooling—the business, technical, or instructional core (Elmore, 2010; Ravitch 2010; Tyack and Cuban, 1996). The business core, exemplified by Cornwall (2003), highlights marketability as a key element of school design and measures success in terms of earnings. The business core includes operations, Marketing, finance and revenue, cost-benefit and market analysis; leadership
strategies, and planning for growth and sustainability. While also concerned with the use of money and resources, design of the *technical core*, as described by Miles and Frank (2008) focuses on organization of people, time and space. The technical core includes scheduling, facilities design, human resource design, and student grouping. Finally, the *instructional core* (Wiggins and McTighe, 2007) focuses on curriculum and pedagogy, teaching and learning, and professional development for staff and community. These authors do not focus on these cores to the exclusion of the others, but the differences in their frameworks are notable.

**Marketing Theory and the business core of schooling: Cornwall’s (2003) Model**

Cornwall’s (2003) guideline for school creators draws its values from business planning and Marketing practice. This model is leader/designer centered for a design framework. In fact, Cornwall’s (2003) design process draws its values largely from what Senge et al. (2000) would refer to as *machine thinking* about business management. Cornwall centralizes the school leader as the creator of a product that is sold to customers. This is an example of the modernist style of design (Bolland and Collopy, 2004). Yet while it lacks some emphasis on human design, Cornwall’s model can be useful in the design thinking process in that it establishes a basis for evaluating a school design model and an implementation process using Marketing as a source of values and measures.

\[\text{For example, the Cornwall (2003) defines an organizational vision as "...a leader's view of what a business concept (or, in this case, a school) can become..." (p. 13).}\]
Cornwall considers only one primary metric—*can the school make money*—that is, does it attract and serve customers well and capitalize on this success to continue to grow as an organization. A simplistic measure of school performance, profitability is nevertheless an important political and practical value in school design (Ravitch, 2010; Cuban, 2007). In an era of school competition, Cornwall (2003) contends that schools must continuously attract customers and Samet themselves effectively to a variety of constituencies from parents, to businesses with their potential resources, to decision makers in the local educational and political establishment. Cornwall views school design as an entrepreneurial enterprise focused around the creation of an effective business plan. He details seven elements of design and their measurable components (see Table 1).

For each domain of school design in his model, Cornwall (2003) offers detailed advice on execution. Cornwall explicates some of the questions asked and data gathered during this process and offers tools to support a designer’s learning. He highlights key decision-making factors such as the availability of consumers (students), the state of the existing marketplace, and examples of product success or market trends that would indicate the likelihood of the school’s specific services succeeding in the marketplace. Finally, Cornwall provides a brief overview of how to determine financial feasibility based on revenue projections, fixed versus variable expenses, and the potential operating margins that might allow for success.

<table>
<thead>
<tr>
<th>Design Domain</th>
<th>Elements of Design – Measurable Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mission and Rationale</td>
<td>Core Values</td>
</tr>
<tr>
<td></td>
<td>Statement of Purpose and focus</td>
</tr>
<tr>
<td></td>
<td>Mission Statement</td>
</tr>
<tr>
<td></td>
<td>General goals tied to aspirations for the school</td>
</tr>
</tbody>
</table>
Cornwall’s model and those like it represent an important set of design considerations as well as an equally limiting set of assumptions about what schools are and can be. This detailed guidance can be used to generate the questions required to measure whether a school model has internal integrity and validity. For example, do the attempts to market the school align with the school’s purposes and are they appropriate for the intended users? Alternately, how are the intended intensity of its services and the timing thereof aligned to community practices and needs? Cornwall’s work provokes a specific set of evaluative questions and they are not trivial to the design process. His work, however, can also be seen to neglect primary concerns (the nature of teaching and learning, for example) in favor of more secondary concerns (how is the school marketed).
Design thinking suggests that all of these concerns should be treated iteratively and flexibly.

**Strategic planning and the technical core of schooling: Miles and Frank (2008).**

Cornwall (2003) focuses on the need for schools to be effective businesses and draws values primarily from marketing and economic theory and research. Miles and Frank (2008) offer a second model focused on the need for schools to effectively manage resources using a strategy based on the evaluation of priorities and needs. The authors explicate a six-stage school design process: 1) Determine your school’s highest-priority academic needs; 2) Assess how well your resource organizations meet your academic needs; 3) Set concrete goals to meet your highest priority needs; 4) Identify and evaluate options for accomplishing your goals; 4) Create a strategy by choosing a set of options that works in your school’s context; 6) Decide on ways to measure progress toward your goals and then measure them. The authors then use several examples from a case study to illustrate how elements of the technical core can be designed to the collectively determined needs of a school. As with other texts in the field, the language is focused on reforming existing schools, but the values and measures are applicable to new school design as well.

Miles and Frank (2010) go significantly farther than Cornwall (2003), however, in prescribing a general set of assumptions about schools and their design needs. Miles and Frank identify three “new school goals”: 1) Ensuring students learn subject matter content; 2) Helping all students meet rigorous academic standards; 3) Preparing students
for a rapidly changing workplace with emphasis on literacy and critical thinking skills (p. 3). The authors argue that there must be alignment between what they call the “new school goals” and the way schools make use of their resources, specifically time, people, and money. After establishing their three driving goals for schools, Miles and Frank (2010) argue that achieving them requires a designer to focus on the creative use of resources. The new school goals require teaching and learning to be flexible and individualized. This in turn, the authors contend, requires flexible and creative use of resources.

Despite their bias towards these “new school goals”, Miles and Frank (2010) propose two primary measures for school design based on their strategic approach that have potential value to design thinkers—*instructional coherence* and *strategic use of resources*. Appropriately for a design thinking mindset, instructional coherence is a measure of the alignment between goals/needs and the elements of design, particularly resources. Unlike Cornwall’s (2003) Marketing-based approach, which privileges the customer’s perception of needs, Miles and Frank’s “strategic” approach focuses on backwards thinking that begins articulating a school’s goals and then thinking creatively about how to employ people, time, and money towards these ends.\(^3\) The proposed strategy for how to use resources, however, is based on the author’s “new school goals”

\(^3\) The term “strategic” and the idea of “strategic planning” is somewhat disputed in the field as to whether it is reflective of a machine or living systems orientation towards organizational design (Schmoker, 2006).
of increasing content focus, academic rigor, and critical thinking. Rather than framing the questions that might drive a designer’s strategic approach to use of time, space, and resources, the authors posit a strategy that incorporates investing in teacher quality, organizing for personalized learning, and focusing student time on core academics. Their work provokes important thinking about how to align time, space, and resources to school purposes, but Miles and Frank fail to provide an open-ended process for designers to engage with.

**Organizational design and the instructional core: Wiggins and McTighe (2007).**

If one might criticize Cornwall (2003) for ignoring the instructional core entirely or Miles and Frank (2008) for being overly prescriptive in this domain, the opposite critiques might be leveled at Wiggins’s and McTighe’s (2007) *Schooling by Design: Mission, Action, and Achievement.* Wiggins and McTighe focus overwhelmingly on the teaching and learning work of schools and little on the technical or strategic cores that enable teaching and learning to function. Having said this, like Cornwall (2003), Wiggins and McTighe (2007) do focus on locally determined goals for school design. The authors present their logic model in the following formula: “if X is our mission, then what follows for curriculum, teaching, and school organization?” What they term “engineering from the mission” begins with design of mission and vision and works upward through

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4 *School by Design* is part of a substantial body of school planning work by Wiggins and McTighe (2007) and the ASCD, an organization that publishes a range of supports for school level planning.
the domains of curriculum design, instructional program, human resources, and ultimately to policies, structures and governance (see Figure 1).

![Image](image.png)

Figure 1. The *Schooling by Design* map of the key elements of school creation. If one reads it from the bottom of the pyramid up, this map illustrates Wiggins and McTighe’s (2007) design process and the elements that must be included in this process.

In each of these domains, the authors frame the major design considerations, and provide examples of processes and tools that can or have been used for the design of the given domain. For example, the authors, who have a large publishing and school support business focused on curriculum design, provide analysis around the purposes and function of the curriculum and then frameworks and graphic organizers for engaging in the design process in each of the 10 components of curriculum design the authors identify (ranging from mission-related demonstrations of student performance to curriculum mapping to a guide for identifying and addressing “predictable learning-related problems” (p. 10)).

The measures Wiggins and McTighe (2007) employ for evaluating school design are implied in the pyramid design in figure 3, but the authors are explicit about how their pyramid map translates into six components of school design, which must be measured:
- Design alignment to the long-term mission
- "A curriculum and assessment framework that honors the overall mission as well as the explicit long-term goals of academic programs." (p. 2)
- Explicit principles of learning and instructional design
- Structures, policies, job descriptions, practices, and use of resources consistent with mission and learning principles
- A feedback and adjustment system including a strategy of change "centered on the constant exploration of the gap between the explicit vision of reform versus the current reality of schooling." (p. 2)
- Tactics for designing and implementing "backward" from the desired result

As a complement to Cornwall (2003) and Miles and Frank’s (2010) work, Wiggin’s and McTighe’s (2007) measures are singularly focused on the educational product itself and the internal integrity and validity of this product. Goals and measures, as Wiggins and McTighe explicate, are designed to the purposes of the school by asking what the mission implies in terms of the elements of design. This approach does align to design thinking and offers a useful set of tools to school designers who can choose to centralize this work as appropriate for their design communities.

**Summary and Critique of the Three Models.**

The three texts reviewed in this section represent three different partial applications of design thinking to education. All of these texts are prescriptive in key areas that limit the open-ended design thinking process. There are also significant gaps in this literature. None of the three texts establishes processes for the flexible integration of local need or for learning dynamically from what is happening in the process of implementation.

Because these texts are general overviews of the business, technical, and instructional cores of schooling, they offer school designers only limited support for addressing the culture and daily human behaviors that ultimately are determinants of how
members of the school interact with each other and how they are able to work together to further school goals (Senge, Cambron-McCabe, Lucas, Smith, Dutton, & Kleiner, 2000). As Senge et al. argue, organizational outcomes are influenced by their business plans, budgets, schedules, and curriculum maps, but these outcomes are ultimately more primarily shaped by the day-to-day actions and beliefs of the members of the community.

**Literature on Living Systems Theory, Practitioner Theory, and Design Thinking**

Texts in the field of school design, even the most sophisticated, overwhelmingly have a bias towards their own pedagogy or model; their own brand. From a school leader’s perspective, this means that there is a lot of support for implementing specific structures of schooling and little support for open-ended design thinking. While design thinking does have a bias—or theoretical stance—the bias in design thinking is about process and role, about the *how* of design. Design thinking privileges the people in the school over any particular theory or structure of schooling. The literature in the following section, which I describe as *practitioner theory* using a term from the Vermont Restructuring Collaborative (VRC, 1994), is a close parallel to design thinking. Practitioner theory offers examples of the application of the literature in school planning and school reform to more iterative processes that begin to resemble design thinking.

**Situating Practitioner Theory in Autopoetic Living Systems Theory.**

Senge, Cambron-McCabe, Lucas, Smith, Dutton, and Kleiner (2000), in their school design compendium *Schools that Learn: A Fifth Discipline Fieldbook for Educators, Parents, and Everyone Who Cares About Education*, frame their work by first considering what they describe as the dominant, twentieth century “machine” way of
thinking about organizational design. This perspective, which emphasizes hierarchical control and has dominated American schooling, has been undermined in recent years by a change in scientific understandings of how human organizational systems actually work. Senge et al. (2000) offer a detailed and sophisticated set of frameworks and support for this new understanding of how organizations operate and especially how they learn. In Senge et al’s (2000) case, this formulation is scientific in that its values are drawn from biological theory and living systems theory. The authors contend that schools must be reimagined as living, dynamic systems and discuss the implications of this driving metaphor for the elements of design (Table 2).

<table>
<thead>
<tr>
<th>Industrial-Age Assumptions about School</th>
<th>Autopoetic Assumptions about School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schools are run by specialists who maintain control</td>
<td>Human organizations control themselves</td>
</tr>
<tr>
<td>Knowledge in inherently fragmented</td>
<td>Systems thinking: reality is composed of relationships, not things, and therefore knowledge is integrative and contextual and inherent to living</td>
</tr>
<tr>
<td>Schools communicate the truth</td>
<td>Schools help you create an expansive and coherent truth for yourself</td>
</tr>
<tr>
<td>Learning is primarily individualistic and competition accelerates learning</td>
<td>Knowledge building is collaborative and shared—meaning making is inherently social</td>
</tr>
</tbody>
</table>

Senge et al. (2000) introduce their model by explaining an important transformation in the field of systems thinking over the last 100 years from machine thinking to what is called autopoetic thinking (see Table 2). In autopoetic thinking, living systems are “self-producing” and “distinctly characterized by emergent self-organization (behaviors and structures that cannot be predicted based on past behaviors and structures) and cognition, the ability to ‘make sense’ of their environment” (p. 55). Senge et al. (2000) further point out that living systems are not readily controlled. They write:
Unlike machines, living systems continually grow and evolve, form new relationships, and have innate goals to exist and to re-create themselves. They are neither predictable nor controllable like machines, though they have patterns of behavior that tend to recur and their future development can be influenced. (p. 55)

The process of design for living systems, therefore, is about understanding and focusing the relationships and interactions of the system’s members on shared purposes in a way that drives individual action over time.

As with all of the authors previously reviewed, Senge et al. (2000) go beyond describing the design process. The authors offer a model for schooling based on their own formulation of the needs and values they contend should drive school design and school change. The result is an expansive guide for designers of schools as learning organizations. Their design model and the values and measures it highlights are framed in the living systems approach to understanding organizational design. The authors explain, “When we inhabit a school as a living system, we discover that it is always evolving. We participate in that evolution by asking questions like ‘Why is the system this way? Why do these rules exist? What is the purpose of this practice?’” (p. 55). The goal of a learning school is that “Constantly questioning becomes a way of life for students, teachers, parents, and administrators” (p. 56). This philosophy of design, while it has some aspects of the proscriptive tendencies of similar school design work, values the knowledge of local actors.

I have argued that autopoetic systems theory is a stark contrast to the modernist ideal of externally determined and imposed model design templates. Instead, autopoiesis contends that the knowledge building of local actors is fundamental to organizational success. In this way, autopoetic systems theory provides a context for locally determined
Practitioner theory. Practitioner theory attempts to connect local knowledge with research-based practice in an iterative learning process that mirrors design thinking.

**Practitioner Theory – A Close Approximation of Design Thinking In Action**

Practitioner theory is inherently oriented towards design thinking because it repudiates the privileging of academic research or established, dominant school models over local expertise. The Vermont Restructuring Collaborative (VRC, 1994) highlights the way designers use educational theory and research to validate their own understandings. The authors explain that the role of theory in providing a foundation for change is interactive and entangled in the change process:

“Practitioners’ theory” was frequent in our stories. That is, change most often occurred not because it fit a particular theory; rather, it resulted from the process of defining a particular need, designing a strategy to meet that need, and then looking for theoretical backup to support the strategy. At this point, the intervention strategy might be revised because of the theoretical information. It would then be practiced in the light of the new theoretical perspective and further refined still further by the reality it encountered. In our experience it didn’t matter whether the rationale for the change was added at the end or picked up along the way…Generally, theory serves as a touchstone that helps to define and describe the specific goals and objectives of a change initiative. However, since local conditions play such a large role in successful change efforts, theoretical purity was often the first casualty. (p. 333)

Just as practitioner theory is described, school design is also a process of understanding local need and crafting specific, tailored responses to that need based on both local understandings and on expertise, research or theory. Part of this process entails
translating educational theory into practice, but only as it is of relevance of the students and school community.

**Practitioner theory from a research perspective: Bryk, Sebring, Allensworth, Luppescu, and Easton (2010).**

Bryk, Sebring, Allensworth, Luppescu, and Easton (2010) also make use of practitioner theory to develop a support for both generating school design and analyzing it. What the authors call the “framework of the essential supports for school improvement” comes out of a collaboration between a broadly representative group of educators, researchers, and community members, including the authors, in Chicago in the 1990s (Bryk et al., 2010, p. 44). As Bryk et al. explain, the framework serves “two masters” in that on one hand it provides practical support to those trying to change a school yet, on the other hand, it is grounded in an analytic realm:

…the framework should be anchored in organizational theory and provide analytic traction for efforts to examine its validity empirically. In this latter regard, an effective theory identifies the critical elements that combine to form the overall framework, guides the development and refinement of measures for each of these core elements, and directs attention to specific interrelations that we should find among measures of these elements and their relation to valued student outcomes. (p. 44-45)

The framework both captures the measures of the required elements of schooling and links these to prospective student performance based on analysis of historical data (Table 3). Generally speaking, schools that improved on the framework’s measures also saw improvements in student achievement in standardized test scores and attendance.
This suggests that the framework may be a useful starting point for evaluating and designing these elements of schooling.

As detailed in Table 3, the framework establishes five “Organizational Subsystems” divided into 14 *indicators* of effective school design (Bryk et al, 2010). These indicators are then again divided into 37 specific measures of improvement. This is a substantial list of measures and the complexity of the framework matches the complexity of schooling and there is an underlying openness to local control that is appealing to a design thinking mindset.

<table>
<thead>
<tr>
<th>Organizational Subsystem</th>
<th>Indicator of Effectiveness</th>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>School Leadership</td>
<td>School Leadership</td>
<td>Inclusive/Exclusive Level of teacher authority Parent and Community Involved/Uninvolved Program coherent/incoherent School Improvement Plan In Use/Inert</td>
</tr>
<tr>
<td>Parent-community-school ties</td>
<td>Teacher’s Ties to the Community</td>
<td>Know community Use community</td>
</tr>
<tr>
<td>Parent Involvement</td>
<td>Teachers outreach Parent involvement in school</td>
<td></td>
</tr>
<tr>
<td>Professional Capacity</td>
<td>Teacher Background</td>
<td>Cosmopolitan experience Quality of undergraduate institution</td>
</tr>
<tr>
<td>Frequency of Professional Devel</td>
<td>Frequent/Infrequent</td>
<td></td>
</tr>
<tr>
<td>Quality of Professional Devel</td>
<td>Coherence/Longevity</td>
<td></td>
</tr>
<tr>
<td>Changes in Human Resources</td>
<td>Hire quality teachers Remove unsuccessful teachers</td>
<td></td>
</tr>
<tr>
<td>Work Orientation</td>
<td>Innovation/School commitment</td>
<td></td>
</tr>
<tr>
<td>Professional Community</td>
<td>Public classroom practice Reflective dialogue Peer collaboration New teacher socialization Collective responsibility Focus on student learning</td>
<td></td>
</tr>
<tr>
<td>Student-Centered Learning Climate</td>
<td>Academic Support and Press</td>
<td>Students are pressed to work hard Classroom personalism Classroom behavior Academic engagement Peer support for academic work</td>
</tr>
</tbody>
</table>
Evident across the Bryk et al.’s 37 measures of effectiveness, however, is an implied overarching question of whether or not the elements of a school’s design correlate to student achievement. While student achievement is an extremely important measure in the discipline of school design, it is also a challenging measure to assess with validity and equity. A focus on student achievement measures has often led to an overreliance on relatively limited standardized test scores (Ravitch, 2010; Tyack and Cuban, 1996). The very existence of these tests, in turn, forces a homogenization of schooling around trying to enable students to score well on them.

Regardless of the needs of the local community, the fact of standardized validation is an important design consideration for most public high schools. For example, local political actors often require evidence that supports current or future school practices and test scores are often used in assessing school progress (inappropriately so, many would argue). Bryk et al.’s framework offers designers one approach to validating their design decisions, but it also lends credence to a traditionally limited and limiting understanding of what schools can be. The prescriptions evident in this research presume many traditional understandings of the structures of school including curriculum, assessment, professional learning, and school discipline. For example, curricula are generally divided into separate academic disciplines that silo learning in the model of American universities; success is generally assessed in some sort
of test and students accumulate grades, usually from 0-100, that are then generally translated into As, Bs, Cs, Ds, and Fs on most report cards; professional learning for teachers, historically, frequently involved being told about how to improve their practice; and school discipline has tended to criminalize student behavior rather than working to help students develop the capacity for positive socialization.

**Practitioner theory as support for principals and school leaders: The National Association of Secondary School Principals (NASSP, 2006).**

A second example of practitioner theory is a model originally created in the 1990s and then rewritten in 2006 by the National Association of Secondary School Principals (NASSP). This model is a primary example of practitioner theory at a national level and the authors represent a very large group of administrators, teachers, and students. Their work, called *Breaking Ranks II: Changing an American Institution,* is a practical and an extensive report that focuses the 82 recommendations they developed in their first publication for the use of school leaders and designers. The *Breaking Ranks* model measures school design using both a design thinking process map and a set of measures based on a formulation of driving goal of schooling as personalized learning.

*Breaking Ranks II* offers seven measures for the design process:

- Clear definition of learning goals;
- Shared accountability across staff and students;
- Small and caring community;
- Personal and flexible learning options;
- Effective use of time; and supportive relationships. (NASSP, 2006)

These measures are derived from a combination of *educator experience* and *educational research and theory,* with the former greatly privileged over the latter. As the authors
explain, “Unique to the effort was the fact that the document was not primarily a research
document; rather, it was a set of principles designed by practitioners keenly aware of the
day-to-day realities of education” (p. xiii). Although, as the authors acknowledge, they
are specifically influenced by Sizer’s work on school design and personalized learning
(1984,1992), they do not strongly reference any specific body of educational research or
theory.

![Diagram](image)

Figure 2. The Breaking Ranks Model for School Reform describes a kind of design thinking process tailored to
the school environment.

The focus of the *Breaking Ranks* strategy is on developing the adult and student
learning systems that will allow school purposes to be accomplished. In design thinking
fashion, the model asserts that local school measures must be derived from the work of
school-level participants. Ultimately, this work is aligned to a design thinking mindset
and full of practices and tools for school leaders. At the same time, it privileges two practices that do not necessarily reflect a design thinking mindset: 1) There is an orientation towards long-term planning processes followed by relatively permanent implementation; 2) as with the work of Bryk, Sebring, Allensworth, Luppescu, and Easton (2010), the authors treat many of the existing structures of schooling as given or proscribe new ones based on their collective ideology.

Like the template created by Bryk et al., the Breaking Ranks model also offers a coherent map of the elements of design in a school’s instructional core. For prospective school designers, this framework can serve as a tool for imagining how comprehensive and broad a design for the instructional core of a school can be. The elements in this map can serve as a kind of checklist for designers. This map and the broad array of recommendations in Breaking Ranks II are tailored towards current school leaders and are organized to be instrumental and readily employed by school leaders. Breaking Ranks II even includes a range of supports that drill down to the level of individual planning meeting agendas. This level of utility is notable in contrast to the two practitioner theory models by the VRC (2007) and Bryk et al. (2010) I also reviewed in this chapter.

Practitioner theory as policy agenda: The Vermont Restructuring Collaborative (1994)

The Vermont Restructuring Collaborative (VRC, 1994) helps resolve the inherent tension in school design between machine-thinking-style imposition of “educational theory” or “research-based practices” and pure local invention without any learning from the field. The VRC (1994) ultimately affirms the ground-up, design thinking approach to
school planning and is one of the most comprehensive breakdowns of the elements of schooling available in the field. The authors also explicitly account for the technical, business, and instructional cores, and further provide approaches, processes, and tools for engaging and motivating people to take on the work of school design and change. The authors contend that knowledge of school history and context and of community history and context are essential to school design, and they advocate for an ongoing design process that includes the broad community in decision-making. Because they are presuming an existing school that is in a process of change rather than a new school, the authors frame their work as the requirements of school change (continuous design) and not of new school design (school creation), but their conclusions are useful in both settings.

The VRC offers nine principles of school improvement that can serve as a first set of measures for school design:

1. Support broad-based and consistent leadership
2. Encourage cooperation and collaboration rather than competition across all members of the school community
3. Incorporate state-of-the-art tools and research findings into what we are doing
4. Insure safe and secure environment for students
5. Respond to and be agents of change and create an organizational ethos in which change is embraced
6. Establish a culture in which learning is the core of the educational enterprise for students and teachers
7. Promote the structures and expectations for students to increasingly make choices about how to direct their own learning to meet specified outcomes
8. Design and implement curricula, instructional, and assessment practices where (a) respect and equal attention is given to all types of intelligence’s, learning styles, and psychological needs; (b) learning experiences provide opportunities for real life applications; and (c) citizenship and global responsibility are emphasized.
9. Recognize that accountability to the students, parents, and community is a responsibility of the school. (VRC, 1994, p. 26)

Of all the school design texts reviewed for this analysis, the VRC’s is perhaps the most coherent as a tool for designers. The VRC’s text includes investigations into specific elements of school design. Some of the central elements the authors explore include: focus clearly on the needs of students; include the community in the design process; understand that the role of theory is iterative and entangled; ensure design has the required time; and do not let budgeting be a missed opportunity. As with the previous list, this list of elements is useful for educators as a checklist against which to measure the completeness of their design work.

**Summary of Practitioner Theory.**

The three examples of practitioner theory reviewed in this section model the iterative use of both experience and research in the design process. As with the business management-based models outlined in the previous section of this paper, these models can serve as important supports for school designers, but it is unlikely that any one of them will provide all of the support a given group of school creators might need. Still missing from the VRC’s (1994) discussion of resources, for example, is the issue of facilities design and management. Of all the core elements of design, I have found space to be one of the least discussed factors outside of the specific architectural literature on schools. Further research is needed into the cause and impact of this deficit, which is frequently decried by charter school advocates (Nelson, Muir, & Drown, 2003). A different concern might be raised with Bryk, Sebring, Allensworth, Luppescu, and Easton (2010) due to correlating their framework to student success. The authors use basic
standardized reading and mathematics scores as one of their primary determinants of student achievement; however, best measures of student achievement are greatly in dispute as are the value systems that determine design of assessments for these measures and the desired achievement goals (Ravitch, 2010). Finally, both the VRC (1994) and the NASSP (2006) models are framed with specific formulations of needs/goals and sources of values that may limit their usefulness to school designers who envision approaches that do not resemble those advocated by these two groups of experts.

Ultimately, practitioner theory is a close support for design thinking. I expand on this work by exploring how employing design thinking as a mindset and process for generating and implementing practitioner theory impacts teacher flexibility and adaptability, agency, and their willingness to take a student-centered, inquiry stance on school change. Many previous studies of the field have tended to be rooted in a given educational philosophy or school model and studies of implementation and either tell the story of multi-school, externally driven reform efforts (such as the New American Schools, see Bodilly, 2001) or the story of a given school implementing a specific design model. There has been little study of the use of design thinking in the practice of school design and leadership. The existing literature has much to offer that can inform the school design process and guide innovative and constructive thinking about the needs of communities and schools. Each of the literatures I have reviewed supply a piece of a larger puzzle and contribute to thinking about the creation or improvement of schools today. The process for implementing school design principles in ways that reject
proscriptive thinking and originate in specific school community contexts clearly requires further study. I have attempted to do that through one case study in this dissertation.
Chapter 3: Methodology

I chose practitioner inquiry as my methodology because it aligns to the design thinking theory-in-action (Carroll, 2015) that I implemented as I led a school through a design process. I have been part of five school design efforts. My design work at Northeastern Leadership Academy in a northeastern city was deeply impacted by both my prior school design experiences and my study of these experiences as a doctoral student for the past ten years. My school leadership work made it clear that I needed to work to implement a leadership and design methodology that was focused on local needs and meaning making.

The design thinking process is a learning cycle that moves from ethnographic study, to problem formulation, to piloting solutions and learning from the users all over again (Beckman and Barry, 2007). I was simultaneously developing a similar understanding of my research methodology as cycles of learning, application, reflection and interpretation. This aligned to what Herr and Anderson (2005) describe as the “action research spiral”, “iterative cycles of plan-act-observe-reflect” (p. 76). As the authors contend and my experience evinces, “In naturalistic inquiry, there is a sense that the methodology may evolve as it is implemented in the field, depending on the conditions that greet the researcher as the study is being implemented. With action research and the assumption of the research spiral, this premise of an evolving methodology is a virtual given” (p. 76). Happily, this approach enabled me to study my planning process through the theoretical lens I have described above—piloting the theories I was studying in my leadership practice and learning where the gaps and disconnects were in both my own
understanding and in the theories, I was applying. In turn this helped me begin to develop a critique of the existing field and a more contextually relevant school design theory.

**Context for this Research and Overview of the Data Collection Process**

A notable feature of my research context is my prior experience and the frameworks and mindsets I have developed as a school designer and doctoral student over ten years of practice. In considering my growth over time, for example, I find that while I espoused belief in design thinking and distributed leadership and I had studied related leadership practices extensively, I was overwhelmingly a hierarchical leader with an inflexible understanding of schooling during the early stages of my growth.

My understanding of leadership and design became more sophisticated during my first principalship, when I was the leader of a young charter high school for youth in the care of the department of human services. However, in response to external pressures and my own sense of priorities, I continued to be a largely traditional school leader with a traditional mindset towards planning and change. This is evident, for example, in a review of the large quantity of design documentation that my leadership and design teams produced in each iteration of my work. These documents and their formats and methodology are representative of many traditional, structural approaches to school design that have proliferated over the past twenty years. While the underlying educational philosophy in these design documents is relatively progressive, the understanding of design evident in the very format of the documents is highly structural, homogenizing, and traditional. Figure 3 is an example of the more formal planning process I used early
in my career as a principal. This document was more than fifty pages in length and it incorporates fundamental assumptions like the traditional division of the subject areas.

Another and related feature of this research setting is that it falls into the context of more than ten years of study and reflection in the practice of designing or redesigning new schools. Over the course of these experiences, I developed reflective practices and data collection tools and methods that I was able to apply in my current context and to this research. These practices include notetaking and reflection systems and school-wide
data collection protocols. The data include draft design documents, design team meeting minutes, whole school meeting minutes, and records of group learning processes with students as well as staff.

This research focuses on our attempt to use design thinking as an approach to school improvement over the course of three academic school years. During this time, the teachers engaged in three collective design thinking efforts around improving attendance; flexibly using teaching and learning time; and teacher-student conferencing. The focus of this research was on the design thinking process we attempted to use to address the challenges and needs that arose and on the impact of this process and mindset on our teachers and their engagement and motivation.

This research was participant action research in service of continuous organizational improvement (Herr and Anderson, 2005) and professional inquiry (Cochran-Smith and Lytle, 2009). I studied and worked on improving my own practice and the practices of the school community in which I was immersed. As a doctoral student I studied under Dr. Susan Lytle and in line with their definition, I have tried to adopt "Inquiry" as my professional "stance" as a school leader. Cochran-Smith and Lytle (2009) describe this concept:

Fundamental to the notion of inquiry as stance is the idea that educational practice is not simply instrumental in the sense of figuring out how to get things done, but also and more importantly, it is social and political in the sense of deliberating about what to get done, why to get it done, who decides, and whose interests are served. (p. 121)

As a leader, I was working to engage our teachers in continuing inquiry using design thinking. This was a product of my professional belief in the efficacy of local
knowledge and local expertise (Lytle, 2010; Cochran-Smith and Lytle, 2009; Gonzalez, Moll, and Amanti, 2005, Vermont Restructuring Collaborative, 1994). As Cochran-Smith and Lytle explain, "Working from and with an inquiry stance, then, involves a continual process of making current arrangements problematic; questioning the ways knowledge and practice are constructed, evaluated, and used; and assuming that part of the work of practitioners individually and collectively is to participate in educational and social change" (p. 121).

I tried to take a curious, improvement-oriented approach to my practice as school leader and I attempted to be systematic and deliberate in asking questions, collecting data and reflecting on what we are learning (Cochran-Smith and Lytle, 2009). As a result, there is a fundamental alignment in this research between my own beliefs and aspiring practices as a school leader, design thinking--the creative process I observe--and inquiry and action research--the investigative process I employed. My own understandings were deepened and enriched as I checked them with members of the community during ongoing one-on-one coaching meetings and small and large group professional learning sessions. In this way, I worked to make my own developing understandings part of our collective professional feedback and improvement systems.

Also underlying this research methodology is the fact that as a leader, I value distributed leadership and local knowledge as the primary driver school improvement and change (Cochran-Smith and Lytle, 2009; Gonzalez, Moll, and Amanti, 2005). I believe in what the Vermont Restructuring Collaborative (1994) calls "practitioner theory." The authors highlight the way designers can use educational theory and research to validate
their own understandings rather than to dictate them. As they articulate, "The role of theory in providing a foundation for change is interactive and entangled in the change process…" (p. 333). Just as practitioner theory is described, school design is also a process of understanding local need and crafting specific, tailored responses to that need based on both local understandings and on expertise, research or theory. Part of this process entails translating educational theory into practice, but only as it is of use to the students and school community.

Herr and Anderson (2005) describe the action research process similarly, calling it the “action research spiral” or “iterative cycles of plan-act-observe-reflect” (p. 76). As the authors explain:

In naturalistic inquiry, there is a sense that the methodology may evolve as it is implemented in the field, depending on the conditions that greet the researcher as the study is being implemented. With action research and the assumption of the research spiral, this premise of an evolving methodology is a virtual given. (p. 76)

Some data, such as school surveys, were administered as part of the practice of school leadership and some actions, such as our “attendance design sprints” were enacted as a result of inquiry that I and members of the school community did based on these data. This inquiry-based research methodology is rooted in what Cochran-Smith and Lytle (2009) call the “joint construction of local knowledge” (p. 2). This work of co-constructing meaning became a core part of my own understanding of and identity as school leader as well as a foundational part of how our community constructed and told our own story.

Ultimately, both design thinking and practitioner inquiry are also forms of social meaning-making. In enacting both the design thinking process and an action research
spiral, I was engaging as leader/researcher in a process of co-defining, or storytelling about what the organization has been, is currently, and can be in the future. Ganz (2007), explicates how stories can help shape shared community narrative and culture. Her storytelling model has three stages: 1) Story of Self; 2) Story of Now; 3) Story of Us. The Story of Self connects one’s personal narrative to the history and values of the community. The Story of Us and the Story of Now serve to bind individual narratives to a common purpose and future. She details this model, “While individuals have their own stories, communities, movements, organizations and nations weave collective stories out of distinct threads…Points of intersection become the focus of a shared story – the way we link individual threads into a common weave. A Story of Us brings forward the values that move us as a community.” A Story of Us, in Ganz’s storytelling model, leads to a Story of Now which is a projection into the future and the broader context of schooling in America. Ganz explains the Story of Now, “Stories of Now articulate the challenges we face now, the choices we are called upon to make, and the meaning of making the right choice. Stories of Now are set in the past, present and future. The challenge is now—we are called upon to act because of our legacy and who we have become, and the action that we take now can shape our desired future.” Through engaging in shared design thinking and through engaging in reflective practice I have also engaged in a process of communal storytelling and meaning-making that culminates in this dissertation. Design thinking accounts for the technical needs of a costumer, but it also emphasizes the emotive needs of the costumer. Crafting a meaningful shared narrative is an expression of this emotive need and was a central part of shaping our shared emotional narrative (Brown, 2009).
The Case Study: Three Occurrences of Design-Thinking-In-Action

For three years, I collected data on my experiences implementing design thinking as a leadership practice while both an active graduate student and school design practitioner. Between the fall of 2015 and the spring of 2017, I worked with teachers and staff to use design thinking to address a number of different challenges faced by our school community. These included three primary “design sprints”—examples of design thinking-in-action—that served as the basis for the analysis that is the focus of this dissertation research: 1) Attendance intervention design; 2) Teacher led flexible scheduling; 3) The iterative design of our student conferencing systems.

Each of these three interventions was its own example of design-thinking-in-action and therefore investigating each is useful for deepening my own and our collective understanding of how we can use design thinking to achieve better organizational outcomes. At the same time, however, all of these interventions were, themselves, a part of the larger developmental process by which I hoped that our organization benefited as members became more flexible and adaptive, as they increasingly developed efficacy that resulted in ever more direct participation, and as we collectively and individually used ethnographic tools to constantly and consistently return to the real needs of our young people.

In order to study this design thinking intervention I employed four primary methods:

- **Participant Observation**—Analysis of my personal reflections captured in journal entries, writing for graduate courses, observational notes, and reflective analysis done as part of my work as school leader;
• **Artifact Analysis**: Review of archival records from our collective school work over the past two years including meeting minutes and physical artifacts such as chart paper notes or photos of group work and digital records such as shared google documents;

• **Transcript Analysis of Audio Recordings**: Coding and analysis of audio recordings of team and whole-group meetings created in order to further our collective design work;

• **Outcome Data**: Review of programming, program implementation, adjustments to instructional practices, revised schedules, and similar design products; design products such as schedules, policies, or implementation plans; implementation records such as attendance numbers, work products, and program data.

**Participant Observation**

As a deeply embedded insider conducting action research, participant observation is a natural primary method. I kept careful record of our collective actions and those of the teachers through deliberate note-taking, audio-recording, and other forms or record keeping. During this research process I was also, as Herr and Anderson (2005) recommend, seeking out focused written research and thinking related to the topic (focused on design thinking, school leadership, and school change) to extend my own thinking and deepen my reflection and learning.

My goal in using observation techniques was to help "freeze time…" as Campana (2007) describes it. In some cases, I was able to accomplish this by stepping out of my participant role into a formal observation role so that I could take a running record of the event I am observing (taking formal and detailed observation notes is a routine part of my professional work). In other cases, as part of our normal design practice, we designed our meetings so as to capture either audio recording or written records of group processes and
collective design work (for example, we did a lot of design thinking using extensive chart paper records which I collected and photographed).

An essential element of my data collection was my use of the Microsoft organizational software application Onenote. Onenote was my primary tool for systematically gathering data so that it could be easily accessed, analyzed, and employed as part of my leadership and our general school practices. Onenote is a notetaking application which organizes data into pages and tabs, similar to traditional spiral notebooks (Figure 4). Onenote is particularly useful as a reflective tool because it is globally searchable—every page, in each tab, in all of the user’s notebooks can be searched from the search bar in the top right of the window. Using the search bar, for example, I can search for every note I had ever taken with the key words “speed conferencing” or “daily schedule” in order to find notes related to the specific design sprints I have investigated.

Figure 4. Sample of a page in the Onenote application. This is an example of meeting notes with the time and date, named page, and location in the School Design tab.

In order to make meaning of these data as thoroughly and open-endedly as possible, I worked to move between insider and outsider status actively trying to “Make
the strange familiar and the familiar strange” (Herr and Anderson, 2005). I did this using a combination of regular memo writing (see example in Appendix A) and in at least two review sessions with peers in the educational research and school leadership fields who helped serve as a critical friends and mirrors. Using these methods, I was able to evaluate the relationship between my own espoused theories and my theories in-action (Schon, 1991) allowing me to monitor and reflect on my own developing understandings to seek evidence of bias.

**Document and Archival Data Review**

Another source of data for this study was gathered from a review of the extensive archival data I collected as part of leadership of the school (Hammersley & Atkinson, 1995). Because I have, as previously noted, long been guided by my graduate courses in inquiry and practitioner action research methodology at the University of Pennsylvania, and as a result have taken inquiry as "my professional stance,” I collected extensive data as a core and routine aspect of my professional practice (Corchran-Smith and Lytle, 2009). Document review was important for providing context and a check on the validity of my ongoing meaning-making based on participant observation, interviews, and questionnaires (Ravitch and Carl, 2016).

In order to make sense of these various forms of data, I reviewed them systematically to understand the context of teacher’s practice, to investigate claims and theories raised by other methods and by the teachers themselves, and to search for emergent themes that might not have been uncovered directly through other means and may require further study (Ravitch and Carl, 2016; Marshall and Rossman, 1999;
“Content analysis” served as a central tool for identifying contradictions or misunderstandings in my own thinking over time as reflected in the more interactive methods of data collection outlined above. As Marshall and Rossman (1999) note, “Probably the greatest strength of content analysis is that it is unobtrusive and nonreactive: It can be conducted without disturbing the setting in any way. The researcher determines where the greatest emphasis lies after the data have been gathered” (p. 117). Content analysis allowed me to create coding systems and representations and apply these systematically across the different iterations of design documents and related materials. For example, I used graphical representations such as "decision modeling", where the path of decisions and non-decisions were mapped visually, in order to better understand how the context of teacher engagement developed as it did (Miles and Huberman, 1994).

There are two primary forms of archival data that served to further this study: 1) Implementation data; and 2) Outcome Data. I describe each of these in more detail in the sections that follow.

**Implementation data.**

As a matter of professional practice, I collected a great deal of what Ravitch and Carl (2016) term "official data" about our collective school design work—data that is part of the public, internal workings of the school. These data included design documents (such as written policies and procedures, presentations, program descriptions, and graphic representations); team meeting schedules, agendas, and minutes; shared web-based
design and planning documents; correspondence from a variety of members of the school community; and audio and photography collected for the purpose of iterative design work. In addition, I had extensive "personal documents" (Ravitch and Carl, 2016) that were relevant to this investigation. For example, I had my own professional records, calendars, reflections, correspondence, minutes of design thinking coaching I received directly, and professional research related to design thinking and leadership.

**Outcome Data.**

In some of the design sprints, it is relevant to consider data that was collected related to the outcomes of a specific intervention or action. These data may include traditional quantifiable data like student or staff participation rates or examples of the products produced through a given design process such as new programming, revised school schedules, or adjusted instructional practices.

**Transcript Analysis of Audio Recordings**

Because, as a community, we invested in our collective design process it was not uncommon for us to record meetings and design sessions for the purpose of future analysis. First and foremost, this allowed me, as researcher, to “turn the spoken word into the written word” because, as Ravitch and Carl (2015) explain, “Without transcripts, it is difficult to engage in intensive, iterative data analysis” (p. 159).

**Validity**

My research represented what Maxwell (1996) calls an unstructured, “intensive research design.” As Maxwell explicates, “Unstructured approaches…allow the
researcher to focus on the particular phenomena studied; they trade generalizability and comparability for internal validity and contextual understanding and are particularly useful in understanding the process that led to specific outcomes” (p. 64). This research was a focused study of a very specific topic—the impact of design thinking methodology on teacher mindset, understandings, and engagement at Northeastern Leadership Academy. As practitioner action research, the most important forms of validation were therefore oriented around the local context. Cochran-Smith and Lytle (2009) cite Anderson and colleagues (1994; 2007) in describing this form of validity:

Anderson and colleagues posit new criteria for practitioner research including democratic validity (honoring the perspectives and interests of all stakeholders), outcome validity (resolving the problems addressed), process validity (using appropriate and adequate research methods and inquiry processes), catalytic validity (deepening the understandings of all the participants), and dialogic validity (monitoring analyses through critical and reflective discussion with peers). (p. 44)

I do hope that this research serves as a useful tool for my fellow school designers and school design researchers in understanding and reflecting on school leadership, school improvement, and school design processes, however, my primary focus has been on local improvement. For this reason, the most important measure of the validity of this research may be how it ultimately impacted the mindsets and methods of school design, improvement and change in the schools in which teachers trained in these practices go on to teach, outcomes I will have to leave to future study.

Having said this, even without arguing for comparability or generalizability, both bias and reactivity were certainly potential threats to research validity in an investigation that is so personal and so embedded in my practices as school designer and as researcher. My inherent bias to view my own leadership practice in an overly positive or negative
light was of particular concern. In addition, I was concerned with my ability to code and analyze data that I held in my mind as emergent understandings over so much time.

Because my personal content analysis itself was likely to be biased by my lived experiences, I partnered with a small group of peers I have worked with since we began as fellow doctoral students at the University of Pennsylvania to help me reflect on my “emergent understandings” and search for “alternate explanations” (Marshall and Rossman, 1999, p. 152). These peers have expertise in educational leadership as well as qualitative data analysis and include a school leader and a professional researcher and data analyst. The ultimate goal of this process was to “surface and criticize tacit understandings” (Schon, 1991) and then to adapt our practices accordingly. At several points during this investigation I met with this team and they helped mostly to narrow the focus of my research. They reviewed the various design sprint examples with me and worked with me to narrow my research question to focus on the impact on teacher mindsets as evidenced through their actions. The team felt that in this way I am able to study my own professional experience without power dynamics clouding the data in the way they might if I interviewed the teachers directly rather than focus on the evidence of their work.

**Positionality and Power**

My historical experiences provided background and context, but the focus of my research was on my work as the principal of Northeastern Leadership Academy, a small, alternative public school serving over-age and under-credited young people. In this
leadership role I was able to develop and apply a design thinking approach to leadership as well as to school planning.

As the leader of the school, however, it is important to note that I had positional authority that might have impacted participation in this research (Herr and Anderson, 2005). This is particularly relevant in a human system like a school. As Cochran-Smith and Lytle (2009) detail, “educational practice is not simply instrumental in the sense of figuring out how to get things done, but also and more importantly, it is social and political in the sense of deliberating about what to get done, why to get it done, who decides, and whose interests are served” (p. 121). My research was a known and dynamic element of the social and political fabric of our school as it has been since I began working there. While passive data is therefore readily collected without significant potential impact on participants, I was explicit in the implementation of my observation and interview protocol to ensure that all participants understood that their participation was voluntary, that participant identity would be masked, and that participation in the study in no way impacted performance evaluations or standing in the community in any other way. I also made it clear I was studying my own leadership and how it appeared to affect our practices as a team. In this sense, I explained the work was a piece with my ordinary work as their principal—not something added on our different from what I would have been doing more informally otherwise.

In my role as principal, I had a large amount of formal, positional authority. I attempted to manage and make sense of my own power in this context. Some examples of my formal power include:
- **Hiring:** Overwhelmingly, the teachers and staff in the school were hired or rehired under my leadership. We hire with a committee of teachers, students, staff, and administrators and I have been committed to not overruling the teachers and staff although in some cases I have had to make final decisions.

- **Evaluation and Termination:** The teacher evaluation system in this northeastern city is relatively typical. Teachers must be poorly evaluated for multiple years and put on improvement plans to be terminated. There are also financial incentives attached to being highly rated. It is therefore impossible to separate my personal authority from my positional authority for this reason. In the 2015-2016 and 2016-2017 school years, I worked with a team that was called the School Improvement Panel to adapt the teacher evaluation framework to our non-traditional model. I took this work seriously and worked with my Vice Principal of Academics (new in the role this year) to implement the modified evaluation system. All teachers were rated effective or better and I was flagged by my superiors for potential evaluation grade-inflation.

- **Time and Space:** Final control over how we used time and space was ultimately a place where I have significant power. I tried here not to assert myself forcefully. I worked to build consensus around how we use our space and delegated leadership of those decisions to others. Similarly, in the spring we created a scheduling team to design next year’s schedule, but in the fall, due mostly to a lack of time, the schedule was imposed by me—i.e. it turned out to be much more top down than bottom up. As a result, there are some notable challenges in our schedule design as well as some interesting opportunities. Teacher and staff leadership were evident in our use of time and space. The teachers designed and implemented a completely different schedule for Fridays in the spring and all I did was approve it.

This power dynamic was further complicated by the fact that I was studying design thinking, a mindset and process that I was committed to both as a researcher and as a leader. I attempted to be cautious about evaluating and reevaluating my personal commitment to this work as a responsible professional who must first focus on the good of the young people that I serve and as a researcher operating with professional ethics and causing minimal possible harm.

Racial and class identity, politics, and power further added complexity to the dynamics of power at NLA. I am a white man with two degrees from Ivy League
universities—universities that I understand helped manufacture my own white privilege (McIntosh, 2016). I completed this research as part of my doctoral work. I have attended private schools my whole life (and, with help from 15 years as a doctoral student, I have continued into my late 30s). I am, I know, frequently authoritative and I speak with confidence and assumed expertise on a wide range of subjects both germane and beyond the scope of the work we did at NLA.

This northeastern city is an overwhelmingly African American community and one where being a resident, particularly one from a long-standing family, neighborhood, community, or block—is often a primary source of identity and pride (the work of famous northeastern city native musicians reflects this). I was an outsider. I was noticeable for my skin color, my family background and wealth, my commute, my ignorance of local vernacular and idiom, and my willingness to take the public busses to get around town. I was also an outsider with, albeit accidental, historical ties to another outsider—the white Superintendent, having worked for him previously as a charter school teacher in a school managed by a for-profit educational management organization he ran.

**Power Mitigation Methods**

In order to help mitigate any bias created by my power and privilege, I engaged in several routine and episodic processes designed to help me reflect and assess my own positionality. As a primary method, I checked research peers in roughly bi-annually for one to two-hour sessions in which I received coaching specifically around issues of research design and positionality. I also addressed issues of power and positionality with
our professional design consultant from Stanford University, Dr. Maureen Carroll. A second technique I employed was iterative journaling (as per the memo that originally led to this section on power and positionality) which allowed me to reflect on experiences that had occurred in my practice as school leader and then to later consider my reflections and what they suggest about my prior and current understandings of the context and relational dynamics in which this research is embedded. In addition to these reflective practices, I have also triangulated data whenever possible between primary data such as photographs, recordings or work products, participant mediated data such as meeting minutes, and reflections such as journal notes. Finally, I set several goals in order to better hold myself accountable to my own research ethics and expectations:

- **Goal 1:** My goal was to make the leadership of schools more effective for everyone;
- **Goal 2:** When I write, "I", mean it, and when I write "we" mean it as well;
- **Goal 3:** Explicate the full context;
- **Goal 4:** Get beyond myself to what the impact of this work is on this or any community.

**Conceptual Framework**

In training our community in design thinking it was important for the community to have a shared understanding of the design process. This required a shared mental model and for this purpose we employed a basic design thinking representation, *The Design Thinking Innovation Process* by Carroll (2015) (Figure 5). This process, like other problem-solving methods, represents a repeating cycle of data gathering, analysis,
solution generating, testing, and ongoing revision. Unlike many other models, Carroll’s representation has only three stages: 1) Exploration (Develop Empathy); 2) Ideation (Defer Judgment), 3) and Experimentation (Learn from Failure). Exploration entails ethnographic study of the subject of the design process (a student or a teacher, for example) and the crafting of needs statements representing what the design team infers about the true needs of the subject. Ideation involves brainstorming and generating many solutions in an open-ended process. Finally experimentation is a process of piloting changes, learning from their impact, and pivoting to new iterations.

These stages are based on a similar model used by IDEO in their design thinking work, but simplified. We chose this particular three-step representation of the design process in part because of its simplicity, which meant it was easily explained and we could focus our collective work in three phases.

Figure 5. The Design Thinking Process (Carroll, 2015) describes the design process as iterative and open-ended
In the following chapter I will examine three design sprints conducted by the teachers and community of Northeastern Leadership Academy between the fall of 2014 and the spring of 2017. Over those three years we focused relentlessly on implementing design thinking as a tool for continuous school improvement. Specifically, we referred to and used the representation in Figure 5 to drive our learning and experimentation as we worked collectively to improve our school. Because we focused so much on this model during our design sprints, it was logical for me to use analyze our design sprints by considering in what ways and to what effect teachers demonstrated the mindsets of design thinking at each stage of the design process.

Carroll’s (2015) stage model served as a tool for organizing the data from my research. I examined each iteration of my design practice in terms of: 1) How we explored and understood the needs of our customers; 2) How we generated ideas and the constraints that may have limited our thinking processes; 3) How we piloted our ideas and learned (or did not learn) from the outcomes of our design work.
Chapter 4 – Story and Analysis

Overview: The NLA Design Story

Over the course of my school design experiences, I have come to believe that my changing understanding of school design parallels a shift in organizational theory from an externally proscribed, structural model to a dynamic, locally determined, autopoetic model (Senge, Cambron-McCabe, Lucas, Smith, Dutton, & Kleiner, 2000; Boland and Collopy, 2004). This research explores my own changing leadership perspectives in the context of the impact of my leadership and growing understanding of the latter approach to school design—one that is derived from local need and expertise, from the needs of the students and their families, and from the experience and learning of the teachers.

This transition is evident looking even at early drafts of my doctoral preliminary exams. In my first years as a school leader, as I began to explore and learn about design, my understandings of school and what school could be were largely rooted on the existing structural aspects that made up my conception of schools and schooling. I saw the work of design as the work of, in essence, filling in the blanks on a checklist of the elements of a traditional school—some kind of daily schedule with rotating periods? Check. Some form of student handbook and discipline policy? Check. Curriculum? Check.

As I have studied and been engaged in design thinking and learned more about the theories of human systems and design thinking, I have come to understand that the design can be iterative, human-centered, and open-ended rather than prescriptive, predetermined, or structural, but the lens I began with was extremely rigid and fixated on the archetypal
North American model. This despite the fact that my long-time mentor, Dr. James “Torch” Lytle, was fond of saying, “if you forget the football team and the cafeteria, you have a whole new understanding of what schools can be,” my conception of what a school could be was really a set of biases about what a school should be and how it should be that way. In a fundamental way, I believed that schools should have the most common elements of the archetype such as class periods, discipline procedures and handbooks, and courses in subject areas that culminate in report card conferences. In my most recent incarnation as school designer, I experienced a profound shift in my own understanding and practice as I internalized design thinking theory and human systems theory. With the support of Dr. Maureen Carroll from Stanford University and others, I developed an approach to leadership that is rooted in the flexibility and adaptivity of design thinking. The change that occurred in the way the staff and I approached problem solving is evident in the data examined in this chapter.

Situating the Study

Northeastern Leadership Academy was a small, alternative high school (known as a "Transfer School" in this northeastern city) in a northeastern city in the United States. By district mandate, NLA served students between 16 and 20 years old who were two or more years behind in high school. The school served between 100 and 140 young people who have been previously disconnected from school or have fallen behind. The students at NLA generally had been through extremely challenging childhood and schooling experiences and were commonly victims of serious trauma and its effects. Overwhelmingly students were impoverished and students of color. About 85% were
African American, 10% Latino, and 100% were eligible for free lunch under the federal lunch program.

NLA was founded by a local franchise of a national educational organization dedicated to working with overage and under credited students. This relationship proved to be politically fraught as the school and its leadership, its founder and partner organization, and Northeastern City Public Schools (NCPS) have not always seen eye-to-eye. For example, I was appointed by the district without being vetted by the partner organization.

I did not understand these complexities when I arrived at NLA in July of 2015. Principals have the month of July off in the NCPS, but I had found an empty building, so I spent the summer recruiting or recruiting-back teachers and administrators. The building had previously been occupied primarily by a school that had been moved to a new location. The now empty building was ultimately divided between NLA and NCPS’s Family Engagement Center in a shared campus arrangement that gave the school ample space to deliver our program and access to the full-scale Career and Technical Education resources for our construction program and the culinary program I decided to start once the facility was given to us.

When I took over at the end of the school's third year, I was its third principal. I found little by the way of clear or actionable plans or design work and a tiny portion of the needed staff. Without much district support and basically no support from our partner organization, I reached out to teachers who had been part of the school. I re-recruited a woman who ultimately became my first vice principal of culture and climate. She had
been part of our partner’s founding team for the school and provided some continuity. Each teacher or staff member who was hired was included in summer design meetings and conversations and in the ongoing hiring process. I also explicated my theory of action to each new hire—explaining that this was a "school under construction" and that if they were not interested in being part of building it together, this might not be the right community for them.

There were some existing curricula, but they were vague and unclear when they could be located at all. There was no daily schedule. One of my first hires was a vice principal for academics and the two of us worked with the teachers to design and implement a relatively traditional school program in my first year. During the 2014-2015 school year however, I leveraged our adult time to work collaboratively on redesigning our academic model. I shared the lead in this work with our Academic Interventionist and our VPs as well as with several teachers who served as chairs for our academic design team, leadership team, and school design team. Over our next two and a half years together, we learned and taught staff about design and design thinking, about competency-based learning, and about programs similar to ours. We worked with multiple partners including Dr. Carroll from Stanford’s d.schoool and School of Education, the personalized learning company Education Elements, and New York City based consultancy named Eskolta that helped support the design and implementation of alternative or “Transfer Schools” (another name for a school that serves over age and under credited students). More than a third of the staff received formal training in design
thinking in one form or another and several received multiple trainings and/or attended a relevant conference.

Between 2014-2015 and 2016-2017, our staff expanded and contracted by four or five adults but our enrollment did not. This study focusses analysis on the core staff of teachers who continued at the school and were therefore thoroughly engaged in our design thinking work. Eighty-five percent of the staff were at NLA by choice and almost all returned from year to year. In both of my first two years, we retained 95% of the staff.

The political context of our work at NLA was complex, but the result was mostly that we were able engage in our design work with enough freedom from outside mandates to allow us to legitimately conduct open-ended design. As previously noted, although the school was founded in partnership with between the local franchise of a national non-profit school northeastern city (LF), LF has not really had the capacity to direct the principals at the school. I was able to be responsible first to the young people we served. Having said this, the school’s stakeholders included students, their families or caregivers, the teachers, our advocate counselors, our Vice Principals (one of academics and one of climate and culture), and our operations team.

**The history of implementing design thinking in the context of NLA.**

Beginning in the 2014-2015 school-year, I worked as school leader to teach design thinking to the teachers, staff, and leadership at NLA. During the two-week, “summer institute” professional development of my first two weeks leading the staff (summer of 2014), we spent a number of hours examining the basic principles of design thinking using models from Senge et al. (2000) and the international design firm IDEO
(Brown, 2010). I began encouraging staff to use design thinking concepts and language in our practices and in thinking about all aspects of our work. That winter during the 2014-2015 school-year, a small group of teachers and administrators, myself included, were formally trained in design thinking in a day long training program with a partner organization called Education Elements and then in the spring, with the help of a grant, we held a two-day training for a broader group of 12 staff and 4 students with Dr. Maureen Carrol, a design-thinking expert and educator from Stanford University and founder of the design firm Lime Design.

This second training was intensive and particularly impactful and began an enduring coaching relationship with Dr. Carroll. The workshop incorporated empathy activities and methods for working towards the true needs of a client. We studied the design process, practiced strategies for each stage, and engaged in mini-design sprints. This work pushed us outside of our established mental boundaries and encouraged us to be both consumer-centered and meaningfully creative. The result of one of these imaginative sprints, for example, included a waffle-making backpack designed to boost the spirits of an easily discouraged student.

In the fall of the 2015-2016 school year, we continued to push forward with design thinking as a leadership methodology as we implemented a new academic model. With Dr. Carrol's coaching, I began to explicitly use the language of "pilot and pivot" to talk about our improvement work—asking staff to learn from their students, try new ideas, and adapt those ideas quickly based on what we are learning on the ground. Over the course of this year and the next, various practices and changes to the school emerged
from a series of design thinking exercises called “design sprints” and these are the subject of the remainder of this case study.

**Design thinking as we understood, defined, and implemented it at NLA.**

At NLA, design thinking came to serve us as a way of life—an organizational philosophy—that drove our understanding of our work and our approach to organizational change and growth. Overtime, the members of our administration tried less frequently to solve problems and impose our solutions on the school. We did this with some ongoing coaching from Dr. Maureen Carroll, who served as our consultant for over a year. Instead, we encouraged the ground-level designers to engage with problems, study our young people and their needs (or better yet, study these with them), and design specifically for them. "Pilot and pivot” became a mantra in our building which represents the leadership shift we made. Like so many schools, our standard approach had been to plan, plan, plan! Given all the time spent planning, when we actually put our ideas into practice, we were hesitant to adjust them. The result was an enormous amount of time wasted mirror-gazing, thinking about ourselves and our practices, and very little time trying, learning, adjusting, and trying again. “Pilot and Pivot” proved a much more satisfactory alternative approach. We focused on learning from what we were doing on the ground, making adjustments readily and quickly, and slowly transforming our organizational DNA from slow moving and habit driven to rapidly adjusting, dynamic, and flexible.

This rapid, iterative improvement process often takes the form of what are called “design sprints.” A design sprint is a time-bound, design thinking process that engages a
given design community in responding to a specific need. As a staff group and as the leader of the team, our understanding of design thinking, our knowledge and access to appropriate design protocol, tools and supports, and both our collective and individual capacities to participate in the process was evolving as we engaged in different design sprints over time.

It was Dr. Carroll’s work that most meaningfully shaped our mindsets and design practices for the following two years, particularly because she maintained a coaching relationship with me and my our then assistant principal, Gina, for more than a year. The model of design Dr. Carroll taught us, The Design Thinking Innovation Process (Carroll, 2015), is a three stage process. As described in Chapter 3, this is a model we implemented in part because of its simplicity. The three stages are: Exploration (Develop Empathy), Ideation (Defer Judgment), and Experimentation (Learn from Failure).

![The Design Thinking Process](image.png)

Figure 6. The Design Thinking Process (Carroll, 2015) describes the design process as iterative and open-ended

Dr. Carrol trained us in some initial processes and considerations. This framing was very similar to the framing that can be found in Dr. Carrol’s Stanford colleague’s
work, *An Introduction to DesignThinking: Process Guide* (Plattner, 2019). In the brief web-text, each stage is detailed with important considerations and practices. The section on each stage includes a summary of “how to do” the major activities of that stage. For example, here is the guidance in Stage 1, Exploration, for how to define the need for which you are designing:

Consider what stood out to you when talking and observing people. What patterns emerge when you look at the set? If you noticed something interesting ask yourself (and your team) why that might be. In asking why someone had a certain behavior or feeling you are making connections from that person to the larger context. Develop an understanding of the type of person you are designing for – your USER. Synthesize and select a limited set of NEEDS that you think are important to fulfill; you may in fact express a just one single salient need to address. Work to express INSIGHTS you developed through the synthesis of information you have gathered through empathy and research work. Then articulate a point-of-view by combining these three elements – user, need, and insight – as an actionable problem statement that will drive the rest of your design work.

A good point-of-view is one that:

- Provides focus and frames the problem
- Inspires your team
- Informs criteria for evaluating competing ideas
- Empowers your team to make decisions independently in parallel
- Captures the hearts and minds of people you meet
- Saves you from the impossible task of developing concepts that are all things to all people (i.e. your problem statement should be discrete, not broad.)

Similar guidance, training, and coaching guided our design work. Dr. Carroll, for example, gave us a simple three stage test for assessing the usefulness of a needs statement (see Figure 7).
Figure 7. Dr. Carroll’s representation of three key tests for assessing a need statement (Carroll, 2019).

This test, with the context of the guidance above, detail the mindsets one would hope to see during stage 1 of the design process. Similarly, driving questions embedded by Dr. Carroll in each stage of the design process help to describe these mindsets:

1. How did we explore and understand the needs of our customers? (Three tests);
2. How did we generate ideas and to what extent have we moved beyond the constraints that may have limited our thinking processes?;
3. How did we experiment by piloting our ideas and learning (or not learning) from the outcomes of our design work?

In the sections that follow, I consider three examples of design sprints—student conferencing; interdisciplinary learning and daily schedule design; and improving attendance. Each example highlights different successes and challenges that arose as a result of these interventions and the nature of the process. In examining each design
sprint, I investigate the sources of knowledge that we drew on for both process and content, how we made meaning out of these data, and what actions we decided to take based on the understandings we had derived. The in-case analysis for each sprint will focus on emergent themes guided by the framing in in previous sections and above around design thinking mindsets.

In addition to analyzing each sprint as its own design process, I also analyze each sprint in comparison to the others by looking specifically for evidence of the three desired design thinking mindsets and outcomes detailed in my research questions:

1. **Flexibility and adaptive thinking** in how they approach their individual, team, and collective work;

2. **Agency and self-efficacy** in their actions suggesting that they are developing “creative confidence” (Kelley and Kelley, 2013) and demonstrating the belief that they have the power to enact meaningful change;

3. Teachers taking an **inquiry stance** around the needs the students and focusing continuous improvement efforts on the real, specific needs of the young people we serve.

To the extent that there is evidence either of these mindsets or of countermanding mindsets evident in the outcomes of each sprint, I consider how our implementation at each stage of the design process may have impacted these outcomes. While there is a general alignment between the mindsets I am investigating and the three stages of the design process, the alignment is not always direct and in general, the data in this investigation do not lend themselves to easy, stage, or mindset-based categorization.
Instead, these concepts emerge as themes at different points during the narratives and their importance is driven by the context of the design sprint in which they are situated.

There are also underlying assumptions here that as teachers engage in design thinking they will demonstrate these desired outcomes and at the same time that these outcomes are also dependent on the extent to which the mindsets and processes of design thinking were or were not effectively employed. In an effort to examine some of these themes, I also ask of each design sprint, in the style of ethnography, “what’s happening here?” In this way I uncover unanticipated or otherwise unaccounted for patterns, themes, or outcomes. Finally, in order to maintain my critical perspective, in each example I consider the extent to which my own leadership behaviors did or did not impact the design process and what lessons might be learned from these outcomes.

Case 1 – Speed Conferencing an Example of Iteration and Adaptation.

What came to be called “Speed Conferencing” was originally designed in the winter of 2015 during a two-day design thinking training that was part of Northeastern City Public Schools’ (NCPS) funded partnership with Education Elements, a consultancy that helps blend technology into schools. Speed conferencing was the first and became one of the most enduring products of our collective design thinking work and a well-established element of our basic school model. The design thinking training that set Speed Conferencing in motion actually took place before our significant investment that spring in our partnership with Dr. Carrol.

Speed Conferencing was a direct and original product of the first formal design sprint NLA staff were engaged in. I attended the training with several teachers. This was
the group’s first introduction to the mindsets and processes of design thinking. The presenters had a four-part planning process that they taught us as a version of a design thinking process—Plan, Do, Study, Act. This model (see Figure 8) incorporated a continuing improvement element in the “Act” phase with a check-box section in the planning chart that read:

_____ Continue the pilot for another 4 weeks and add new actions. Why?
_____ Pivot (Modify) for another 4 weeks w/different actions. Why?
_____ Scrap it and revisit our problem-statement. Why?

The Education Elements design thinking model bridges the traditional planning language in schools and the more domain specific language one typically finds in design thinking practice (IDEO, 2012, for example). Words like “Problem Statement” and “Plan” are more familiar in the school context than “need statement” or “ideate” which are design thinking terms. Having said this, the Education Elements formulation also some embedded design thinking words and mindsets including the emphasis on the basic concept of adaptivity—piloting and pivoting based on what is learned.
Figure 8. The Prototype and Test Form was the design planning tool provided by the Education Elements presenters during our staff’s first Design Thinking training in February, 2015.

The participants in this design sprint were Sam (math teacher), Jack (then the vice principal), Gina (then a teacher coach and future vice principal), and me. We took part in a series of activities and discussions during the two-day training. The process began with a simple form of ethnographic mapping. The presenters asked each school team to engage in a process during which we used actual examples of what students say and do to draw inferences about their needs. My personal reflection notes on this activity (see Figure 9) capture the basic, foundational needs we identified including “safety” and “purpose.” This empathy mapping process led the team to craft a statement about our need as a school community to change our students’ ownership over their own learning. We wrote, “All young people at NLA need a way to feel valued because it will address negative framing and the idea that we do not listen.”
Initial Design: Education Elements Training

Once we had identified our need statement, the presenters from Education Elements then asked us to form small groups and to create a plan using a relatively traditional brainstorming protocol in which we made a list of as many ideas as we could think of and then selected one. The small groups then chose an idea and created a pilot design addressing the identified need. The two teams approached the need very differently. Sam and Jack identified “Case conferencing to develop short term goals” as their focus while Gina and I targeted “Assign/partner all staff to students.” It was the first team, however, that created an enduring design. For the purposes of this analysis, I am going to focus only on this first idea, which later came to be called “Speed Conferencing.”
Figure 10. Original hand drawing of the GPS system including speed conferencing. This was created on the second day of our design training with Education Elements.

Figure 11. The digitized version of the pilot sketch drawn by me and based on the work done by Sam and Jack on Day 2 of our Education Elements design training in February 2015.

The first day’s work prepared our team to create a plan for the implementation of our designs as we moved into day two. This process was linear. We were asked to take our ideas and map them logically from initial concept through implementation and assessment of success. In response to the conferencing idea that Sam and Jack had
generated, for example, the whole team worked together to generate a set of implementation questions:

- Who is responsible for creating the goal setting process for case conferences?
- What is the format for the goals setting process and/or outline of goals?
- When should this process be completed and started?
- Where will you house goals / how will they be tracked?
- How will you build out the goals setting process/what resources will you use?

By the end of the second day, working from these questions, Sam and Jack had a design concept, a clear sketch of a pilot process (Figure 10) and an implementation timeline that scheduled a pilot of the process during our whole-school, two-week spring orientation (called Mental Toughness) in February 2015. I turned the sketch the team created into a digitized image that afternoon using a word-processing application (Figure 8). I then used this digital image as a basic explanation of our processes for the remainder of my time at NLA including making it a part of our School Design and Strategic Plan (Appendix B).

**First Implementation.**

It was only a few days after this initial design that we piloted the first Speed Conference during Mental Toughness that March 2015. In the first iteration, 9 teachers sat at in the cafeteria at the round tables, each with two computers. Our 89 students who were present entered the room and after we got them quiet, I explained the process. Students were to circulate the room, find each of their teachers, and wait in line for a conference. Teachers sat face to face with students, each partner in front of a computer and for a the first five or so minutes, both were supposed to complete a separate form in google drive. These forms captured the data from student and teacher separately (see
Figure 12). The process required the pair engaging in a conference to turn the computers to each other and compare their responses directly.

<table>
<thead>
<tr>
<th>Staff Form</th>
<th>Student Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Last Name (student)</td>
<td>Your First Name</td>
</tr>
<tr>
<td>First Name (student)</td>
<td>Your Last Name</td>
</tr>
<tr>
<td>Teacher</td>
<td>Teacher</td>
</tr>
<tr>
<td>Class/Subject</td>
<td>Class/Subject</td>
</tr>
<tr>
<td>How would you describe this student's progress thus far in this class?</td>
<td>How would you describe this your progress so far in this class?</td>
</tr>
<tr>
<td>What is one goal this student will focus on completing in the next 10 school days?</td>
<td>What is one goal you will focus on completing in the next 10 school days?</td>
</tr>
<tr>
<td>How often does this student work hard in class?</td>
<td>How often do you work hard in class?</td>
</tr>
<tr>
<td>Case Manager</td>
<td>Case Manager</td>
</tr>
</tbody>
</table>

Figure 12. Speed conferencing written prompts for staff and for students. The two forms were mostly identical with just a change of subject.

At the last minute before conferences started, I was running around, finding enough computers and setting them out for the teams. Several computers didn’t have enough battery life and as students were lining up, several teachers decided to give up on the student form and just to conduct the conference with their student and the one computer. In addition, we did not norm the discussion part of the conferencing process and some teachers and/or students took significantly longer to move through a given conference than others. The google form timestamps each entry and these data highlight the discrepancy in the process.

Table 4

Table of teacher conference rate data from February 2015 first Speed Conference (first pilot conference)
For those that did have two computers, having both students and teachers complete the form took more than the five minutes per conference we had allotted (see Table 4). The average conference time completion rate, accounting for the teachers that did not have working computers for a length of time during the conference, was 7.3 minutes. Teachers with working computers completed an average of 20.2 total student conferences representing only roughly a quarter of their average total student load.

While I spent time running around trying to support the technology, Jack and Gina spent his or her time cajoling students and trying to get them to conference. Just scanning the room during the conference session, it was evident that changes needed to be made if we expected to complete the conferences and to do so in a timely fashion. There were no counselors (the school had three of them at the time) present during the session, which limited both accountability and follow through. In addition, while the data created populated a spreadsheet, nothing was done with these data once they were entered.
It is worth noting that there were several underlying assumptions at play as we began to iterate this design and at no point did we legitimately check these assumptions with our students. While, as described below, students did participate in the adaptation of the design of our grading system, they did not participate directly in our speed conferencing design sprint. In our original design process we stated that “All young people at NLA need a way to feel valued because it will address negative framing and the idea that we do not listen.” The theory we were ultimately piloting was the logical leap that we made as designers—that this form of conferencing will make students frame their school experience more positively and make them feel listened to. A lack of student engagement was a strong initial indicator that the design was not meeting the need.

**Iteration 2: More accountability, dead data.**

In the spring of 2015, several members of the team including Gina, Rachel, Sam, Jack and I attended an Alternative Schools conference. Several of the sessions at this conference dealt with student conferencing at both the school and classroom levels. We returned with renewed sense of the importance of conferencing, and that summer we shared what we had learned with the rest of the staff as part of our summer planning process:

Colleagues,

A couple of pieces of material as food for thought as you continue to work on your basic instructional design for the fall:

- The PowerPoint from Thursday: [https://docs.google.com/presentation/d/13b9HmBk-u1z6gk1jgZ9vgtkpYqPdMSIMm-bq9UF4S2k/edit#slide=id.p24](https://docs.google.com/presentation/d/13b9HmBk-u1z6gk1jgZ9vgtkpYqPdMSIMm-bq9UF4S2k/edit#slide=id.p24)
- A Model for Standards-Based Grading (Attached) - As we consider the competencies required to complete a given course or course sequence, this is a useful model for us to keep in mind (from the Transfer School fair).
Student Conferencing (Attached) - Sam was in this session with me, so please feel free to follow up with him. As we have learned this year, direct, meaningful feedback to students is key for their success. How are we going to incorporate classroom based progress monitoring and conferencing? (We will be doing speed conferencing bi-weekly or so, as per our design this year).

Let us plan on meeting on Thursday afternoon after graduation or Friday morning (I will finalize by tomorrow morning). That will give each mini-team extra time this week to work on your pieces of the puzzle. I would to share out our work with the whole staff on Thursday, Friday or Monday as well.

Keep up the awesome work!!! Pilot and Pivot!

gk (Gabriel Kuriloff, Summer Planning Email, July 6, 2015)

That summer we built speed conferencing into our daily schedule for the 2015-2016 schoolyear (see Appendix F), making it a bi-weekly component of our operations. I remained the primary organizer. After Jack left the school in the summer of 2015 (to become the principal of a different school) and Gina assumed his position, I ended up taking full ownership of the speed conferencing process, from creating the form, to reminding folks of the schedule, to organizing a physical space for the sessions.

Speed conferencing’s second iteration encompassed three sessions (10/16/15, 10/30/15, and 11/20/15). These conferences continued to take place in the cafeteria.

Teacher feedback was clear that students needed more accountability. In order to encourage students to conference promptly, we had changed the procedures so that in order to get out of the room, each student was supposed to hand to their counselor a copy of their schedule with each teacher’s sign off. In this iteration the students did not complete a form or take notes of any kind—we were focused on increasing accountability and ensuring that each student had been spoken to by each teacher.
Despite my own and the staff’s collective focus on tightening the process, one of the first things that happened in the conference was that one of the teachers misused the online Google Form, writing their own name into the source form so that all the conferences would have only that one teacher’s name attached. This caused a five-minute shutdown of the whole proceedings while I sprinted back to my office to fix the form on my laptop and to resend the link. After two such disruptions, I learned to lock the form for editing so that teachers could no longer make this mistake. This slow down created general confusion and allowed many students to proceed through the conferences without speaking with all of their teachers. Although advocate counselors did collect the signed schedules, there was not tracking of data or follow up with students who failed to complete.

Over the three sessions in this second iteration, an evident common thread in this iteration is declining student participation (see Figure 13) and the continued absence of any form of data output and/or analysis. While the total time elapsed declined slightly over the three sessions, attendance and participation declined by more than two thirds. The feedback from students and teachers indicated that the conferences did not seem effective or purposeful. Students did not feel accountable to them and staff did not find it a good use of time.
In considering the espoused purpose of speed conferencing, it is notable that during the first conference, some students wrote lengthy and meaningful responses that were most likely not read by anyone after the conference completed. For example, one student wrote a significant critique for her teachers:

I do very well in this class and it seems to go very unappreciated. I don’t need recognition for the things I’m supposed to do but it will be appreciated if the teachers in this classroom would take me seriously when talking about important things. I take my work outside of school and inside and it seems as if it’s still not appreciated! And lastly if failing student I would love the honesty from my fellow two not one teachers. Thank you very much. (Student Response, 10/16/18)

Writing criticism like this is a courageous act and this student feedback is entirely aligned to the stated purpose of speed conferencing that “All young people at NLA need a way to feel valued because it will address negative framing and the idea that we do not listen.” This statement is a clear example of a student taking advantage of this process to use her voice. While it is possible that there was a conversation between student and teacher based on this written comment, the data do not make this seem likely. The student in
question has only two teacher entries from the same conference session, and neither are from the teacher that she was addressing in the comments above.

Whether or not the conference took place and the student was heard in the moment, the data were captured and stored but never shared or analyzed with anyone after the conference session. This suggests that the purpose of the conferencing protocol was being directly undermined by the way in which it was implemented. It is notable, given the espoused need that this design addressed, that at the conclusion of the second iteration of speed conferencing, the student response form was discontinued. Speed conferencing became a time for teachers to deliver information to students and a way for the school to generate regular progress reports in response to a newly discovered need—getting students to progress more rapidly through our competency-based, personalized learning model.

**Iteration 3: Bringing the data to life and engaging student feedback.**

In the third iteration of speed conferencing, the goal major goal was to increase the pace of the conferences and tighten the accountability for both staff and students. In November 2016, “review and pivot speed conferencing” appeared as an agenda item for our ongoing weekly leadership team meetings. The staff were clear that students needed a tangible product from the conferences in order to motivate themselves for increased effort. It was also evident that the conferencing data was not proving useful in the sense that after the conferences, no one was following up. If a student missed conferences, there was not accountability for that student at all. The larger system (as shown previously in Figure 11 on page 15), while it was functioning in the sense that counselors...
were meeting with students and supporting them, was not functioning in the sense that conference data was being employed for ongoing feedback and coaching purposes.

In a follow up leadership team meeting on 12/16/15, with Gina, Rachel, Ronda, and myself, we discussed system design. If students, staff, and parents needed some sort of tangible progress report document and we were already holding bi-weekly conferences, we reasoned, there was no need for a separate process, we just needed to print the data from every third speed conferencing session and send it home to families. This meant that teachers needed to complete the form even for students absent during the conference. In that meeting the team assigned me (I agreed) to “Reformat Speed conferencing to be progress reports and to be printed after conferencing” (Leadership Team Systems Design Meeting, 12/16/15).

In the third iteration during the winter and spring of 2015-2016, we moved conferences to the computer lab and I created a process to hold students more accountable. Based on the feedback I had received from the teachers and on my own observations, I had our office staff print a half-page sized course schedule for each student. In addition, wanting students to play a larger role in making meaning out of the conference, we brought back a student response form, but rather than have students complete their own digital response forms, students completed the simple hand written one (Figure 14). This meant that the student notes were for the student and, if there was follow up, that student’s advocate counselor. There was no longer a direct feedback loop to teachers, although that loop had, as noted, not previously been implemented in any case.
Going into the conference session, I personally worked to address previous concerns. I printed and posted written instructions for how to proceed through the conference process:

1. Take a student response form;
2. Go to any teacher who is free and conference;
3. Complete response form for that teacher, noting down what your goals are;
4. When you have seen all of your teachers, sign the bottom of the form and have your Advocate Counselor sign off at the bottom;
5. You are allowed to go to the library if you are done early.

Having learned my lesson in previous iterations, I personally logged each computer onto the teacher response form and made sure the form was locked from editing. I also put a sign on each computer with the teacher’s name and the subject area. It took me most of a day to ensure the process was set up to run as smoothly as we had learned we could manage.

![Figure 14](image)

Figure 14. Having eliminated the student response form, students were asked instead to complete a handwritten form during their conferences and to submit this form to their "Advocate Counselor" (AC).

This conference process was evidently more efficient and teachers were also, for the first time, asked to complete the form for students who were not present during the conferencing. These data evidence that more forms were completed and that individual conference time accelerated significantly (Table 5). The average total response time fell
to less than less than four minutes, down from 13.4 minutes in the pilot of the conferences. In addition, more students, on average were being seen during conferences while the total number of students engaged during the actual conference session remained relatively consistent. Conferences had become more efficient without the student form. In addition, all students were receiving written feedback regardless of whether they attended or not. Having said this, the human to human, coaching focus of the conferences had become minimized in favor of communicating progress efficiently.

Table 5

Table of average minutes taken by each student conference, the average number of conferences completed by each teacher, and the total number completed during the conference session itself.

<table>
<thead>
<tr>
<th>Date</th>
<th>Average time/conference</th>
<th>Average Conferences/teacher</th>
<th>Total conferences completed during session</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/8/16</td>
<td>3.6</td>
<td>18</td>
<td>199</td>
</tr>
<tr>
<td>2/19/16</td>
<td>3.6</td>
<td>22.5</td>
<td>23</td>
</tr>
<tr>
<td>4/15/19</td>
<td>3.2</td>
<td>21.8</td>
<td>167</td>
</tr>
</tbody>
</table>

Once the conferences were complete, I learned that the next major challenge was the technical process of taking hundreds of lines of individual data entry for each student getting them to output to a progress report for each student. Including the challenge of making sure all the teachers had entered the relevant data prior to this work being completed. Whether it was the most efficient solution or not, the process I created entailed first writing code to combine a given student’s entries into one line in the spreadsheet and then manually deleting the hundreds of unused lines from the spreadsheet—all for the purpose of creating a “mail merge” which allowed the data to be exported to a report card template in a document.
First creating this process took me several days despite my extensive experience working with spreadsheets. Once the process was formulated, each repetition took several hours, mostly spent deleting the extra entries. This first run of the process took additional time because, for what would not be the last time over the next two years, three teachers of our 12 subject area teachers did not complete entering their students’ data and I had to repeat the process of deleting lines, as described above, twice. In Figure 15, the circled areas represent the kind of equations I was writing into the spreadsheet and the source cells for the relevant data. In addition, the figure displays the multiple lines created for a single student that I then removed manually at the conclusion of the process.

Figure 15. In this sample from the spreadsheet I created to organize the speed conferencing data so that it could be merged into a progress report document for each student. The circled areas represent the coding that I did to pull all of a student’s entries into one line.

The resulting form was printed and distributed to students and advocate counselors and it was sent home to families. It was also posted in electronic form on the staff’s shared digital drive so that any staff member who was following up with a student could look up what we began to call the student’s “speed conferencing progress report” (see Figure 16).
Leveraging language the advocate counselors had been using with when talking to our students about this new academic model, we used the metaphor of driving on a highway to describe their progress in these first reports such as “Not Making Progress (Stopped – completion date dependent on significant increase in engagement)” and “On Pace (Middle Lane – Completion by June 2016)” (Figure 16).

This is when we learned that our grading policy was controversial. I asked a group of students to talk to me about our progress reporting system and instead I learned that they wanted “real” grades. As can be seen in Figure 16, as our school staff was actively designing our competency-based learning system, we decided, with my strong encouragement, to try not using traditional grades. In our new model, students received a letter grade based on how many total competencies they completed in each subject area. If a student was satisfied with a C, the student could “ring the bell” (we would ring an actual bell for them) in Morning Meeting and move up to next level of that subject area.
or their next class. If a student wanted a higher grade, the student could keep working until they were satisfied and then ring the bell.

In an eye-opening, Friday afternoon conversation in December that took place around the meeting table in my office, a group of students informed me strongly that they believed that they and their peers needed traditional grades and that no matter how well we described their progress otherwise, it was not going to be impactful if it did not come with traditional As, Bs, Cs, Ds, and Fs. It was Fs that I had most wanted to get rid of and I explained to the students my rationale, but they were unconvinced. It did not matter whether grades were a tool of oppression or not, the students argued that they and their parents needed them to make meaning of educational progress and to understand how their efforts resulted or did not result in outcomes. Over the winter holiday break, I redesigned the progress report form to make it look like more like a traditional district report card. I simplified the descriptive language for each performance level and removed the highway metaphor and I added letter grades. The result can be seen in Figure 16, which shows the two iterations of the progress report document.

**In-Case Analysis of the Speed Conferencing design process – Needs unmet by design**

One challenge in the initial phase of this design process was a confusion of purpose stemming from Education Elements’ seemingly conflicting roles as both an open-ended design consultant and as a vendor for technological solutions to school problems. Although this conflict was evident and even noted by one of the members of our team, it did not seem to impact our work particularly, as the products we designed in
these sessions—Speed Conferencing and “Assign/partner all staff to students.”—were both human-centered design solutions using little or no “blended” technology. We, in essence, ignored the almost overt effort by the consultants to sway us towards technology-based and personalized learning-oriented solutions—including handing out packets of information on various “blended learning” efforts.

Having said this, there is an evident disconnect between the need statement we crafted (“All young people at NLA need a way to feel valued because it will address negative framing and the idea that we do not listen”) and our design products. It is possible that the leadership team and our priorities unduly influenced the design process. Jon, Gina, Rachel, Sam, a student, and I attended a conference in June of 2015 where we saw other school’s examples of student conferencing and it may have led to an undue focus on that specific aspect of our pilot despite the fact that it was really only one piece of the overall process design. In our Education Elements Planning Tool, under the “Study” column, we had written:

Analyze completion or progress of goals set in case conferences:
- Case managers set goals and calendar appointments for checking in on goals
  1. 10-15 day goals set for all students?
  2. All goals in SMART form?
- Completion of Academic Review
  1. All students complete review for all subjects (we will need a master list to check off before students exit)
  2. All reviews signed by student and teacher

In Figure 10, the original hand-drawn version of our process design, the major driving actions at the top of the drawing are students setting quarterly goals and tracking data towards these goals and below that is bi-weekly case management support from the advocate counselors. The conferencing itself was intended to support these larger
processes. Instead, the conferencing became a central focus while the other processes were haphazard and infrequent.

Speed conferencing continued throughout my time at NLA. In no iteration of the process did we ever successfully connect the speed conference and the data it produced to our case management process (counseling and student support). The original vision was of a tight feedback loop that would help students understand and stay on top of their own progress while getting the support they need. While by the final iterations of the design the data was outputted into a printed report, because printing these required a large amount of my personal time and energy, the timing of the progress reports was haphazard at best. In addition, the reports may or may not have been used during a given student’s case management process. We did not successfully collect these data on case management, but there is no question that case management was less frequent than every two weeks and speed conferencing was more likely to take place in 8-week than in 6-week intervals.

A final, critical challenge with the speed conferencing design is that despite its original intent of engaging students in meaning making, the conference process and resulting progress reports became a way of conveying teacher-generated information to students without any reciprocal way to hear from or learn from the students themselves. If the goal was to motivate students to work, there is no data to indicate whether this outcome was accomplished. In the spring of 2016, one of our minimal analyses of the data looked at together as a staff told us that our implementation remained far from tight, that more than half the students did not receive a conference in the aggregate (Figure 17).
Figure 17. Total percentage of conferences completed with students between January and March 2016.

It is worth noting that even in our more didactic ultimate version of speed conferencing, we never spent communal time analyzing the large amount of data we collected and speed conferencing is not listed in Figure 18 as a part of our adult communication systems but is listed under both “communications with students about progress” and “reporting systems.”
Figure 18. Systems Design Team Meeting Minutes reflecting the dual roles of speed conferencing as both a way to "communicate with students about the program" and as a "reporting system" and indicating the shift to printing reports.

While speed conferencing may have served more as a reporting system than a support system for students, a piece of data mined from the speed conferencing reports did prove internally validating for a program change that became a central feature of our weekly schedule. The analysis and similar data suggested that more than half of the students were regularly missing their classes and a similar percentage were receiving
incompletes or Ds in their classes (Figure 19). In the face of the stalling of our newly designed, entirely personalized and competency-based learning model, the science and mathematics teacher team (STEM team) proposed to the staff what they called “Crush Friday,” an instructional intervention that would, like speed conferencing, become an enduring part of our program model. Ultimately, that concept emerged as a feature of the design spring around the schedule, which is described in the third case below.

Figure 19. Charts of the data from speed conferencing between January 2016 and March 2016 indicating that a majority of students are not attending and are not seeing academic success.

**Case 2 – Attendance Design**

On Thursday morning, February 28, 2016, I stood on my chair during a staff meeting and began to yell, or at least to talk loudly, as I have been sometimes known to do. My frustration had begun to boil in November and had bubbled over. There was significant pressure from school district leadership and our partner organization’s leadership and significant attention in the local community around attendance. Alternative schools traditionally struggle with attendance because the students we serve generally have long histories of non-attendance at school—often going back to early
elementary school. Overage, under-credited students, by definition, are a population that has struggled with school. Having said this, if students do not attend school, it is hard for us to serve them and as our attendance declined from fall to spring for the second year in a row, I became worried that the school district might consider closing the school if we could not show improvement. I had asked Ronda, our vice principal of climate and culture, to work with staff and with her team on this challenge and had raised the urgency around it at multiple cabinet team meetings (our two vice principals, our operations manager, and myself) from November through January.

**Background on attendance: Student data and Student Support Team interventions.**

Student attendance was perhaps the most significant barrier to student achievement at NLA. Even our highest performing students frequently had average daily attendance in the 70% to low 80% range. Average daily attendance across the school was less than 50% if one counts students who basically never attended our school to begin with. We were struggling with attendance rates lower than 50 percent average daily attendance when our goal for the year was to maintain a 65 percent average daily attendance rate each month from November 2015 to May 2016. Our standing procedures, in line with the district’s expectations, were to send home attendance letters to families and to make automated calls when students were absent. In addition, in an attempt to better understand this challenge, our student support team and leadership teams analyzed a variety of data and engaged in an initial intervention process. The work began with
practices initiated by the student support team (SST) that primarily started in December, 2015 and January, 2016 (Cabinet Leadership Meeting, December 16, 2015).

Student Survey Responses: These data are based on 38 student responses (Roughly a 40% rate of return)

Figure 20. I compiled the data from our student survey into a slide to share with students, staff, and partners (January, 2016).

That winter we surveyed our students to try and gain a better understanding of their circumstances and needs (see summaries of these findings in Figure 20). These data were surprising and conflicting, suggesting the problem was highly individualized. Students seem to have had generally positive feelings about adults at school, did not
report being bullied, and seemed to feel generally successful. While they were less positive about liking school in general, the overall trend seems to be positive feelings about the school community. Having said this, it is worth noting that the student survey suggests that students may have had a false sense of their own attendance as their self-reported attendance numbers do not correlate with the school’s overall attendance numbers.

**Round 1 of attendance interventions: Contracts, home visits, and calls.**

In our first round of interventions based on our student support team’s (SST) analysis of these data and under Ronda’s leadership, we implemented three initiatives based on our assessment of student need: 1) Individual Student Contracts – 32 students were given individual contracts designed to help motivate them and increase their buy-in and participation; 2) Home-visits – Counseling staff began conducting home visits in the middle of the year when staff capacity allowed for it; 3) Calls home – Office staff, counseling staff, and some teachers called home when students were absent.

These efforts, our data suggested, were not as impactful as we might have hoped. We can clearly see impact on individual students (for example the six students in the table captured in Figure 21 who improved and were released from our student contracts); but overall attendance for the students in the intervention remained far below our goals (Figure 21).

Home visits proved even less impactful. They took significant amounts of time and required at least two staff members for each visit. The most common outcomes were
evidence of the enormous barriers our students were facing on a daily basis. For example, one home visit report read:

[Student]: Went to the home and older sister informed AC’s that [Student] does not live there and has been staying with her boyfriend around the corner. She also informed us that [Student] is pregnant and “needs to finish school.” We left the note with sister who said she will give it to her to call and arrange a way to return to school. (Home Visit Record, 4/7/16)

It was evident from our survey data and the results of our early interventions that these efforts alone were not going to solve the problem. I continued to pressure Ronda to work with the whole staff on strategies to improve attendance.

**Findings: Student Contracts**

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Transferred</td>
<td>4</td>
</tr>
<tr>
<td>Student Moved</td>
<td>1</td>
</tr>
<tr>
<td>No Call/No Show</td>
<td>1</td>
</tr>
<tr>
<td>Family in Crisis</td>
<td>2</td>
</tr>
<tr>
<td>Attendance Improved</td>
<td>1</td>
</tr>
<tr>
<td>Improved and released</td>
<td>6</td>
</tr>
<tr>
<td>Parent Meeting</td>
<td>1</td>
</tr>
<tr>
<td>Extended</td>
<td>8</td>
</tr>
<tr>
<td>Found alternate intervention more effective</td>
<td>4</td>
</tr>
<tr>
<td>Incarcerated</td>
<td>1</td>
</tr>
</tbody>
</table>

Figure 21. Findings from student contract intervention 1/4/16 - 4/1/16.

**Attendance Interventions, Round 2 – Design Thinking Pilots.**

Thursdays were Ronda’s standing meeting with the staff during our morning meeting time (see the third and final case study below which focuses on the daily
schedule and Figure 37 for an example). On the 28th of February, she had a district meeting to go to first thing and I had a district meeting to go to later in the morning. I agreed to take over her standing staff meeting and I went in with an agenda to check in on what they had been doing to improve student attendance and engagement and to think together about next steps. I asked the team to split into small groups, share and discuss what they had been working on to improve attendance and what they thought the whole school should be doing. They were then assigned to share back with the whole group. I captured what the teams shared out with the whole group in the table and attached notes shown in Figure 22.

![Figure 22](image)

Figure 22. The notes I took from the group presentations in our first staff meeting on attendance design (February 25, 2016).

As I listened to the groups share out, I remember becoming extremely frustrated. Only Christian and Embid even shared out any meaningful actions. While there were some whole school ideas shared, it did not feel to me like the adult community was taking ownership and I did not feel that the ideas we had were going to make a difference. It was at this point that I found myself standing on a chair. I know what I said
accurately because recognizing my speech’s potential significance for our use of design thinking, I wrote it down in my notes immediately following the staff meeting. I was frustrated and worried about the future of our school and the staff team I loved, so I stood on my chair and “yelled” at them:

Guys! I don’t know how to communicate this any more clearly! This is me. I am standing on a bow of the ship. You are all ALREADY in life rafts. The band is ALREADY lined up and the music is starting to play. We are about to launch you all to the sea and I am about to salute as I sink sadly beneath the waves!...I am leaving here today for a training, but here is what we need to do. You are going meet with your advisees this afternoon. You are going to get from them, NOT how they think we should improve attendance, but instead you are going to get a list of what they need and what their experiences are like. THEN we are going to work together to design some pilots and see if we can maybe work together to move this thing. (Gabriel, Thursday Staff Meeting for RTII, February 25, 2016)

Whether or not that is verbatim what I said, it captures the spirit of my message and its intensity. I charged the teachers to interview their advisees during advisory and in general during the day. I reminded them not to ask the students for solutions but to listen to their experiences. I then left for my meeting, still thinking about the problem.

When I returned that afternoon, the school felt like it was buzzing. Three or four different students approached me excitedly as I entered about what they thought we should do about attendance and how we should change the school. The next morning during our staff meeting, we used the data that the students had given us to craft need statements and to ideate a range of potential interventions that might impact attendance

______________________________

5 I know this speech by heart because I repeated it to anyone who would listen in the weeks to come including my wife and my graduate school friends.
based on what the students had said. We would move nine of these forward in the design process and ultimately select five of them to implement that spring.

![Image](image.png)

Figure 23. Picture of one of the groups of teachers crafting needs statements based on their notes on what students told them (February 29, 2016).

We presented the nine ideas that emerged from our ideation to our students on Monday, March 7, 2016 (Figure 26). The night before, my notes on what to say to the staff, Figure 24, highlight the central goal of the activity—engage the students themselves in design sprints to improve the school.

![Image](image.png)

Figure 24. Planning notes for attendance design sprints launch.

The students divided themselves into groups based on interest. Each group and its assigned staff members spent most of the day on Monday and Tuesday and then additional time on several days during the week working on their pilots. The task was to
get the design as close to actionable as possible or to even try it out that week. All week long, students and staff were huddled together in rooms planning, testing, and organizing.

Figure 25. Pictures of attendance design week activities. The top left picture captures some of the group work of the hot breakfast pilot group. The student on the top right is designing new daily schedules. The lower two pictures capture the design groups.

On Friday the first groups presented their plan for piloting their design ideas (Figure 26) to the whole school during town hall. The remaining presentations took place over the next few days.
Based on the presentations, three ideas were selected to be carried forward as part of our initial efforts:

1) **Shorten the daily schedule** – We piloted ending school 30 minutes earlier. We moved dismissal from 4:00 to 3:30 by shortening the minutes in each class from between 55 and 60 minutes to between 50 and 55 minutes.

2) **Provide hot, restaurant style breakfast daily** – Using our culinary program students and teachers who agreed to come in early to school in exchange for leaving early, to prepare for and serve their peers.

3) **Provide bus tickets to all students who live outside of a ten-block radius** – This targeted students who lived within the 2.5 mile limit for district provided tickets.

   (Action Research Executive Summary, 4/23/16)

We decided to advance an additional pilot design sprint, adding an intensive day of whole school, project-based learning (see the final section of this chapter on the design of the daily schedule). As part of their design work, groups were tasked with determining an appropriate start date and length for their pilot and soon thereafter, we began distributing bus tickets, providing breakfast, and, beginning March 28, 2016, we shortened the length of the school day (see Appendix C).

**Outcomes of our interventions.**

The results of our design sprints, from the perspective of improving attendance, were not that different from our initial interventions. There was some evidence that specific students experienced positive outcomes, but attendance as a whole, did not noticeably improve (Figure 27). After roughly a month of our pilots, we conducted a review of our data, first with the whole staff and then with our cabinet leadership team. The staff completed individual and group reflections before looking at the attendance
data and then reviewed their beliefs in light of these data. In our whole staff review, we immediately found that we had not understood how complex interpreting our outcomes would be. Some of our interventions, such as the breakfast pilot, were positive for individuals or small groups of students. Others, like the schedule changes seemed to have a benefit for student learning and staff effectiveness, but also did not obviously impact attendance.

Staff members reflected on this complexity in individual and group notes, ultimately sharing out their finding with the whole group in the charts pictured in Figure 28. Staff made arguments for continuing and discontinuing the various pilots, but there was limited overall consensus (with the possible exception of a general agreement that if we tried to make the school day longer again, students were going to rebel). Teachers noted that specific students were getting to school notably early in order to help out with breakfast and eat, including students from the construction pathway. With regards to getting out of school earlier, Jack noted to his group, “…getting out early, I know that the students are very happy about it” and Janis, a counselor responded, “yeah, I feel like morale is up” (Attendance Data Review Meeting Minutes, 4/21/16). There were mixed feelings about the bus tickets with some teachers feeling like they had not been delivered effectively to all of the students who needed them and had not been effective as a strategy. One teacher commented, “I feel there were more minuses than plusses,” but an advocate counselor and our operations manager agreed that there were far fewer needs-based requests being fielded overall. Sam noted, “Maybe the bus ticket is not having an
effect, but for the 40 or so we have, that's the incentive and [without it] it's over for them"
(Attendance Data Review Meeting Minutes, 4/21/16).

Findings

<table>
<thead>
<tr>
<th>Bus Tickets:</th>
<th>Early Dismissal Before Pilot (18 Days)</th>
<th>Early Dismissal During Pilot (18 Days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Gain – 16 Students</td>
<td>Total: 795 days attended</td>
<td>Average: 44.17%</td>
</tr>
<tr>
<td>- Loss – 17 Students</td>
<td>Total: 768 days attended</td>
<td>Average: 42.67%</td>
</tr>
<tr>
<td>- No change – 23 Students</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 27: Analysis of initial attendance design sprints (Attendance Action Research Presentation, 4/23/16).

Our cabinet leadership team met on Monday of the next week to discuss what we had learned and what our next steps should be. We decided to end the breakfast pilot because of the low total number of students engaged and the large demands it placed on staff. The bus ticket pilot was grant funded, and without substantial success rates, we did not feel we could justify carrying it forward. The changes to the daily schedule, however, we maintained and ultimately incorporated into our designs for the following year.
Figure 28. These were the notes written by the staff after doing individual and group reflection on our pilot data. Each group representative wrote in a different color.

**In-case analysis.**

It is hard for a professional who cares about the students I serve to make the analytical differentiation I have been forced to make in reflecting on this design sprint. If my research question was “did our design sprints produce the results we hoped for?”, then I would have to consider the attendance sprints a failure. My research, however, investigates the extent to which teachers were developing key mindsets embedded in design thinking. Teachers in this case certainly acted boldly and with self-efficacy and they very much worked to engage students in the design process. In this way the students were also exposed to and began to practice and internalize these mindsets. Finally, the level to which our staff were willing to go to be flexible and adaptive during this design sprint was notable. They were even willing to make changes to their own workday; for example, the chefs agreed to come in early for the breakfast preparation. Staff reorganized whole school days as part of this work and they never complained that they were being asked to do too much. Perhaps most impressively, as they were engaging in
the attendance design sprint with the students, our staff were also redesigning our academic model to align with a new externally driven priority (although I believe it aligned with our internal priorities as well)—creating a schedule that had students in our CTE programs 40 percent of students’ school time.

Reflecting on the overarching process, however, I also can readily see how it could be improved for better outcomes. On February 17, 2016, right before we launched the attendance sprints, Gina and I spoke with Dr. Carrol on the phone. My notes have some clear guidelines that she laid out for us to follow:

Hacking around levers
- You are working in a domain, around a lever
- Hack around incentives (what incentives would matter)

1. 7 minutes of brainstorming (groups of 4-5)
2. Then pull an idea and figure out how to test it in the next week
   a. Implement and collect the data
   b. Do it again three times
3. Pilot and pivot
4. Capture brainstorm data for future use
5. Bring in the potential recruit to pilot

Hack should be small enough that I can do it in a week (Maureen Conversation Minutes, 2/17/16)

In considering this guidance, there is an obvious tension between what was advised and what we executed. We tried to be bite sized, but our scale, in every case, was more global than it was focused. Our interventions were often costly, time consuming, or both. We also let them go on for a month before evaluating them. By the time we began to evaluate our interventions, changes like shortening the school day had developed institutional inertia—backing out of them when it became evident that maybe we should was ultimately deemed too culturally costly. Although teachers displayed significant
flexibility in their mindsets, our overall design work failed to be rapid and iterative and, therefore, quickly became institutionalized into our larger structures. This is perhaps most evident when it comes to the interaction between our attendance design sprints and the design sprint that ran simultaneously and crafted our 2016-2017 daily schedule.

Case 3 – Iterating the Daily Schedule – Career and Technical Education meets crush days meets problem-based learning

I was once taught and have always said that time and space are the most important and underutilized resources in schools (origin unknown). Our third design sprint was centered on trying to reshape our daily schedule to meet the changing needs of our students as the school program changed. The schedule itself became a tool for accommodating the implementation of three distinct but overlapping elements of our developing model. The stakes were extremely high and we were both meeting external demands and aligning these demands to complement the work we had been doing over the previous year and a half to implement an educational model tailored to the needs of our students and school. In the end, there were three distinct design streams that came together in the design of the daily schedule as we tried to satisfy the demands of problem-based learning, personalized learning, and competency-based learning, while incorporating an exciting mandate to make our career and technical education (CTE) program forty percent of students’ total time in school. The design challenge was complex and potentially overwhelming task to say the least.

The complexity of the task was further exasperated by the pressure we were under to make improvements to the school. In the spring of 2016, the school and our collective
school change work were under some existential threat from the district. This was the result of chronic poor student attendance (although not atypical attendance for our student body) and from conflict between myself and our school leadership and the leadership of our partner organization. The result of a series of meetings between school leadership, district leadership and our partner’s leadership, however, was that we were given permission to more fully implement our partner’s model, which meant dedicating forty percent of student’s total school time to career and technical education. This was an exciting opportunity for us to employ the competency-based learning model we had been piloting over the 2015-2016 school year in service of interdisciplinary learning centered around the CTE programs. It was exciting to finally be attempting our partner’s national affiliate’s approach to CTE, but it was also daunting and a significant change from the traditional, period-based schedule we had been running for our CTE classes.

The fall of 2016 had featured the launch of our competency-based, personalized, and problem-based academic model. The new changes to our daily schedule would affect our implementation of the new model as well as have significant impact on our day-to-day operations. We had also been piloting a separate scheduling intervention already that spring designed as a weekly academic intervention day called crush days. In addition, the academic design of both our CTE classes and our traditional subject area classes would be significantly impacted and the schedule would need to meet the needs of both.

It is relevant that we were taking on a lot of different conceptual design work at once—challenge-based learning, personalized learning, and competency-based learning. These represent something of a Venn Diagram of educational practices. We were
practicing and learning to work together to design integrated, challenge-based learning for students in which students would work together to solve real-world challenges; we were personalizing learning by allowing each student to progress at that student’s own pace through a given subject area’s selected standards; and we were getting rid of traditional tests and quizzes and saying that in order to advance through a subject area, students had to demonstrate proficiency on individual standards through multiple performances of that standard. These disparate factors interacted in the design of the original 2016-2017 daily schedule and the iterations of it that occurred during the school year. In the sections that follow I explicate some of these contextual design factors that created the conditions for the design thinking sprint we undertook together as a staff as we redesigned the schedule.

Problem-based learning—layer 1 of the scheduling design challenge

Before we began any formal training in design thinking beyond I myself had presented to the staff, Gina attended a training at Harvard University in Problem-Based Learning (PBL) and she took on piloting the concept of a whole-school, integrated and interdisciplinary PBL project. We called this work challenge-based learning because we liked the framing of challenge more than problem, because as we saw it, a problem was something that that needed correction.⁶

⁶In addition, there is a further distinction made in practice between what is commonly called “project-based” learning and “problem” or “challenge-based” learning—practitioners of the latter two practices
Figure 29. Staff, volunteers, and a small group of students working on a professional development day to renovate the school courtyard in the culmination of the first school gardening project which began in the spring of 2014 and was completed in fall 2015.

Gina and I collaborated closely and she ultimately replaced Jack as vice principal in August of 2015. She came back from the Harvard training and took the lead in guiding her peers through the design of a cross-curricular, problem-based learning experience in which students designed garden space in our courtyard (the problem they framed was how to create a sustainable urban garden), In this first PBL garden effort, only a few of these original garden items were ever built, and those mostly by staff members, but our personal finance teacher and resident master gardener, Samantha, did work with Gina to distinguish themselves from the former based on giving more control to students in framing the problem/challenge and in allowing students to decide how to approach solving it.
apply for a small Whole-Foods grant (Appendix E). This grant seeded the initial improvements to the courtyard. The resulting design was never fully executed, although staff and a few students began the courtyard improvements together that fall (Figure 29). Ultimately, a subsequent PBL effort led to a different vision for the courtyard as will be discussed later in the chapter.

![Diagram](image)

**Figure 30.** Interdisciplinary map of the first problem-based learning project we worked on during my time as principal at NLA. Gina did the organizing of the project and created this diagram working one-on-one with the related teachers.
Figure 31. Dynamic interdisciplinary map of the first problem-based learning project we worked on during my time as principal at NLA. Gina did the organizing of the project and created this diagram working one-on-one with the related teachers.

Figure 32. This is the final design for the first garden project. Geometry and discrete mathematics students worked in small groups to small pieces of the yard. They then combined these into the collective design shown here (April 2015).

In my observation, Gina earned staff trust and buy-in through this process. She was humble and met the individual teachers where they were. When her strategies for assigning work to individuals did not work, she went to them directly, crafted first one map of the work (Figure 30) and then another (Figure 31), capturing their ideas in a way that helped make the project effective as a coherent whole. The maps appeared to make the teachers feel like they were working together as part of a team, and this is a sentiment that carried.

**Competency-based and personalized learning—layers 2 and 3 of the scheduling design challenge.**

The second support that Gina provided through her leadership of the academic design team was to begin to codify our competency model. We were pushing in several
directions at once—on competency-based learning (which is about how students are assessed and how teachers frame progress and achievement); on problem-based learning; and, at the same time, on interdisciplinary learning. A list of our “Design thinking challenges” for the design team that spring included: attendance; schedule; intake assessment tool; assessment; balancing CTE and academic; staffing; physical plant” (Design Team Minutes, May 13, 2015). It is relevant that this list did not include designing the structure of classes and instructional pedagogy. This was work that I and the academic design team as well (although it was under direct influence), asserted should belong to the teachers. Teachers should use what we were learning about design thinking to redesign their classes.

With Gina’s support and me dedicating time and energy to the work, teachers began to redesign the classes in the Spring of 2015. As an example, the English team crafted a station-based, rotation model (Figure 33 and Figure 36) where each of the two language arts teachers focused on specific parts of instruction (reading and analysis; writing; research; discussion; and general literacy development). My own educational beliefs were clearly driving this work, but I took a very minimal role in the discussions of how each content area or interdisciplinary team would be organized. Each of the content areas proceeded to design its own implementation of the model working iteratively during May, June, and July.
On May 28, 2015, the academic design team gathered the drafts of each content area’s design pilots for the first time. This was within a month of our design thinking training conducted by Dr. Carrol and a staff member from Dr. Carrol’s design firm Lime Design and Gina and I were having periodic consultations with her over the phone. Dr. Carrol counseled us to encourage staff to rapidly design their ideas and to test them by at least trying to map out fully what they would look like when implemented if not actually to mini-pilot what they were thinking in their current classrooms. The math team designed a three-day rotation model that incorporated skill building, guided conceptual development, and applied problem-based learning. Jane, representing the English Language Arts team, designed a 6-week rotation that broadly followed the writing process (Figure 33).
This model was then again subjected to a re-imaginining when we held a full-day academic design session in July, 2015, on what we called Instructional Design Day. During this professional development day, we charged each content area with using the design thinking process to imagine their classrooms for the following year. We gave them a list of requirements (Figure 34) that included that assessment must be competency-based, be supported by special education teachers, and incorporating both problem-based learning and remediation. We also posed some general questions about ideas that had been raised during our conversations together, asking staff to include thinking about how the daily schedule might support their instructional needs. We then further detailed the expectations for our design in the charts in Figure 35. These visuals highlighted two additional pieces of our model that would be features of our program and daily schedule—social emotional learning (SEL) and personalized learning. The latter, without substantial deliberation, would become the central feature of the instructional models our teachers would ultimately design in the summer of 2015.

Figure 34: This document was the instructions given to the academic designers on what we called Instructional Design Day.
On Instructional Design Day, we asked the teachers to use Figure 34 and Figure 35 as frames and to design their instructional model based on their understandings of students’ needs. The output was iterated graphical representations of the work that staff had done in May (Figure 36). The instructional approach to competency-based learning is on the left-hand chart, with specific competencies achieved during a three-stage learning cycle (these are symbolized with colored post-it notes, one of the best known design thinking techniques for creating placeholders for ideas). On the right-hand chart, Jane indicates how students will move on a day-to-day basis through the physical space of the humanities rooms. The use of learning stations with a central whole group meeting space is a first attempt to incorporate competencies into a more personalized structure.
Figure 36. As described by Jane in presentation to the staff during our instructional design professional development day. The chart on the left captures how competencies are accrued. The chart on the right shows how this model is implemented in time and space.

The design of the 2015-2016 daily schedule.

The daily schedule going into 2015-2016 was focused on priorities including our whole-school morning meeting, staff meeting time before school began, and advisory. In this schedule (Figure 37), our CTE classes are scheduled for the same amount of time as all of the content area classes. This schedule used 54-minute periods that, because they met at the same time, allowed the possibility for learning across disciplines or the combination of two 54-minute periods, as with the humanities classes, into a larger (in terms of student numbers) 108-minute period classes. The goal that I articulated together with the handful of staff including Gina, Sam, and Jane who were working on the schedule, was to allow teachers to use the blocked time creatively and flexibly (as on Instructional Design Day). In addition to the teacher’s design thinking, this schedule
represented specific feedback drawn from student focus groups. Students indicated they liked what the note taker described as “PBL infused into classes.” In addition, students specifically requested individualized instruction and one requested co-teaching in mathematics classes (Schedule Design Focus Group, 05/26/15).

Figure 37. The table pictured in this figure captures the daily schedules of both the CTE and general education classrooms. This schedule featured our integrated "humanities" course and common preparation time for core content teachers.

There was a modified version of this schedule for Wednesdays when advisory was extended to 45-minutes and instead of the usual, teacher-led advisory lesson, advocate counselors and other community members ran psycho-educational groups with the students. On Fridays, morning meeting was extended as was the advisory period. The former was dedicated to whole-school town hall (an extended, discussion-oriented morning meeting) and the latter was used for Speed Conferencing and student activities (theater, ping pong, and journalism, for example) on alternate weeks.

There were several notable drawbacks to this schedule design. For one thing, the interdisciplinary and problem-based learning model, now built into the daily schedule,
was challenging to implement given our over-arching move to competency-based and personalized learning as it would have been challenging to implement in the most traditional of contexts. In addition, in the middle of the summer I was told by my assistant superintendent, that while we could implement our competency model, we were required to use the district’s digital textbook as our resource for student work in math. This meant that by the start of the 2015-2016 school year, we were only meaningfully trying to conduct a combined humanities course, while science and math worked separately, only combining occasionally for specific projects.

**Competency-based, personalized, and problem-based—the Ven diagram of design considerations leads to challenges in implementation.**

In the fall of 2015, we began implementing our competency-based, personalized learning model (for full details, see Appendix B). This design borrowed from the competency-based learning work of the school design organization Buidling21 (building21.org) and what was then the Office of New Schools of the School District of Philadelphia. The final product however, was the result of the school staff’s collective school design work in the spring and summer of 2015. The school design document (see the outline and highlights in Appendix B) was created by our Academic Design team which was led by then academic interventionist and later vice principal, Gina. Gina took the lead in helping frame our vision for student learning with a group of six other teachers, Jack, and me. She championed the concept of project-based or what we later called problem-based learning and she also took the lead in pushing forward our competency-based, personalized learning model.
Each content area selected a set of 30 required competencies from the standards for that subject area and additional competencies that would be addressed, but not assessed during instruction. Students’ grades, as noted above, were determined by how many competencies they completed past the minimum requirement. Wall charts with student names and lists of the competencies went up in every classroom so that teachers could visually track student progress by checking off completed standards (as captured in Figure 38).

**Personalization initially overwhelms problem-based learning**

As school leader, I inadvertently engaged one of the forces that undermined interdisciplinary learning resulting in an only partially intended but enormously significant impact on our design. Although I was trying only to push on their thinking,
personalized learning was an accident of a strongly worded imperative delivered to highly engaged teachers who were working collaboratively. As we approached the redesign of our instructional model and our teaching teams were redesigning the fundamental organization of their classrooms and pedagogical approaches in the early summer of 2015, I prompted our team with the following question: “How do we effectively support students who are entering in the middle of the school year and those who miss substantial amounts of school time so that they can effectively enter the instructional program?” (Academic Design Team Minutes, 6/19/15). That summer, the teachers designed our model and by early fall, students were not only working on specific performances of competencies, they were also working largely independently, and they were accruing competencies towards completing classes the moment they had demonstrated proficiency in all of the required standards.

Despite the extensive work Gina and the teachers did on piloting PBL, the practice that students should progress independently ultimately overwhelmed the implementation of PBL. PBL is about students demonstrating proficiency in academic skills concepts applied to the real-world. While it is a natural fit for competency-based assessment, it was, at least in our model, a social, group-oriented pedagogy whereas personalized learning generally tended to indicate independent student work for us. Using specific standards to drive learning design lends itself naturally to personalizing learning—by focusing on the development of student demonstrations of learning, teachers created mini-projects and performances that students could engage with independently and non-linearly in most cases.
When the 2015-2016 school year began, Gina and I decided to let go of interdisciplinary problem-based learning as a school focus. Problem-based learning in the individual classrooms was something we could work towards, but we had come to understand that teaching to the competencies alone was going to be a significant burden on our teachers and a major change for our students that needed significant adaptation if they were going to be successful in the new model. Although we had been practicing integrated, interdisciplinary PBL in the spring of 2015, we made a deliberate determination to let it go in the fall of 2015 in favor of focusing on the personalized competency work teachers had created.

Our initial implementation of the competency model was mixed. Some subject areas seemed to make the transition smoothly. For example, in health I noted in early observations of Samuels’s classroom:

Each student is working on self-paced learning experiences that lead towards larger projects. Samuels pulls Tamja over to the competency chart. Has her check off the one she did (see picture) and then she chooses what's next. Samuels, “Ok, and now you get a piece of candy!...You get one! One for each competency! So choose wisely…” (Classroom Formal Observation, 11/12/15).

There was similar early success in English Language Arts and in our culinary and construction career and technical education courses. In mathematics, however, our teachers almost immediately began reporting that students were getting stuck. One of the math teachers, Mr. Wakanda, because the explained what he observed, “At the

7 We called him Mr. Wakanda because all staff were allowed to choose what they wanted to be called. While most followed my lead and used their first names, Mr. Wakanda preferred to be called by his last name.
beginning, most students jumped into it but started giving up due the demands of the activities and the number of questions involved” (Problem of Practice Minutes, STEM Team, “Wakanda 10/16-10/21”, 2015).

Including me in their frustration, the team invited me to join a weekly morning team meeting during which the teachers discussed what we called a “Problem of Practice.” This meeting followed an open-ended protocol I had given the staff (Figure 39). During this Problem of Practice meeting, Mr. Wakanda presented samples of student work and asked us to consider why students were not making significant progress towards completing competencies by demonstrating proficiency on the selected standards for the course.

**Problems of Practice**

<table>
<thead>
<tr>
<th>Date</th>
<th>Teacher</th>
</tr>
</thead>
</table>

Step 1 - Presentation of Problem (presenter)
- Describes problem
- Shares data (ideally three different sources of data on the same subject for the purpose of triangulation, but don't sweat it too much today).

Step 2 - Clarifying Questions
- The team asks the presenter to explain anything they don’t understand

Step 3 - Noticing and Wondering (presenter silent) (20 minutes or so)
- Spend 10 minutes at least in silence writing
- 5-10 minutes at least sharing Noticings
- 5-10 minutes at least sharing Wonderings
- Presenter is silent taking notes

Step 4 - Feedback from the presenter

Step 5 - Write down ideas for next steps in classroom practice.

Figure 39. NLA protocol for academic teams to use when using student work to conduct root cause analysis around a teacher-selected "problem of practice."

As can be seen in the notes captured in Figure 40, team members, including myself, were looking at student data and thinking about what the students needed while
also frequently leaping directly to solutions. Samuels, the physical education and health teacher writes, “I wonder if due to the nature of our students it might be more effective to concentrate on one competency at a time,” and Gina adds, “I wonder if tasks were attached to real world problems if that would help.” This is the first seed of what would become “Crush” days, which were initially designed to use whole-day or half-day real world learning experiences to drive instructional momentum, similarly to the way our career and technical education programs work. In addition, the second core idea that drove this work was that if students could experience success by completing one or two whole competencies in a single day, they would feel more successful overall and be more engaged. I then added to this discourse, “I wonder if the students know the purpose of their work” and “I wonder what the impact of trying to marry the best of both worlds, bigger projects while assessing one competency at a time.” This thinking ultimately became the rationale for Crush days.

Figure 40. During the STEM team's Problem of Practice meeting we interacted by typing notes into a shared google document in real time as we examined the materials Mr. Wakanda had shared. This is an excerpt from these notes (10/16/15 and 10/21/15).
It may not have been accidental that three teachers on the STEM team, Sam, his fellow math teacher, Mr. Wakanda, and Niema, who was our special education teacher, were all both STEM team members and core members of our school design team. They were all vested in our work in that they took leadership roles in its design and they had been expressing concerns with our students’ progress through our new competency-based learning model.

As the team continued to meet and discuss the challenge following the Problem of Practice meetings led by Mr. Wakanda on 10/16/15 and 10/21/15, Niema approached me and asked me if their team could have some time with the whole staff during a staff meeting. The STEM team wanted to propose a design concept for helping students experience significant short-term success in our competency model.

**Crush Fridays go from dynamic teacher-collaboration to scheduled study halls**

When, almost from the start of our implementation of personalized learning, students appeared to resist our changes, especially in math classes, the STEM team began to discuss what students needed and how we might meet those needs. Without traditional, whole-class pacing and deadlines, students began to languish and hang out in class, accomplishing little in many subjects. Blocked schedule time, rather than empowering dynamic teaching, in part became a tool that students used avoid doing any work in a given subject area (for example, they would spend all their time in science and never go to math). Working within the ideas we seeded in that original Problem of Practice
meeting, the team came up with an idea they originally called “crunch” and then later called “crush” Friday.

A crush day was an intervention day where the teachers completely reorganized our students and daily schedule. On a crush day, teachers selected students who needed to make progress in their classes and engaged them in intensive, often problem-based and interdisciplinary learning experiences. These learning experiences were designed to allow a student to make multiple proficient demonstrations of at least one competency in a given subject area in order to complete the competency and check it off their competency chart. In this way students were given an experience of success that, the staff hoped, would motivate them to more actively engage in their ongoing course work.

After a couple of mini-pilot versions of interdisciplinary projects within the STEM team, the whole school pilot of Crush Friday was planned for April 15. Niema, our special education teacher, chair of the academic planning team, and member of the STEM team, took the lead in organizing the staff and students (see Figure 41).

![Figure 41](image)

Figure 41. The first tool Niema built to manage the student sign up process for Crush Fridays. The process required the teachers to select and publish a new schedule for every student in the school.
Her organizational spreadsheet (Figure 41) required each teacher to responsibly request students until all the students were selected. This level of detailed management ultimately led me to refer all technological organization tasks in the school to Niema. When we determined in a staff meeting that something needed to be crafted, I would make comments like, “Well, I would take care of this form, but Niema will just redo it better, so Niema, it’s tasked to you!”

The spreadsheet turned into student lists and these in turn were posted at the front of the building. For the pilot, Niema made lists of the students showing where they were going in the morning and in the afternoon and these were posted outside of my office in the front entrance to the school. As students entered, our counseling staff directed them to the lists and then to morning meeting where we reviewed the plan for the day (see the “Minute by Minute” plan for the day in Figure 42).

The pilot featured two crush sessions, one in the morning and one in the afternoon. Because we were reorganizing the entire school day, however, the crush schedule gave us the opportunity to implement several of our other programs, design concepts, and interventions as part of the school day. For example, crush days allowed an easy way to incorporate speed conferencing, which required all students and teachers to be free at the same time (as can be seen in the schedule (Figure 42), at this point, speed conferencing was taking place in the computer laboratory). Also included in the day was Town Hall, our weekly community discussion forum and our positive incentive auction (students earned school dollars by exemplifying core values and then could spend them buying real prizes at our quarterly auctions).
Following the pilot, Niema continued to take the lead in organizing, executing, and ensuring that students and staff knew their roles. Having learned from the pilot that some teachers did not complete the student assignment form without frequent reminders, she began sending frequent reminder emails (Figure 43). Ensuring that teachers got this job done on time became my only major responsibility when it came to the planning of the day, and even there, Niema did most of the heavy lifting.

CRUSH-FRIDAY Minute by Minute (MBM) April 15th 2016

<table>
<thead>
<tr>
<th>EVENT</th>
<th>TIME</th>
<th>LOCATION</th>
<th>WHAT'S HAPPENING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breakfast</td>
<td>8:00 am</td>
<td>Club Coach and Counselor</td>
<td>Students will be picked up at 8:45 am in the rotunda by all teachers/other adults. They will be encouraged to use the restroom before leaving. Students should get to the activity before 8:15 to keep them on track.</td>
</tr>
<tr>
<td>Block 1</td>
<td>8:45 am</td>
<td>Classroom</td>
<td>Activity as identified below.</td>
</tr>
<tr>
<td>Town Hall</td>
<td>11:15 am</td>
<td>Music room</td>
<td>Large group activity of some kind.</td>
</tr>
<tr>
<td>Lunch</td>
<td>12:00 pm</td>
<td>Cafeteria</td>
<td>All students should be in the CAFETERIA and move into the 12:45 class activity. Students should be out of the CAFETERIA by 1:30. All students should be in the CAFETERIA by 1:55 for the fourth block. 1:55 students and staff will line up.</td>
</tr>
<tr>
<td>Afternoon</td>
<td>1:25 pm</td>
<td>Computer Lab</td>
<td>In the music room. (Reminder for staff who have 3rd or 4th period)</td>
</tr>
<tr>
<td>Block 2</td>
<td>1:30 pm</td>
<td>Music room</td>
<td>Students should be in the CAFETERIA and move into the 1:30 block.</td>
</tr>
</tbody>
</table>

Figure 42. Selection from daily agenda for the whole-school pilot of Crush Friday.

Figure 43. The left side is an email reminder Niema sent to the staff in advance of the third crush day. On the right is a follow up reminding them a second time.

Crush goes from pilot to daily schedule
For the first crush activities, teachers worked largely independently or in pairs to plan learning experiences. Science and math teachers took students to the gymnasium where they made and threw paper airplanes to gain proficiency on competencies related to engineering and graphing. On the third crush day, I was invited to conduct a formal evaluation of three teachers team teaching together. My summary described their crush project:

This lesson was designed by three teachers as an extended, interdisciplinary lesson focused on water and solutions. The lesson began with a student presentation on lead in water and the drinking water problem in northeastern city public schools. The second section of the lesson was led by Mr. Smith’s section and it consisted of students using a computer simulation first to model adding solvents to solutions and then to examine pH levels. They then transitioned to the social studies portion of the lesson. (Kuriloff, Formal Evaluation, 4/29/16)

Under Gina’s guidance, the teachers had practiced interdisciplinary collaboration when we developed our first PBL garden project in the spring and fall of 2015. These skills seem evident in the teacher collaborations that emerged during the first iteration of crush days.

![Figure 44](image)

Figure 44. This is the daily schedule for Crush Mondays during the 2016-2017 school year. The schedule indicates that each subject area, listed across the top in light blue, was scheduled for two sessions of Crush each Monday.
As we had done previously with speed conferencing, that summer we built crush days into our daily schedule and made it a central part of our weekly activity. A first adjustment we made was to move crush day from Friday to Monday. Staff were concerned about student attendance as our analysis of attendance indicated that average daily attendance was ten percent higher on Mondays than Friday (Attendance by Days of the Week, 4/28/16).

The weekly schedule we created for the 2016-2017 school year was a dramatic shift away from a traditional school structure towards the 60:40 classroom to career education time split that was prescribed in our partner’s model. With students attending their CTE classes 40 percent of their time, and one day of the week a crush day, students only had two days each week in their content area classes. The minimization of class time put pressure on crush days. In order to input this schedule into the school district’s scheduling program, students needed to be assigned crush to classes for each of the two sessions on crush days. This meant there was less urgency around reassigning the students based on the spreadsheet that Niema had created and updated each week for teachers to select and assign students to their crush day classes (Figure 41).

In addition to scheduling students for specific content blocks on crush days, we also began scheduling all our physical education classes for those two sessions. This meant that students who needed gym were only able to participate in one of the two crush sessions. It also meant that it was no longer possible to schedule whole-day crush lessons, which was an occasional feature of first iteration of the design. In addition, wanting to engage students in more service learning as part of our cultural model, Jared, who had
taken over as leader of climate and culture, and I added an hour of community service to the beginning of the day. Students were to sign up for their choice service projects each morning, a plan that rested on Jared and myself to implement and quickly needed to be taken over by Gina because Jared and I both lacked the organizational capacity, especially the time, required to ensure that the operations went smoothly.

Figure 45. Email from Gina, our vice principal, to the staff providing organizational clarity for Crush Mondays. As the aspects of the day became more institutionalized, more administrative guidance was needed to organize the activities.

In the six or seven sessions that we ran, we never came close to the organization, accountability, and consistency that Niema’s organizational worked ensured for the rest of each crush day (see the daily schedule in Figure 44). Crush days now included town hall, physical education, service learning, and frequently speed conferencing.

The content taught on crush days, perhaps because the schedule of the days had become so busy and the time on task in the actual crush sessions became limited to 105
minute sessions, shifted somewhat in the fall of 2016 to be less interdisciplinary, less
creative, and more like longer sessions of existing classes. The sessions became more like
make-up sessions and less like the problem-based learning that they had originally
featured. Having said this, crush days remained a flexible and dynamic tool that would be
adapted again in the spring of 2017 to bring back together our competency and challenge-
based learning work.

Designing the daily schedule for 40 percent CTE.

With crush days taking up a fifth of the weekly schedule and CTE taking up two
fifths, there were only two days of traditional academic classes in our daily schedule. As
we began to redesign the daily schedule for the 2016-2017 school year, our design work
was, as noted, pulling us in multiple directions. The school district and our partner gave
us permission to design a schedule with forty percent of student time dedicated to CTE in
April, 2019 (Partnership Meeting Minutes, 4/15/19), and Gina and I immediately began
to engage the staff in this new design process. We were also piloting Crush days and
engaging in our attendance design sprints at the same time.

Design thinking activities had become somewhat commonplace, especially with
the whole school engagement that had occurred around attendance design. When we
began the scheduling design process in a professional development meeting on April 12,
2016, teachers needed only the briefest primer before splitting into groups and beginning
to conduct their interviews. We split into two teams, the first designing for Christian, our
construction teacher, and the second designing for Jane, who taught English Language
Arts. We framed the two-day session by reminding everyone of the design thinking process and mindsets (Figure 46 and Figure 47).

![Design Process](image)

Figure 46. Design thinking process written up on chart paper to remind staff of the process.

![User Centered Design](image)

Figure 47. As we moved through the design stages, I provided some additional reminders about design mindsets to keep staff focused on the process and help them resist skipping steps.

The first session focused mostly on conducting an ethnographic study of the two teachers. The focus prompt I gave for the design activity was, “How do we organize our instructional program for this teacher?” We asked them to tell us about their workdays. We asked them what some of the highlights and low lights were. I moved between the teams and encouraged open-ended questioning.
Figure 48. On the right are the initial group notes on Christian’s experiences based on their ethnographic interview and on the left the original notes from Jane’s group members.

The results of the ethnographic explorations were revealing in a variety of ways and as the two groups studied their notes, multiple needs statements emerged for each group (Figure 49).
These statement choices were then discussed until each group had arrived at a final selection. While Jane’s statement ultimately led to more focused discussions about the design of classroom learning and the implementation of the competency model, Christian’s read, “Christian needs the construction program to support cross curricular credits towards graduation.” The logic was that if students were going to spend significantly more time in CTE programming, they needed to earn credits towards their subject area competency work during this time.

Jane’s process led us to revisit the components of our pedagogical design; Christian’s process led us to begin mapping the daily schedule. As usual with our design thinking work, the original version was written by hand (Figure 48).

![Image](image.jpg)

Figure 50. These are some of the notes taken as the staff began to drill down into planning the daily schedule.

In the chart on the left of the image is the first sketch of what significantly extended CTE time might look like. This was ultimately not that far from what the 2016-2017 schedule looked like, although ironing out the details took considerable time. One important note
is that the initial design assumed that culinary and construction courses could run on different schedules, and this ultimately proved impossible for us to execute.

Figure 51. Overview of the 2016-2017 daily schedule with 40% of the students’ time dedicated to the career and technical education pathways in culinary arts and construction.

The schedule design we began the year with (Figure 51) gave Christian his students four full days of construction we believed he needed based on our design work. A second design session with the chefs revealed that they preferred half days with their students, four days each week. We simply couldn’t make that version of the schedule work in conjunction with the construction schedule and ultimately, the chef’s agreed to hybrid schedule that created supplementary literacy, numeracy, and later professionalism classes so that students did not have to spend the full day in the kitchen. These supplementary classes required other teachers to take on additional responsibilities, which they did willingly, but as an additional burden.
Figure 52. The 2016-2017 daily schedule organized by subject area, period of the day, and day of the week.

Culinary and construction tracks are grouped together.

A second aspect of this schedule is that it freed one of the math teachers to push into the CTE courses and provide academic support and it created small group instructional (SGI) periods that could serve as supplementary core content time for students (Figure 52). This schedule maintained our interdisciplinary humanities courses, but separate science and mathematics courses. In addition, all the classes were organized loosely into what some schedulers call streams, cohorts of students that are assigned most, if not all, of the same class periods. This was intended to better allow teachers to align their content across subject areas and with the CTE programs.
Figure 53. The ideation around our conversation with Jane led to a new model for how to understand students progressing through the school. The tree model replaced the wheel model (Figure 35) in our thinking as it privileged the career pathway.

The schedule also reflects our move to the tree as our unifying academic metaphor. In our new vision, core academic skills were the academic roots that needed to be taught through all areas of the curriculum, especially the CTE pathways. These skills include both general and broadly applicable skills like problem-solving and citing evidence in support of an argument. The trunk of the tree was our academic and social emotional learning themes. These themes came from our partner’s model and largely seen as linear, developmental stages, beginning with “responsibility to self”, progressing to “responsibility to family”, and ultimately taking on “responsibility to community.” In this structure, in the first trimester students work on understanding themselves, setting short- and long-term goals, and developing the habits and tools for achieving those goals. In the second trimester, students consider what it means to be responsible to family both in the present and in the future and in the third trimester they look outward to their broader communities. Our intention was that these themes would provide a common underlying focus that would better enable more interdisciplinary work (as did prove to be the case by the end of the 2016-2017 school year when students and staff engaged in whole school problem-based learning).

The tree model helped us understand that content learning needed to occur during CTE classes and across all subject areas. In order to try and achieve more integrated instruction, we debated various ways that teachers might plan together and decided that there needed to be some overarching structure. The first structure was the thematic
organization of our content—responsibility to self, responsibility to family, and responsibility to community—with each theme assigned to a trimester in order (the school year was organized into thirds). The second structure was duplicated for culinary and construction. Each CTE department mapped their units in our new system and then shared this with the other teachers. The content area teachers then mapped their own units on to the CTE plans and the themes.

Because four-week units seemed to make sense, we decided to divide the year into ninths, which we called innings. Each teacher team then designed their own unit plans based on this outline. This effort demonstrated our strong commitment to interdisciplinary learning and to trying to integrate core skills and understandings across the curriculum. We did not mandate any specific partnerships or projects; instead we tried to create the conditions under which natural partnerships would emerge over the course of the year.

![Figure 54. Draft curriculum mapping tool the staff used to create maximum possible alignment between their subject area content and the CTE content over the course of the year.](image-url)
There is a second significant implication of the way we had designed these courses, based in part on our design interview with Jane, who unfortunately decided to leave the school that summer to take a job in a more traditional school. We determined that there were two major challenges with the personalization part of our model: 1) personalization actually allowed students to be absent more frequently because of the ease with which they could return to their work; 2) when each student was working entirely at his or her own pace, we failed to teach students to work in groups or to have them practicing discourse. There was still a clear push both because of the practical need of our students given only 60 percent of their time was to be spent on traditional academic work. This effort also reflected the statement Christian’s group wrote for him, “Christian needs the construction program to support cross curricular credits towards graduation.” The CTE teachers’ schedules, however, created a practical problem for them. They had designed the schedule themselves, but by union contract, they were required to have a certain number of minutes free each day (these are indicated as “prep” periods in the daily schedule). In order to accommodate their need for prep, we agreed that they would have the fifth day of the week, the 20 percent of the schedule time that students did not have CTE, largely free to plan, prepare, and develop their programs.

**Crush Fridays become PBL Projects – Iterative, Adaptive, Optimistic.**

That the staff believed in crush days as an effective tool for engaging and moving students is evidenced in their consistency in returning to the concept over time. Part of our model was to hold induction sessions, called Mental Toughness, for both new and returning students at several times during the year. These sessions were usually two
weeks long, replaced traditional course work, and focused on acculturating students to our model and building community and teamwork. By the spring of 2017, however, Mental Toughness was wearing thin on our returning students, many of whom had done this basic programming as many as half a dozen times before. In addition, the culinary and construction teams were in between projects and looking for a chance to work differently with the students. The staff decided it was a great opportunity to use our crush model, but to extend it over several weeks so that it would accomplish similar purposes to Mental Toughness.

For this crush, we dedicated three weeks. We let the students vote on and select projects from a list that we generated. The two most significant were the design and construction of the raised bed garden mentioned earlier and a building branding and positive messaging. As they had in the initial iteration of crush days, teachers worked collaboratively. Sam, one of the math teachers, and Christian, the construction teacher, were the lead teachers on the garden project. They taught students scale (on the left of Figure 55) and guided small groups of students to build scale models of their garden designs. The groups then presented their designs to the whole school and we voted on our favorite. The most ambitious of the models was selected (see the far right of Figure 55).

That spring, in the final months of the school year, the view out of my window included an enormous construction project, an enduring legacy of a brief era of design thinking at one school (see Figure 57 for a picture of the completed garden). It served as a tangible reminder of significant accomplishments design thinking enabled our staff and students to achieve.
Figure 55: As part of the garden project, students studied scale. In this picture, a student is comparing the size of a toy dinosaur with the size of the projection of the toy.

Figure 56. The raised bed garden construction was continued by the construction classes into the spring of 2017.
In case analysis.

The design work that fell out under the scheduling design sprint serves as the backbone of any school—the context in which the design and implementation of instruction in time and space occur. That we were able to create a community of educators that shared the responsibility for building and rebuilding the central structures of schooling is notable. We were a community working towards our shared aspirations in fits and starts, but working courageously to push beyond the expectations we had held for our students, our work, and ourselves and to imagine new and better ways of being the best community we can be together. We were able to create a community of educators that shared the responsibility of building and rebuilding the central structures of school and schooling.

During the scheduling design sprint, the staff demonstrated a depth of empathy—digging deeply into the experiences that Christian and Jane had in the school and
designing structures and processes that would allow these needs to drive meaningful changes in our collective work. Throughout this case, the staff’s willingness to work and hard and to take risks is evident. When the staff created crush days, they took on additional burden without objection because they believed that they were doing what was necessary to meet the needs of the students we served. When we reorganized around the CTE classes, staff similarly adapted our existing model and made it work because they believed this was the best way to meet our needs.

Of all our design sprints, the one around the schedule proved the most complex and hardest to manage. We were a community working steadily towards its aspirations in fits and starts. Because every adjustment or innovation required change in some other aspect of the work of the school, the solutions we designed were challenging both to implement and maintain and equally challenging to learn from. Our commitment to continuously returning to design thinking enabled us to be flexible in iterating some of the most traditionally inertia bound aspects of a school including the structure of classroom learning, the length of class periods, and the design of the curricula. Design thinking did not transform our students into models of educational excellence, but it did help us create a school community in which we were all equal learners, deeply invested in working together to make a community that serves the needs of its members more effectively over time.
Chapter Five: Analysis and Conclusions

Introduction: Revisiting the Context for the Study—Leader in Learning

This research is an attempt by one educational leader to capture and examine my own practice for the purpose of seeing what might be useful and meaningful in my own growth and development as a leader; in the growth and development of the school, teachers, and students I serve; and, in support of the growth and development of fellow, like-minded leaders and educators. Lytle, Lytle, Johanek, and Rho (2018) argue that leaders taking an inquiry stance and writing about their practice has an important place in the field. They articulate this in describing the principals who are chapter authors in their edited book:

Though none of these chapters is a traditional report of research, we believe that these varied narratives about inquiry-driven leadership could be considered something of a new genre with the potential to make a significant contribution to the professional literature—partially through the problems posed, but also from the systematic effort to mine site-based data as an aspect of leading, and to describe and analyze the process of doing so. (p. 16)

As a school leader, I have used design thinking as a tool to promote continuous growth and improvement and to help create a learning community in which all members see themselves as both learners in, as well as creators of, our collective school. In telling my story, I aim to contribute to this new genre.

The mindsets and practices of design thinking are tools that helped the teachers of Northeastern Leadership Academy develop skills to better understand our needs and to continuously improve our practice over time. In the sections that follow I will first summarize the data and the findings from this investigation. I will then examine the
implications of this work on the field of educational leadership and consider directions for future research and for the development of future educational leaders.

**Summary of Findings.**

The three design sprints detailed in this analysis are messy. There are clear indicators of outcomes that we desired, and there are evident failures to effectively address the needs of students and teachers or to learn from what we were trying to do. In addition, there is no clear linkage between the design sprints, the mindsets that teachers (and sometimes students) demonstrated, and student test scores or even, as detailed, necessarily their attendance. This analysis is organized around my research questions and focused on teachers’ use of design thinking and the mindsets it entails. Beyond this, however, each section highlights what emerged from the data as it seemed important and relevant to the work of leading schools for continuous improvement (Lytle, Lytle, Johanek, and Rho, 2018).

In the sections that follow, I will consider some of the successes and challenges that emerged from the design thinking sprints examined in the previous chapter. Revisiting my research questions, I consider how the beliefs, behaviors, and mindsets of the teachers at Northeastern Leadership Academy were impacted by the use of design thinking as a leadership methodology for continuous school improvement. Specifically, I find that there is evidence of behaviors and the development of programming and materials that demonstrate three core design thinking mindsets:

1. Flexibility and adaptive thinking in how they approach their individual, team, and collective work;
2. Agency and self-efficacy in their actions suggesting that they see themselves as central change agents and demonstrate the belief that they have the power to enact meaningful change;
3. Teachers taking an inquiry stance and focusing continuous improvement efforts on the real, specific needs of the young people we serve.

However, I also find that there are ways in which each design sprint evidences both some successes in the teachers’ use of these mindsets and some challenges. Both successes and challenges emerged as a result of both our collective lack of design thinking expertise and our inability to truly inhabit mindsets that push our thinking beyond our existing expectations and understandings.

Finally, my goal was to democratize our school, to attend closely to the needs of our students by engaging teachers and the students themselves in understanding and meeting these needs. I was convinced that this was the surest path to an effective learning community, and I believed that it was the surest path for our students to whole, healthy adulthood. Achieving both the engagement we worked for and an equitable community required us to be purposeful and reflective—it was not enough to just work to empower our members as learners if we did not also work to unmask the forces and structures of prejudice, racism, and oppression that undermined our work. Direct participation alone—members actively engaging in decision-making—is not sufficient for the creation of an equitable community. Friere (1972) explains that “praxis,” is the cycle of action, reflection, and action that creates culture and society and is central to liberatory education. Characteristics of praxis include self-determination, intentionality, creativity, rationality, and self-actualization. Praxis requires, “problematization,” however, a process of decoding and revealing the relationships, social forces, and influences that may not
otherwise be apparent in order to generate a critical consciousness about a phenomenon.
It was not enough to democratize the school if students and staff did not also understand
the nature of their needs and the context of our work together. In the final section of the
analysis of findings below, I will consider again the impact of power, race, class, and
privilege on this work and on my own role as leader.

**Flexibility and adaptive thinking: Teachers demonstrate the efficacy to be
generative and take risks.**

Throughout the research process, I looked for answers to three sub-questions to
my primary research questions related broadly to the extent to which teachers were
engaged in collaborative, flexible, adaptive, and generative problem-solving together:

- How do teachers adapt their behaviors in a leadership context that values and
  emphasizes design thinking and the ground-up mindsets that design thinking
  entails?
- Do teacher actions suggest increasing generativity and flexibility through a
  willingness to pilot ideas and to pivot from these ideas as the evident needs of
  students dictate?
- Does design thinking prompt continuous learning and greater teacher
  engagement in all aspects of school improvement and beyond work associated
  with individual classrooms?

When seen together, the behaviors embedded in the questions suggest a high level
“relational trust” (Lytle et al., 2018, reference this concept from Bryk, Sebring,
Allensworth, Luppescu, and Easton, 2010, which I also referred to in the literature review
in chapter 2 of this paper). Relational trust, if present, is a key indicator of the impact of
leadership on school outcomes (Lytle et al, 2018; Bryk et al. 2010).

In examining the three design sprints, one emergent storyline is that the level of
risk, and therefore the level of relational trust, required in each design sprint was not
equal. To some extent, the more relational trust required, the deeper and more meaningful
the product we designed and the more lasting its impact seems to have been. This is
evidenced by the attendance design sprints particularly. As leader, I raised the stakes for
this sprint by speaking to the staff directly about the potential existential threat to our
school if we did not improve our attendance. The teachers, however, did not respond by
protecting themselves or divorcing themselves from the problem and denying
responsibility. They responded to the crisis by being extremely generative, producing
more than ten pilot projects and even more small interventions. They were further willing
to examine all the solutions that they participated in creating with open minds, critiquing
them for their failings and appreciating their successes, even when these were
unanticipated.

Our scheduling design sprint required a different level of relational trust. The
teachers placed trust in the design process when they followed a handful of team
members’ needs to the design of core elements of the schedule. The teachers being
interviewed in this design session and in others had to expose their struggles to their
peers. Their peers, in turn, had to trust that meeting the needs of their colleagues would
equate ultimately to meeting their own needs. As the schedule developed in its intricacy,
there was an additional trust in the collective community evident in teachers’ willingness
to try various hybrids of the schedule during a given school year—demonstrating their
willingness to step in to meet emergent needs.

From a leadership perspective, teachers demonstrated a willingness to follow my
lead and to engage repeatedly in the design thinking process, but they also at times
skipped key steps in the design process such as completing the ethnographic analysis. There were high levels of apparent trust in our organization and this trust perhaps also allowed for a lack of accountability. The teachers trusted me to allow them to take risks and to not punish them and they trusted each other. Speed conferencing is an example of an area in which the original design team and the organization as a whole placed apparent trust in me to carry out the implementation of the design. Teachers and sometimes students were willing to provide feedback on the process, but none was willing to take on more meaningful accountability. This may well be related to the relatively limited ultimate connection between speed conferencing and the identified needs of our students.

In a similar vein, there is evidence in these sprints to suggest that the more I was involved in them in my formal role as administrator—as organizer, decision-maker, or director—the more likely the product or solution was to be technical and bureaucratic and therefore resistant to continuous improvement and change. In the speed conferencing sprint for example, while Sam and Jack were the designers of the original concept, I was the one who turned that concept into a digital process diagram. I was the one who included this diagram in our school design documents and planning work and I was the one who poured hours of my time into turning the teachers’ comments into reports rather than using that same time as leader to work on making meaning out of what students and teachers were trying to communicate with each other.

My leadership in this sprint demonstrates two failings from a design thinking perspective: 1) I centralized my own work and the technical solution to a problem that had emerged rather than returning continuously to the needs of our students; and 2) When
I did return to student needs by engaging a focus group of students directly, it was only to get their feedback on the design of our progress reports, rather than to return with them to the need that Gina, Sam, Jack and I had identified in our first design thinking training, “All young people at NLA need a way to feel valued because it will address negative framing and the idea that we do not listen.” The failure is not so much that the goal-planning system we designed could not have addressed this need; it is that under my guidance I led the process away from this purpose towards becoming an overly technical system for communicating formal progress. Even the goal-planning itself was ultimately lost.

The corollary of this, however, is that I also have to be able to trust the teachers and they have to trust each other to execute the processes and take on all of the mindsets, and where they do not, I have to provide support and help the community hold members accountable to methods and ways of engaging with learning. Our first attempt at designing attendance solutions is an example of this. It was not until I stood on my chair and yelled that the team began to employ the learning strategies we had been practicing.

Teachers demonstrated flexibility and adaptive thinking as they integrated the daily schedule, reorganized school days for crush, and restructured the school around our attendance interventions. The latter two design sprints show a level of creativity that is hard if not impossible to mandate. The conditions for learning and risk-taking need to be in place and teachers must be willing to try and believe that their collective work will have positive returns for the school and its students.
Agency and self-efficacy: Teachers are generative and more accountable to each other.

Design thinking requires collaboration and teamwork. When successfully implemented, it is, therefore, a learning process that helps develop a strong, collaborative community. In such a community, I hoped, teachers would, as our design consultant Dr. Carrol advised us, look less to leadership to solve problems and take on increasing ownership over problems themselves. In my research questions, I asked, “How do teachers adapt their behaviors in a leadership context that values and emphasizes design thinking and the ground-up mindsets that design thinking entails?”

The standout experience that indicated teachers were taking ownership and leadership was the creation and implementation of crush days. I was able to participate in the initial data analysis session that ultimately led to the design, but I never directed it, nor did I manage the process once it had been created. Crush stood out to me because it was a clear moment when teachers identified a need, ideated and piloted a solution, and then iterated this solution over time. When we ultimately used the crush template to support the implementation of school wide problem-based learning, as with crush in general, I again did little of the planning and design work, only supporting and celebrating as the teachers and students engaged with their challenges.

Another core aspect of teachers assuming leadership involves the distribution of accountability. In the crush design and the design of the daily schedule, for example, the various work burdens were distributed by the teachers in order to accomplish their shared purposes—there was built in accountability. The career and technical education teachers
were willing to modify their contractual prep period schedules because the design based on their needs, that they were invested in, required it. Similarly, not only Niema assumed additional responsibility to ensure crush days were successful. For the intervention to be successful, all of the teachers were required to plan and reorganize their work each week as well as to select students.

Design thinking is likely to achieve the best outcomes when the whole community participates. When we engaged in the attendance design sprints, we began to realize the ideal implementation process in which students, teachers, and leadership are all engaged in design thinking together. By engaging the teachers in design thinking I modeled for them and rewarded with my praise the work that demonstrated teachers taking creative leadership. When we took on the attendance design sprints, this engagement was formally expanded to the students. They were taught the mindsets and behaviors, and they began to take on leadership and ownership themselves. Students were actively engaged in the attendance sprints in a way that suggested that they were valuable far beyond any impact they made on student attendance.

Schools often use their bureaucratic systems as tools for holding members accountable to specific behaviors, outcomes, or both. As I worked to move away from bureaucratic leadership towards being a learning leader, I expected peer accountability and accountability to shared purposes to be both more effective and more powerful drivers of behavior than systems of hierarchical control or of evaluation and punishment (Senge, 2000; Bryk et al, 2010). This expectation was born out in the enormity of the work that teachers were willing to take on and accomplish in the name of our shared
purposes and of our community—work that was outside the confines of their classrooms and subject areas and required them to go beyond the traditional responsibilities of their jobs.

Although the teachers’ level of responsibility for our work exceeded my expectations at times, there were also examples of teachers and team leaders avoiding accountability. The downside of my push to distribute decision-making and authority to the teachers and students was that this distribution of responsibility could at times lead to a lack of accountability. The cabinet level leadership team—Gina, Rachel, Ronda/Vernon, and I—met periodically to look critically at our leadership practices. A frequent concern raised by the three other members of the team in these meetings, and in general a concern raised by various members of our team as part of our whole school design work, was about a lack of accountability.

While on the macro-level, I saw the community as engaged and relentlessly hardworking, there were multiple examples of concerns raised by staff members around adult peer accountability. An example of this was illustrated by speed conferencing. Despite the fact that I was doing hours and hours of additional labor in order to create the progress report as the teachers had requested, on multiple occasions more than one teacher failed to complete their reports or completed them in a careless way that required correction—in all cases costing me hours of time to repeat the reporting process. Another example of the impact of limited accountability occurred on our humanities team where the two language arts teachers, who had designed a model of collaborative teaching, were then frequently at odds about its implementation—both were left feeling that the other
was not responsive to his or her needs, and both then looked to Gina and me to mediate and resolve their conflict. Similarly, when teachers failed to complete their crush forms, Niema turned to me to enforce accountability, resorting back to traditional hierarchy in the face of reticence.

**Staying focused, being rapid and iterative and ensuring we meet the needs we set out to meet is complex and undermined by the inertia of bureaucracy.**

Design thinking processes are intended to be rapid. The method for arriving at best results is to learn and iterate. The lead of Northeastern City Public School’s math department, who was the person who originally connected me to Dr. Carrol and Lime Design consultants, was fond of quoting Maxwell (2000) whose design slogan captures this sentiment, “Fail fast, fail often, but always fail forward.” While we were effective in failing often, and sometimes we were successful in failing forward, we were not nearly as effective at failing fast.

This is a common problem in schools and in general in bureaucratic organizations. These organizations tend to have cultural inertia, and it is hard to change these basic ways that members interact with the organization (Senge et al., 2000). School planning has traditionally been more deliberate and both slow to develop and then slow to change. When we were not rapid, however, we did not effectively iterate our designs and, as happened in the attendance design sprints, we are not able to effectively learn from what we are doing even when we took the time to reflect on our work.

Looking at the data, there is, at times, a need for more decisive, more hierarchical leadership in order to ensure rapid, iterative prototyping. The mindset should be to design
the new process or protocol quickly, create prototypes to test quickly in a context that is
time-limited but as close to real implementation as possible. The design team then learns
from the implementation to adapt and improve the design. This is the essence of our
adopted mantra, “pilot and pivot.” The design process seems to have broken down at
times when I, as leader, or leadership more generally failed to act decisively either in
making decisions or creating the conditions in which the needed decisions were made.

There were times, for example, when the teachers were looking for me to make a
decision, as with how to end the attendance sprints, or where better management was
needed, as with the implementation of community service during crush days. Delaying
these decisions, or failing to organize a process for making them, resulted in the sprints
extending longer than the week-long time frame our consultant Dr. Carroll recommended
to us.

In addition, one of the management roles of leadership is to cull the total number
of initiatives being undertaken and to make the initiatives selected for implementation
simple and intelligible to the maximum extent possible (Elmore, 2007). Only the most
likely actions should have been undertaken at any one time given the limited capacity in
our school. The scheduling and attendance sprints in total are both examples of
challenges that became more ambitious and more inclusive than we were able to manage
or ultimately learn from as effectively as we might have hoped. In both cases there was a
failure of leadership to commit to implementing changes in small, bite-sized components.
As a result, we did not hold ourselves to the rapid nature of design thinking iteration. By
not iterating rapidly, we diverged back into a more traditional form of school
improvement. This lack of assertive management of the design process itself is perhaps a result of my desire to stay out of the way of the design process in order to empower the team, but allowing the sprints to drag on did not support successful possible outcomes.

At the same time, pushing the staff too quickly while not holding them accountable to the most important stages of the design process equally undermined the quality of our products. The desire to be rapid was easy to sustain at the beginning of each sprint when the challenge was fresh and stirring our emotional responses as well as our intellectual curiosity. The speed conferencing sprint is an example of how our rapid ideation and then iteration of our design may have missed important insight. At several different stages we missed what the students were saying to us and we failed to return to their needs to evaluate our designs over time. The ethnographic stage is essential if we are going to use design thinking in schools as it draws specific conclusions from the data itself rather than from our existing ideas, beliefs, or prejudices. Looking at data meaningfully is at the core of all similar processes for continuous school improvement.

In a similar rush to get our teachers pushing exciting and creative pilots forward as quickly as possible, I allowed teams to take shortcuts without challenging them. For example, teams skipped drawing inferences from their observations of students—a shortcut that undermined the human-centered nature of the design thinking process. These shortcuts may suggest nothing more than the fact that the teachers were all trained in their own educations to be assertive and to jump to the “what to do next” stage of an improvement process as quickly as possible. Inquiry stance, however, if it is going to legitimately serve its purpose, must be driven by an open-ended investigation of student
experience and need. When we failed to engage in this interpretive process, as we did at times in the attendance sprint (Figure 58), for example, we may have missed opportunities without ever being aware of it. A close examination of what teachers wrote on their chart in Figure 58 shows that when they began their ethnographic review, they had already let the students’ words become needs and then design solutions. The ideas that emerged from this effort, including buying additional bus tickets, a pilot that was tried and then ended, did not necessarily represent actual understandings of student needs and, therefore, did not push beyond the solutions students had already imagined. This ultimately may be a central reason that this design sprint showed so little net impact on student outcomes.

Figure 58. Teachers engaging in an attendance design thinking sprint. One can observe that the team has moved to needs statements even though they have not completed their ethnographic analysis.

**Inquiry stance: Paying attention to the needs of the students is a great, but it can be a false lead.**

In examining the data from the three design sprints, there is evidence that teachers were paying attention to the needs of our students, but, as noted, because of a lack of expertise and a lack discipline in the ethnographic stage of the design process, this most
important element of our work was perhaps the most underdeveloped. My research questions ask, “How do teachers respond to the design thinking focus on understanding students and consumer ethnography?” As discussed, they did not always respond; in part because we were often rushing them, teachers sometimes evaded parts of our design process. This is also a failing on my own part and on the part of leadership for not always ensuring that there were students in the room for the purposes of deliberate ethnography. Too often I allowed stand-ins such as teacher thought-maps to replace direct inquiry with the students.

In contrast, when teachers used each other as the subject of design, lack of insight and empathy generated by the ethnographic process was rarely a problem. The results suggest that teachers were more likely to allow their bias to cloud their judgment when their relationship to the subject was less specific or less immediate. As an example, the error I made in giving the instructions for the attendance design sprint, as pictured in Figure 58, was forgetting to remind the team to use specific students from their interviews when they began their ethnographic reflections. An even better approach as leader and facilitator would have been to bring those same students into the room and to have the adults speak directly to them at greater length about their experiences.

This latter strategy, making sure to listen to student voices in order to better understand their needs, does involve some risk, however. There is a relatively fine line between letting students tell you what they think they want and using ethnographic interviews and techniques to learn about student needs and then ideating a design to meet these needs. When we erred by not following our ethnographic protocols, as we may have
done with early dismissal in the attendance design sprints, the results were design products that were appealing to the students but may not have meaningfully addressed the evident need. Similarly, when we used speed conferencing to accomplish the goal that teachers espoused—that of reporting progress to students and families efficiently and effectively—rather than focusing on the need, we designed a product that served adult purposes.

Finally, a related challenge we faced when it came to maintaining our inquiry stance and focusing on student need was that we sometimes lost site of the needs we had identified. This was exemplified in the speed conferencing sprint where the final product hardly resembled either its original iteration or the need statement that had led to its generation. Lack of continuity, clarity, or transparency, even with ourselves, undermined organizational trust. When, overtime, our actions do not align to our espoused needs and beliefs, members lose efficacy and the bureaucracy. In the case of speed conferencing, I, as leader, was often left doing the most meaningful work and more problematically for aligning to need, I was left responsible for iterating the design itself. The fact that speed conferencing became increasingly my problem alone as it became more bureaucratized, is not surprising. Speed conferencing became increasingly about the paperwork and less and less about the human interaction and meaning making required to effectively support student engagement in learning.

Power, Race, Class, and my Leadership.

It is important, in completing this analysis, to stop here and address the fact that the history of public education in the U.S. is a history of social injustice and inequity,
racism, and economic and social oppression. Schools have played a central role in the mechanisms of oppression. It was with this fact in mind that I made the unmasking and disruption of power and privilege core to my educational practice as well as my personal belief system. From my first week’s at NLA, I led purposeful conversations with our staff about race, class, and power. I showed a video text I had studied while a graduate student that captures how our instinctive biases often overwhelm us. I led and engaged with our staff and students around these themes as well as studying stereotype threat and the various ways schools serve to alienate, disengage, and in many cases, abuse poor students and particularly students of color. We studied trauma and the national Adverse Childhood Experiences (ACE) study (Felitti, Anda, Nordenberg, Williamson, Spitz, Edwards, Koss, and Marks, May, 1988).

Having said all this, I cannot pretend that the work of creating an equitable and just community was fully implemented. Even as I entered the community, planning to lead a conversation around race and differences, my own biases were quickly exposed. In the first weeks of my time as school leader in 2014, I led a professional development session on literacy in which I divided the staff into groups and gave them each a chapter to read on the subject and a presentation to prepare for the next day on what they learned. After the first session, Chef Barry approached me, said that he appreciated me, that he was happy being part of the team and that he understood that teaching reading was important. He needed me to know, however, that he had not had to read an academic text and present it to peers since high school. He had come to teaching through culinary school and he was happy to learn, but he was not sure how to do what I was asking. For
years I had correlated educational attainment with capacity to be a teacher. In the back of my head I assumed that having been a “good” student was at least a decent corollary for being an effective teacher. I held this belief while at the same time fighting to change the very nature of schooling because I do not believe that the way schools have defined success has been meaningful. Standing in the hallway outside of the staff meeting, Chef Barry exposed me to myself. I knew him to be an excellent teacher. Most of what goes into helping young people change and grow is not about the narrow definition of academic success my private school and Ivy League education kept trying to convince me it was. I knew that college was not the answer to everything, but my biases clouded my thinking nonetheless.

In my role as principal I tried to own my own biases and to directly engage in conversations with our staff about the influence of bias. I checked myself and our work with Gina, our vice principal, who was also an African American native to this northeastern city and who once said of our design work, “I wouldn’t do it if I didn’t believe it was good for little boys and girls who look like me.” This explicit work, however, was supported by my conviction that if we really engaged our students in the design process, and if we embraced their perspectives, understandings, and needs, we would be working towards equity in our community. Emdin (2016), a researcher and author on race and education, writes, “For white folks who teach in the hood, and any teacher who feels unsettled by the misalignments between the culture of youth and their own ways of knowing and being, the way forward is to view tension in the classroom as an asset for creating a truly cosmopolitan space” (p. 108). A truly cosmopolitan and
democratic space is ideal for learning. Our path towards this goal at NLA led us towards learning from and with each other, towards creating our own attendance initiatives, designing our own daily schedule, and building giant gardens together, but the path towards creating such a cosmopolitan and democratic space was only just beginning to emerge.

“Creative confidence” grows at the heart of our learning community.

There is significant benefit to being a creative problem-solver in the modern workplace and to being someone who can work effectively on a team. These mindsets and skills, however, require the confidence to take risks and to seize opportunities and the humility to accept failure, adapt, and change. My most pressing conclusion from this research with regards to the implementation of design thinking as a methodology itself is that what Kelley and Kelley (2013) call “creative confidence” matters for the success of a generative organization like a school. Technical skills and learning alone are not enough to succeed and lead change, nor is adaptive learning and flexibility sufficient. Without the courage to take action and the belief in one’s own efficacy, what Senge (1990) called “generative learning” is not possible. Kelley and Kelley (2013), considered two of the lead thinkers in the field of design thinking, describe creative confidence. They note first that all people have creative potential and that is not some special gift (p. 3). They explain, “At its core, creative confidence is about believing in your ability to create change in the world around you. It is the conviction that you can achieve what you set out to do. We think this self-assurance, this belief in your creative capacity, lies at the heart
of innovation” (p. 2). Inspiring this confidence in students and staff by providing the conditions necessary to breed confidence was a central goal of mine as a school leader.

As noted previously, my use of design thinking was in service of creating an inquiring, continuously learning community. My primary method for achieving this goal was practice. In my first weeks with the staff at NLA in 2014 I taught about design thinking. I spoke to the staff about the fact that I was never going to look for them to fail. If they were taking an educational risk in trying to design something for students, I would never punish them for it. My work centered on the belief Kelley and Kelley (2013) detail, “Creative confidence is like a muscle—it can be strengthened and nurtured through effort and experience” (p. 2). This investigation of my own leadership at NLA evidences a commitment to collectively practicing using the mindsets and tools of design thinking in support of our collective learning. In addition, it highlights the value of continuous learning repeatedly with the hope that lessons learned will become habit and second nature—part of the core mindsets of our community members.

The advantages and limitations of design thinking in schools.

Design thinking offers a form of inquiry stance that is particularly useful to schools, both because its mindsets are deeply aligned to the needs of the 21st century workplace and because it engages and empowers the learner. Design thinking addresses the central challenge for schooling for the last 100 years, its failure to meet the learning needs of its members, students and teachers alike, by emphasizing rote learning and delivery of information to teachers and students rather than dynamic learning, and engagement with teachers and students (Elmore, 2007). As a learning tool, design
thinking is a specific fit for schools because it engages the members of a learning
community collaboratively in learning about how to achieve the individual goals of
members and the collective goals of the organization. If we want to graduate powerful
and engaged students who can take their place as citizens in our democracy and thrive in
the modern workplace, we must expect them, as well as their teachers, to be powerful and
engaged now. Kelley and Kelley (2013) explain how creative courage can empower
designer:

A creative mindset can be a powerful force for looking beyond the status quo. People who use the creative techniques we outline are better able to apply their imagination to painting a picture of the future. They believe they have the ability to improve on existing ideas and positively impact the world around them, whether at work or in their personal lives. (p. 18)

This is a clear statement of my primary objective for my students and staff—that they believe they have the power to impact their own lives and the world around them. In order to accomplish this, I had to be similarly courageous in my use of my authority and my vulnerability (Lytle, Lytle, Johanek, and Rho, 2018).

Having said this, design thinking is not a silver bullet—it is not the right problem-solving method for all situations. Design thinking lends itself to problems that are rooted organizational arrangements easily subject to change. Design thinking is particularly appropriate to the creation, shaping, or reshaping of organizational structures, processes, or elements. Challenges that are rooted in organizational inequities or systematic oppression may be best served with alternate problem approaches such as practitioner action research (Herr and Anderson, 2005) or community organizing (Alinsky, 1971; Gecan, 1998). These problem-solving tools are more oriented towards understanding and
interacting with power structures. Similarly, practitioner inquiry uses ethnographic tools with a level of diligence and reflection that might be exhausting for the average educator in a secondary school context, but would be more powerful for making unfiltered meaning out of student and staff experience. All of these methods, however, are in service of the same pressing need, especially in underperforming urban schools, for local flexibility and timely invention that can address the immediate needs of students, teachers and schools struggling to create safe and productive learning environments for all members of the community.

At NLA, we were particularly well situated to benefit from design thinking as a leadership tool and to make use of it to address the emergent needs of teachers and students. We had the organizational freedom to experiment without undue pressure or direction and the time to engage in the work. Because a unique supplemental teacher’s contract that was experimented with in the northeastern city, we also had an hour a day at a minimum of time to collaborate, a true rarity in secondary schools. Design thinking as a problem-solving tool is time consuming and exhausting. Schools that lack the time or capacity to engage in the work are better served using potentially more traditional processes such as cost-benefit analysis in order to protect the limited time of staff and students. Having said this, we also made choices and I made choices as a leader that enabled our design thinking work at the expense of other potential focal points for our efforts. For example, I chose to overwhelmingly leverage our professional learning time to teach and practice design thinking rather than focusing on rote practices or even curriculum design or data analysis.
Another factor potentially specific to NLA was the level of engagement of the teachers. NLA had a very strong mission statement and clear purposes. It may be that teachers who are interested in working in an alternative school like this are naturally inclined to be risk takers and to push on the status quo. Similarly, as teachers who had selected to work in a young school with new leadership were selecting to an experience that was likely to be chaotic and demanding. The meaningful use of design thinking as a problem-solving tool requires shared purposes and a willingness to be flexible and experimental that can be both demanding and unsettling to some. Teachers who crave stable environments with consistent operations and cultural inertia would not likely make strong members of a design thinking-oriented community like NLA was. Leadership can inspire teachers to some level of engagement, but adults must be committed to the mission and vision of the organization and must be willing to buy-in and be courageous. Identifying these characteristics in potential staff is a considerable challenge to other organizations attempting similar work.

**Reconsidering Positioning Myself as Lead Teacher, Learner, and Designer.**

When the leader invites members to do the work of challenging the status quo, both the leader and the members are exposed. Lytle et al. (2018) explain, “An inquiry stance includes a willingness to question normative assumptions and practices…Sometimes leading from an inquiry stance disrupts one’s own identity and/or the shared identity of the institution or organization. Professional courage must be summoned” (p. 3). The authors further note, “This ‘constructive disruption’ (Cochran-Smith and Lytle, 2009) is contingent on the positionality of the leader and the degree to
which leaders are aware of their position in relation to the problem posed” (p. 3). In my leadership of NLA, I tried to make my work transparent by bringing the challenges we faced directly to the attention of teachers and community whenever possible.

In terms of my authority, as I was the sole person who was evaluated by an outsider and whose evaluation represents the entire school, ceding my authority to community members inherently means assuming some personal risk and I was, at times, critically evaluated for some of the products of our collective design work, most notably our selective use of instructional materials supplied by the district. In considering how I was vulnerable to my teachers and community, I found that the most powerful form of vulnerability was in having the confidence to say I did not know something or did not know how we should do something without allowing this to feel like an admission of incompetence. The schools I attended trained me that part of being powerful was to sound authoritative on any subject at hand. Allowing myself to not know something was challenging throughout these processes.
To the extent that I could, I also worked to model risk taking by being open with our staff and students and by acknowledging that they were often the better decision-makers, or often, we made better decisions together. We spoke about my positionality as we talked together at various times over the years about power, race, class, and difference. I used the tools of open dialogue, written reflection, and deliberate, planned reflection on my strengths and growth areas with our cabinet leadership (Figure 59). I developed a habit of asking myself if I was designing my leadership in ways that met the needs of my teachers, staff and students. My early encounter with Chef Barry and his academic history had exposed to me my own biases and I was determined to continue to search for them.

My response to acknowledging my own failings was to try and be open about them and in general, to try and push the learning into the teams and get out of the way. As we began to build our design thinking practice into 2016-2017, I was fond of presenting a challenge that had been raised to the staff (or they would present the challenge themselves, as they did with crush days the year before) and then saying aloud as I actually did so, “Thank you all; someone let me know when we have a pilot. I will now be backing slowly out of the room.” I wanted to create an adult and student culture in which all community members took responsibility for our growth and improvement. I asked myself, our staff, and ultimately our students to look hard at our needs and to work together to design ways to meet those needs. I also tried to create a space for teachers and students to create that was protected from the expectations and mandates of the district.
and state. To the maximum extent possible I wanted to shield our staff from the district mandates of generic professional development, generic curricula and materials, and a general tendency at the district level to prioritize the bureaucratic over the creative or even adaptive aspects of our work.

In part, this research itself is dedicated to this lesson—the true expertise to drive change, to drive us towards our collective and individual goals, is in the relationships between community members, in their trust for each other, their willingness to take risks for each other, their willingness to move past their assumptions about each other, to really hear each other’s needs (Bryk et al, 2010; Elmore, 2007). Then, building on that foundation, we need to have the courage to work together to meet these needs regardless of evaluation protocols or district mandates or the collected prejudices of a hundred years of schooling that has largely failed the young people we care for every day.

This research is a study of my attempt to lead and learn from the ground up; to practice finding the best ways to meet student and community needs through the collective work of the community rather than through purchasing a service or meeting a district directive. Lytle et al. (2018) explicate this positionality:

…when school, district, and other educational leaders position themselves as inquirers, their leadership can illuminate and improve many aspects of institutional life and create intellectually demanding and rich learning environments—for both adults and children. Key to this assertion is the potential for site-based leaders to identify (often with their colleagues, students, and parents in the community) issues and problems that are locally significant, previously unrecognized, and rarely given the systematic, intentional study that an inquiry-based approach to leadership affords. (p. 1-2)

As I draw conclusions from this study, I find myself humble in the face of this work. This is not a story of brilliant success where the school grew steadily into the vision that we
held for it. The data in this study do not suggest a clear path towards running a perfect school or a perfect alternative school. They do not even suggest that we learned a particularly good strategy for improving attendance. What they do is tell the story, for good or ill, of a community learning and working together to solve challenges and meet needs in complex and simple ways. Even at our best, the work was daunting, effective designs were elusive, and the challenges the young people we served faced every day were overwhelming. Yet, we persevered, learned from each other, and kept moving forward.

**Implications for organizational theory: Revisiting autopoietic systems thinking and the learning organization.**

In my time as principal of Northeastern Leadership Academy, I attempted to shape and lead a community of continuous learning. Schools can be seen as concentric learning circles or parallel processes of learning. At every level of a school, curious individuals should be examining questions that are meaningful to their learning goals, researching these questions, developing answers or responses, testing these responses, and learning from the outcomes of these tests. Design thinking was my tool for achieving this end. It was my belief and hope that by teaching design thinking, empowering community members to be the sources of change, and allowing them to take risks and fail, I could lead an inquiry community on a path to learning and growing better at understanding our work and knowing how to do it better together. I chose this path towards achieving Senge’s (1990) vision of the learning organization, “…organizations where people continually expand their capacity to create the results they truly desire,
where new and expansive patterns of thinking are nurtured, where collective aspiration is
set free, and where people are continually learning how to learn together” (p. 3).

Senge (1990) further articulates the nature of a learning organization as one that
harnesses its members’ natural love of learning and desire to be part of a truly effective
team. He describes:

…a group of people who functioned together in an extraordinary way — who
trusted one another, who complemented each other’s strengths and compensated
for each other’s limitations, who had common goals that were larger than
individual goals, and who produced extraordinary results… What they
experienced was a learning organization. The team that became great didn’t start
off great — it learned how to produce extraordinary results. (p. 4)

With Senge in mind, I sought to create a learning organization made up of teams that
work together to become great at achieving their shared purposes. My goal as school
leader was to help those teams study and generate the solutions to the challenges and
barriers that prevent student learning. I saw my job as helping the community develop the
generative learning mindsets to create change. Senge (1990) explains that “Survival
learning” or what is more often termed ‘adaptive learning’ is important—indeed it is
necessary. But for a learning organization, ‘adaptive learning’ must be joined by
“generative learning,” learning that enhances our capacity to create” (p. 13).

The work of continuous improvement—of teaching teachers to look at data, craft
improvements, and analyze the impact of both—is not new. Our use of design thinking is
not a revelation in educational leadership, although the mindsets of design thinking were
profoundly in line with my goals for the mindsets of my staff and students—that they
develop collective and personal self-efficacy, flexibility and adaptivity, rooted in an
inquiry stance. These goals, however, have been articulated in various ways in design
thinking, educational leadership, and organizational management theory and often they
share the common themes of inquiry, generation, and reflection.

The basic form of strategic planning that most every public school engages in
annually for their districts, states, and for the Federal Title I program all ask leaders to
look at data and plan improvements and they frequently require leaders to engage
teachers, students, and community members in this process. Similar themes are also
reflected Senge’s (1990) five organizational dimensions—personal mastery, mental
models, building shared vision, team learning, and systems thinking. In addition, the
design thinking familiar language of piloting can be found in the existing leadership
literature going back decades. In a study of the Vermont Restructuring Collaborative,
Jamieson (1994) observes that piloting ideas was a central feature of the leadership
practices studied and that “pilots allow people to work incrementally on systematic
change, to take risks, and even to fail” (p. 52). In addition, Jamieson notes that keeping
the planning process and the creation of the product simple was a key to successful
implementation.

Another comparable improvement process that is well known in educational
leadership can be found in literature about what is called “professional learning
communities” (DuFour and Marzano, 2011). This approach employs teams of teachers
analyze data in order to make changes to instructional practice. The authors, who analyze metadata from educational research to draw their conclusions, write:

If substantive school improvement requires a coordinated, systematic, and collective effort rather than a series of isolated individual efforts, then schools and districts must use professional development strategies that are specifically designed to develop the collective capacity of educators to meet the needs of students. Strategies based on sanctions, punishments, attracting future generations of educators, or rewarding individual teachers will do little to build the collective capacity of current educators to meet the demands being placed on them…The best strategy for improving schools and districts is developing the collective capacity of educators to function as members of a professional learning community (PLC)—a concept based on the premise that if students are to learn at higher levels, processes must be in place to ensure the ongoing, job-embedded learning of the adults or serve them” (DuFour and Marzano, 2011, p. 21).

This team-based, cyclical approach to improvement practices that emphasizes the parallel goals of adult and student learning is similar to the implementation of design thinking at NLA. The PLC model perhaps suggests a narrower focus on the learning of the teachers rather than on building collective knowledge. In addition, the PLC process is focused on creating a “results orientation” based on specific kinds of data, while the design thinking approach we employed at NLA establishes results by continuously going back to the students and looking at their needs. This may and often does entail looking at quantifiable data from student performance as well as work samples, as we did when the STEM team designed crush days, but ethnographic data was frequently privileged as it is design thinking generally.

What is different about design thinking is only that it is driven by mostly by ethnographically derived from individual student need, that it is rapid, and that it embraces failure and thus enables risk taking. Also key in this difference is the particular alignment of design thinking to both the 21st century workplace and its alignment to the
Elmore (2004) explains teacher’s needs:

…teachers are more likely to learn from direct observation of practice and trial and error in their own classrooms than they are from abstract descriptions of new teaching; changing teaching practice, even for committed teachers, takes a long time and several cycles of trial and error; teachers have to feel that there is some compelling reason for them to practice differently, with the best direct evidence being that students learn better; and teachers need feedback from sources they trust on whether students are actually learning what they are taught. (p. 38).

Given that improving practice is dependent on the engagement and motivation of teachers, design thinking can be a particularly well-suited tool. Empowering teachers and making them agents of change and giving them license to make changes in all aspects of the school program, not just in their classrooms, builds relational trust and encourages further risk taking. As Bryk, Sebring, Allensworth, Luppescu, and Easton (2010) detail:

At the most basic level, relational trust is grounded in social respect. Key in this regard are the conversations that occur within a school community. Respectful exchanges are Samed by a genuine sense of listening to what each person has to say, and in some fashion taking this into account in subsequent actions (p. 138).

Design thinking as school leadership incorporates paying close attention to the teachers and their needs and having them directly engage in ways that encourage the deepest forms of listening and then action based on that listening. Pink (2010), in his work on human motivation, further explains that humans are primarily motivated by three forces—autonomy, mastery, and purpose. In NLA’s implementation of design thinking, teachers were potentially more motivated by being given freedom to select and address problems (autonomy), the support for studying and learning about and from those problems and working to overcome them (mastery), and by working towards the shared
and meaningful goal of making the school work for the high need young people it served (purpose).

At NLA I leveraged my time and the professional time of teachers to spend it on 1) helping teachers (and students) understand students and their needs and; 2) leading the community to be effective in working together to solve problems. In doing this, I supported a school culture in which teachers were willing to take leadership and willing to take risks because they believed in the work we were doing for our young people as evidenced by their high engagement in a wide range of activities in this research.

In addition, because we used design thinking not just to solve instructional, classroom-based challenges, but as Tran (2018b) has modeled, to engage them in design sprints for improving the practices and systems of the whole school, their work was purposeful in a fundamental sense in that it was taken seriously and that they were trusted and given permission to act on their expertise and understanding of their students. Risk-taking, particularly, is a challenge in the school context because the education of children is at stake. Teachers must both truly believe in their work and know that they are safe from repercussions in order to take the risks demonstrated in this narrative.

The evidences from this study suggests that the teachers at NLA demonstrated creative confidence (Kelley and Kelley, 2010), a willingness to take risks and high levels of motivation and engagement in the process of improving the school. At the same time, these data indicate that this multi-year implementation of design thinking, while it succeeded in the development of some key mindsets, did not sufficiently focus our
practice in a way that allowed us to arrive deliberately through our ethnographic and rapid-piloting at the solutions to the needs we intended on addressing.

Design thinking supports generative learning. At the heart of effective teaching and learning for the 21st century is the capacity to work collaboratively and creatively to solve problems. This is affirmed by recent research conducted in collaboration between Microsoft and McKinsey and Company’s Education Practice (2018), which asserts that technology is dramatically changing the modern workplace and that “less than 50% of students will be prepared for the fastest growing jobs” (p. 4). Design thinking offered our teachers and students a learning tool aligned to the 21st century workplace. Our work with design thinking, particularly when we successfully engaged our students, gave our members experience working collaboratively and the social-emotional tools not just to solve problems, but to solve problems effectively in teams and to work meaningfully with others.

In engaging in this inquiry myself—studying and learning from our collective practice—I am emulating the work that I asked of our community. I taught design thinking to my staff and students and engaged in it with them in order that we might become a learning organization and that we might be the source of solving our own problems and meeting our own needs. In considering my own leadership of this work, I hope that I have acted with the courage that I have asked of the community I have led. I hope I have been open to both the positive and the painful learnings inherent in the work of trying to become excellent together, slowly and deliberately over time.

**Future Research on Design Thinking in Education.**
Since I began my doctoral research over a dozen years ago with only the idea that I wanted to study design thinking and education, there has been an explosion in these intersecting fields (Lahey, 2017). There are hundreds of news articles, and magazine stories in publications such as Forbes Magazine (Schein, 2019) and The Atlantic (Lahey, 2017). There are also handbooks or guides (Tran, 2018, IDEO, 2012) for educators looking to incorporate design thinking in the classroom or, less frequently, in the leadership of a school (Tran, 2018a). On the popular website for educators, Edutopia.org, a search for exact term “design thinking” produces 170 results. Our design consultant, Dr. Carroll’s position at Stanford University, a dual appointment between the d.school and the Graduate School of Education, is evidence of increasing validation of this work in the fields of education and design thinking.

Extended research studies on the use of design thinking in schools and on its impact on teachers and students, however, are almost non-existent. Even in light of the critical need for new leadership strategies that will help develop and retain teachers by fully engaging them, utilizing their learning, and empowering them to make their schools learning-focused communities, there is limited study of these practices. This leaves a gap in the field that necessitates further research. The growing number of design thinking educators should be able to leverage the increasing knowledge in the field in support of what the Vermont Restructuring Collaborative (1994) calls “practitioner research”—their efforts to employ local knowledge and expertise and to iteratively source their own theories to educational research and existing practices.
This research serves as one practitioner’s examination of the design thinking as a potential tool for a model of distributed leadership and reflective practice that serves the needs of teachers and students in schools today. This work is intended to fit into the locally driven and locally significant model of leadership literature that Lytle, Lytle, Johanek, and Rho (2018) highlight as an emerging field and to bring to this literature an example of a learning model that can be compelling both as a tool for continuous improvement and as a practice for building and maintaining a community with an inquiry stance and the creative confidence to generate change.

There are four areas of investigation where future research might be particularly revealing in light of the data and analysis in this inquiry. The first is in what Brown and Martin (2015) call “intervention design” for schools. Intervention design is design thinking focused on improving organizations through rapid iteration and engagement with decision-makers throughout the process. The second area that is relevant for further investigation is the impact of design thinking mindsets on the learning and development of students as well as further study of the impact on teachers. In both cases, if students and teachers could be engaged in the inquiry process, it would allow them to engage with their own data in the same way that I have in this analysis. As design thinking becomes more commonly used and taught in elementary and secondary classrooms, a third area for future research is a need to study the learning and developmental outcomes from this work on individuals and groups of students.

Finally, I am one leader reflecting on one incidence of design thinking applied to school leadership and school change. In the field of leadership inquiry (Lytle et al., 2018)
around design thinking there are now exemplars of schools that are themed entirely around design thinking such as DTech which is referred to in the introduction to this paper (Tran, 2018a). DTech has documented implementing design sprints as part of their school improvement practices and there are similar examples of guidebooks or model practices that can be employed both in school improvement and in classroom learning. These schools and their work with design thinking can serve as a real-world laboratory for understanding how design thinking and the mindsets it instils can be at the heart of teaching and learning for the 21st century and the driver of continuous school improvement. With the field expanding rapidly, it is reasonable to expect that more in-depth investigations will be forthcoming. It is my hope that this investigation may serve as both support and inspiration for school leaders and design thinking educators who are working together to create dynamic learning communities.

**Implications for leadership - Loose coupling and the dual function of design thinking as leadership (inside and outside the black box).**

When I arrived in the northeastern city my assistant superintendent gave us each a copy of a book called “Strategic Thinking: A Four Piece Puzzle,” by Bill Birnbaum (2004). The book was given with a set of cards attached to a ring with? the title, “Systems Thinking.” Reminded of my extensive study of Senge (1990, 1994, 2000) and my research on systems-thinking, I was at first excited. Strategic thinking as conceived of by the administrators in Northeastern City Public Schools was not what I had at first hoped for. The difference is captured in a piece of advice in Birnbaum’s book:
Together with your management team, conduct period strategy sessions to explore “What’s happening?” and “Why?” While you’ll likely publish notes from your sessions, your notes won’t be your maximum benefit. Instead, your maximum benefit will be the increased level of shared knowledge among your management team members. (p. 114)

This text frames leadership as a manager’s job, where notes get “published” to the broader community. It is not a book focused on educational leadership, and it portrays the leader as a manager and organizer of others’ actions. Strategic planning, this leadership model’s tool for thinking about organizational improvement, is something that is done at a fixed point in time, usually once a year, and then reviewed or updated over the life of the plan.

This same conception the district has of short-term planning. Every year, in advance of the budgeting process, school leaders are asked to develop “strategic plans” that set measurable goals in three to five broad areas with a number of specific actions and outcomes described under each (Figure 60). The goal in Figure 60 is particularly illustrative of the top organization and conception of leadership in the school district. Even though Birnbaum’s (2004) strategic thinking text recommends fewer goals and focusing on achieving them, the scope of these plans is overwhelming. The math goals that begin on the page below are only one of the three goal templates the district provided. We were required to modify each of these goal templates to match the design of our specific school and then to add one or two additional goals of our own choosing. I have included the complete plan we created for the 2016-2017 school year as well as the goal tracking document we were then required to keep and update monthly (although it was rarely checked by district administration) in Appendix J: Strategic Plan 2015-2016
and Goal Scorecard. Once this plan was created, it was rarely updated. In fact, this one was reviewed only once and the changes we suggested were never formally adopted, which is why I have included some of these comments in the version in the appendix.

Figure 60. Sample page of a 13-page school strategic plan that is intended to drive budget, staffing and leadership for a given school year.

How school leaders engaged with our work in the northeastern city was highly related, in my experience, to how we were held accountable. Much of a school leader’s work was largely invisible to district level management. Observers were only infrequently, if ever, in the school building (I went a whole year in the northeastern city without an administrative walkthrough). As a result, much of a principal’s accountability and evaluation score is driven by a set of administrative tasks and related record keeping, like the strategic planning and goal tracking described above. In addition to essential
managerial functions like payroll and attendance keeping, principals were asked to complete and update strategic plans and school goals; submit reports on our daily schedules and various forms of programming; hold specific family and community meetings; prepare, train, secure, implement, review, analyze, and publicize in relation to the required state standardized testing; attend required district trainings; attend required state trainings; update our professional certifications; and a set of tasks related to staff accountability including, in the northeastern city, as many as three to four formal evaluations of each teacher as well as write-ups for lateness or multiple absences from work.

Elmore (2007) defines school leadership narrowly as “the guidance and direction of instructional improvement” (p. 57). This is in contrast, he explains, to the frequently overwhelming conceptions of the principal as a hero who can take on all school responsibilities and solve all problems. In explaining the value of distributed leadership in schools, Elmore juxtaposes the traditional vision of the school leader as a manager who controls the functions of school with the realities of school leadership (this is aligned to the work of Senge, Cambron-McCabe, Lucas, Smith, Dutton, and Kleiner, 2000). Elmore (2007) argues, “In a knowledge-intensive enterprise like teaching and learning, there is no way to perform these complex tasks without widely distributing the responsibility for leadership (again, guidance and direction) among roles in the organization and without working hard at creating a common culture, or set of values, symbols, and rituals” (p. 59). Our implementation of design thinking helped to fulfill both of these needs by virtually mandating the distribution of leadership responsibilities to
those most capable and closest and in the design process itself enforcing our student and community-centered values while serving as both ritual and routine.

A second theme Elmore (2007) identifies is what he calls the “loose coupling” between the “technical core” of what is actually goes on in classrooms and the administration of all of the structures and systems of schooling around the technical core that serve to protect and preserve it. Educational administration, Elmore explains, has been about the “management of the structures and process around instruction” (p. 47) and not about leading instructional improvement. In contrast, he asserts, educational administration has served to mask the existing poor practices in schools because it is perceived as complex and not easily subjected to study and oversight. The evidence in this study suggests that the use of design thinking as leadership has the potential to much more strongly couple the structural design functions of school change and changes to the instructional core. Design thinking pushes schools to be more dynamic in both directions—it draws instructional practice out of the classroom and makes it the subject of shared decision-making through the design thinking process and it pulls school structures and process into the teacher’s domain of control by sharing the responsibility for shaping school-level decisions and working to align these changes with changes to the technical core in service of student and adult needs.

Organizational leadership theory describes a variety of metaphors for understanding the role of the leader (Northouse, 2016; Morgan, 1998). Northouse (2016), in his textbook on leadership theory and practice, describes leadership as “…a process whereby an individual influences a group of individuals to achieve a common goal” (p.
Analyzing a wide range of leadership theory, he further explains that leadership is a process, not a trait or characteristic of the leader and that a leader can exercise power in a variety of ways including through positional authority (such as formal evaluation), coercion, expertise, or relationship with the members of the organization. Finally, Northouse (2016) details the difference between management and leadership. He writes, “To manage means to accomplish activities and master routines, whereas to lead means to influence others and create visions for change” (p. 14). In educational literature, this view of leadership is often termed “transformational leadership” because it is oriented towards empowering members to engage in organizational change based on shared vision and belief (Spillane, 2006). Spillane contrasts this with a “transactional” approach to leadership which privileges social exchange: “You scratch my back, I’ll scratch yours” (p. 24).

Design thinking has the potential to bridge the technical core and administrative functions of schooling and it also has the potential to serve as both a model of transformational and of transactional leadership. Design thinking is highly transactional in that the teachers themselves (and all community members) can be the subjects of the design process and through this process the whole community focusses on meeting their needs. At the same time, design thinking builds shared culture by engaging the community members in rituals and routines centered on examining the needs of its members and on learning together how to be a better organization. These shared overarching purposes are profound enough and the approach of design thinking is flexible enough, that if the formal leader is willing to be open and to allow the process to shape
the organization, the design process itself can serve as transformational purpose.

Ultimately, this is the theory we were testing at Northeastern Leadership Academy and a theory I hope other school leaders may begin to practice and apply—we care about working together towards achieving our collective goals because we believe in the power of working together with the shared mindsets and practices of design thinking in order to achieve those goals. At the heart of our collective goals is that we will continue to get better at learning and changing together. This is ideal worth striving for in a school which can and should be the most committed of learning organizations.
Appendix A

Sample Research Memo

I began this positionality memo when I was a full-time doctoral student. The revision below represents an update I made to the memo after my dissertation proposal hearing in the spring of 2016.
**Location/Positionality**

Context:  
Newark Leadership Academy (NLA) has just concluded its fifth year of operation and its second with me as school principal. CUT AND PASTE!

- Outsider, interloper, intruder
- White guy, from Philly, commuter
- Authoritative
  - Speaks with authority and assumed expertise
  - Assumed power and privilege
- Friendly evaluator:
  - Works to best position teachers, at my own expense
  - May not hold everyone accountable at all times
- Power of evaluation
- Process Power
  - Design and Design thinking
  - Pushing the decision-making down to the team
  - Do I over-rule?
  - To what extent does the team follow me and to what extent do they lead?
  - In the story I want to tell, I lead and they lead iteratively, although I have the final say in arbitrating the powers and relationships on the ground and some people probably feel silenced
  - What if I learn that the teachers that that the AEs are crushing attendance?

**Practical/Professional/Contextual Identity:**

- I have a hard time separating the I from the "we" in both my research and professional work. Frequently in design meetings with staff I will say, "In the team I was working with we came up with this idea… Team, did we actually come up with that idea or did I come up with it and make you swallow it?"
- A good portion of the staff are assertive enough to hold me to my general pledges and my pledges of shared engagement and ground-up design specifically. The teams have acted in an empowered way and have been empowered as have individuals who step forward meritocratically as we can manage (Nicola designs most of the templates we do our academic design work in together because she is better at it).
- I check in with teachers, particularly during coaching, with the Union Representative, and with teachers in spot checks.

**Researcher Identity:**

I have been worrying at the foundations of this research for more than a decade. I have been collecting data from the meetings.

- Design thinking is something I have been passionate about for almost my entire professional career. As I have come to understand design thinking as a principle of leadership and a methodology for continuous ground-up improvement, my identity as a leader has changed from a structural, hierarchical orientation and my interest in studying the role and impact of myself as the school leader on that community has shifted to an interest in understanding the impact of an approach to leadership in which I am not the locus of change but rather its facilitator. This is the same shift we demand of our teachers and it reflects a belief in the power and importance of local design and ground-level leadership. Having said that, I am very aware that in the ongoing complexity of leadership, design thinking itself is something that I have brought to and imposed on the community both as a process and as a methodology. I believe that it is both reasonably well understood and well accepted, but I do not have evidence of this.

- Competency-based learning and our "designed" academic model: It is unclear to what extent I have forced/pushed/pulled us down this path and to what extent it is a collaborative effort. It makes sense and is a common approach in our field, but we are certainly trail-blazers in Newark itself. Even if the core concepts have come from me, I have been hands-off enough over the past year that a number of initiatives from how we grade to how we organize time are bubbling up from the staff. I also do not know, however, how much they value or appreciate their
I struggle to manage and make sense of my own power in this context. I have a large amount of formal, positional authority.

- Hiring: Overwhelmingly, the teachers and staff in the school were hired or rehired under my leadership. We hire with a committee of teachers, students, staff, and administrators and I have been committed to not overruling the teachers and staff although in some cases I have had to make final decisions.
- Evaluation and Termination: The teacher evaluation system in Newark is relatively typical. Teachers must be poorly evaluated for multiple years and put on improvement plans to be terminated. There are also financial incentives attached to being highly rated. It is therefore impossible to separate my personal authority from my positional authority for this reason. This past year I worked with a team that is called the School Improvement Panel to adapt the teacher evaluation framework to our non-traditional model. I took this work seriously and worked with my Vice Principal of Academics (new in the role this year) to implement the modified evaluation system. All teachers were rated effective or better and I was flagged by my superiors for potential evaluation grade-inflation.
- Time and Space: Final control over how we use time and space is ultimately a place where I have significant power, but I have tried not to assert myself forcefully. I have worked to build consensus around how we use our space and delegated leadership of those decisions to others. Similarly, in the spring we created a scheduling team to design next year’s schedule, but in the fall, due mostly to a lack of time, the schedule was imposed much more top down than bottom up. As a result, there are some notable challenges in our schedule design as well as some interesting opportunities. Teacher and staff leadership have been evident in our use of time and space. The teachers designed and implemented a completely different schedule for Fridays in the spring and all I did was approve it.

Over that time my understandings of the work of schooling and of school leadership have matured, I hope and believe, significantly. At the same time, my understanding of what I am interested in as a researcher has shifted in parallel. Always prone to self-reflection, I have become increasingly more aware of the impact of the force of my personality, my abundance of enthusiasm and energy, my volume and my assertiveness—on the communities in which I participate. It is difficult, in this context, for me to ask a question that does not lead the witness. I will need to work very hard both in my consent and assurances and in my presentation as a researcher, to present what I feel, which is that getting the work right is the only thing that matters and if I personally or we as a community have been off-track, we need to know it as well as we can and we need to try our best to get it right moving forward. As a leader, I am generally explicit with the staff about this theory of practice and I challenge them to be direct with me in the name of the work. Obviously, my positional authorities cannot be ignored.

Positionality control methods:
- I check in with research peers (in periodic 1-2 hour sessions; in bi-weekly conversations; in interactions with professional peers such as Dr. Maureen Carroll)
- Iterative journaling (as per this memo)
- Triangulation between archival review of captured first-hand data (meeting minutes, email exchanges, web-based live working documents), teacher interviews, and participant observation.

Orientation:
This research is intended to provide insight into what it means to create a school. In the era of local control and educational entrepreneurship, there is a unique opportunity for creative educators to build schools that are engaging, rigorous, and serve as catalysts for and centers of neighborhood and community change.

As a practitioner, I am working to build flexible schools that are integrated into community life and focus educational experience around a combination of intensive skills-based literacy and numeracy instruction and meaningful experiential learning in areas such as entrepreneurship, management, media and journalism, business, finance, and leadership.

As a researcher, I want to help explicate the meaning of school planning and design from a leadership perspective. By studying my own actions, reflecting on them, and seeking to deliberately negotiate and understand my own leadership practices, I hope to illuminate key strategies for managing school design and for conceiving of the school design process.

Essentially, however, I research this research as an anthropologist. I am trying to understand what is going on behind the scenes.
Essentially, however, I approach this research as an ethnographer—trying to understand what is going on here in my leadership of this school design process. While I have questions about how I manage relationships, negotiate obstacles, and make decisions about my practice, I intend to allow these questions to grow and change as I come to understand my own experiences in this work.

**Neighborhood:**

I am a committed storyteller and in many ways, I believe a story has intrinsic value of its own by virtue of being told. At the same time, I believe that the storyteller, in this case myself, gains enormous benefits in the telling. I say all of this only to indicate that if these were the only things accomplished, for me, it would be enough.

Having said this, I am ambitious and I believe that the story I can tell can be part of important conversations in spaces where meaningful decisions that shape young peoples’ lives are made. The world of education and education policy, of families and communities, and of politics and resource distribution are all in my neighborhood in the broadest sense. I speak to these communities because I believe that the conversation over what is meaningful and useful schooling has become skewed and has been waylaid by small concerns.

There is a great deal of national conversation about what schools should be like and who should run them. However, there is very little that speaks to what the work of school creation means for those who participate in and lead such efforts. Nationally, schooling models emphasize standardization. It is my hope to be an advocate for individualization in the discourse over new schools. Ladsen-Billings (2006), in a letter to the President, advocates for an era of expansive school experimentation and careful study of the results in order to create many successful models of schooling. I hope to be one example of experimentation and serious study.

I believe that capricious and thoughtless school design is relatively common right now in the United States. I would like to be a voice in support of thoughtful, studied, and inclusive school design and planning that determines what schools can and should be. Perhaps with enough case studies and counterexamples, some balance can be restored to the discourse over effective schooling.

Beyond this broad arena, I have specific audiences I seek to address. I have listed them here, although I find it hard to organize them by importance. I wonder if ranking audiences might help me narrow my focus, but I need to consider this idea further.

1) **School creators** - My first audience are school creators and educational entrepreneurs. There is a wide body of literature written by traditional entrepreneurs that helps illustrate the landscape that a prospective entrepreneur might be entering. In education, however, there is little written from the perspective of the school designers. Such work can be important as either a technical or an inspirational guide.

2) **The communities we might want to engage with** - Because I am working to create an actual school model, one potential audience for my writing is communities that might someday seek to partner with REAL.

3) **School leaders** - Existing school leaders form a second important audience. School leaders would hopefully similarly be able to make use of the technical and inspirational aspects of our story.

4) **School policy makers** - I seek to influence school policy over time by providing counterexamples to traditional approaches to teaching and learning and by modeling, explicating, and exploring our own decision-making over time.

5) **Communities writ large** - Any community might potentially benefit from considering the community-based, experiential, and action-oriented schooling model we are trying to develop. These ideas can provide inspiration for or counterpoints to other modes of organizing schooling.

**Legacy:**

I went to really good schools (in the sense that I had positive, healthy experiences at them, felt empowered by my experiences, and felt prepared and able to take on subsequent challenges). I feel very lucky and veryprivileged to have been able to attend the schools I did. At the same time, all of the schools I attended, to a greater or lesser extent, reflected a relatively leftist, progressive educational ideal. Friends Select, my middle and high school, although traditional in its repressive and oppressive tendencies, was a place the preached the value of diversity, of choice, and of participation and ultimately enabled me to pursue my passions and interests. Brown University, similarly, was a place of great freedom and flexibility and one also value laden and struggling to make itself a more just place (for example, I was on the Search Committee that chose Ruth Simons, the second woman and first Black person ever to head an Ivy League university).
Miquon, however, shaped my life more than any other learning experience. Miquon was (and is) an incredible, Dewian-progressive elementary school in the woods outside of Philadelphia. There is no real way to quantify or even very ably qualify the things I learned, but to give some idea: I learned confidence and competence; I learned that if I wanted something done I could do it myself; I learned how to build a Catapult and carve a Kachina Doll; I learned to think about hard problems from different perspectives. I think the lyrics to the Miquon song say a lot about my position in relation to education and what education should be. I have been thinking about it a lot recently:

This valley drew us one by one
To come and find a school
Where kids climb trees and skin their knees
And laughter is the rule
Where everybody seems to grow with time enough to dream
Where loves alive and children thrive
Beside a singing stream

Chorus:
So Miquon here's to you
May your Dreams forever flow
May your autumn be brilliant
And your winters deep with snow
We're proud of what you stand for
And we're glad to do our part,
And they'll always be a little bit of Miquon in my heart

Some of my biases:
Children and young people deserve to grow up in a world filled with wonder and with dreaming. Living is hard. The capacity to love is precious. We do so much in most schools to limit joy and reduce freedom. We talk of filling up all available class time via bell-to-bell teaching. We reduce freedom and restrict choice with the promise that if you do this "you'll have more choices later on." Well, I'm not sure you learn how to make choices by being told what to do.

So I believe in choice and freedom grounded in a healthy understanding of the forces that control the world around us. I also believe in learning to work hard through experience—by persevering through struggle. I think this last value must be taught in a firm but compassionate way. In 11th grade I took too many courses and I had 17 major assignments due within two weeks. I had to learn to negotiate and I had to learn to stay up all night and get the work done. Both have proved invaluable.

I believe in treating all people with compassion and care—in measuring the value of my actions by whether they add value to the world. I believe that all people can learn.

Implied, but worth stating explicitly: I believe deeply in justice, equity and equality. I believe that we should be a society that is anti-racist, anti-sexist and works actively against prejudice of all kinds. I believe in cooperation and collaboration.

I believe that the purpose of life is not to be happy, but to make meaning. Having said that, I think finding beauty and joy in everyday life is one of the greatest human capacities and one that should be developed at all costs.

Why schools?:
I have always been "good with kids" and I have always been a performer. Easy to see how I ended up in teaching. I love classrooms and books. I love study and thinking hard about things. I took care of my little sister and played with her. I babysat and I volunteered in schools.

One of my first interests was in leadership and governance, particularly at the city level. In the spring of my senior year at my senior year I was interning with a city councilwoman and I had the opportunity to sit in on the council's budget hearings. I learned that the Philadelphia Public School District was $115 million dollars in the red. The discussions centered in nat. on weather to cut art and music only, or athletics as well. I was amazed. Not shocked by the inevitv
evident, I was aware of inequity, but stunned by its scope.

I saw the educational crisis as a call to action. I focused my college studies around urban public policy and urban education. After my first year at Brown University, I returned to Philadelphia and spent a semester tutoring students through the Say Yes to Education program at the University of Pennsylvania. The students I taught had significant trouble with what I considered to be basic skills, reading and adding.

Returning to Brown, I continued to think seriously about urban education and urban studies. I wrote my honors thesis on the politics of school reform in Philadelphia and completed the undergraduate Teacher Education program to earn my teaching certification in English language arts. I set out trying to learn everything I could about cities and schools.

Why Leadership?
I have been a leader, at least in the organizational sense, since elementary school. In sixth grade I organized a school-wide pet show. In high school I served on and eventually ran student government and edited the literary magazine. As I noted above, I was fascinated with city governance and spent time interning with a city councilwoman. In college I served on school councils, was nominated to the committee that helped choose the president of the university, served as the president of my class, founded a campus discussion forum, and organized a school-wide governance reform project.

While I deeply love teaching and find the leadership I take on as a teacher of students to be among the most powerful relationships in my life, from the earliest days of my teaching I was never satisfied with being a classroom teacher only. In my six years at Mariana Bracetti Academy, I tried to learn as much as I could about the management of schools. I took on a range of different roles in the governance and support of the school, from supervising a variety of after school activities to more serious administrative responsibilities including those of recruitment coordinator, master scheduler, and curriculum coordinator. In my various roles I also spent a great deal of time training teachers both as a national teacher trainer for Edison Schools Inc. and within my own school as a curriculum and educational leader. My responsibilities as curriculum coordinator included designing curriculum and professional development as well as designing and implementing a school-wide, cross-curricular literacy program. I also worked as a consultant for Edison Schools Inc.’s high school curriculum and design.

Although MBA provided an excellent space for me both to develop my skills as an educator and as an educational and instructional leader, it has suffered under inconsistent leadership and a lack of vision and design. During my fourth year at MBA, I was given the job of coordinating the comprehensive school-change process that I had been advocating for over the previous three years. Leading this process gave me the opportunity to reflect on research, design, and implementation of all aspects of the high school program. The school-change process also forced me to fine tune my interpersonal leadership techniques and challenged me to build ownership among faculty, staff, students, administration, and our school board.

Schools and Communities
As an Urban Studies major, I studied the politics of school reform. I wanted to understand the history and structures of schooling and I saw it, and perhaps still do, as a function of politics, particularly in urban (or perhaps community level) politics. I became convinced that the best “community development” came from within communities and leveraged existing community capital. Organizations like the Industrial Areas Foundation (Alinsky, 1971; Gecan, 1998) have leveraged people power for years, supported mostly by religious organizations. A school, however, is expressly for the purpose of creating and employing human capital. I have come to believe that schools have the potential to be an essential part of community change.

As a teacher, I am a progressive educator and a constructivist. I make rigorous demands of my students, but I am also supportive and patient. I deeply love working with them, as they well know, and I make a point of being accessible to them all. I try to be explicit in my lesson goals. The most important tools I can give my students are cultural capital and an ability to understand and negotiate effectively with power. I want to instill this methodology in a school design. As an administrator, I believe in supporting my teachers in the same ways I would my students—with high expectations, patience, and the continuous modeling of the positive behaviors.
## Appendix B

Table of Contents and Design Examples from NLA School Design and Strategic Plan 2015-2016

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Figure 61. This the table of contents from a late draft of the NLA School Design and Strategic Plan document. This captures the breadth of what we were working on.
Figure 62. The final iteration of the 2015-2016 school-year’s daily schedule. This highlights the dedication of 40 percent of student time to Career and Technical Education.

Figure 63. Sample of the tools teachers used to evaluate students based on their proficiency in specific standards.
Figure 64. The map that teachers used to align content with the CTE teachers and across themes during the 2015-2016 school year.
Appendix C

Letter to Parents Regarding Attendance Design Changes

3/23/16

Dear Parents, Caregivers, Families, and Students,

We are very proud of the work we have done together with our students this year. Our young people are being challenged academically more than ever before and they are rising to that challenge. The work students are doing in our Career and Technical Education programs—Construction, Culinary Arts, and Civic Entrepreneurship—is also more than impressive. We are building houses together and running a daily gourmet café in our building. Come stop by one day and eat with us (or just sit in on our classes and see what’s going on!)

As you know, a central focus of our work here at NLA is leadership development. Through our efforts to teach leadership, we recently challenged our students to take responsibility for improving our school attendance. Students worked with staff to develop a number of experimental initiatives. Over the remainder of the school year, we are going to “pilot” or try some of these ideas as experiments to see if they do, in fact, improve our attendance.

As a school team we have decided to start with three ideas. We will be implementing them over the next month and we will share how well each one works and what we learn with you in future updates and family meetings. The three student Spring Design Sprint winning ideas are:

1) **Bus Tickets:** Beginning after spring break, **all students, regardless of where they live,** will receive the bus tickets they need to get to and from school. These tickets will be distributed during last period each day to encourage students to attend and stay for a full day of learning. Students who are not present in the last periods of their days will not receive tickets.

   Trial run start date: March 28, 2016 Trial run finish date: April 15, 2016

2) **Hot Breakfast:** We will be serving **a restaurant style hot breakfast from 8:10-8:40am. Students must be in the building by 8:20am** to enjoy this special breakfast.

   Trial run start date: March 30, 2016 Trial run finish date: April 13, 2016

3) **Change to the Daily Schedule:** Based on overwhelming student feedback, we are moving up our general dismissal time to 3:25pm, opening earlier for hot breakfast, and creating a voluntary study period at the end of the school day. **New Schedule:**
   - 8:00am – School doors will open
   - 8:00-8:30am – Hot Breakfast
   - 3:25 pm – Student dismissal
   - 3:25-4:00 –Voluntary after school tutoring and study hall. If you would like your young person to stay our previous dismissal time, please reach out to Mr. Cook, in our office (973-733-6773), and she will sign your student up for our study program.

   Trial run start date: March 28, 2016 Trial run finish date: April 22, 2016

Thank you so much for your support. Getting our students in to school and making sure they are mastering the skills they need to be successful must be a shared effort. Your participation and feedback is always welcome.

We look forward to an exciting spring of student projects and ever greater achievement.

Thank you again, please do not hesitate to reach out if you have any questions.

Sincerely,

Gabriel Kuriloff, Principal
Appendix D

Attendance Practitioner Action Research Presentation and Findings

Newark Leadership Academy
Action Research: Attendance Design

Job-Embedded Action Research Project
New Jersey Leaders to Leaders (LiL) Program
Foundation for Educational Administration

Gabriel Kunkel
Mentor: Dr. Angelica Allen-McAdoo
Submitted: 4/27/16

Introduction

• Background: Attendance Crisis
  - We have a complex student population that faces multiple challenges, both internal and external
  - Our goal has been to increase ESY full attendance each month
  - Our reported monthly attendance has been in the high 50s in the fall and the low 40s after January
  - These efforts in the past 2 years
    - A focus on attendance data (both getting students to school and studying it)
    - Organized daily fifteen minute meetings at the start of our morning procedures
    - Strengthened the new developed by students and staff part of school wide design strategy

• Problem Statement: Students indicate that they like school, that they have positive relationships with adults, and that they feel safe in school. However, many students do not attend regularly nor take full advantage of the opportunities available to them. Students struggle to overcome barriers to attendance.

• Research Questions: How does mitigating some of the barriers that may prevent students accessing school effect student attendance?

• Secondary research questions:
  - Why are the most significant barriers to student participation?
  - Can engaging students and staff in the improvement process support increased attendance and participation?
  - Do community led interventions design initiatives positively impact student attendance? If so, how much?

• Design Questions:
  - Can increased communication and bartering agreements improve student attendance (fall, home visits)?
  - Can individualized student contracts positively impact student attendance?
  - Does adding schedule positively impact student attendance?
  - Does providing incentives for all students positively impact student attendance?
Context for the Project

- Newark Leadership Academy a Newark Public School
  - Students with extraordinary needs
  - Youthbuild founded
  - I am the third principal in five years
  - Staff
    - 3/4 Advocate Counselors
    - 18 teachers
    - 2 VPs (1 SOM)
- Student Demographics
  - 16-20 years old
  - 2 or more years behind in their schooling
  - Histories of disrupted schooling, trauma, and disconnection
  - Began the year with roughly 140 students
  - Current enrollment = 102

Methods - Practitioner Research

- Action Research Spiral: Herr and Anderson (2005) describe as the "action research spiral", "iterative cycles of plan-act-observe-reflect" (p. 76).
- Baseline
  - Attendance Calls
  - Student Questionnaire
- Round 1 – SST Initiatives
  - Student Contracts
  - Home Visits
  - Advisory Competition
- Round 2 – Design Thinking Pilots
  - Shorten Daily Schedule
  - Restaurant Breakfast
  - Bus Tickets
- Staff Reflection and Revisions to Pilots
Findings: Baseline

- Attendance Calls
- Office
- ACs
- Teachers
- Fall Attendance Data

Student Survey Responses: These data are based on 38 student responses (Roughly a 40% rate of return)

How many days of school do you usually miss during a week? Please rate the following on a scale from 1-5

[Graph showing survey responses]

Please rate the following on a scale from 1-5

[Graph showing survey responses]

[Graph showing survey responses]
Student Survey Responses (38 Respondents)

<table>
<thead>
<tr>
<th>Reason</th>
<th>Number of Similar Responses</th>
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<tbody>
<tr>
<td>Health</td>
<td>11</td>
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<tr>
<td>No One Wake Up</td>
<td>5</td>
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<tr>
<td>Kool/Cheers/light/Tired</td>
<td>8</td>
</tr>
<tr>
<td>Listen/Lust Don't Feel</td>
<td>6</td>
</tr>
<tr>
<td>Like to Do</td>
<td>3</td>
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<tr>
<td>Reason/Slipping</td>
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</tr>
<tr>
<td>I never miss</td>
<td>2</td>
</tr>
<tr>
<td>Craft/Legal</td>
<td>2</td>
</tr>
<tr>
<td>Family issues</td>
<td>2</td>
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<tr>
<td>Handling Business</td>
<td>2</td>
</tr>
<tr>
<td>No bus tickets</td>
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<tr>
<td>Working</td>
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What do you do when you don't come to school? (38 Respondents with multiple answers)

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<tr>
<td>Handling Business/Running</td>
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<tr>
<td>Errands</td>
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<tr>
<td>Lay in bed/Nothing</td>
<td>4</td>
</tr>
<tr>
<td>Play Games</td>
<td>4</td>
</tr>
<tr>
<td>Watch TV</td>
<td>4</td>
</tr>
<tr>
<td>Home sick/Doctor's</td>
<td>4</td>
</tr>
<tr>
<td>Work</td>
<td>3</td>
</tr>
<tr>
<td>Catch up on assignments</td>
<td>2</td>
</tr>
<tr>
<td>Stay in the house</td>
<td>2</td>
</tr>
<tr>
<td>Visit Others</td>
<td>2</td>
</tr>
<tr>
<td>Court</td>
<td>2</td>
</tr>
<tr>
<td>Take family to school</td>
<td>1</td>
</tr>
<tr>
<td>Turn up</td>
<td>1</td>
</tr>
</tbody>
</table>

What’s one thing the school could do to improve your attendance? (38 Respondents with multiple answers)

<table>
<thead>
<tr>
<th>Response</th>
<th>Number of Similar Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nothing</td>
<td>7</td>
</tr>
<tr>
<td>Bus ticket</td>
<td>6</td>
</tr>
<tr>
<td>Get up before 6</td>
<td>4</td>
</tr>
<tr>
<td>Not good attendance</td>
<td>4</td>
</tr>
<tr>
<td>The time</td>
<td>3</td>
</tr>
<tr>
<td>Help with going to class</td>
<td>2</td>
</tr>
<tr>
<td>I don’t know</td>
<td>2</td>
</tr>
<tr>
<td>Changing the door time to 9:15 without a parent</td>
<td>1</td>
</tr>
<tr>
<td>Don’t call my house</td>
<td>1</td>
</tr>
<tr>
<td>I don’t like my teacher</td>
<td>1</td>
</tr>
<tr>
<td>No uniform is not a reason to be sent home</td>
<td>1</td>
</tr>
<tr>
<td>Not worth coming if I’m not learning anything</td>
<td>1</td>
</tr>
<tr>
<td>Some better breakfast</td>
<td>1</td>
</tr>
<tr>
<td>Stop being so hard on students</td>
<td>1</td>
</tr>
<tr>
<td>Hit the kids to stop calling me when I’m busy</td>
<td>1</td>
</tr>
<tr>
<td>Tell me to get a contract so I had to come</td>
<td>7</td>
</tr>
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</table>

Findings: Student Contracts

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Frequency</th>
</tr>
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<tbody>
<tr>
<td>Student Transferred</td>
<td>4</td>
</tr>
<tr>
<td>Student Moved</td>
<td>1</td>
</tr>
<tr>
<td>No Call/No Show</td>
<td>1</td>
</tr>
<tr>
<td>Family in Crisis</td>
<td>2</td>
</tr>
<tr>
<td>Attendance Improved</td>
<td>1</td>
</tr>
<tr>
<td>Improvised and released</td>
<td>6</td>
</tr>
<tr>
<td>Parent Meeting</td>
<td>1</td>
</tr>
<tr>
<td>Extended</td>
<td>8</td>
</tr>
<tr>
<td>Found alternate intervention more effective</td>
<td>4</td>
</tr>
<tr>
<td>Incarcerated</td>
<td>1</td>
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</table>

Total Days from 1/4/20 to 4/1/20: 25
Attendance: 50%
Findings: Home Visits Sample Reports

- Val 4-7-18: Janette Martinez: Went to the home and older sister informed AC’s that Janette does not live there and has been staying with her boyfriend around the corner. She also informed us that Janette is pregnant and needs to finish school. We left the note with sister who said she will give it to her to call and arrange a way to return to school.

- Val 4-7-18: Destany Hill-Know: Came to school on 4-4-18 after significant amounts of absences and said she no longer lives in same address that is on file (AC’s did not have time to get new address due to training) She informed the AC’s that she came to the school because her Aunt picked her up and brought her to school. We went to the home address that was on file anyway but no answer and apartment appears to be empty.

- Val 4-7-18: Leslie Aringer: Went to the home and heard a voice inside the house we also observed movement in the apartment through a window and shade that was open. We knocked and also said her name aloud but did not answer the door. Letter was put in the window.

- Tiffany Knight was on our list, but her address is not correct.

- Shaguus Smith: was on our list but he arrived at school that morning so we did not go to home. However, he did not return to school on 4/7/18 so attendance will continue to be monitored with potential future home visit.

- Armando Luis- his was on our list but he arrived at school that morning so we did not go to the home. AC’s informed him of the potential home visit due to his significant absences and he reported not living with his father anymore and has been staying at different locations either with girlfriend, friends, or extended family. He returned to school again on 4/8/18.

Findings

<table>
<thead>
<tr>
<th>Bus Tickets:</th>
<th>Early Dismissal</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Gain – 36 Students</td>
<td>Before Pilot (18 Days)</td>
</tr>
<tr>
<td>- Loss – 17 Students</td>
<td>Total: 795 days attended</td>
</tr>
<tr>
<td>- No change – 23 Students</td>
<td>Average: 44.17%</td>
</tr>
</tbody>
</table>

Breakfast:

<table>
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<tr>
<th>Breakfast Pilot April 4-15</th>
<th>4.4</th>
<th>4.5</th>
<th>4.6</th>
<th>4.7</th>
<th>4.8</th>
<th>4.11</th>
<th>4.12</th>
<th>4.13</th>
<th>4.14</th>
<th>4.15</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL at BREAKFAST</td>
<td>24</td>
<td>15</td>
<td>14</td>
<td>13</td>
<td>8</td>
<td>5</td>
<td>13</td>
<td>21</td>
<td>24</td>
<td>26</td>
</tr>
<tr>
<td>TOTAL in SCHOOL</td>
<td>42</td>
<td>44</td>
<td>44</td>
<td>44</td>
<td>36</td>
<td>50</td>
<td>55</td>
<td>52</td>
<td>47</td>
<td>49</td>
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</tbody>
</table>

- % in attendance GOING TO BREAKFAST: 36.50% 34.00% 33.13% 25.05% 22.22% 16.00% 37.14% 40.39% 53.06% 53.06%
- % of roster GOING TO BREAKFAST: 34.50% 34.50% 13.39% 11.62% 7.77% 7.77% 12.62% 20.39% 23.30% 15.24%

<table>
<thead>
<tr>
<th>Individual Students</th>
<th>0-50%</th>
<th>50-100%</th>
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</thead>
<tbody>
<tr>
<td>gain - went up</td>
<td>19</td>
<td>15</td>
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<tr>
<td>stay the same</td>
<td>12</td>
<td>7</td>
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<tr>
<td>lost - went down</td>
<td>14</td>
<td>12</td>
</tr>
</tbody>
</table>

| Increase in Attendance for those eating | 3.14-4.4 | 4.4-4.15 | Increase in Attendance for those eating |
|----------------------------------------|----------|----------|
| 37.77%                                 | 42.72%   | 4.05%    |
Conclusions: Staff Analysis

- **Breakfast:**
  - Pros:
    - Students that are usually late come earlier and arrive to first period earlier.
    - Source of pride for students and staff.
    - Gauging work experience in cooking and saving breakfast.
    - High participation of student workers (arriving before 7:30am).
  - Cons:
    - Does not seem to impact students with excessive absences.
    - Student workers may be coming early because they get to leave early.
    - The program costs money.
    - Loss of culinary staff during team meetings and end of the day.

- **Bus Tickets:**
  - Pros:
    - Allows some students to take care of personal needs.
    - Allows some students to bring friends.
    - Improvement in student mobility.
  - Cons:
    - Improving the system would require students to show an improvement in attendance.
    - Some students have become more distant.

**Early dismissal**

- Pros:
  - Students were more willing to stay in class.
  - Students are released.
  - Improved behavior.
  - Some did not eat.
  - Some in the classroom.
- Cons:
  - Problem if not talked about.

**Historical**

- Pros:
  - Many students have not seen.
  - Many students have seen.

Recommendations/Next Steps

- Continuing data analysis
- Student Interviews
- Pilot decisions
- Possible new round of pilots
- Revisions to academic design
Application to Leadership Practices

- Application to NLA
  - Continue some pilots and continue to study the data
  - Revising academic design with a focus on engagement and leveraging community
  - Continuing engagement
- School Improvement Action Plan
  - Focus on continuing understanding of the challenge
  - Pivot academic model back to cohort-based learning and
- Dissemination
  - Superintendent
  - Students and Staff
  - Principal peers
Appendix E

Whole Foods Grant

In this appendix please find the principal’s letter of support for the grant and our grant budget.

10/1/14

Dear Colleagues,

I am writing to express my strong support and that of our school leadership for the Newark Leadership Academy (NLA) Gardening Program. This program is a central part of our vision for our school and we are extremely excited about its educational value and the general value to our community.

We are a Problem-Based Learning community serving young people with some of the most extreme needs in the city of Newark. All of our students are 16-20 years old and two or more years behind in their studies. In order to engage our young people who have traditionally struggled in school, we are building a diverse educational program that emphasizes real-world skills and career readiness in addition to supporting our young people’s academic development.

At NLA we run Construction, Culinary, and Entrepreneurship learning pathways which are all closely tied to the development our garden. Our vision for the garden program is that it will:

- Give our young people the opportunity to develop a life-long, self-sustaining skillset
- Engage our young people in tactile, kinesthetic learning that is community oriented and in service of others
- Connect our pathways programs to each other through meaningful collaborations
- Support our culinary program by providing access to high quality, fresh produce
- Beautify our school space and strengthen our community

We have beautiful spaces for gardening and we have already seen our young people enthusiastically engaging with our program (see the picture included below, taken from my office
window). We have planned a greenhouse to be built by our construction team and we have a community service project already scheduled to bring all of our young people together to clean and plant an abandoned lot adjacent to our school building.

We cannot thank the Whole Foods team enough for supporting this extremely valuable and important work. Please let me know if you have any questions.

With Peace and Purpose,

Gabriel Kuriloff, Principal

**Whole Foods Grant Budget**

<table>
<thead>
<tr>
<th>Center for Court Innovation/Newark Community Solutions</th>
<th>Annual Budget</th>
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</thead>
<tbody>
<tr>
<td>Whole Foods</td>
<td></td>
</tr>
<tr>
<td>M.A. Garden</td>
<td>Fiscal Year 2015</td>
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<tr>
<td>Personnel</td>
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<td>None</td>
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<td>Subtotal</td>
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<td>Fringe Benefits</td>
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<td>Total Personnel</td>
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<td>Supplies</td>
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<td>Recycling Bin</td>
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<td>tarps</td>
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<td>Long-Handled Garden Hoe</td>
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<tr>
<td>Long-handled Shovel</td>
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<tr>
<td>Long-handled spade</td>
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</tr>
<tr>
<td>garden gloves</td>
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<tr>
<td>Garden Hose</td>
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<td>Garbage Bags</td>
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<tr>
<td>Pruning Shears</td>
<td>$14</td>
</tr>
<tr>
<td>Hand Cultivator</td>
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</tr>
<tr>
<td>Herb, flower and veggie seeds</td>
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</tr>
<tr>
<td>soil</td>
<td>$200</td>
</tr>
<tr>
<td>Lumber</td>
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</table>

| Subtotal Supplies                                     | $1,695         |
| Indirect Cost                                         | 10%            |
| Total OTIPS                                           | $2,000         |

**PROJECT TOTAL**

$2,000
Appendix F

Iterations of the NLA Daily Schedule

The following are three versions of the daily schedule, one each from 2014-2015, 2015-2016, 2016-2017. They show the design progression from a rotating, traditional schedule in 2014-2015 to the more interdisciplinary 2015-2016 schedule with blended humanities courses to the 2016-2017 schedule with its interdisciplinary learning centered around having 40 percent of student time in the career and technical education classes.
### NLA Final Schedule 2015-2016 - Wednesdays

<table>
<thead>
<tr>
<th>Period</th>
<th>Time</th>
<th>STEM</th>
<th>Humanities</th>
<th>Culinary</th>
<th>Construction</th>
<th>Personal Finance/Entrepreneurship</th>
<th>Art</th>
<th>Spanish</th>
<th>PE/Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>7:30-8:40</td>
<td>Prep</td>
<td>Prep</td>
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<td>Prep</td>
<td>Prep</td>
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<tr>
<td>2</td>
<td>8:45-9:37</td>
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</tr>
<tr>
<td>3</td>
<td>9:42-10:32</td>
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<tr>
<td>4</td>
<td>10:38-11:30</td>
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<tr>
<td>Lunch</td>
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<tr>
<td>6</td>
<td>1:27-2:19</td>
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<td>Group</td>
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<td>Period</td>
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</table>

### NLA Final Schedule 2015-2016 - Fridays

<table>
<thead>
<tr>
<th>Period</th>
<th>Time</th>
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<th>Humanities</th>
<th>Culinary</th>
<th>Construction</th>
<th>Personal Finance/Entrepreneurship</th>
<th>Art</th>
<th>Spanish</th>
<th>PE/Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>7:30-8:40</td>
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</tr>
<tr>
<td>2</td>
<td>8:46-9:38</td>
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</tr>
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<td>3</td>
<td>9:42-10:34</td>
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<td>4</td>
<td>10:38-11:31</td>
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### NLA 2016-2017 Daily Schedule

<table>
<thead>
<tr>
<th>Time</th>
<th>Culinary A</th>
<th>Culinary B</th>
<th>Construction A</th>
<th>Construction B</th>
<th>Culinary A</th>
<th>Culinary B</th>
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<tbody>
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<td>7:15-7:30</td>
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<tr>
<td>7:45-8:00</td>
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<td>8:00-8:15</td>
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<td>8:15-8:30</td>
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<td>8:30-8:45</td>
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* *Note: Group 48 periods (flexible for remedial, acceleration, enrichment, core classes)*

**Note: Critical Reading and Writing (CRW) in English**

**Note: Critical Reading and Writing (CRW) in Spanish**
<table>
<thead>
<tr>
<th>TIME</th>
<th>Construction &amp; Culinary</th>
<th>Math</th>
<th>Science</th>
<th>Humanities</th>
<th>Personal Finance</th>
<th>Spanish</th>
<th>PE/Health</th>
<th>Critical Reading and Writing</th>
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<tbody>
<tr>
<td>7:30-8:25</td>
<td>School Leadership Teams</td>
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<td>8:30-9:15</td>
<td>Town Hall</td>
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<td>9:20-10:10</td>
<td>ART/PolicyCouncil/Building Service (WORK STUDY)</td>
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<td>1:36-3:20</td>
<td>PE/Kitchen Cleaning</td>
<td>SGI</td>
<td>SGI</td>
<td>SGI</td>
<td>PE/Student Support</td>
<td>SGI</td>
<td>PE</td>
<td>CRW/PE</td>
</tr>
</tbody>
</table>
Appendix G

Education Elements Full Agenda

Personalized Playlist of Resources:
Prototype & Test Form
Northeast Leadership Academy

Directions:

- Fill out columns 1 - 3 below
- After 30 days we will revisit to fill out column 4

**Prototyping & Testing Form:** February 9, 2015

<table>
<thead>
<tr>
<th>Plan</th>
<th>Do</th>
<th>Study</th>
<th>Act</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Initial Problem Statement:</strong></td>
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<tr>
<td>All young people at NLA need a way to feel valued because it will address negative framing and the idea that we do not listen.</td>
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<tr>
<td><strong>2. Prioritized 1-2 Actions to Implement:</strong></td>
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<tr>
<td>1. Case conferencing to develop short term goals</td>
<td>1. What are your immediate next steps to roll out the changes noted in your learning environment?</td>
<td>1. How will you know if you’re successful?</td>
<td>At the end of 4 weeks, we believe we need to:</td>
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<tr>
<td>2. Assign/partner all staff to students</td>
<td>- Revisit advisory and reassign young people to adult staff, schedule case conferences during mental toughness</td>
<td>- Analyze completion or progress of goals set in case conferences</td>
<td>___ X ___ Continue the pilot for another 4 weeks w/the same actions. Why?</td>
</tr>
<tr>
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<td>2. How will you communicate these changes to the stakeholders involved?</td>
<td>- Case managers set goals and calendar appointments for checking in on goals</td>
<td>- Case conferences are being implemented this week. 2/23-2/27</td>
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<tr>
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<td>3. What additional support do you foresee needing over the next 4-8 weeks to implement these actions?</td>
<td>1. 10-15 day goals set for all students?</td>
<td>______ Continue the pilot for another 4 weeks and add new actions. Why?</td>
</tr>
<tr>
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<td>2. All goals in SMART form?</td>
<td>_____ Pivot (Modify) for another 4 weeks w/different actions. Why?</td>
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<tr>
<td></td>
<td></td>
<td>- Completion of Academic Review</td>
<td>_____ Scrap it and revisit our problem-statement. Why?</td>
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<td>1. All students complete review for all subjects (we will need a master list to check off before students exit)</td>
<td>____ Other. Explain</td>
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<tr>
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<td>2. All reviews signed by student and teacher</td>
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</table>

**Continued Planning:** February 23, 2015
Goal 1: Define -- “Study” Column

- Who is responsible for creating the goal setting process for case conferences?
- What is the format for the goals setting process and/or outline of goals?
- When should this process be completed and started?
- Where will you house goals / how will they be tracked?
- How will you build out the goals setting process/what resources will you use?

- Personalized Learning Portal > Students Owning their Own Data
- Ideas for Personalized Learning Plans for goal setting
  - Article: Spotting Schools’ Version of Bigfoot
  - Article: It’s All About Self-Directed Learning
  - Example PLP from Vermont’s DOE

Goal 2: Check progress -- “Do” Column

- Have you revisited advisory and assigned young people to adult staff? Y or N
- Have you scheduled case conferences during mental toughness? Y or N For “Do” items not completed what are your immediate next steps to complete these actions?
- Who is responsible for completing these actions?
- By when should these actions be completed?

*If you have completed all “Do” items, what are the next set of 1-2 actions that need to occur?
Appendix H

Sample of Staff Development Sessions Around Race and Power and Around


Dr. Stevenson’s writing and the model developed by Dr. Stevenson and his colleagues support a culturally informed approach to positive socialization—the explicit development of coping skills and strategies and practice using them. The chart below details the core theory and practical framework that underlie the PLAAY model of positive intervention. **The PLAAY model is a framework that NLA is implementing as a central component of our trauma informed practices.**

Below is a chart of some of the components of the PLAAY Model and what the implications of the program are for school practice. In addition, there is a chart below that details the Transaction Stress and Coping Model that this framework is rooted in.

<table>
<thead>
<tr>
<th>Element of the Framework</th>
<th>Theoretical Lens</th>
<th>Implications for Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effects of Race and Racism and Trauma on Youth Development</td>
<td>Fear is the Mind Killer</td>
<td>Unconscious Bias Research is Scary; “R-word” is becoming four-letter word Why Racial Anxiety Hampers Efficacy/Competence “Please don’t bring up Race” Fear, Anger, Guilt are all Natural Nothing Wrong with being afraid Not Getting Help for the Fear is a Problem Black youth should not be the victims of our unresolved fear and anger Teacher-Black student relationship research shows bias</td>
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<tr>
<td>Catch-33</td>
<td>Catch-22 Damned if you do, Damned if you don’t Catch-33 – “Just Damned” Reflects a deeper level awareness of the tragedy of the “Catch-22” of systemic racism Presents a crossroads to ignore, adopt or challenge this reality Defines racism as a meta-cognitive process</td>
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<td>Positive Socialization Theory</td>
<td>Racial/Ethnic Coping and Agency Socialization Theory (RECAST) for Stressful Transactions</td>
<td>Race and Racism matter in Key Dyadic Interactions</td>
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<td>To cast again Changing something: to change the form of something. The experience led him to recast his philosophy of life. To rewrite or conceive again in a different form. Give roles to different actors: to assign roles in something such as a play or film to different actors; recast the play for a road tour Racial socialization is to racial identity what the iris is to the lens of the eye (IRIS)- identity, relations, information, styles</td>
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<tr>
<td>Racial and Ethnic Socialization mediates the harm of discrimination on Black boys’ well-being</td>
<td>Perceived Discrimination exposure leads to increased behavioral difficulties and depression symptoms (Brody et al, 2006; Nyborg &amp; Curry, 2003) Stereotype threat &amp; underperformance (Steele and Aronson, 1995;) and learning (Nussbaum &amp; Steele, 2007); microaggressions (Sue et al, 2007) Emotionally nurturing and supportive strategies can mitigate this negative impact of perceived discrimination (Brody et al., 2006) Racial/ethnic socialization to assess and buffer racism experience (Stevenson, 2003; Stevenson, et al, 1997)</td>
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<td>The PLAAY Model Components of the Model</td>
<td>TEAM—Teaching Empowerment Athletic Movement Intervening with Emotion during Basketball Play CPR- Cultural Pride Reinforcement Anti-Violence Cultural Socialization Curriculum MAAR- Martial Arts Anger Reduction COPE -Community Outreach through Parent Empowerment ROPE- Rites of Passage Empowerment</td>
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| Developing Culturally Relevant Skills | Engage and integrate cultural style, movement, & communication during “in-the-moment” interventions on court, etc  
| Black barbershop passionate argument-style to CPR sessions  
| Apply self-knowledge to influence others  
| Target emotional, academic, and racial stress coping  
| *information, relationship, identity, and style* |

| Becoming Meta-Analytic – Rescripting | Thinking critically “about accepted ways of thinking and feeling, discerning the hidden interests in underlying assumptions and framing notions.  
| *(p. 13).” (Hopper, 1999)*  
| Teaching youth to think about their thinking using their cultural meaning-making strategies |

| Buffering and Instigation (Stevenson, 2008) | The transmission, acquisition, and recasting of intellectual, affective, and behavioral coping and agency skills to mindfully engage racial/ethnic conflicts arising from the habitus construction  
| *information and knowledge,*  
| *relationship engagement,*  
| *identity development,* and  
| *styles expression*  
| *to buffer* self-, other-, and culture-worldviews from insult through *protection* and *affirmation* and  
| *to instigate* racial/ethnic coping and agency through *reappraisal* and *competence*  
| Across generations; from family, community, society; as verbal or nonverbal; Deliberate or inadvertent (Lesane-Brown, 2006) |
Figure 2: Transactional Stress and Coping Model
Appendix I

Sample Trauma Trainings for Staff


Rich et al. detail the nature of trauma and the effects of trauma on the adolescent brain. Co-author Sandra Bloom is creator of the Sanctuary Model of Trauma-Informed Practice, which NLA is implementing. The authors discuss the impact of trauma on adolescent development, identity formation, and behavior.

The authors define Trauma as “experiences that are emotionally painful and distressing and that overwhelm an individual’s capacity to cope. Although there has been some debate about how to define a traumatic event, most definitions agree that when internal and external resources are inadequate to cope with external threat, the experience is one of trauma. The powerlessness that a person experiences is a primary trait of traumatization (Van der Kolk 2005)” (p. 4).

When trauma or neglect happens early in life and is left untreated, the injuries sustained reverberate to all ensuing developmental stages (Bremner 2002; Van der Kolk1996; McEwen and Magarinos 1997). (p. 11).

The authors explain, “This massive remodeling occurs in the cortex, the highest functioning part of the brain that is needed for good judgment, planning, and other essential functions of adulthood. Teenage behavior can be better understood in the context of what is going on in the adolescent brain. Asking teens to manage more than one task at a time can overwhelm them, as they are just developing the brain functions
needed to prioritize issues, sort through problems, and set goals for the future. Because
the cortex is under construction, teens use more primitive parts of the brain (limbic) to
manage their emotions, and thus are more likely to react versus think and to operate from
their gut response versus reasoning. They are more likely to misinterpret body language
and are generally more vulnerable to stress at this time. They also require more sleep
because of the work their brain is doing to facilitate all this growth and change
(Chamberlain 2009).” (p. 12).

The combined stresses and trauma of boys and young men of color who use these
systems and the systems themselves often lead to a collective sense of hopelessness and
helplessness. In many systems, including the health care system, these boys and young
men are referred to with terms that suggest that the providers view them as barely human.
When these young men and boys react in ways that reflect their histories of trauma, these
reactions are only taken as confirmation of this disparagement. (p. 25).

Program and other Training programs re: Mental Health that are part of the CUN
programs for foster children in LAUSD.”


We know that all human infants are genetically predisposed to form attachments
to their primary caregivers, but if those caregivers are absent, unresponsive or threatening
– that attachment process can be disrupted. The essential task of the first years of human
life is the development of a secure bond of attachment between infant and caregiver
through attuned emotional communication which leads to the capacity for emotional
regulation in the developing child. In situations of neglect or abuse, the infant will react with either hyperarousal or dissociation, which is a disengagement from the world or a kind of “spacing-out” in their attempt to somehow regulate, organize and protect themselves from both external and internal emotional stimuli.

Children who have experienced parental neglect and/or abuse develop ways of adapting to the chaos or threat in the environment that are maladaptive in other environments, such as a new foster home or school. This means that even if the new environment is full of kindness, warmth and nurturing – a maltreated child may have great difficulty functioning in it as their brain has become hyper-alert to perceived danger and has not developed the pathways and memories that enable them to adapt to a new and different environment – even if it is positive. This presents understandable problems to foster parents, counselors, mentors and teachers – especially if they do not understand what leads to these kinds of defensive strategies.

A child exposed to chronic, traumatic stress develops an automatic fear response as her brain has adapted to an insecure, unpredictable and dangerous world. This state is called “hyper-arousal” and can result in behaviors such as hyperactivity, anxiety, sleep disorders, incontinence, lack of impulse control, aggressivity and problems forming attachment to others. Not only may they react anxiously or aggressively to perceived threats as an attempt to protect themselves, they may also provoke aggression in an attempt to control it. If the more aggressive attempts to create a connection with caregivers fail, the child may resort to dissociation or “freezing” as a final resort: they cannot do anything about the situation and they cannot leave.
In cases of disrupted and insecure attachment, the lower brain-processes become dominant and higher-order cognitive skills and social skills can become impaired. These cognitive or higher-order skills include the ability to control their own impulses and emotions as well as the ability to read or understand the emotions of others – often leading to a lack of empathy and other social skills. Other effects can be a susceptibility to depression, anxiety disorders – including post-traumatic stress disorder, impairments of both attention and memory – including attention-deficit and attention-deficit hyperactivity disorders.

...Even though early experiences create a foundation based upon adaptation to the caregivers and the early environment – we know now that the brain has more plasticity over the lifetime than had been understood even in the recent past. That means that creating experiences of secure attachment and providing the tools for the development of emotional regulation can facilitate self-regulation, impulse control, resilience, higher-order cognitive and social skills can help to alter the course of a child’s life at any age.


Dr. Sandra Bloom’s landSam text describes the effects of trauma and explicates how trauma is incurred. Bloom than details her “Sanctuary Model” of trauma informed therapeutic care. The Sanctuary Model emphasizes clear and open values, explicit power dynamics, conflict resolution, safe spaces, community meetings, and creative expression. More recently Bloom moved her work to New York where she founded the Andrus
Children’s Center (http://www.sanctuaryweb.com/institute.php). As noted above, Bloom is now working with colleagues at Drexel University in Philadelphia and we look to continue our partnership.

The Sanctuary Mission

To teach individuals and organizations the necessary skills for creating and sustaining nonviolent lives and nonviolent systems and to keep believing in the unexplored possibilities of peace.

What a Certified Sanctuary Organization Should Look Like

- A Sanctuary program should be a strong, resilient, tolerant, caring, knowledge-seeking, cohesive and nonviolent community where
- Staff are thriving, people trust each other to do the right thing, and clients are making progress in their own recovery within the context of a truly safe and connected community.
- Tangible results of a Sanctuary community include decreased staff turnover, decreased use of coercive measures, decreased critical incidents, staff injuries, and client injuries, greater client and staff satisfaction.
- Such a community is sufficiently knowledgeable that it fully recognizes the ever present possibility of violence and therefore constantly attends to protecting its social immune system against the spread of violence in any form – physical, psychological, social or moral.
- In such a community, communication is open, direct and honest and people trust that they will find out information that they need to make good decisions.
- Members of a Sanctuary community are curious about human behavior and do not assume that everyone is motivated in the same way. They are accustomed to listening deeply and to being heard by others.
- If someone feels that their trust has been betrayed, they are willing to give the other person the “benefit of the doubt”, and find out what happened, rather than leap to the worst conclusions.
- A Sanctuary community uses knowledge already attained and is gaining new knowledge all the time in the context of social learning.
- Within this community, members recognize the importance of democratic decision-making and shared responsibility in problem-solving and conflict resolution all of which serves to minimize abuses of power and enables an organization to deal more competently with the challenges of complexity in the world around us.
- Every effort is made to include anyone affected by a decision in the decision-making process and as a result people feel free to dissent, to raise troubling concerns, and to support consensus agreements even when they may not fully agree themselves
- A Sanctuary community is able to have safe and useful conflict as a means of learning and growing. Conflicts are seen as a resource and are generally well-managed with emotional intelligence and open communication.
• Everyone in a Sanctuary community recognizes that “hurt people hurt people” and that therefore, creating and sustaining a just environment is vital to everyone’s safety and well-being.

• Because the heart of Sanctuary is community, people in a Sanctuary environment are encouraged and supported in their individual striving but are also expected to maintain an active concern for the “common good” even when that may mean putting aside one’s own individual needs.

• In full recognition of the vulnerability to loss that everyone experiences, a Sanctuary community honors individual and group losses, while using a vision of the future to prevent stagnation and to promote continued development.

• Ultimately, people who come into a Sanctuary community are offered an opportunity to have corrective emotional, relational, and environmental experiences.


“Youth receiving the intervention scored lower on a measure of coping strategies that tend to increase interpersonal conflict or minimize or exaggerate interpersonal issues. They also exhibited a greater sense of personal control as measured by the Locus of Control Scale.

Finally they reduced use of verbal aggression, while control participants scored higher on verbal aggression over time. Staff also completed the Community Oriented Programs Environment Scale (COPES) which assesses aspects of the functioning of the therapeutic community. There were no significant differences between conditions a baseline and at three months. At 6 months, units using the Sanctuary Model scored significantly better on the total scale and on the subscales of Support, Spontaneity, Autonomy, Problem Orientation, and Safety”
Appendix J

Sample Northeastern Leadership Academy Strategic Plan as Submitted to the School District with Additional Comments from School Leadership

<table>
<thead>
<tr>
<th>Strategic Goal #1: Staff and Student Accountability</th>
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<tbody>
<tr>
<td><strong>Competency:</strong></td>
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<td><strong>Indicator:</strong></td>
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<td></td>
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<tr>
<td><strong>SMART Goal:</strong></td>
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Drivers (what must be true to achieve this goal – you need to launch it, build it, monitor it or know how to evaluate it):

- Clear and consistent accountability policies and procedures for students around attendance, timeliness, participation, and effort based on values and norms and clear roles and responsibilities for staff around implementing student accountability processes and procedures
- Data informed Instructional Leadership
- Relentless tracking and moving of individual students through both academic and social-emotional challenge, coaching, and intervention leveraging school accountability processes—behavioral (e.g., Letter to Self, internal and external scavenger hunts, five-year plan) and academic (afterschool and Saturday make-up classes)
- Staff and student short and long-term goal-setting
- Alignment of Professional Development, Testing, Celebrations, Ritual and Routines, Rites of Passage
- Professional development for all staff around policies and procedures as well as the skills of motivational interviewing, group dynamics and group process, and values-based dialogue

<table>
<thead>
<tr>
<th>Drivers (FOCUS AREAS)</th>
<th>Tasks to be completed (TO DO)</th>
<th>Metric/Outcome (WHAT’s DONE)</th>
<th>Milestone</th>
</tr>
</thead>
</table>
| Establish Accountability Processes | Overarching Task: Design accountability policies and procedures for students around attendance, timeliness, participation, and effort based on values and norms:  
- Reviewed new processes with partner during August 2016. Finalize  
- Implement tracking of attendance and participation | Student handbook reflecting processes and philosophy of youth development.  
- Implementation of Saturday and After School attendance remediation (by 11/1/16)  
- Weekly staff-wide analysis of participation | Student handbook were shared with all students during Mental Toughness (by 9/23/16)  
Staff were trained in Motivational Interviewing |
| Teams and Data Cycles | Over-arching Task: NLA Leadership will support staff in the use of data and data cycles to raise the rigor and increase the consistency of instructional delivery aligned with the District’s Big Investments and the Five Circles of The Partner.  
- Launching and Ensuring Implementation (September)  
  - Principal, VP, Director of Culture/Climate will | Implementation Goals:  
- All teachers will use Monitoring Sheets to monitor students’ misconceptions during lessons. Monitoring sheets will be reviewed and analyzed during weekly | All coaching cycles scheduled for the year (10/19/16).  
- Team meeting schedule shared with staff and all training complete by 10/15/16. |
|---------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
|                     | • Implement support protocol around academic deficiency (after school and Saturday school)  
• Teach accountability processes explicitly to students during mental toughness, advisory, morning meeting, and town hall as well as in daily interactions  
• 6-week progress reports completed, sent home, shared with students, and reviewed in whole school conferencing at least once per-trimester and on report card distribution night.  
• Color coded progress trackers will be posted in all rooms by 12/1/16. | and attendance data during after school PD sessions (in Thursday and Friday morning PLC – 7:30-8:20) | (9/2/16); Youth Transformation; and Leadership Development (9/7/16)  
- First progress reports completed week of 10/24/16 and in six-week intervals thereafter. |
require teachers and counselors to bring AMOR and related student performance data to coaching meetings for review

- Director of Climate and Culture will require Case Managers to bring ETO (Effects to Outcomes) counseling data to bi-weekly coaching

- Principal, VP, Director of Culture/Climate, and School Operations Manager will ensure that data review cycles will be adhered to by calendaring coaching meetings

- Principal and Vice Principal will monitor Teacher Team Meetings through review of minutes and team products and through bi-weekly walkthroughs:
  - Assessing to the standards

- teacher meetings and bi-weekly coaching.

  Beginning **September 26, 2016**, teachers will circulate during lessons in each content area to monitor standards/skills learned by students in class and provide at least one piece of feedback to each student during the lesson.

  All teachers will track standards/skills to monitor content mastery by students using school competency tracker tools.

  All staff are trained in two data analysis protocol (Interrater Reliability Tool from NCPS and Triangulating for Root Causes Protocol from University of Pennsylvania).

<p>| First look at completed AMORs in coaching meetings week of 10/31/16. | Monthly check-in on AMOR completion gathered through coaching and reported to leadership. |</p>
<table>
<thead>
<tr>
<th>Data cycles (triangulating for root causes)</th>
<th>School-wide leadership teams (academic design; operations; celebrations; SIP/Data Team; SST)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ongoing Coaching and Feedback:</td>
<td></td>
</tr>
<tr>
<td>o Principal, VP, Director of Culture/Climate will hold staff accountable for presenting data at coaching meetings, using data to design unit plans/lesson plans, and sharing and analyzing data using protocol during weekly staff team meetings (with each team meeting at least three times/week).</td>
<td></td>
</tr>
<tr>
<td>o Principal, VP, Director of Culture/Climate, will review Team meeting schedule finalized and shared (10/17/16).</td>
<td></td>
</tr>
</tbody>
</table>
| Clear roles and responsibilities | Overarching Goal: Leadership Team will establish clear roles and responsibilities for all staff around implementing student accountability processes and procedures and accountability procedures to ensure full engagement.  
  - Whole-staff analyzed policies and procedures for all relevant roles and responsibilities (*June 2016*)  
  - Create data tracking tools based on implementation goals by 11/2/16.  
  - Assign roles and responsibilities to staff with clear deadlines and data tracking tools | Data Tracking tools for cultural leadership | 90% of implementation goals met by the end of the first trimester (12/12/16) |
| Full-school alignment | Overarching Goal: Alignment of Professional Development, Testing, Celebrations, Ritual and Routines, Rites of Passage  
  - Create school calendars for each domain and single school | All unit plan templates to reflect: 1) Big Investments; 2) 5 Circles of The Partner; 3) Selected High Leverage Vocabulary; 4) Literacy | August 10-11 Curriculum mapping process. |
calendar with all domains (Operations Manager) by 10/31/16 and share these with the partner and all school staff.

- Met with the Partner and sister school staff members to align curriculum maps across school programs and ensure parallel trimesters and themes (August 2016).
- Ongoing Thematic Alignment
- Counselors and teachers participate in weekly teacher team curriculum sharing and incorporate teachers and ACs in weekly advisory planning (focus on school social-emotional themes) – Fridays, 7:35-8:20
- All-School hour of service: Created and implemented weekly, all school hour of building service (Mondays, 9:00-10:00am). Director of Climate and Culture identifies appropriate internal service projects (for example, cleaning the street and empty lot that most students use to arrive at school each day).

Support Organizer (from the resource binder).

Unit plans reflect cohort-based alignment with CTE programing.

August 24 Curriculum assessment review

Ongoing Thematic Alignment Meetings (Friday on the final week of each month)

Finish!
<table>
<thead>
<tr>
<th>Professional Development</th>
<th>Overarching Goal: Professional development for all staff around policies and procedures as well as the skills for holding students accountable including motivational interviewing, group dynamics and group process, values-based dialogue</th>
</tr>
</thead>
</table>

- **August 27-September 9,** engaged in two-week, joint professional development with the partner and the members of the opportunity youth Network and four-day (9/6-9/9) on motivational interviewing, group dynamics and group process, values-based dialogue, student engagement, the five circles of the partner, and youth transformation.

- All staff trained in challenging students and leveraging the principles of youth development to encourage growth and transformation (9/1, 9/6 and 9/7 2016)

- Advocate Counselors receive training in case management with the partner (9/28/16).

| August 10-11 | Curriculum mapping August 27-September 2 Professional Development Staff assessment |

- **85% of staff can explicate motivational interviewing, group dynamics and group process, values-based dialogue in end of each trimester staff survey.**

- **Add academic PD (Response to Students Tracking; Unit Planning; Circles)**
• Mockingbird Education Training *(9/20/16 and 9/21/16)* with Uplift Academy on Whole Brain Teaching and student engagement strategies for hard to serve youth.

• Leadership to provide ongoing coaching on staff challenges to young people and on staff implementation of school expectations and norms.

• Whole-staff PLC and discussions weekly on Fridays centered around the development of effective systems for challenging the young people to grow and transform, planning implementation of advisory curriculum.

• Principal, VP, Director of Culture/Climate will train staff on aggressive monitoring during **August 11-12 Summer PD, Summer Institute**, and ongoing PDs conducted during **morning staff meetings (7:35-8:20)**. Leadership members will coach teachers and staff on ongoing
monitoring of data during academic and SEL instruction.

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**Strategic Goal 2: Mathematics**

**District Wide Goal(s)**

1. Internalize how PARCC defines Common Core mastery and how the NCPS Teacher Framework can accelerate teacher practices to prepare students.
2. Tailor the district’s yearlong instructional plans that articulate how to use the adopted curricula and assessments strategically for depth of learning.
3. Support teachers to maximize daily math lessons using approved resources and strategies to ensure all students master Common Core standards.
4. Coach teachers to implement high impact instructional strategies that will help students meet PARCC demands.
5. Charter and support teacher teams to skillfully reflect on student work and to radically improve long-term, unit, and lesson planning for individual teachers and teacher teams.

**District-Wide SMART GOAL:**

- 30% of all NCPS students Meet or Exceed the College and Career Readiness Standard on PARCC in the 2016-17 school year.
- 100% of NCPS schools show growth in their school-wide math SGPs in the 2016-17 school year.
- 100% of schools have PARCC SGPs greater than 50 in the 2016-17 school year.
- 25% growth in teachers of mathematics rated and confirmed as Highly Effective.

**School-Wide SMART GOAL:**

- 18% (15/83) of all NLA students will Meet or Exceed the College and Career Readiness Standard on the PARCC in the 2016-2017 school year.
- Embed district bets into core practices so that 100% of unit plans and lesson plans and 80% of classroom observations demonstrate all four big bets.

<table>
<thead>
<tr>
<th>Drivers</th>
<th>Tasks to be completed (TO DO)</th>
<th>Metric/Outcome (WHAT’S DONE)</th>
</tr>
</thead>
</table>

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Over-arching Task: Build a team of high-will mathematics educators that come together regularly to learn, practice and peer-coach – with the goal of improved mathematics teaching and learning.

• Planning and Training (Before the School Year Begins)
  o Math Instructional Team consists of Mr. Kuriloff (School Principal),
    Mr. Maloney (Math Teacher), and Mr. Wakanda (Math Teacher).
  o MIT meetings are scheduled for
  o Train math teachers to teach problem-solving skills and mindsets to
    students (10/26/16)
  o Established, through summer institute and ongoing, weekly Math
    team meetings (Thursday and Fridays, 10:25-11:05) the following
    priorities:
      ▪ Unit Planning:
        1. Course content mapped to interdisciplinary units. Math
           teachers met with Mr. Romagnolo, district Math Director,
           to map transfer school appropriate modification of the
           Agile Minds-based scope and sequence. Teachers
           identified rich anchor tasks as the instructional frame
           (9/7/16).
        2. Aggressive Monitoring Observation Records (called
           Response To Student Trackers (RTSTs) at NLA) and a
           pacing calendar with in-context objectives for each day.
      ▪ Lesson Planning: Anchor tasks, discourse strategies, and
        questions/tasks to monitor planned for each day as per the design
        mapped with district math team and updated weekly on Google
        Drive.
      ▪ Academic Discourse: Habits of Discussion Routines (Mental Math,
        Think-Pair-Share, Show Your Thinking) and Discourse Strategies
        intentionally planned and implemented as well as documented in
        Unit plans updated weekly on Drive (by 11/30/16)
      ▪ Aggressive Monitoring: AMOR ready each day to track student
        misconceptions during questions/tasks in context of ongoing data
        analysis and examination of Student Work. AMORs (RTSTs are
        reviewed in weekly STEM team meetings (Thursday and Friday,
        10:23-11:05)

Implementation Goal:
• Mathematics Instructional Team is trained in the Math Big Bets, models
  balanced math instruction, meets regularly (Thursday and Friday, 10:25-
  11:05 and Tuesday and Wednesday from 7:35-8:20) and leads peer
  coaching cycles to improve math instruction for every student.

Ongoing Student Achievement Metrics
• Student % correct in line with interim benchSam predictor scores for all
  teachers (attached).
**Balanced Mathematics Instruction**

| Over-arching Task: All students will continue to experience mathematics instruction that balances conceptual understanding, reasoning, and procedural fluency. Units and Lessons are anchored in context-driven tasks and the order of learning is switched from “I Do, You Do, We Do” to “Y’all Do, We Do, You Do.” |
| Planning and Training (Before the School Year Begins) |
| Principal will carve out one full day of PD for teachers (August 11th, September 7, 8, and 9) before students return to school to support teachers in planning for and delivering task-based math lessons. |
| Principal will support teachers in planning their first unit and first lessons of the school year. |
| Launching Implementation (September) |

**Implementation Goal:**
- 100% of teachers use core curricular resources to plan and implement lessons with context-driven anchor tasks.

**Ongoing Student Achievement Metrics**
- Student % correct in line with interim benchSam predictor scores for all teachers (attached).
Math team plans and implements balanced math lessons using Agile Mind resources and supplemental materials, starting the week of Sept. 26.

- Ongoing Coaching and Feedback (To be Updated Quarterly Throughout the Year)
  - Principal and MIT implement Math-Across-the-Curriculum with a focus on embedding applied mathematics into CTE course work as well is Health, Financial Literacy, and Science courses through push-in instruction provided by MIT teachers and co-planning during STEM team meetings (Fridays 10:25-11:05)
  - Principal models and gives bi-weekly feedback on lesson plans with context-driven problems especially as the opening and central focus of lessons.
  - Principal models and gives bi-weekly feedback on instructional strategies that support context-driven math tasks, especially at the start of lessons via peer-coaching and observations.
  - Written and verbal feedback is given to all teachers bi-weekly on Instructional Big Bets, Unit Plans, and AMOR data as well as on samples of student work by Principal.
| Habits of Discussion: Mathematical Discourse | Over-arching Task: Every mathematics lesson requires students to create viable arguments and critique the reasoning of others through written, verbal, and technology-enhanced discourse strategies.  
- Planning and Training (Before the School Year Begins)  
  o Principal and VP, attended August PLI to learn mathematical discourse strategies as students make sense of challenging problems (same as above).  
  o Principal and VP held 4 full-day of PDs during summer institute for teachers before students return to school to support teachers in implementing mathematical discourse strategies (same as above).  
- Launching Implementation (September)  
  o Principal supports and gives feedback on lesson plans that include mathematical discourse strategies every day on a bi-weekly basis.  
  o MIT will attend LIFTT session 2 to continue 1st quarter work.  
  o PLCs (Thursday and Friday, 10:25-11:05 am), work to plan and implement balanced math lessons that have a plan for mathematical discourse every day, starting the week of Sept. 26.  
- Ongoing Coaching and Feedback (To be Updated Quarterly Throughout the Year)  
  o Principal models and gives bi-weekly feedback on lesson plans that include intentional strategies for academic discourse,  
  o Principal models and gives bi-weekly feedback on instructional strategies that support mathematical discourse via peer coaching and observations. | Implementation Goal:  
- 100% of mathematics lessons require students to reason in written, verbal, and/or technology-enhanced forms with intentional academic discourse strategies.  

Ongoing Student Achievement Metrics  
- Student % correct in line with interim benchSam predictor scores for all teachers (attached). |
### Aggressive Monitoring and Formative Assessment

**Over-arching Task:** In every lesson, student thinking is visible and audible; teachers and students aggressively monitor and track misconceptions, and respond to address misconceptions with urgency.

- **Planning and Training (Before the School Year Begins)**
  - Principal, VP and MIT collaborate to develop AMOR template for each unit *(summer institute, August 2016)*
  - Principal and VP will attend August PLI to plan for Aggressive Monitoring of student work (same as above).
  - Principal dedicated 3 full days of PD *(August 11, September 7 and 8)* for teachers before students return to school to support teachers in planning for and implementing Aggressive Monitoring every day (same as above).

- **Launching Implementation (September)**
  - Principal supports and gives feedback on lesson plans that include intentional Aggressive Monitoring opportunities every day.
  - MIT will attend LIFTT session 1 to launch the work of the 1st quarter in schools (same as above).
  - PLCs work to plan and implement Aggressive Monitoring every day, starting the **week of Sept. 26**.

- **Ongoing Coaching and Feedback (To be Updated Quarterly Throughout the Year)**
  - Principal models and gives bi-weekly feedback on unit plans that include intentional opportunities for Aggressive Monitoring.
  - Math team will video their classroom practice and review it for critical improvement including in the moment written and verbal feedback and data monitoring over time.
  - The math PLC *(Thursday and Friday, 10:25-11:05 am)* will use AMORs gathered in class, from data cycles, and from Looking at Student Work protocols to plan for small group and tailored instruction opportunities.

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**Implementation Goal:**

- 100% of mathematics lessons have intentionally-planned opportunities for aggressive monitoring and student misconceptions are recorded and immediately addressed

**Ongoing Student Achievement Metrics**

- Student % correct in line with interim benchSam predictor scores for all teachers (attached).
Strategic Goal 3: Literacy

**District Wide Objectives:**

- **Objective 3:** Support teachers to maximize daily literacy block using approved resources and strategies to ensure all student meet the Common Core Standards.
- **Objective 4:** Coach teachers to implement high impact instructional strategies will help students meet PARCC demands.

**District Wide SMART GOAL:**

- 75% of 3-11th grade students will meet their SRI growth goals.
- 75% of 3-12th grade students will grow 10%+ from interim assessment 1 to interim assessment 2.

**School Wide SMART GOAL:**

80% of students will demonstrate growth of one score level (ex. meets to exceeds) between interim examination 1 and their PARCC assessment scores.

At least 25% of all English 4 students will Meet or Exceed the College and Career Readiness Standard on PARCC in the 2016-17 school year.

70% of students who are below level readers and in attendance 65% or more, and receiving a literacy intervention will meet their SRI growth target for the 2016-2017 SY.

<table>
<thead>
<tr>
<th>Drivers (FOCUS AREAS)</th>
<th>Tasks to be completed (TO DO)</th>
<th>Metric/Outcome/Timeline (WHAT’s DONE)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Literacy Army</strong></td>
<td><strong>Overarching Task:</strong> Create a team of educators focused on the interpretation and analysis of ELA data and the implementation of 4 district wide investments in ELA (Literacy Intervention, Everybody Writes, Aggressive Monitoring, and Habits of Discussion) based on practices outlined in “Reading Reconsidered.”</td>
<td>Over-arching Goals (see School Wide smart goals 1-5)</td>
</tr>
<tr>
<td></td>
<td><strong>Launch Literacy Army</strong></td>
<td><strong>Launch Literacy Army</strong></td>
</tr>
<tr>
<td></td>
<td>- Ms. Pittiman will identify and recruit faculty members to serve on the school’s <em>Literacy Army</em> using the “skill, will” matrix by 10/26/16.</td>
<td>Ms. Pittman (VP); Mr. De Voe (ELA); Mr. Fabriano (Social</td>
</tr>
</tbody>
</table>
Ms. Pittman will meet with the Literacy Army to outline overarching task for the year during common planning time, Tuesdays and Wednesdays, *(Curriculum Mapping, Exploring and Implementing Literacy Strategies outlined in Reading Reconsidered Chapters 2-4, Development of Exemplar Questions and Task, Analysis of Student Work).* Use Kelly A’s High School Literacy One Pager to engage team in conversations about the overarching work for the year.

**Curriculum Mapping: Defining the Reading Cannon**

- The literacy team has selected 4 Collections to teach this year that are aligned to our school Themes—responsibility to self, responsibility to family, and responsibility to community. These texts will be integrated into a humanities sequence that attaches each collection to our theme and to relevant social studies, and CTE content as demonstrated in unified school unit planning by (9/6/16).

**Creating Exemplary Questions and Task:**

- Literacy team will work together to implement *Everybody Writes* and *Habits of Discussion* strategies that will be implemented daily as students respond to complex text.
- Team will engage in Text-Based discussions using Reading Reconsidered Chapters 2 (Close Reading) and 4 (Writing for Reading) during Tuesday and Wednesday

**Analysis of Student Work and Interpretation of Data:**

- Team will explore and utilize varied Analysis of Student Work Protocols from National School Reform Faculty *(Tuning, Atlas, Studies); and Dr. Davis (SPED)*

- Literacy Army meets on Wednesday from 8:55-9:35 (as demonstrated in team minutes)

**Curriculum Mapping: Defining the Reading Cannon**

- Text Selections for Curriculum Maps completed on 9/9/16.
- Submit selections to literacy lead for review.

**Creating Exemplary Questions and Task:**

- Questions and Tasks reviewed (Bi-Weekly in Literacy Army meetings, *Wednesday from 8:55-9:35*). *(See Meeting Agenda and notes)*

**Analysis of Student Work and Interpretation of Data**
<table>
<thead>
<tr>
<th>Vertical Slice, etc. and NCPS’ Office of Academics Standard Protocol for Data Analysis.</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Team will analyze student work with Grade level teams on 4 quarterly formative district assessments and 2 district wide interim assessments using one of the above protocols.</td>
</tr>
<tr>
<td>• Team will use NCPS’ Office of Academic’s SPDA (what, so what, now what) protocol to analyze Grade, Teacher, and Student Level PARCC and NCPS’ Interim and Formative Assessment Data.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Meeting Agendas and Notes using Assessing to the Standards protocol from Tuesday Data meetings (7:35-8:20).</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Data is tracked overtime using Google Drive tracker</td>
</tr>
<tr>
<td>• Samples of organizers collected and maintained (ex. What, So What, Now What Notes)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Overarching Task: All students in grades 9-12 will engage in formal or informal writing in response to text every day during their literacy block and social studies class.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Read Reading Reconsidered Chapter 4 /PD (Writing for Reading)</strong></td>
</tr>
<tr>
<td>• Facilitate school wide text based discussion on Reading Reconsidered Chapter 4.</td>
</tr>
<tr>
<td>• Implement strategies based on text and exemplary practices embedded in the Reading Reconsidered CD.</td>
</tr>
<tr>
<td>• Turn Key PLI’s Reading Reconsidered PD for teachers on one full day before school starts.</td>
</tr>
<tr>
<td>• Implement Writing strategies outlined in Chapter 4.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Over-arching Goals (see School Wide smart goals 1-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Read Reading Reconsidered Chapter 4 /PD (Writing for Reading)</strong></td>
</tr>
<tr>
<td>• Meeting agendas and materials from professional text discussions on Chapter 4 and Reading</td>
</tr>
<tr>
<td>Implementatio of Everybody Writes</td>
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<td>-----------------------------------</td>
</tr>
<tr>
<td>Administrators require teachers to write exemplars to the questions and task they create throughout the school year.</td>
</tr>
<tr>
<td>Administrators will ensure all teachers’ exemplars meet grade level expectations as defined by PARCC/CCS.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Habits of Discussion</th>
<th>Overarching Task: All students will engage in peer-to-peer, small group, or whole group text-based discourse every day during their literacy block or social studies class.</th>
<th>Over-arching Goals (see School Wide smart goals 1-5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implementation of Habits of Discussion Protocols:</td>
<td>Engage ELA and Social Studies teachers in viewing of Habits of Discussion Video to norm expectations and outline what it looks like at varied grade level bands to (<em>Great Habits, Great Readers &amp; Reading Reconsidered</em>).</td>
<td>Implementation of Habits of Discussion Protocols:</td>
</tr>
</tbody>
</table>
- Administrative team will review and implement Habits of Discussion Rubric to turn key to staff and use as a coaching tool.

**Ongoing Coaching and Feedback:**
- Conduct administrative walkthroughs to ensure habits of discussion protocols are implemented across content areas.
- Administrative team will identify teacher exemplars and implement peer observations to norm school wide expectations.
- Administrative team will develop coaching tool tailored to habits of discussion and provide teachers ongoing feedback on implementation.
- School leadership will provide opportunities for teachers to practice being a discussion facilitator at Grade Level and Departmental Meetings.

- Meeting Agendas and Materials

**Ongoing Coaching and Feedback:**
- Walkthrough Feedback forms/coaching tools beginning October 2016-May 2017
- Peer observation notes and feedback beginning December 2016-May 2017.

<table>
<thead>
<tr>
<th>Aggressive Monitoring</th>
<th>Overarching Task:</th>
<th>All teachers will use this specific formative assessment technique to gauge student learning and provide immediate feedback to students on their written responses.</th>
</tr>
</thead>
</table>
|                       | **Implementation of Aggressive Monitoring Protocols** | - Administrative Team will watch the DVD embedded in *Reading Reconsidered* with particular emphasis on Aggressive Monitoring.  
- Administrative team will implement Professional Development to turnkey Reading Reconsidered PD with an emphasis on Aggressive Monitoring.  
- Administrative team will create an aggressive monitoring template for teachers to use. |
<p>|                       | <strong>Over-arching Goals</strong> | (see School Wide smart goals 1-5) |</p>
<table>
<thead>
<tr>
<th>Litarcy Interventions</th>
<th>Overarching Task: All Beginning Readers (0-1000L in grades 9-10) receive an approved learn to read intervention.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Scheduling and SRI administration</strong></td>
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<tr>
<td></td>
<td>• Create master schedule with a Literacy Intervention period for students in Grades 9-10.</td>
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<tr>
<td></td>
<td>• Administer SRI by September 16, 2016 and identify students in need of Literacy Intervention by September 22, 2016.</td>
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<tr>
<td></td>
<td>• Adjust student schedules for reading intervention period.</td>
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<td></td>
<td>• Identify and assign teacher(s) who will teach and implement Read 180 and Systems 44 for students.</td>
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<tr>
<td></td>
<td>• Ensure all students begin Reading Intervention by September 26, 2016.</td>
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<tr>
<td></td>
<td>• Conduct training for Reading Intervention teacher by September 22, 2016.</td>
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<tr>
<td></td>
<td>• Administer SRI during 3 other testing windows throughout the year.</td>
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<tr>
<td></td>
<td><strong>Data Analysis and On Going Coaching and Feedback</strong></td>
</tr>
<tr>
<td></td>
<td>• Identify and train member of administrative cabinet to run varied SRI and Systems 44 reports.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ongoing Coaching and Feedback:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Administrative team will assist teachers in creating aggressive monitoring questions.</td>
<td></td>
</tr>
<tr>
<td><strong>Ongoing Coaching and Feedback:</strong></td>
<td></td>
</tr>
<tr>
<td>• School leaders will reference running records during feedback and coaching sessions to ensure teachers are correctly identifying errors and are making the appropriate plans to differentiate instruction accordingly.</td>
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</table>

<table>
<thead>
<tr>
<th>Scheduling and SRI administration</th>
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</tr>
</thead>
<tbody>
<tr>
<td>• SRI September Results</td>
<td></td>
</tr>
<tr>
<td>• Schedule Adjustments for students who scored below 1000.</td>
<td></td>
</tr>
<tr>
<td>• Agenda and Materials for Reading Intervention Training.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Data Analysis and On Going Coaching and Feedback</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• SRI growth reports</td>
<td></td>
</tr>
<tr>
<td>• Coaching and feedback artifacts</td>
<td></td>
</tr>
</tbody>
</table>
- Use data from reports to provide coaching and feedback to teachers implementing reading interventions.
- Adjust goals and schedules on a quarterly basis based on outcomes on SRI test.

**Strategic Goal 4: Student Support Goals**

<table>
<thead>
<tr>
<th>District Wide Objectives:</th>
<th><strong>Objective 6:</strong> Implement <strong>Student Support Teams and rituals</strong> to ensure school staff regularly engages in strength-based conversations to proactively support students before they struggle.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>District Wide SMART GOAL:</strong></td>
<td>By June 2017, 100% of NCPS schools will have two highly functioning teams within their Student Support Team (SST). One team will focus on promoting school-wide best practices and the other team will provide individual supports for students in need.</td>
</tr>
<tr>
<td><strong>School Wide SMART GOAL:</strong></td>
<td>By May 15, 2017 A northeastern city Leadership staff will have tracked and documented all relevant implementation data (intervention plans, follow-up, meeting minutes) based on the continued implementation of weekly whole-staff response to intervention meetings, weekly SST School-wide (Tier 1) team meetings, and weekly SST Student Intervention and Case Management team meetings. By May 15 2017, monthly average daily attendance will reflect a 10% improvement over prior school year to a minimum of 65% average daily attendance with attendance and enrolment tracked with 100% accuracy.</td>
</tr>
</tbody>
</table>

**Drivers (FOCUS AREAS)**

**Tasks to be completed (TO DO)**

**Metric/Outcome (WHAT’S DONE)**

<table>
<thead>
<tr>
<th>Over-arching Task: <strong>Student Support Teams and rituals</strong> are implemented to ensure school staff regularly engages in strength-based conversations to proactively support students before they struggle.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Team Planning and Training (Before School Year Begins)</strong></td>
</tr>
<tr>
<td>- Leadership establishes two teams, the Student Support Team and I&amp;RS Team.</td>
</tr>
</tbody>
</table>

| Implementation Goal: Student Support Teams and rituals are implemented to ensure |
- **Teams scheduled for weekly meetings (SST on Tuesdays from 9:45-10:45 and I&RS on Thursdays from 7:30-8:20)**

- **Completed “climate and culture” building walkthroughs by both staff leadership and student leadership; identified strengths and questions for areas of improvement as of 9/16/16.**

- **Mission statement, vision, and core values are strongly established with staff through staff training in April 2016 and August 2016; Mission, Vision, and core values posted throughout the school; Morning meeting room painted to reflect the same in spring 2016.**

- **Launching and Ensuring Implementation (September)**

  - **Students will learn and internalize school philosophy through two-week “Mental Toughness” induction practices (including the requirement that all students memorize and are able to recite the partner’s during individual student interviews at the conclusion of induction). Students will explicate the meaning of the philosophy through group activities and in their individual interviews.**

  - **The leadership team ensures that the school’s core beliefs and values are linked to behavioral expectations and posted throughout the school and specific to location by focusing on values-based challenging of student behaviors with staff.**

  - **Leadership team ensures staff implement two-week “mental toughness” that emphasizes group dynamics; physical, emotional, and cognitive challenges to build expectation and rigor; structured activity with clear and trained adult support roles (Facilitator, Enforcer, Catcher); activities to including Physical Training, small and whole group challenges, problem-solving, and group dynamics activities; norm establishment and setting; student handbook review; and leadership development with an emphasis**

- **school staff regularly engages in strength-based conversations to proactively support students before they struggle.**

  **Ongoing Student Achievement Goals:**

  - **Student Support Team minutes**
  - **I&RS documentation and reporting**

  **Mental Toughness Implemented for All Entering Students**

  - **Teacher Coaching minutes collected and feedback given by Principal (Monthly)**
  - **Leadership create and deliver data**
on youth development, trauma-informed practices; and the goal of youth transformation.
- Values, mission, and vision posted throughout the school and in every room; values and philosophy posted in entry; and painted and posted in morning meeting room.
- Student understanding assessed through group activities, individual student interviews, and monthly short surveys given to students and staff during advisory.
- Core beliefs and values as well as mission and vision displayed in all classrooms.
- Leadership plans ongoing training for SST and I&RS team members following the guidance from the district and our partner.
- Continuing implementation of “NLA Dollars” and monthly auctions (including exchange rate for last year’s dollars)

### Implementation Goals for SST:
- SST meetings begin 9/27/16
- All participating staff members trained by 10/26/16
- SST determines initial data needs by 11/1/16 and makes requests of School Data Team
- SST team documents weekly meetings with minutes and agendas over the course of the year.
- Trimester review of implementation with Leadership Team (12/14/16)

### Implementation Goals for Values and Expectations
- By 9/6/16 The Partner’s Philosophy, School Values, and Mission/Vision will be posted on the wall of every classroom and community spaces

| Presentations for the whole-staff focused around school goals and strategic priorities (Monthly) |
| SST team minutes collected; Individual student action plans tracked and monitored in ETO system weekly. |
| SST progress reports generated Monthly by director of climate and culture. |
- All students memorize the partner Philosophy and are able to articulate the meaning of the philosophy in personal terms during an individual interview with school staff by the conclusion of a given mental toughness period.
- Values, norms, and expectations will be co-developed and processed during each mental toughness induction experiences.
- Staff trained on values-based challenging of students (April 2016, August 2016 during summer institute).
- Weekly staff development and ongoing coaching reinforces values-based challenges.
  - Director of Climate and Culture will generate monthly progress reports to track progress on these implementation goals. – See Soto Tracker.
  - Principal will ensure that the relevant staff members are participating in monthly SST and I&RS trainings and technical assistance sessions following the guidance from the Office of Student Supports including monthly trainings (first training 10/26/16).
  - Director of Climate and Culture and conducts climate walkthroughs with students in September, November, January, and April. Data is reviewed in Leadership, Data Team, and SST.

<table>
<thead>
<tr>
<th>District Wide Objectives:</th>
<th>Objective 7: Structure dedicated time to teach non-academic skills and to promote classroom communities</th>
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<tbody>
<tr>
<td>District Wide SMART GOAL:</td>
<td>By June 2017, 100% of NCPS schools will link their school-wide values to district-wide Social Emotional Learning (SEL) through monthly lessons/activities. District will launch this SEL initiative in February 2017.</td>
</tr>
</tbody>
</table>
**School Wide SMART GOAL:** Implement theme-based, SEL curriculum across daily Morning Meeting, weekly Town Hall, bi-weekly Advisory, **PERIOD OF SERVICE, CRUSH MONDAYS**, and infused across the curriculum with a focus on Humanities instruction that links rigorous reading and writing to a developing understanding of personal responsibility to self, family, and community as reflected in unified SEL Scope and Sequence (**by November 15, 2016**) and specifically identified in Unit Plans (**by September 26, 2016**)

**Integration of Social Emotional Learning**

**Over-arching Task:** Structure dedicated **time to teach non-academic skills** and to promote classroom communities

- **Launching and Ensuring Implementation**
  - Survey students to determine lessons, activities and/or events that are of interest to them by **11/4/16**.
  - Advocate Counselors designed and the whole staff implemented a two-week “Mental Toughness” induction to teach School values and norms; to begin developing sophisticated understanding of self, family, and community; to explicitly teach group dynamics and youth development principles.
  - Advocate Counselors work with partner and sister school counselors to develop theme-based (Responsibility to Self, to Family, and to Community) advisory curriculum by **9/26/16 and finalized by 11/15/16**.
  - Teachers and Counselors train together in implementation and adaptation in weekly, whole-school advisory planning meetings (**Fridays from 7:35-8:20**)
  - Director of Climate and Culture will submit documentation (as outlined by the Office of Student Supports) showing evidence of SEL activities on a monthly basis.

- **All-School hour of service:** Created and implemented weekly, all school hour of building service (**Mondays, 9:00-10:00am**). Director of Climate and Culture identifies appropriate internal service projects (for example,

**Implementation Goal:**

- SEL subcommittees organize and promote activities in alignment with district SEL objectives to ensure that social emotional skills are developed in students and classroom communities.

**Outcome Goal:**

50% of the students who attend 65% or more
cleaning the street and empty lot that most students use to arrive at school each day).

### District Wide Objectives:

**Objective 9:** Radically **reduce out-of-class time** through progressive discipline, restorative practices, and student-centered response to incidents

By June 2017, all NCPS schools will implement school-wide progressive disciplinary measures that are inclusive of restorative supports for academic and behavioral intervention. *Full roll out Beginning in Fall 2016.*

### School Wide SMART GOAL:

By June 2017, Northeastern Leadership Academy will have continued to implement restorative practices and our response to intervention protocol, with youth leadership provided by the Student Policy Council in mediating conflicts as evidenced by the implementation of student led youth development team (agendas and minutes as well as implementation numbers) less than five incidents of a student needing to be held of out school and only those deemed necessary for student safety.

### Progressive discipline practices

**Over-arching Task:** Radically **reduce out-of-class time** through progressive discipline, restorative practices, and student-centered response to incidents

- **Planning and Training (Before School Year Begins)**
  - Continue to train staff in restorative practices, motivational interviewing, and youth development during summer institute (August 2016)
  - Continue with use of systems to challenge young people through individual interventions and developmental processes designed to challenge each young person (including weekly I&RS, RTI, and SST meetings)
  - Select students to conduct climate and culture walkthrough (by 9/15/16) to identify gaps and areas for improvement in school-based processes for managing responses to disciplinary infractions and opportunities for proactive planning to build school culture
  - Partner climate and culture walkthrough 10/25/16 (during weekly leadership data meeting)

### Implementation Goal:

**Student Support Teams and rituals** are implemented to ensure school staff regularly engages in strength-based conversations to proactively support students before they struggle.

**Ongoing Student Achievement Goals:**
- SST to conduct climate and culture walkthrough (11/1/16) to identify gaps and areas for improvement in school-based processes for managing responses to disciplinary infractions and opportunities for proactive planning to build school culture
- Advocate Counselor offices have been designed with isolated safe space including de-escalation resources and privacy screens (Spring 2016)

- Launching and Ensuring Implementation
  - Establish youth-governed discipline committee as sub-committee to school policy council by 11/15/16.

- Ongoing Coaching and Feedback (To be Updated Quarterly Throughout The Year)
  - Implemented school-wide youth transformation process designed to challenge young people to build their skills and capacities and rooted in leadership development practices, motivational interviewing, and individualized student development processes (ex. Letter to Self, Internal and External scavenger hunts, peer mediation, Student-Teacher-Advocate Counselor conferences (STAC meetings).
  - Principal ensures that the relevant staff members are participating in monthly SST and I&RS trainings and technical assistance sessions following the guidance from the Office of Student Supports

- Student Support Team monthly logs
- I&RS documentation and reporting
References


Thorndike, E. L. (1910). The contribution of psychology to education. *Journal of Educational Psychology,* 1, 5-12.


