STAGING THE PATH: THE ROLE OF CHOICE DESIGN IN CULTIVATING LEARNER ENGAGEMENT AND SELF-REGULATION CAPABILITIES

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ABSTRACT

STAGING THE PATH: THE ROLE OF CHOICE DESIGN IN CULTIVATING LEARNER ENGAGEMENT AND SELF-REGULATION CAPABILITIES

Sydney Schaef
Sharon Ravitch

This study explores the factors that shape students’ experience with instructional choices in classroom-based settings, and the role of instructional choice design in positively influencing student engagement and the development of self-regulation skills among high school students who attend an urban high school in the Mid-Atlantic Region, referred to as Aspiration High School. A range of cultural, structural and human resource factors are found to have a limiting effect on students’ experience with quality instructional choices in school, and as a result, limits their opportunities to practice and develop the self-regulation skills necessary for navigating choices at levels of complexity that mirror the world beyond school (Winne & Perry, 2000; Winne & Hadwin, 1998; Winne, 2001). Teachers and students of Aspiration High School were surveyed to gather insights on their experiences of and perceptions on choice in learning. Two teachers engaged in a series of collaborative lesson design cycles that involved choice-based lesson design, implementation with observation, lesson debriefs, and student work analysis, as well as pre and post student interviews and focus groups. This study identified five elements of high-quality choice designs, and argues for quality choice design as an important mechanism for cultivating learner engagement (Katz & Assor, 2007), developing interventions to support self-regulatory skill development among
learners, and nurturing pedagogical shifts among teachers toward more learner-centered designs and practices.

*Keywords*: student engagement, self-regulated learning, curriculum design, student choice
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CHAPTER 1: INTRODUCTION

The Call for Student “Voice and Choice” in Learning

In recent years, the field of K-12 education in the United States has seen a significant push toward personalized learning. Not unlike the sentiment captured in the landmark 1983 report, A Nation at Risk, advocates of personalized learning models have grown increasingly concerned over the educational outcomes of America’s public schools. What is arguably distinctive about supporters of personalized learning is that their emphasis is not solely on the need for school improvement, but rather on the urgent need for school and system redesign (Software & Information Industry Association, 2010).

In November 2010, over 150 local and state practitioners, national thought leaders, and technology executives gathered together to formulate the defining characteristics of personalized learning (Cavanagh, 2014). The lead organizers of the symposium framed the problem at hand and their purpose for convening:

We joined under a common belief that our industrial-age, assembly line educational model - based on fixed time, place, pace and curriculum - is insufficient in today’s society and knowledge-based economy. Our education system must be fundamentally reengineered from a mass production, teaching model to a student-centered, customized learning model to address both the diversity of students’ backgrounds and needs as well as our higher expectations for all students (Software & Information Industry Association, 2010, p. 6).

The case for new, personalized learning models was grounded in both a moral and economic argument; namely, that school systems must ensure all learners, not only the most advantaged, have access to the supports needed to leave secondary school
adequately prepared for college, career, and citizenship (Association for Supervision and Curriculum Development, 2010). In an effort to clarify the path forward for practitioners and policy leaders across the country, the symposium attendees formulated a list of five essential elements for personalized learning, as well as five critical policy enablers, shown in Table 1.

**Table 1: Elements of Personalized Learning System Redesign (Software & Information Industry Association, 2010)**

<table>
<thead>
<tr>
<th>Essential Elements of Personalized Learning</th>
<th>Policy Enablers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexible, anytime, everywhere learning</td>
<td>Redefine use of time (Carnegie Unit/Calendar)</td>
</tr>
<tr>
<td>Redefine teacher role and expand “teacher”</td>
<td>Performance-based, time-flexible assessment</td>
</tr>
<tr>
<td>Project-based, authentic learning</td>
<td>Equity in access to technology infrastructure</td>
</tr>
<tr>
<td>Student-driven learning path</td>
<td>Funding models that incentivize completion</td>
</tr>
<tr>
<td>Mastery/Competency-based progression and pace</td>
<td>P-20 continuum and non-age/grade band system</td>
</tr>
</tbody>
</table>

Each of these “essential elements” of personalized learning would take shape over the years that followed as breakthrough school and system redesign efforts came to the fore, largely made possible by a subsequent wave of substantial philanthropic investments in personalized learning models (Miller et al., 2016). One of these concepts in particular, “student-driven learning path,” has become a central design parameter of many of the largest competitive school design challenge grants of the last five years.
Student-driven learning is a particularly unique and important principle of K-12 school redesign because of its emphasis on “student agency” in learning and its explicit mandate for elevating and nurturing “student voice and choice” in the classroom (Bray & McClaskey, 2013; Patrick, Kennedy, & Powell, 2013; Toshalis & Nakkula, 2012). This stands in stark contrast to the highly standardized, “industrial-age, assembly line” model that is the hallmark of the industrial era (Software & Information Industry Association, 2010).

As practitioners throughout the United States seek to implement personalized learning models that emphasize “student voice and choice” in learning, important questions emerge about the role and impact of choice in learning, and the importance of practitioner approaches to choice design. Are all types of choices in learning equal? Is there such a thing as helpful, constructive choice sets and choice sets that inadvertently disservice, discourage, or disadvantage students in their learning? Specifically, are there types of choices in learning that contribute more significantly to student engagement or skill development than others? How do teachers perceive choice in the role of learning? What barriers do teachers perceive in designing and facilitating instructional choices in learning?

This study seeks to inform theory and generate practical insights for practitioners on instructional choice design, which I define as the planning of learning experiences that integrate purposeful and meaningful choices for learners about what, when, or how they learn.
The Study

This study was conducted at a high school located in an urban setting in the Mid-Atlantic Region referred to as Aspiration High School, and was guided by the following research questions: What are the factors and conditions that shape students’ experiences with instructional choices in school? What types of student choices in learning help to positively influence student engagement and the development of self-regulation skills among urban high school youth?

This study explores the experiences, perspectives, and opinions of teachers and students on instructional choices in classroom-based settings. While “student-driven” learning models are praised as powerful potential drivers for systematically redesigning our education system (Software & Information Industry Association, 2010), practitioners across the country, including Aspiration High School’s team, struggle to overcome the dominant transmission model of instruction that has become the hallmark of American schools (Cochran-Smith & Lytle, 2009). In this way, the challenges involving the dynamics of learning and student engagement at Aspiration High School serve as a microcosm of those faced by educators throughout the country seeking to implement personalized learning models, but struggling with the juxtaposition of new models for teaching and learning, and “old” expectations, experiences, and even preferences about what learning should look and feel like.

This study suggests that a range of cultural, structural and human resource factors profoundly limits students’ experience with instructional choices in school, and as a result, limits their opportunities to develop the self-regulation skills necessary for
navigating choices at levels of ambiguity or complexity that mirror the world beyond school (Winne & Perry, 2000; Winne & Hadwin, 1998; Winne, 2001). This study identifies high quality instructional choice design as a mechanism for cultivating engagement (Katz & Assor, 2007) and skill development among learners, as well as for nurturing shifts toward more learner-centered designs and practices among teachers.

**Dissertation Overview**

In Chapter 2, I present the conceptual framework of the study, which draws upon student motivation and engagement literature, self-determination theory, self-regulation research, and learning design theory to hypothesize a relationship between instructional choice designs and aligned instructional supports aimed at cultivating self-regulation skills among learners.

Chapter 3 describes the methodological approaches employed in this study, and discusses the research site and participant selection, data collection methods, analysis tools and processes, and validity and ethical considerations. Findings are then presented in two chapters. Chapter 4 discusses the cultural, structural, and human capital factors that influence students’ experience with instructional choices at Aspiration High School, with a particular emphasis on teacher perceptions of students’ valuations and levels of readiness for a range of instructional choices. Chapter 5 presents insights from a series of collaborative lesson design cycles implemented with two teachers at Aspiration High School, including a framework for high-quality instructional choice design, a case for the efficacy of choice design as a strategic diagnostic tool for self-regulation skill...
development, and a discussion of human capital factors that influence students’ experience with instructional choices.

Chapter 6 discusses the limitations of the study, and presents a set of implications for theory, practice, and future research based on this study’s findings. Recommendations are presented for both researchers and practitioners and suggest ways to expand the knowledge base around the intersections of choice design and self-regulation skill development, as well as short- and long-term strategies for enhancing the quality of instructional choices experienced by students in classroom settings.
CHAPTER 2: CONCEPTUAL FRAMEWORK

Three driving question sets guided the review of extant scholarly literature for this study:

● What insights can be gleaned from research on student motivation, engagement, and choice design in learning? Is there an existing typology of choice, or methodology of choice design, that we can build upon?

● As a precursor to exhibited “student agency,” how is self-regulated learning conceptualized in the field, and how does it intersect with what is known about student engagement and choice design?

● How might the aforementioned literature, as well as other learning design principles, frameworks, or techniques, best inform a choice design methodology aimed at optimizing both student engagement and self-regulation in classroom settings?

An exploration of the literature related to each of these core dimensions of the study shaped the formation of a working conceptual framework to situate the inquiry and shape research design. In this section, I present key insights from the literature on student motivation and student engagement, examining both the core and contextual factors of influence. Next, I discuss the literature on student choice in learning, and its theoretical underpinnings in self-determination theory, as well as literature on self-regulated learning, how it is currently conceptualized, and the latest findings on the intersections of self-regulation and the fields of neuroscience and psychology. Finally, I discuss existing frameworks and theories that support student-centered learning design models that
emphasize engagement and learner agency, including universal design for learning (UDL), motivating instructional contexts inventory (MICI), and expectancy value theory.

**Student Motivation: Complex “Webs of Causality”**

What motivates students to achieve in school? To engage in learning? To persist through challenges? The expansive body of literature on student motivation speaks to its complex nature; rather than a set of simplistic “input-output” models, student motivation is arguably best thought of as “webs of causality” in which student motivation is influenced by a set of dynamic internal and external conditions, including social location and contexts, situational circumstances, personal goals and interests, and varying emotional connections to school and school contexts (Toshalis & Nakkula, 2012, pp. 3-5).

In K-12 educational settings, motivational theory is commonly understood in terms of two types of motivation: *extrinsic motivation*, which describes learning that is undertaken for an outcome, such as a reward, that is separate from the learning itself; and *intrinsic motivation*, which describes learning that is motivated by the inherent value or enjoyment of learning (Deci, 1971). Multiple studies have shown that student motivation, when generated from internally held goals rather than external pressures, tend to be much stronger and more easily sustained (Eccles & Wigfield, 2012; Ryan & Deci, 2000). As it relates to school persistence, several studies have shown that students who drop out of high school have lower intrinsic motivation compared to students who persist (Vallerand, Fortier, & Guay, 1997; Vallerand & Bissonnette, 1992). The logical question follows: how do students develop *intrinsic* motivation? Put another way, are there factors that can
influence the internalization of motivation? Building on previous studies, motivational theory has evolved and become reconceptualized around notions of autonomy and control; namely, that these are critical variables that impact students’ relationship to extrinsic and intrinsic motivation (Ryan & Deci, 2000). Vansteenkiste, Lens, and Deci (2006) explain: “Autonomous motivation involves the experience of volition and choice, whereas controlled motivation involves the experience of being pressured or coerced (p. 19).” Building upon the extrinsic-intrinsic motivation typology, autonomous motivation encompasses both intrinsic forms of motivation and “well-internalized” forms of extrinsic motivation; conversely, controlled motivation involves “poorly internalized forms of extrinsic motivation (p. 9)” and does not involve intrinsic motivation, given its external nature. If autonomous motivation involves either pre-existing intrinsic motivation or internalized forms of extrinsic motivation, the next question that follows is: how would a student come to “internalize” externally motivated behaviors? Ryan and Deci (2000) explored this question and found that, consistent with self-determination theory, the internalization of externally motivated behaviors is a function of three critical conditions: relatedness, competence, and autonomy (p. 73). With regard to relatedness, Ryan and Deci (2000) found that “the primary reason people initially perform... [externally motivated] actions is because the behaviors are prompted, modeled, or valued by significant others to whom they feel (or want to feel) attached or related (p. 73).” Applied in a school setting, the implications are significant: when students feel a strong sense of connection to others who encourage or model particular behaviors, external motivators can be appropriately applied to help students gradually internalize new forms of
motivation. Toshalis and Nakkula (2012) reiterate that both intrinsic and extrinsic motivation are useful and positive tools for engaging learners, and that what matters most is social context:

The more deeply students can connect with the people and larger contexts providing external motivation, the more likely it is that they gradually will internalize those motivators as their own. If on the other hand, the external motivators are applied in a decontextualized manner, outside of meaningful relationships and important contexts, they are likely to remain extrinsic and less influential (p. 9).

With regard to competence, Ryan and Deci (2000) explain, “people are more likely to adopt activities that relevant social groups value when they feel efficacious with respect to those activities (p. 73).” If students are directed to demonstrate certain behaviors, for example, before they are developmentally ready to do so, students will struggle to internalize the desired behaviors (Vallerand, Fortier, & Guay, 1997).

Autonomy fulfills the last condition necessary for individuals to fully internalize the new, externally motivated behaviors. When individuals have choice and freedom from “excessive control,” they then have the opportunity to reflect, make meaning of the new behaviors in the context of their own values and goals, and may “actively transform values into their own (p. 74).” When choice is not present, or when learners feel that they are subjected to highly controlling environments, this can have detrimental effects on motivation (Ryan & Deci, 2000). Some scholars believe that the highly controlled, high-stakes testing environment spawned by the No Child Left Behind federal policy has created a dynamic of control, pressure, and rigidity in schools that is undermining student self-motivation (Iachini, Buettner, Anderson-Butcker, & Reno, 2013). In sum, the self-determination theory posits that students experiences within social contexts that affirm
students’ sense of relatedness, competence, and autonomy, will help “catalyze” both student motivation and personal growth, “resulting in people being more self-motivated, energized, and integrated (p. 68).”

There is a substantial body of research associated with sociocultural learning theory and multicultural education that suggests social and cultural factors significantly influence children’s experiences in schools, sense of belonging, and motivational levels (Neito, 1999; Phelan, Davidson, & Yu, 1998; Connell & Wellborn, 1991; Deci & Ryan, 1985; Eccles, Wigfield, & Schiefele, 1998; Juvonen & Wentzel, 1996; Resnick et al., 1997; Weiner, 1990). The ways in which social and cultural contexts shape student experiences and perspectives is complex, and the importance of these factors cannot be overstated. As Toshalis and Nakkula (2012) point out,

Thoughts, feelings, behaviors, and socialization processes inform the nature of motivation, engagement, and student voice in ways that are difficult to disentangle...By picturing the factors that influence achievement motivation in a web of causality, we acknowledge that students exist within a dynamic ecology—it shapes them, and they shape it. To reduce our unit of analysis to the student alone is to miss the fact that he is a product of and contributor to his environment (p.8-9).

Perhaps the most salient observation to draw from the research in this area is that students sense of belonging, relatedness, and connection in school strongly correlate with student effort, affective engagement, performance, and ability to cope more effectively (Anderman, 1999; Anderman & Anderman, 1999; Baumeister & Leary, 1995; Lynch & Cicchetti, 1992; Ryan, Stiller, & Lynch, 1994;).

This research underscores our previously discussed motivational framework based on self-determination theory, in which students need to not only feel a sense of competence and autonomy as part of their learning experience, they also need to feel a
strong sense of relatedness, emotional security, and bonding within the social context of learning. As the work of Ryan and Deci (2000) attests, social contexts have “dramatic power” to shape internalizations of motivation in learning contexts (p. 76).

Finally, a note about language: it was observed in several studies that the term “achievement motivation” was used specifically to describe students’ motivation to achieve in school contexts (Toshalis & Nakkula, 2012; Bergeron, Chouinard, & Janosz, 2011; De Castella, Byrne, & Covington, 2013; Masland & Lease, 2013). For the purpose of this study, we will avoid the descriptor “achievement” in our discussion of student motivation, as it is arguably a misnomer. The research we’ve identified in which this term is used relates strictly to the context of schooling, and therefore does not accurately account for the many contexts beyond school in which students might exhibit different degrees of achievement motivation.

**Student Engagement: Behavioral, Affective, Cognitive**

If student motivation is the drive behind learning, engagement is the act of initiating and sustaining the learning activities that make learning and academic growth possible (Furrer & Skinner, 2003). Furrer and Skinner (2003) define engagement as, “active, goal-directed, flexible, constructive, persistent, focused interactions with the social and physical environments (p. 149).” The Glossary of Education Reform defines student engagement as, “the degree of attention, curiosity, interest, optimism, and passion that students show when they are learning or being taught, which extends to the level of motivation they have to learn and progress in their education (2016).”
Early scholarly work on student engagement conceptualized student engagement as two-dimensional, comprising of \textit{behavioral engagement} and \textit{affective engagement} (Finn, 1989; Finn & Voelkl, 1993). Behavioral engagement is the degree of student effort and persistence in school tasks and learning activities (Birch & Ladd, 1997), and is evidenced by such indicators as attendance and participation in class, assignment completion, and exhibited effort. Affective (or emotional) engagement refers to how students feel about learning (Connell & Wellborn, 1991) and how students feel about the school they attend (Finn, 1989), and is evidenced by a strong sense of belonging in school, demonstrated interest in learning, and identification with one’s school (Lam et al., 2014). Contemporary scholars have added a third dimension to engagement; namely, cognitive engagement, which is described as students’ deep thinking and \textit{application of learning strategies} during the learning process (Jimerson, Campos, & Greif, 2003; Fredricks, Blumenfeld, & Paris, 2004). While this dimension of engagement is of central importance to this study, it is also problematic in its assumption about students’ knowledge of learning strategies, their ability to apply them independently, and their ability to manage contextual factors that may influence their ability to engage cognitively. As will be discussed in a later section, a student’s ability to think deeply and apply learning strategies, or demonstrate “cognitive engagement,” is contingent upon a range of physiological, psychological, and socio-contextual factors; it is not simply a matter of effort or willingness to focus one’s mind, as may be conveyed by the term “engagement.” Finally, while several other researchers have recently chosen to add a fourth dimension, academic engagement (Appleton, Christenson, Kim, & Reschly, 2006),
to describe such metrics as time spent on learning tasks and graduation credits accumulated, for the purposes of this study, we exclude this fourth dimension of engagement, as it is arguably redundant and easily confused with measures of behavioral engagement. For this reason, I adopt the three-part typology of student engagement as behavioral, affective, and cognitive, but argue that the ability to exhibit cognitive engagement is dependent upon one’s metacognitive, behavioral, and motivational capacities, later detailed by, and defined as, the skills, strategies, and executive functions that are foundational to self-regulation (Zimmerman & Schunk, 2011).

The substantial body of literature on student engagement has identified engagement as a highly important predictor of educational and behavioral outcomes; specifically, it is a strong predictor of student performance and positive student behavior (Klem & Connell, 2004); it positively correlates with students grades (Goodenow, 1993), attendance and persistence (Klem & Connell, 2004; Ekstrom, Goertz, Pollack, & Rock, 1986), and test scores (Willingham, Pollack, & Lewis, 2002); it serves to reinforce students’ positive expectations about their own learning capacities (Skinner, Zimmerman-Gembeck, & Connell, 1998); and it is one of the most accurate predictors of which students will eventually exit the school system prior to graduation (Appleton, Christenson, & Furlong, 2008). Because of the powerful predictive relationship between student engagement and positive academic and behavioral outcomes, student engagement represents a fundamentally important theoretical construct for the design of this study and the measure of the efficacy of new instructional design practices that may be introduced.
Importantly, research has also demonstrated that there is a “reciprocal effect” between student engagement and teacher behavior; namely, when students exhibit a high level of behavioral engagement in the classroom, they tend to receive, and benefit from, more “motivational supports” from the teacher (Skinner & Belmont, 1993, p. 572). These supports take three forms: increased interactions, affection toward, and time dedicated to students (“involvement”); more responsive communication, clearer expectations about desired outcomes, and more responsive supports (“structure”); and increased opportunities for flexibility and choice in the classroom (“autonomy supports”) (p. 572-573). This research has unique implications for this study because it illuminates the potential for a negatively reinforcing pattern in which students who struggle with engagement, particularly those who are at risk of exiting the school system, will receive fewer motivational supports than their more engaged peers.

Several studies that have sought to capture the voices of students who have chosen to exit the public school system suggest that motivational supports, or lack thereof, significantly influence student engagement in school and ultimately decisions to exit. A 2013 study that examined the perceptions of “dropout” students on academic disengagement found that the lack of teacher support was identified as one of the most frequently mentioned barriers to success (Iachini et al., 2013). Another study, in which focus groups were held with 467 ethnically diverse 16 through 25 year-old students who had exited public schools across geographically diverse regions in the United States, found that 81% of respondents indicated that access to stronger supports, more relevant and engaging curricula, and clearer connections between school and employment
opportunities would have helped improve their chances of staying in school (Bridgeland,
Dilulio, & Morison, 2006). Additionally, 71% of respondents said that schools did not do
even to “make school interesting,” and nearly half of respondents said that a “major
reason for dropping out” was that classes were not interesting (p.iii). These studies, taken
together, suggest that teacher provisions of motivational supports have a significant
impact on student engagement in school for “at-risk” youth.

**Self-determination Theory and Student Choice**

Much of the literature on student choice is grounded in self-determination theory,
which seeks to understand the psychological factors and supporting social conditions that
enable people to lead self-motivated lives (Ryan & Deci, 2000). Self-determination
theory (SDT) begins with the assumption that human beings are naturally inquisitive and
inclined toward activity and engagement, though they are susceptible to passive behavior
(Ryan & Deci, 2000). SDT also assumes that social contexts are highly important in
either cultivating or undermining self-motivation. Specifically, social contexts that are
“responsive to basic psychological needs provide the appropriate developmental lattice
upon which an active, assimilative, and integrated nature can ascend (p. 76).” According
to Ryan and Deci (2000), in order to feel self-determined, three universal psychological
needs must be met: the need for competence, the need for relatedness, and the need for
autonomy.

Katz and Assor (2007) apply this theory of motivation to instructional choices in
classroom settings, and argue that choice is most motivating when it meets three criteria
for self-determination: autonomy, competence, and belonging. Specifically, choice is
most motivating when it is relevant to students’ interests and goals (autonomy support); when the choice is appropriately challenging and not too numerous (competence support), which is related to the notion of one’s “zone of proximal development” (Vygotsky, 1978); and when the choice aligns with students’ cultural values (relatedness support)(Katz & Assor, 2007, p. 431-435). According to Katz and Assor (2007), choices that support autonomy may take three forms: they may be procedural choices (e.g., choose the method of presentation of work), organizational choices (e.g., student selection of due dates or work groups), or cognitive choices (e.g., students pursue one of multiple pathways to a solution)(p. 437). Katz and Assor’s choice framework offers a helpful way to begin to think about the development of a typology of instructional choices and the ways in which they impact student engagement. Its strength is in its alignment to SDT and in its assertion that not all choice is necessarily useful or motivating, but that choice in learning must be designed purposefully to meet student needs. Its limitations lie in the fact that it is theoretical in nature, not yet grounded in practitioner research, and that, in its particular framing of choice, it might not fully accord with the complexity represented in SDT. Specifically, does offering choice that “relates to students’ cultural values” address the full intention of the “relatedness” dimension of SDT, which speaks to emotional connectedness and belonging? For example, another choice frame for the “relatedness” dimension of SDT might be: what is important is not so much the type of choices offered, but perhaps the sociocultural and emotional context in which the choices are offered. Do students feel safe and connected?
Is the teacher attending to the students’ emotional needs, not just in the curriculum, but in the classroom setting as well?

While the notion that student choice in learning helps to increase student interest and engagement is not new (Zuckerman, S. Eysenck, & H. Eysenck, 1978; Parker & Lepper, 1992), and closely aligns with the principles of personalized learning, a scan of scholarly literature on the relationships among student choice and motivation, academic growth, and student agency reveals that the research is both contradicting and in need of further development.

A range of studies have indeed affirmed the relationship between student choice and motivation; Patall, Cooper, and Robinson (2008) conducted a scan of over forty studies held between 1974 and 2004, and found a positive correlation between student choice and motivation, effort, task performance, learning, and preference for challenge. In a 2010 study, Patall, Cooper, and Wynn found that offering students a choice in their homework led to higher levels of interest, enjoyment, and academic performance among students. In a study conducted with primary-aged children, Cordova and Lepper (1996) also found a positive relationship between choice and engagement; specifically, students who were given choices, compared with a control group that was not, exhibited a preference for more difficult tasks, and higher relative engagement evidenced by a greater willingness to stay after class. Another study conducted among college students (Schraw, Flowerday, & Reisetter, 1998) found that providing students with the opportunity to select their own texts helped to increase “situational interest” in the texts, defined by Schraw, Flowerday, and Lehman (2001) as “the temporary interest that arises
spontaneously due to environmental factors such as task instructions or an engaging text (p. 211).” These studies collectively suggest that choice in learning positively correlates with student engagement.

However, a number of other studies suggest that the relationship between choice and motivation is much more complex; that it positively affects some measures but not others (Flowerday & Schraw, 2003; Schraw et al., 1998), that it has no observable impact on motivation (Parker & Lepper; 1992; Reeve, Nix, & Hamm, 2003), and that it in some cases has negative effects (Flowerday, Schraw, & Stevens, 2004).

The recent work of several researchers offers a more nuanced examination of choice in learning by suggesting that perhaps it is not the mere act of choosing that students find valuable, but the nature of the choices offered and, specifically, the perceived value of the options given to the students’ lives and individual goals (Katz & Assor, 2007). In a 2003 study, Katz and Assor demonstrate that other variables may achieve the same desired result of high levels of student motivation, even when no choice is offered. Specifically, the study found that the same level of intrinsic motivation was observed in students who were assigned without choice to classes that strongly connected to their interests as students who had the opportunity to choose their classes. Flowerday, Schraw, and Stevens came to a similar finding when they conducted a study examining the effect of choice, topic interest, and situational interest on reading engagement, attitude, and learning (2004). The study showed that choice and topic interest had no effect on performance, but that there was a strong relationship between performance and situational interest, such that students who produced the highest quality essays were those
who experienced high situational interest as part of the task, even though they did not choose their topic. In a study conducted by Reeve, Nix, and Hamm (2003), findings suggest that students’ sense of psychological freedom and volition was more significantly impacted by “action choices” (e.g., decisions about how to spend one’s time) than by “option choices” (e.g., decisions about which puzzle to solve).

Importantly, these studies problematize the notion that all choice is motivating for learners, or that all choice results in measurably higher learner engagement in classroom settings. These studies also provide a window into the importance of how choice is situated and contextualized in learning settings, suggesting that in a teacher’s choice design strategy, the nature of the choice offered and its relationship to students interests and goals should weigh heavily. Finally, these studies indicate that, if the goal is increased learner engagement, choice is not the only path. Specifically, instructional design should also account for the power and utility of creating situational interest for learners (Schraw et al., 2001), even when choice is not a part of the learning experience.

In the aggregate, the aforementioned studies offer constructive but limited insights into the complex relationship between student choice, student engagement, and student learning, while offering little insight into the role of choice in helping students develop the self-regulatory skills, strategies, and dispositions necessary for independent or self-directed learning.

**Self-Regulation as Foundational to Student Agency**

Self-regulation is an evolving concept that lies at the intersection of multiple fields of study, including neuroscience, psychology, and educational research. At the
Center on the Developing Child at Harvard University, which draws on research in both neuroscience and psychology, self-regulation is defined as a set of “core capabilities” that enable each of us to “draw upon the right skills at the right time, manage our responses to the world, and resist inappropriate responses (2016, p.5).” The core capabilities of self-regulation include the ability to plan, to focus, and to exhibit self-control, awareness, and flexibility (2016). According to neuroscience, what makes self-regulation possible is a set of three executive functioning skills that correspond to brain functions that develop in early childhood: inhibitory control, which is the ability to avoid impulsive behavior and direct one’s focus away from rapid response to threat and toward planning and impulse control; working memory, which involves the capacity to store and manipulate information in the short-term; and mental flexibility, which involves the ability to adapt when changes in priorities, perspectives or external demands occur (2016, p.3-6).

Research in neuroscience suggests that the gatekeeper of self-regulation is attention, the ability to direct attention purposefully, to monitor what is happening in real-time, and to exhibit personal and situational awareness (Posner & Rothbart, 1998; Petersen & Posner, 2012). Without this essential, ongoing metacognitive process, one is unable to engage in self-regulation. Also of great importance, The Center on the Developing Child affirms that although exposure to severe and frequent stress in early childhood can disrupt children’s ability to fully develop these executive functioning skills, there are evidence-based approaches that demonstrate that it is possible for adults to build these core capabilities and restore the foundations for self-regulation (2016). Citing multiple examples, the Center on the Developing Child identifies two key domains for designing
interventions: first, “environmental approaches” that ensure the supportive structures and streamlined processes are in place to avoid depleting an individual’s self-regulation skills, while also attending to basic needs when possible; and second, an “individual approach” that is asset-based (e.g., a coaching style rather than a punitive approach) and involves the integration of strategies (e.g., re-appraisal, mindfulness), tools, and techniques to build individuals’ core capabilities in the authentic contexts in which they are needed (p. 13-14). These intervention design principles and models, though intended for adults who have suffered from stress or trauma in their lives and who exhibit limited self-regulation skills, echo research grounded in positive youth development (PYD) theory that emphasizes the importance of strengths-based approaches that build competencies in the context of supportive, stable environments for children and adolescent youth (Pittman & Cahill, 1992).

In the education context, conceptions of why and how self-regulated learning occurs have evolved over the last several decades. Educational psychologists tend to share a common image of self-regulated learning as engaging “actively and constructively in a process of meaning generation and adapting one’s thoughts, feelings, and actions as needed to affect their learning and motivation (Boekaerts & Corno, 2005, p. 201).” Much of the literature distills the distinguishing characteristics of self-regulating learners into three features: goal-directed learning that is guided by metacognition; strategic action that involves planning, monitoring, and evaluating outcomes; and a mastery orientation reflected in students’ pursuit of cognitive challenge, sense of self-efficacy, and motivation to achieve learning goals (Zimmerman & Schunk, 2011).
According to Zimmerman (2000), although all learners may employ regulatory strategies or processes at various points in their learning, what distinguishes self-regulated learners from others is, first, the awareness that self-regulated learners possess of the relationships between regulatory processes and learning outcomes; and second, the purposeful use of self-regulation processes and strategies to achieve their individual academic goals.

Various models of self-regulation theory have emerged that attempt to describe learners’ process as they self-regulate, such as Zimmerman’s cyclical three-phase model that includes forethought, performance control, and self-reflection (Zimmerman, 2000); and Pintrich’s four-phase model, which involves planning, monitoring, control, and reflection (Pintrich, 2000). As Moos and Ringdal (2012) point out, these and other models are based on a range of assumptions about students, such as: student capacities for self-regulation (e.g., Can any student just launch into self-regulated learning?); students’ goal orientations (e.g, Do students arrive at school with the skills to define academic goals, and the motivation to achieve them? Do academic goals necessarily align to their existing values, beliefs, and perceptions of the utility of academic achievement to their future lives and plans?); students’ socio-cultural and socio-economic contexts (e.g., Does self-regulation “override” the challenges of trauma, stress, poverty, or threatening environments?); and students’ developmental needs and trajectories (e.g., Do we know what degree of self-regulation skills can be expected of students at different points along their learning pathways?). While these assumptions do not necessarily negate the value of integrating a model for self-regulation into the theoretical and conceptual framework for this study, they do represent important considerations for research design. For this study,
I adopt and adapt a four-part model put forth by Winne and colleagues that explicates self-regulating processes as: *understanding the task, goal-setting and planning how to reach the goals; metacognitive monitoring of learning, and enacting strategies* (Winne & Perry, 2000; Winne & Hadwin, 1998; Winne, 2001).

It is important to note that researchers across disciplines do not characterize self-regulation as a static trait or disposition, but rather as a dynamic set of skills and processes, feedback loops, self-monitoring techniques, and adaptation strategies. In essence, self-regulating individuals, whether in the context of learning, work, or family life, are constantly making conscious, purposeful choices about how they manage themselves and their responses to the world in relation to their goals. Offering a more nuanced conception of the motivational aspects of self-regulation in learning, Boekaerts argues that it is not only *academic goals* that drive self-regulation (Boekaerts, 1997; Boekaerts & Niemivierta, 2000). Specifically, Boekaerts argues that learners are constantly managing two sets of priorities: one set of priorities is around achieving growth goals, building skills, and expanding one’s resources; another set of priorities is around maintaining a sense of emotional well-being and safety within one’s environment (Boekaerts & Corno, 2005). In school contexts, these two sets of priorities can at times be in competition with one another, such as when students are faced with stressful social situations (e.g. bullying) or difficulties in learning; in these cases, studies have shown that students who lack strong self-regulation strategies, or who lack a strong sense of task value, will default to their “well-being goals” and priorities, and employ coping strategies that may divert resources away from academic effort (Boekaerts & Corno, 2005).
Boekaerts’ “dual processing” model of self-regulation echoes both self-determination theory (Ryan & Deci, 2000) and Maslow’s hierarchy of needs (Maslow, 1943; Maslow, 1954), emphasizing the importance of socio-cultural contexts and their mediating effects on learning. It also reiterates the importance of metacognition in self-regulation as the gateway to purposeful, real-time decision-making about goal prioritization and resource allocation, rather than reactive decision-making. For the purpose of this study, I adopt a widely held conceptualization of metacognition as involving two key components: “cognitive knowledge,” which includes knowledge about oneself as a learner and awareness of the factors that affect one’s cognition (Flavell, 1979), and “cognitive regulation,” the ability to monitor one’s own understanding and task performance relative to a specified goal (Cross & Paris, 1988; Paris & Winograd, 1990; Schraw, Crippen, & Hartley, 2006).

How do students come to internalize the metacognitive, behavioral, and motivational characteristics of self-regulated learners? Of particular importance to this study, numerous studies have shown that self-regulation can be developed in learners through a range of educational design decisions. In the table below, these design decisions are organized into four categories: curriculum design, instructional practice, classroom environment, and targeted interventions.

Not surprisingly, the curriculum design studies reiterate the importance of perceived task value for learners, and also underscore the importance of flexibility and open-endedness in learning experiences that create space for student collaboration, self-monitoring, and decision-making. Within the instructional practice domain, each of the
studies reviewed emphasize the critical importance of explicit teaching, modeling, and guided practice and application of self-regulation strategies and skills. In the studies that discuss the relationship between classroom environments and developing self-regulation, numerous intersections with the literature on student motivation, engagement, and self-determination theory emerge. Primary themes each connect back to the notion that all learners need ongoing support for competency, autonomy, and belonging: namely, the importance of supporting interest-driven learning; the importance of providing safe and respectful environments that value diversity of opinion; and the importance of nurturing a “mastery orientation” and providing clear expectations for learners (Ryan & Deci, 2000). Finally, several cognitive and behavior modification interventions also demonstrated efficacy in helping to foster self-regulation skills among learners, particularly those processing the impacts of stress or trauma on one’s sense of self-efficacy.

Table 2: Strategies for Fostering Self-regulation in Learning Contexts (Adapted from Pino-Pasternak, Basilio, & Whitebread, 2014)

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Studies</th>
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<tbody>
<tr>
<td>Curriculum design</td>
<td>• Tasks that are open-ended, problem-based, complex</td>
<td>(Cohen, 1994; Perry, 2013; Webb et al., 2013; Whitebread, 2010)</td>
</tr>
<tr>
<td></td>
<td>• Tasks that are meaningful and relevant to students</td>
<td></td>
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<td></td>
<td>• Tasks that foster play</td>
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<td></td>
<td>• Academic discourse instruction</td>
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<tr>
<td></td>
<td>• Scaffolding</td>
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<tr>
<td></td>
<td>• Metacognitive-prompting assessment</td>
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<tr>
<td></td>
<td>• Cognitive Apprenticeship</td>
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<tr>
<td></td>
<td>• Collaborative Learning</td>
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<tr>
<td>Classroom Environment</td>
<td>• Attending to student interests</td>
<td>(Jang, Reeve, &amp; Deci, 2010; Meyer &amp; Turner, 2002a; Perry, 2010)</td>
</tr>
<tr>
<td></td>
<td>• Promoting respect for diverse perspectives</td>
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Research across disciplines continues to affirm the potential of strengths-based interventions for building (or rebuilding) the “core capabilities” of self-regulation, including school-based interventions that involve curriculum, instruction, and classroom environment design decisions. These promising insights illuminate a unique opportunity to explore the development of a choice design methodology that aspires to support the development of self-regulation “core capabilities” among learners: task analysis, goal-setting and planning; strategy enactment; and metacognitive adaptation (Winne & Perry, 2000; Winne & Hadwin, 1998; Winne, 2001).

**Learning Design**

Choice in learning is ultimately an instructional design and learning facilitation decision. These are choices that teachers make everyday in classrooms. How much choice? For what purpose? One resource for exploring this question in a very practical, pedagogically-oriented way is that of Universal Design for Learning (UDL), a pedagogical framework that describes a range of instructional strategies aimed at ensuring equitable access to learning content and experiences for all learners. In UDL’s commitment to accommodate all learners, particularly those with cognitive, socio-emotional, or physical challenges, there is tremendous power for reshaping instructional design in ways that drastically improve access and equity in K-12 school models.
Developed over a ten-year period and grounded in the learning sciences, UDL puts forth a set of curriculum development principles, guidelines, and strategies organized into three domains: designing for multiple means of representation, designing for multiple means of engagement, and designing for multiple means of expression (Universal Design for Learning, 2016). Because of its emphasis on complete customization of the learning materials, experiences, and opportunities to demonstrate learning, many thought leaders in the field of K-12 education describe UDL as a guiding framework for true implementation of personalized learning (Bray & McClaskey, 2013).

Another important framework that relates to learning design is the Motivating Instructional Contexts Inventory (MICI), a student survey designed to gauge the perceptions that students have of their teachers’ instructional practices (Lam et al., 2014). MICI identifies six essential evidence-based practices for highly motivating classrooms: rigorous tasks, real-life significance in learning activities, the nurturing of student curiosity, the support for student autonomy, the recognition of student effort, and the provision of quality feedback to support student improvement (Lam et al., 2014). These six dimensions align closely with each of the three aspects of self-determination theory-competence, autonomy, and relatedness- previously described, as well as the three motivational support types- structure, autonomy, and involvement- described by Skinner and Belmont (1993) in their model of student motivation, also grounded in self-determination theory.

Of particular importance to instructional design, Expectancy-Value Theory is based on the notion that individuals are motivated to engage in tasks in which they expect
to succeed, and that as a result, individuals come to place greater value on the tasks and
activities for which they anticipate success (Toshalis & Nakkula, 2012). In K-12
education settings, Expectancy-Value Theory offers an important theoretical frame for
understanding the impact of expectations on students’ confidence, on their willingness to
participate in activities perceived as challenging, and on their ability to demonstrate
persistence when faced with difficulties (Wigfield & Eccles, 2002). Research shows that
students make careful calculations about the probability of their success prior to engaging
in new activities, and that, importantly, decisions are often made based on students’
considerations of their level of perceived competence (e.g., What are my chances of
succeeding if I attempt this task? Can I do it?) and support (e.g., Are there sufficient
resources that I can draw on to help me be successful?) (Eccles & Wigfield, 1995; Eccles,
Wigfield, Harold, & Blumenfeld, 1993). Expectancy-Value Theory also speaks to the
importance of the perceived value of the task, or the Subjective Task Value (STV).
Students are more likely to engage in tasks that they perceive as relevant and useful, and
less likely to engage in tasks that they do not perceive as relevant or useful (Eccles,
2005).

Expectancy-Value Theory intersects in striking ways with issues of race, class,
and gender. The work of Steel and Aronson (1995) and others illuminates the powerful
impact that “stereotype threat” has on individuals’ sense of competence, and on their
performance. Stereotype threat describes a situation in which an individual who is a
member of a social group to which a negative stereotype is attached, suffers from
performance anxiety out of concern that their own individual performance will reinforce
the negative stereotype (Aronson et al., 2009). Controlled experiments have demonstrated that individuals experiencing stereotype threat underperform their peers who do not experience stereotype threat (Steel & Aronson, 1995). Stereotype threat reveals the ways in which even one’s own sense of competence is socially mediated; according to SDT, social expectations have tremendous influence over one’s ability to be self-determined, and by extension, one’s ability to develop and sustain self-motivation.

In sum, each of the two essential components of Expectancy-Value Theory has implications for the study. First, curriculum design should promote students expectancy of success; and second, tasks chosen as part of curriculum design must connect to students’ lives and interests (Eccles, 2005). Building on this idea, Cooper (2014) argues that in order to optimize student engagement, teachers need to relate classroom content to students’ daily lives in the present, and ensure that content is either interesting or immediately useful in order to appeal to intrinsic motivation. As illustrated below, she purposefully contrasts present utility and future utility, as well as current life relevance and future career relevance, cautioning that an appeal to future utility or future relevance may undermine one’s efforts to help students sustain engagement in the short term (Cooper, 2014, p. 16)
A related and important body of work, studies conducted by Carol Dweck and her colleagues present possible ways in which educators might support students in positively adjusting their own expectations for success. Through shifting conceptions of intelligence from “fixed” to “malleable,” or expandable through effort, studies show that students are more likely to be more motivated to exert effort, attempt challenging academic assignments, and demonstrate persistence when confronted with challenges, setbacks, and even failure (Dweck, 1999; Grant & Dweck 2003; Mangels, Butterfield, Lamb, Good, & Dweck, 2006). Importantly, studies have shown that the teaching and reinforcing of malleable intelligence can serve as a critical classroom-based, social-psychological intervention for helping black youth overcome stereotype threat (Steele & Aronson, 1995). Given the demonstrated relationship between student expectations of success and their effort and willingness to engage in challenging tasks, both Expectancy-Value Theory and Dweck’s work on malleable intelligence offer important conceptual frames for this study.
Summary

This study’s conceptual framework integrates and builds upon existing literature across multiple domains, and offers a visual representation of the ways in which strategic choice design can positively influence the key research variables that impact student engagement and self-regulation skills. The framework is organized horizontally by Winne et al.’s four-part self-regulated learning (SRL) model, and vertically by the three dimensions of self-regulation widely adopted in the field of educational psychology (Zimmerman & Schunk, 2011). Put another way, the framework captures process along the X-axis, and practice of self-regulated learning along the Y-axis.

Figure 2: Cultivating Student Engagement and Self-regulation Through Strategic Choice Design

The content within the organizing structure draws extensively from the aforementioned bodies of research. In the first row, Motivational Choice Sets, choice possibilities are listed that are intended to optimize both student engagement and opportunities for supporting the development of self-regulation skills, strategies, and
experiential knowledge. This framework presents a range of choice opportunities that can be designed based on diverse learner needs and developmental trajectories, through teachers’ discretionary decisions about choice entry points for students.

The second row, *Strategic Action Supports*, defines the “structures” of competence-supports (Skinner & Belmont, 1993), or scaffolding opportunities, for teachers that will aid in the practice and internalization of self-regulated learning strategies and skills. The final row, *Metacognitive Prompts*, reinforces for teachers the importance of providing “attention” cues for students as they learn and practice self-regulation skills, which can serve to prompt student metacognitive experiences, while also generating opportunities for modeling, cognitive apprenticeship (Palincsar & Brown, 1984), providing feedback, or encouraging a growth mindset (Dweck 1999; Grant & Dweck 2003) and a mastery orientation (Zimmerman & Schunk, 2011).
CHAPTER 3: RESEARCH METHODOLOGY AND DESIGN

This study employs a mixed-methods approach to explore the factors that shape students' experiences with instructional choices, and the role of instructional choices on engagement and self-regulation skill development in classroom-based settings. Primary means of data collection include student and teacher surveys, student and teacher interviews, collaborative lesson planning sessions and lesson debriefs, student focus groups, and classroom observations. In addition, student-facing instructional materials, teacher planning materials, and student work were reviewed and analyzed throughout the study.

The rationale for the mix-method design of this study was twofold: to achieve a level of triangulation with data generated (Maxwell, 2013); and to achieve complementarity by examining different aspects of student and teacher perspectives on their classroom experiences as it relates to choice design and facilitation, described by Greene (2007) as a *dialectic stance* in which the data gathered by different methods produces multiple, divergent perspectives that enable more complex understanding of the phenomena. The study’s design creates significant discourse among the data in a multi-dimensional manner: not only are multiple and diverse sources of data collected, but the data are collected during multiple lesson design and implementation cycles throughout the study.

This study seeks to capture and elevate student voices and perspectives on their experiences with instructional choices, as well as on the broader contextual factors that impact their experience as learners at Aspiration High School. This study also explores
the teacher experience of instructional choice design, including their characterizations of choice and their perceptions of the value of student choices in their learning, as well as the ways in which their journey in choice design shapes, and is shaped by, the cultural norms, attitudes, practices, and expectations that characterize their work as classroom teachers at Aspiration High School. As previously mentioned, the research questions that guided this study were: What are the factors and conditions that shape students’ experiences with instructional choices in school? What types of student choices in learning help to positively influence student engagement and the development of self-regulation skills among urban high school youth?

In this chapter, I describe site and participant selection, data collection methods, processes employed for data analysis, and important validity and ethical considerations.

**Site and Participant Selection**

The research was conducted at Aspiration High School, a public urban high school located in the Mid-Atlantic Region. The school currently has enrolled approximately 550 students; 82% of its students identify as African-American, 8% as Latinx, and 6% as Asian. Ninety-nine percent of students at Aspiration High School receive free lunch, qualifying for the National School Lunch Program as a result of below-poverty line family income levels. Aspiration High School is a special admissions high school, with the following academic, behavior, and attendance admissions criteria:

**Table 3: Aspiration High School Admission Criteria**

<table>
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<tr>
<th>Aspiration High School Admissions Criteria</th>
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<tr>
<td>1. All A’s and/or B’s and no more than (1) C.</td>
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<tr>
<td>2. Average or above standardized Test Scores</td>
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Aspiration High School has recently initiated a major academic program redesign, establishing a new program that enables high school students to earn an Associates Degree in their final two years at Aspiration High School. In my capacity as a curriculum design specialist, I was engaged by the school’s leadership team to support faculty in revising the ninth and tenth grade curriculum in ways that increased student engagement, academic rigor, and scaffolding to prepare learners for college-level coursework.

This study primarily focuses on my engagement with two Aspiration High School teachers, Mr. Harrison and Ms. Oliver, both white, twenty-something, second-year teachers who recently completed teacher education programs in local universities. Both Mr. Harrison and Ms. Oliver volunteered to participate in this study upon invitation. Fifteen other Aspiration High School faculty members participated by completing a teacher questionnaire about perceptions of and approaches to instructional choice design. Additionally, over one-hundred students were engaged in this study through one or more surveys, classroom observations, student work review, or brief oral check-ins; a group of approximately thirty students, representing all four grade levels, were focal participants in this study, and participated in pre and/or post interviews and focus groups during the study. These focal student participants either volunteered to participate upon invitation after my brief presentation of the study and its purpose, or were selected and specifically invited to participate in one or more optional interviews as a result of their responses to
the initial student questionnaire, which asked students to respond to a range of questions related to engagement, self-regulation, and experiences with instructional choices at Aspiration High School.

The teacher and student participant selection strategy employed was intended to create “purposeful sampling” of comparative experiences (Maxwell, 2013, pp. 96-98) and to help generate diverse and nuanced data for the study.

**Data Collection Methods**

This study involved a number of different data collection methods, including teacher and student surveys, classroom observations and field note collection, student interviews, student focus groups, teacher interviews, and ongoing artifact review, including student work samples. Secondary data sources include archival data and researcher memos.

Data collection took place in multiple phases: the first phase included classroom observations, principal and teacher interviews, a school-wide teacher and student questionnaire, student interviews and student focus groups. The second phase of data collection coincided with three collaborative lesson design cycles. Each cycle involved a meeting with each teacher participant to co-plan a lesson; classroom observation during lesson implementation; lesson debrief with each participating teacher; informal student interviews (also referred to as short “check-ins”), and student work review. The third stage of data collection took place after all collaborative lesson design cycles were complete, and involved a final interview with the teacher, final student interviews, and a final student focus group. Each of the data collection methods involved is discussed in
further detail below, followed by a more detailed discussion of the study’s sequencing strategy.

**Student and Teacher Surveys**

A student survey was administered to gain broad insight among students at Aspiration High School about their perceptions of their own levels of engagement in school, their experiences and perspectives on choice in learning, and their self-reported ability to implement self-regulation strategies and practices. The survey was designed and administered using Google Forms. The survey asked for ratings to a series of prompts (e.g., 4 = *strongly agree*, 3 = *agree*, 2 = *disagree*, 1 = *strongly disagree*) and provided space for an open-ended qualitative commentary (Miles, Huberman, & Saldaña, 2014). In addition, several demographic data questions were used to identify any important trends among student demographic groups.

Other student surveys were administered after each lesson, administered either in print or digital form. These surveys were used to gauge the perceptions of participating students of their experience with the choice set provided, and its effect on engagement overall, as well as on the dimension of self-regulation (i.e., task appraisal, goal-setting and planning, metacognitive monitoring, strategy enactment) that is relevant to the choice design.

The teacher survey was used to generate insights among the faculty about perceptions of choice in learning, barriers to choice in learning, and student readiness for various types of choices in learning. The 10-question teacher survey was administered by e-mail, and was designed using Google Forms. The survey asked for ratings to a series of
prompts (e.g., 4 = strongly agree, 3 = agree, 2 = disagree, 1 = strongly disagree) and provide space for an open-ended qualitative commentary (Miles et al., 2014, p. 45).

Teacher Interviews and Collaborative Design Sessions

Teacher interviews took place in all three stages of data collection. One long interview took place during the first stage of the study to gain background knowledge and insights on the participating teachers’ approach to and perspectives on choice design, as well as goals, questions, or areas of interest related to our collaborative engagement. The initial interviews with participating teachers were approximately 60 minutes in length. In stage two of the study, three collaborative design sessions and three teacher interviews took place with each teacher. Collaborative design sessions were approximately 45-60 minutes in length, and involved identification of learning goals, discussion of possible choice opportunities, planning of activities and learning resources, and development of a lesson plan outline for the upcoming lesson. After the implementation of each lesson, a 30-minute post-lesson “debrief” interview took place that provided an opportunity to reflect on the lesson. The lesson debrief followed a four-question protocol: What worked well for students today about the lesson? What do you think didn’t work well for students today about the lesson? What stood out to you about the lesson implementation or the student experience, based on your observations? What insight/s can we glean from this experience to help us inform our next lesson design?

In the final stage of the study, one final interview took place with each participating teacher. The end-of-study interview assumed a more reflective tone, giving
the teacher the opportunity to openly discuss her or his experience over the full engagement, key lessons learned, key challenges, and insights to inform future work.

Teacher interviews took place both in person and by phone at times convenient for the participating teachers. I was careful to ensure my questions and contributions to the discussion reflected a non-evaluative tone (Ravitch & Carl, 2016, p. 148), as it was important to create a safe space for learning and reflection for the teacher. Teacher interviews were audio-recorded and transcribed verbatim.

**Student Interviews and Check-ins**

Qualitative interviews with students at Aspiration High School served as one of the most important methods for gaining direct insight into students’ ideas, values, perceptions, and experiences related to choices in learning, as well as for gaining insight into the broader contextual factors that influence students’ experiences as learners at Aspiration High School. Fourteen student interviews took place over the course of the study and ranged from 20-30 minutes in length. Four of the fourteen interviews took place in a group format. Although this was not a part of the original research design, students expressed a preference for being interviewed together. The remaining ten interviews took place as individual interviews. Interviews followed a semi-structured question protocol to allow for a conversational approach to the interview (Ravitch & Carl, 2016, p. 154). Questions that emerged during early interviews, as well as observational data and teacher and student survey data, shape the questions of subsequent interviews that took place later in the study. During all student interviews, students were
asked to provide specific examples to help elaborate upon and contextualize their responses to questions. All interviews were audio-recorded with expressed permission, and transcribed verbatim.

In addition to the formal student interviews, informal 1-2 minute “check-ins” took place during classroom observations to gain real-time insights from students as they engaged in the lesson or lesson reflection. Student check-ins involved open-ended questions or prompts, such as, *What are you working on?*, and, *Tell me about the choice you made*, and, *How are you feeling about this activity you’re working on?* Jottings were gathered in between student check-ins to capture the essence of student responses.

**Classroom Observations and Fieldnotes**

Classroom observations and fieldnote collection served as an important data source for the study, enabling me to generate rich contextual information and insight on teacher and student dynamics, on the contexts of choice-based lesson implementations, on observable indicators of student engagement in self-regulated learning skills and strategies, and on teacher and student responses in real time (Toshalis & Nakkula, 2012). Classroom observations and fieldnote collection took place throughout each stage of the study. Approximately six hours of classroom observations took place at the beginning of the study in the classrooms of eight different teachers at Aspiration High School in order to help me gain a sense of the student experience and overall school climate. I conducted multiple extended classroom observations of the two teachers who participated in the study prior to the beginning of our collaboration. Finally, classroom observations and fieldnote collection took place during the implementation of each of the three
collaboratively designed choice-based lessons for both participating teachers. The classroom observations enable triangulation of the data gathered by other methods, such as interviews, focus groups, and student work review, among others (Maxwell, 2013). Classroom observations ranged in length between 20-90 minutes. During and after classroom observations, fieldnotes were collected, or jottings were converted to fieldnotes (Emerson, Fretz, & Shaw, 2011, p. 34-39). Jottings and fieldnotes ranged in type and related purpose: descriptive jottings and fieldnotes were taken in order to capture important details about the setting and observable acts taking place among teachers and students. I attempted to use neutral language for descriptive notes to help me recall the setting and interactions, though I recognize that neutrality is impossible, and that I was constantly applying an interpretative lens to my observations. Inferential jottings and fieldnotes were gathered during my observations for the purpose of capturing my interpretations of the specific observations I was making in real time. Finally, evaluative jottings and fieldnotes, which are those that involve making inferences and judgments about the nature and behavioral drivers of events observed (Ravitch & Carl, 2016, p. 162) were also gathered, and provided helpful prompts for analytic research memos written after observations to identify and begin exploring directional possibilities for my analysis and findings (Emerson et al., 2011).

**Document and Archival Data Review**

Document and archival data review provided important insight into a range of relevant aspects of learning and instructional practice at Aspiration High School. Such artifacts as the school’s website, mission statement, student handbook, and annual
A research journal was kept to document observations, jottings, formal journal entries, reflections, personal reactions, concerns, and insights related to emerging themes, captured throughout the course of the study (Emerson et al., 2011; Miles et al., 2014). “Code memos” were also created during the data analysis process after open coding (Emerson et al., 2011, p. 185), which is further detailed below in the data analysis section.
Sequencing of Methods

Data collection methods were organized into three stages, as illustrated above. The school-wide student and teacher survey, document review, and initial classroom observations provided important contextual information about current student and teacher experiences with and perspectives on engagement, student choice in learning, and student self-regulation. Stage one teacher and student interviews provided the opportunity to establish a qualitative baseline of understanding on teacher and student experiences and perceptions relevant to the inquiry. The initial teacher interviews, specifically, were aimed at understanding teachers’ goals and plans for the engagement, as well as discussing their curricular and instructional approaches and how they relate to student engagement and self-regulation. The interview was also an opportunity to discuss the conceptual framework for planning the collaborative design work. The second data collection stage involved multiple iterations of the design cycle, which involved collaborative choice design with the teacher, the implementation of the choice set
(Choice Set and Response Event) with classroom observation and student interviews, and follow-up student feedback surveys and teacher debrief interviews. Stage three of the study involved teacher and student interviews to gain reflective, post-cycle perspectives on the experience, insights gained, and key learnings. During all stages, research journal entries and memos were created as further data collection.

As briefly described above, the primary sequencing strategy employed in this study was aimed at supporting an iterative design, implementation, and reflection cycle through which I was able to provide targeted design and coaching support, while simultaneously supporting, and analyzing, teachers’ design choices and real-time responses to observations of their students. Throughout each design cycle, I also had the opportunity to study students’ observed responses to teachers’ instructional interventions, as well as their expressed perspectives on these experiences and instructional dynamics. As is true of qualitative studies, this research study was emergent by design, allowing ongoing analysis of data to inform key aspects of the study as it progressed.

**Data Analysis**

Data analysis was formative, taking place throughout each stage to shape subsequent lesson design cycles and interview protocols. The school-wide student and teacher data survey was analyzed upon collection, and a brief research memo was written to synthesize key survey findings, as well as to identify students who self-reported low engagement or low self-regulation skills. Initial classroom observations and teacher interviews helped establish a baseline for participating teachers’ perspectives and depth of knowledge on curriculum design generally, and choice design specifically. During the
second stage of the study, data analysis followed each design cycle, including a review and analysis of the collaborative design process with teachers, and all choice event-related data (classroom observations, student interviews, student feedback surveys, teacher post-lesson interviews). Stage two data analysis involved a close reading and open coding of all transcripts, field notes, and student work samples. Open coding enabled me to begin to identify and develop emergent concepts and “analytic insights and categories” from among the data (Emerson et al., 2011, p. 175). I employed descriptive, process, and value coding during initial reviews of data, looking beyond pre-existing codes embedded in the classroom observation protocol.

Descriptive coding was useful in identifying contextual factors of importance such as time management, classroom configurations, and student grouping strategies employed; process coding was helpful for conveying instructional and time allocations during classroom observations, as well as for notating where teachers prioritize their supports and with which students high “involvement” is observed (Skinner & Belmont, 1993); and value coding was useful for identifying patterns among students and teachers in their perspectives on motivation, engagement, and use of explicitly taught self-regulation strategies (Miles et al., 2014). After open coding, a formal code memo was produced to bring definition and clarity to the particular insights and categories generated during the coding process (Emerson et al., 2011, p. 173). Next, I identified themes that emerge from the data, and engaged in additional line-item analysis of selected notes through focused coding, in order to build out analytical themes and identify subthemes (Emerson et al., 2011, p. 191). During subsequent readings of data, I scrutinized my
codes by purposefully looking for alternative explanations or disconfirming evidence. This data analysis process was recursive, following each design cycle in stage two. In stage three, I analyzed final teacher and student interviews using the same coding method described above. Afterward, I engaged in a global review of the data, applying strategies to make connections across design cycles, and looking holistically at the data to identify overall trends before crafting a formal synthesis of findings. All throughout this process, I engaged in reflective writing through analytical memos to document my thinking, emerging questions, and processes (Maxwell, 2013; Ravitch & Carl, 2016).

**Validity**

Throughout the study, I employed several key strategies to mitigate the threats of researcher bias and reactivity to the validity of my study (Maxwell, 2013). Specifically, I integrated validity strategies of methodological triangulation, participant validation, thick description, and reflexivity processes to optimize the qualitative rigor and reliability of my study (Toma, 2006).

Methodological triangulation involves examining multiple data sources to analyze the degree to which data are consistent across different methods (Denzin, 2009). I employed triangulation throughout the study. For example, after gathering student survey data and identifying students who self-reported as struggling with self-regulation skills or strategies, I conducted short interviews with students in which I invited them to provide more details or examples that served to validate or disconfirm the survey responses and generate deeper, more contextualized insights. Another example of methodological
triangulation involved conducting faculty-wide classroom observations to generate additional reference data to help me understand the faculty survey data.

Participant validation also took place throughout the study, with both students and teachers, to help strengthen the credibility of the study (Maxwell, 2013). For example, during lesson debriefs with teachers, and during focus groups with students, I shared several emerging themes and interpretations of the data generated thus far, and ask for them to share their perspectives, and whether the themes or interpretations I presented aligned with their own views or ideas. Participant perspectives were then captured as additional confirming or disconfirming data that informed subsequent analysis.

Thick descriptions are another validity strategy that I employed during the study, specifically during field note collection. Thick description refers to the purposeful use of specific, accurate language in describing the setting and participants of the study, intended to provide sufficiently detailed contextual information that readers are able to visualize the setting, understand processes employed, and transfer findings to new contexts (Ravitch & Carl, 2016).

Reflexivity processes involve examining one’s own participation and critically analyzing the ways in which one’s biases may shape data collection or interpretation (Ravitch & Carl, 2016). During data analysis, I engaged in structured reflexivity processes with colleagues through collective analysis and discussion of data excerpts, creating the opportunity to gain external insights on the data, and raise questions about my interpretations of the data and possible biases with trusted, critical friends.
Researcher Role and Positionality

As a former classroom teacher and current educational designer/consultant who is deeply engaged in curriculum and school model design, learning design and facilitation, and the study of exemplar models nationally, I have strong opinions about what rigorous, engaging, and high-quality teaching and learning looks like. I also have quite particular views on the roles and responsibilities of teachers in creating supportive, culturally responsive learning environments for young learners. I recognize the limitations in my own understanding of the ways in which my race, social class, institutional affiliations, age, and gender surely impact my interactions with Aspiration High School’s faculty and students. Am I too young or inexperienced to be coaching or advising veteran teachers? Am I too removed from the classroom to understand “kids these days?” Am I too insulated by my white privilege to even detect the complex, racialized power dynamics that exist between a predominantly African-American student body and a majority white faculty? How have my own implicit biases come into play?

I recognize that my own experiences, views, and biases will inevitably shape my interpretations of teacher practice, teacher mindsets, and student experiences, and that there is no legitimate way to separate my positionality and my interpretation of the data gathered in this study (Ravitch & Carl, 2016). It is my hope that, through mindful engagement, ongoing reflection, and careful execution of the aforementioned validity strategies, I can produce relevant and important insights that honor the experiences and voices of the youth and adult learners involved in this study.
Ethical Considerations

In compliance with federal regulations and Institutional Review Board (IRB), all proper permissions were obtained for the study. All participants were informed that the study was voluntary, and that there were no consequences for either not participating in the study, not responding to a question, or for exiting the study at any time. I obtained all verbal and written consents necessary for conducting observations, interviews and focus groups.
CHAPTER 4: CULTURAL AND STRUCTURAL BARRIERS TO CHOICE

My investigation of student and teacher experiences with, and perceptions of, choice design in learning at Aspiration High School began with an examination of the broader cultural context that surrounds teaching and learning within the school community. In the following sections, I argue that the learning environment at Aspiration High School, both structurally and culturally, is one not currently conducive to choice designs that are intended to foster engagement and self-regulation skills, as it reflects the Industrial era-inspired principles of control, compliance and standardization (Software & Information Industry Association, 2010; Robinson, 2010).

A Dominant Culture of Control and Compliance

In this section, I contextualize this study on instructional choice design by examining the cultural and structural settings of Aspiration High School, drawing on observations, student and teacher survey data, interview and focus group data, and document review. Because of the significance of social and cultural factors in shaping students’ experiences in schools, their sense of belonging, and their levels of engagement (Nieto, 1999; Phelan et al., 1998; Connell & Wellborn, 1991; Deci & Ryan, 1985; Eccles et al., 1998; Juvonen & Wentzel, 1996; Resnick et al., 1997; Weiner, 1990), it is paramount that an investigation of experiences and perceptions of choice in learning begin with a more holistic view of the cultural context in which the study is situated, including the norms, practices, and expectations that characterize the learning community at Aspiration High School.
The dominant cultural and structural orientation at Aspiration High School is one of control and compliance, which is apparent in a range of Aspiration High School’s learning system features, including: classroom settings and instructional modalities, grading policies, and curriculum. In the following sections, I draw on qualitative data gathered over the course of this study to detail the ways in which these various cultural and structural factors reinforce a culture of compliance and control at Aspiration High School.

*Classroom Settings and Instructional Modalities*

Much is revealed about the underlying values, norms, and expectations of a classroom by examining the arrangement of furniture, equipment, visual aids, materials, and instructional modalities employed (Curtis & Carter, 2003; Gandini, 1998). During my initial observations of eight different classrooms at Aspiration High School, which were randomly selected, I took note of classroom layouts, teacher and student interactions, and instructional modalities employed. In the majority of classrooms observed (75%), desks were arranged in rows facing toward the front of the room, suggesting a teacher-directed classroom environment and an emphasis on individual work. In two of the classrooms, desks were arranged in pods that grouped students in tetrads.

Instructional modalities observed during initial classroom presentations are shown in Table 4. In four of the eight classes, teachers lectured to the whole class while students engaged in note-taking; in two classes, students were completing an individual assessment silently; in one class, the teacher was facilitating a whole-group reading and
interactive discussion of literature; and in the final class I observed, students were working in groups completing a digital worksheet, while the teacher sat at her desk.

**Table 4: Initial Classroom Observations of Instructional Modalities**

<table>
<thead>
<tr>
<th>Instructional Modalities</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture and note-taking</td>
<td>4</td>
</tr>
<tr>
<td>Testing</td>
<td>2</td>
</tr>
<tr>
<td>Whole-group reading and discussion</td>
<td>1</td>
</tr>
<tr>
<td>Student group work</td>
<td>1</td>
</tr>
</tbody>
</table>

The following field note captures my observations in one of the four classes that involved lecture and student note-taking:

*Just observed Mr. Graham teaching Geometry. The class period, which is over an hour and a half long, was structured as a lecture followed by a pop quiz. Topic: congruent and supplementary angles. As I walk into the classroom, he pauses his lecture, approaches me and says, “Remember how I told you they don’t know anything? This kid wrote ‘NAME, 12/21/17’ on his paper, instead of his actual name. You see that?” He shows me the paper in his hand, with a look of annoyance on his face. This is all within earshot of the entire class. The kids were silent, well-behaved, taking notes as he lectured, projecting images of angles and walking through sample problems. He occasionally asked a question to the class – all basic recall questions – but otherwise the room was totally void of student voices. The classroom was full, over 30 students present. It felt crowded, with tight, straight rows of desks reaching to the back of the room. ‘If you can’t remember anything else, just remember this…” His language and framing, notably deficit-based. Focus was on performing well on the quiz, not on the learning itself. (Fieldnotes, 12/21/17)*

The nonchalant way in which Mr. Graham stated, in front of the students about whom he was speaking, “they don’t know anything,” revealed an overt deficit-orientation toward students (Gorski, 2011) that emerged in my interactions with other teachers. In a follow-up department meeting with Mr. Graham and his colleagues, teachers expressed
concerns about students' ability to think at high levels or to transfer learning to novel contexts; there was no consideration given to how the learning environment or instructional model might undermine students’ abilities to retain or transfer knowledge; instead, the emphasis was on students’ limited capacity to manage the work and achieve at high levels (Fieldnotes, 12/21/17). In an initial interview with Mr. Harrison, one of two primary teacher-participants of the study, I asked him to share his perceptions of the causes of low engagement that he observed among some students in his classroom. He responded by illuminating the dominant perspectives of his colleagues, echoing the expressly deficit orientation exhibited by Mr. Graham:

My colleagues will just sort of tell me, “Oh, they’re just lazy,” or, “they don’t care.” I’m like, “Well, I feel like there might be more than just that.” Sometimes if people assume, “oh, they’re just being lazy, they don’t care. If breathing was involuntary, they wouldn’t breathe.” Sometimes, when you have your colleagues giving you that perspective, you’re kind of like, “Well, yeah, that’s part of it,” but then, there’s another part where it could be something else coming on. It could be it doesn’t really reach them. They can’t relate…But, your question was what’s my perception on why they may not be participating. Maybe education is not valued to them on a personal level. A lot of it, I remember having a conversation with my students, and I remember them asking, “Mr. Harrison, when you were in high school, did you ever think about dropping out?” I was like, “Oh, growing up, that wasn’t really an option. It was really frowned upon by anyone where I was from, to drop out.” They were like, “Oh, people drop out left and right where we come from,” like, that’s big. That’s normal for them. So, if education is not valued or is not the norm for them, then they might not see the value of it. I mean, but those are just anecdotal.” (Interview, 1/10/18)

Mr. Harrison, who is new to the teaching profession, seems to resist his colleagues’ perceptions that the conclusive cause for low engagement among students is laziness; he offers the possibility that maybe “it doesn’t really reach them” or “they can’t relate,” but then goes on to hypothesize that low engagement among students in school is caused by students, and their communities, not valuing education, revealing a perspective
not unlike his colleagues who describe the cause of low engagement as, “they just don’t care (Interview, 1/10/18).” Mr. Harrison and his colleagues appear to be attributing low engagement to what they perceive as cultural deficiencies of students and their families (Duncan-Andrade & Morrell, 2008).

In an initial interview with the principal, new to her post at Aspiration High School, I was presented with a very different narrative on the possible causes for low engagement among learners. The principal informed me that the dominant instructional modality employed in classrooms at Aspiration High School was lecture and note taking, and that this was one of the reasons for seeking external support for redesigning the curriculum. “I go into classrooms, and it’s just – it’s boring, honestly. Kids are not engaged. The curriculum needs to be engaging, needs to support critical thinking, get them ready for college. Right now, they’re just sitting there taking notes (Interview, 8/21/17).”

Classrooms dominated by teacher lecture and student note-taking are characteristic of schools with high-compliance cultural orientations, and are illustrative of what educator and philosopher Paulo Freire referred to as the “banking concept” of education, in which teachers “deposit” knowledge that is passively received by students (Freire, 2000). The merits of this instructional approach have been conclusively disproved by contemporary learning theory (Bransford, Brown, & Cocking, 1999), and further, a growing body of evidence suggests that such high-control learning environments serve to reinforce class-based skills and behaviors that create “worker-learners” who defer to authority and withhold their opinions (Golann, 2015).
**Student Experience: What School “Feels Like”**

The control and compliance culture at Aspiration High School is also reflected in the ways in which students describe their own experiences at Aspiration High School. On the initial student survey, students were asked to respond to the open-ended prompt, “School feels like…”. Table 5 presents the results of my open coding and analysis of themes and sub-themes that emerged among student responses. Note that themes and sub-themes are represented in the first column, total number of references is represented in the second column, and the total number of respondents and total percentage of respondents who made references to each sub-theme are noted in the two columns to the right.

*Table 5: Student Responses to "School feels like..."*

<table>
<thead>
<tr>
<th></th>
<th># References</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Category 1: Negative associations</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1 Entrapment</td>
<td>37</td>
<td>83</td>
</tr>
<tr>
<td>1.2 Stress</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>1.3 Uncomfortable</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>1.4 Boring or not fun</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>1.5 Compliance</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>1.6 Repetitive</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>1.7 Unsafe</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>1.8 Other (i.e., crazy, crap, waste, depressing)</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td><strong>Category 2: Positive associations</strong></td>
<td>22</td>
<td>16</td>
</tr>
<tr>
<td>2.1 Learning</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>2.2 Challenging</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>2.3 Safe</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>2.4 Fun or exciting</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>2.5 Engaging</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2.6 Other (i.e., good lunches, home, great place)</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>Category 3: Neutral associations</strong></td>
<td>8</td>
<td>8</td>
</tr>
</tbody>
</table>
83 of 107 student responses (78% of total responses) were distinctly negative, such as by describing school as “prison,” stressful, boring, repetitive, unsafe, or “a terrible place to be;” 16 of 107 student responses (15% of total responses) were generally positive, such as by describing school as “a place where you learn and eat good lunches,” or “a place where I can have fun and learn;” and 8 of 107 of student responses (7% of total responses) were neutral, such as “It feels OK,” or “a college” or “It feels like a normal school, I just wish students were nicer.” More than one in three students (35% of total responses) responded with an explicit reference to entrapment, describing school as feeling like: prison, jail, hell, torture, trapped, or restricting. One student described school as a “memory game” (coded as compliance), explaining: “We need to memorize things in time to pass rather than learn what you are being taught.”

The theme of compliance and “learning just to pass the test” emerged repeatedly in focus groups and student interviews. Students called out the distinctions between learning and memorizing explicitly. Alyssa, a ninth grade student, explained:

Some classes you actually go there and like learn and some you just go there to pass, like, you understand what I'm saying? Like there's a difference between learning and memorizing. We come to school to learn but like in some classes, I feel like I just come to pass 'cause we're not really learning it learning it.” [In] some classes, it's not really about if you learn, it's about if you pass or not. Like, if you got a good grade on it, that's all that matters, but you can get a good grade on something and not really understand it is what I'm trying to say. (Group Interview, 1/30/2018)

When students were asked how they are able to differentiate between classes in which learning was emphasized versus classes in which grades were emphasized, they made explicit references to the language and framing used by teachers to discuss the
relative importance of assignments, learning, and grades, indicating that teachers played a central role in shaping the culture at Aspiration High School:

Some teachers say, ‘I don't care about your grade. I care about what you actually learned out of the class.’

Like, a teacher will be like, finish this packet by the end of the week and like, you'll get an A. But they won't act like, did you understand what you did is what I'm trying to say.

That's what I was saying, that's the difference between learning an understanding. If a teacher come right after class, I'm saying, I don't care about your grades. I just want to now if you understand so you take what you throw out your whole life, you know that teacher has you for the rest of the year. She just says the test does not determine what kind of person you are, how well you learn. That's telling you that this teacher only care about themselves. They come off saying they don't care. And the whole point about learning is not ... and if the teacher come out saying, oh, you need to get this in, you need to get this in, your grades might get messed up. You might fail...(Group Interview, 1/30/2018)

Furthering the theme of compliance, students expressed frustration about the degree to which the school’s curriculum lacked relevance to their individual interests and career aspirations. In essence, many students feel they have to endure an irrelevant or “boring” curriculum because of the need to perform well on tests and earn good grades:

It's like I feel as though preparing me for what I want to be in life is like, I'm not satisfied. I feel like they could do more. I feel like they teaching me, but I'm learning when I come to school, but it's like I'm learning just to pass the test that you're going to give me next week. I'm not learning so that it's stuck in my head for the future for when I get older.

I feel like a lot of stuff that we do, not really helping you for what you want. Like...we basically doing everything just to pass the next test. And then certain stuff will be so overwhelming that you just, once she teaches it, you're not really sticking onto the information, you're just learning right now. So the next test, or the next worksheet that comes, you pass that, rather than hearing something that will stick with you for good. Because that's how they really judge you. It's basically if you don't pass this test, you're looked at as if you're not that smart. It's how, not just in this school, I just feel like overall people look at tests as measuring your knowledge.
I just don't think that's right, because some kids want to learn other things that might actually help their future. Like some kids want to go into psychology when this gets over, because he does psychology, and they want to become a psychologist when they grow up, but they won't give it to him. Instead, they give him some really dumb class. Like I have genetics right now, that's basically biology all over again, and I already passed all my biology tests in the class. There's no point in me being in that class, it doesn't help me whatsoever.

Everybody's like we just want a change. To do something that they like. If we have a chance to do something that we like, we're going to do it. If we having boring topics that we don't like to do, we're going to push it off, push it off, push it off. We don't want to do it. . (Group Interview, 1/15/2018)

In one particularly memorable student focus group, students echoed the prison analogy that emerged in the student survey, with one student providing insight into how she believed the culture of compliance was conditioning students to be passive learners who were unable to make decisions in their learning. In response to a question whether students, on average, were prepared to choose their own topic for a project, one student replied: “We’re so trained to have people pick for us that it’s like, ‘What?’ It’s general, it’s a general question, so you could choose anything. I feel like a lot of people stumble over it, because it’s like, ‘I don’t know what to do.’” When I pursued the line of thinking by asking, “You used an interesting word. You’re ‘trained’ to be a certain way at school. What are you trained to be like?” Four different students responded by saying:

A solder.

An inmate. We got numbers that identify us.

I think school...My dad was talking about it. It’s like, the school district builds schools as prisons, because there’s no identification. Like, my name is Lia Griffin. No, I’m going by 0296252...and I feel like kids are more than numbers, and that’s why this generation is just so crazy, because no one is getting the respect they deserve, and I think that’s wrong. I ain’t no number.
Well, yeah. I feel like kids…it’s like the military…you don’t have no say in that. When you come in here, people don’t wanna be in school. I feel like school is a place where you should wanna come. You should wanna learn new things. You should wanna be able to interact with others, but it’s not like that. When I go to school, I be like, ‘Oh, God.’ The only thing I come to school for is friends. Other than that, it’s like, ‘Oh my God, to do this again.’ Mostly, education today is repetitive. You don’t do the same thing over and over and over again. It gets boring, and you don’t wanna do it. (Group Interview, 3/1/2018)

Lia and her peers feel that they are being treated inhumanely at school, as numbers in a system or inmates within a prison, with little “say” in their experience, echoing student responses to the aforementioned questionnaire. In another focus group, students were asked to share about their typical experience in class at Aspiration High School.

Sydney  Let's talk about in your typical experience here in classes. On average, how much choice do you get in what you learn about?
Alyssa: Not a lot.
Jalen: No choice at all.
Sarah: This class is like, the only class we really get treated-
Deon: Every other one is like you do this or you fail.
Kenya: Like in astronomy, we get choices sometimes, but all the other classes is like no.
Rose: And English. She gives us choices sometimes.
Jalen: But then sometimes they’re just like no, you’re a student. I’m a teacher. You do what I say.
Sydney So in the classes where you have choice, what kind of choices do you get to have?
Sarah: Like, our astronomy teacher, she said like you can do a project or-
Jalen: You could take a test, a project or like a packet or something like that.
Sarah: Or like yeah, she give us the choice to do project or notes so we did a project.
Jalen: Like on a test for astronomy, we get to choose what answers, not answers, what kind of questions we get.
Jalen: Yeah, and we get to choose the questions we want her to grade.
Sydney Are there any classes in which you get to actually choose the topic of what you're studying?
Deon: No
Sarah: No.
Alyssa: No.
Jalen: This ain't that kind of school.
Kenya: Yeah, well the only time, it was in Mr. McCallister's class, when we had to choose what type of project we wanted to do, like, depending on what subject we wanted to do it.
Deon: Yeah, but it was all under one topic though, Rome.
Kenya: Mm-hmm (affirmative)- yeah. But I mean-
Kenya: That was the only time you could actually choose what you wanted to research about.
Kenya: Yeah, but some people ... but if you waited to go last, you didn't really have a choice.
Jalen: It's like a loophole. They found a loophole in the whole choice thing. It's like, oh, you have to do these assignments under this topic or it has to be a certain amount of things.
Deon: It's a false hope. (Group Interview, 1/16/2018)

Many of the choice types described by students are reflective of the compliance-oriented culture at Aspiration High School, such as the choice of “what kind of questions we get” on a test, or “the questions we want her to grade.” When asked whether students get to choose the topics of study in their classes, all students replied in the negative, with one student saying, “This ain’t that kind of school.” Interestingly, students raise nuanced insights about choice parameters, such as the reference to choosing a topic “all under one topic, Rome,” or the example given of students not really having a choice if they “waited to go last.” These choice design parameters, and their impact on student engagement, are discussed in further detail in Chapter 5.

Grading Policies

Though this study did not involve a comprehensive review of teacher grading policies across the school, references made by teachers about their grading policies during teacher interviews and classroom observations, specifically among my study’s participating teachers, provide further evidence of Aspiration High School’s dominant
cultural norm of student control and compliance. Grades are explicitly used as a mechanism of behavioral control. In the case of my participating teachers, grade compositions conflate a range of academic and behavioral dimensions; in addition to quiz and test scores, students are graded on such factors as class participation, “attitude toward learning,” and personal organization (e.g., completing notebook checks). In one discussion with Mr. Harrison, I was told that many teachers at Aspiration High School offer extra credit to students who bring in reams of printer paper for their teachers: “Everybody does it,” said Mr. Harrison, “I’m gonna do it next year (Personal Communication, 2/6/2018).”

In one teacher’s description of her class, she describes punitive use of participation points to dis-incentivize poor behavior in class:

These are like my wild kids. So, I also have my smart kids who are very well behaved and do well, but then I have my rowdier group, who are like crazy smart and do work, but also disrupt my class every five seconds. And so it’s weird because their grades don’t reflect it. Even as I’m like, ‘Participation point! I’m going to have to take one of those away because you need to shut up and sit down. Some of them do well with public prodding, they’re like, “Alright, Okay.” Like there are people watching me. Some of them will need a reminder or a point incentive. Like I’ll walk up to Angelo and be like, “Hey, Angelo, if you can’t pull this together, I’m going to have to take a point for today. I really need you to bring it back in.”

Yeah, so they get an “attitude towards learning” grade. And usually I give them 100 and then like, dock as they do poorly, but I feel like they don’t see that. So I’m going to try this quarter giving it every single day, because I only see them twice a week. Yeah, so we’ll see. Some of them are like 50s right now (Interview, 1/7/18).

These examples offer insight into the ways in which grades are purposefully used to control or coerce student behavior, without consideration of the opportunity to address
the underlying issue or causes at hand, such as for a lack of participation in class, poor attendance rates, or poor organization skills.

Curriculum

The school’s curriculum represents a structural feature of Aspiration’s learning system that reinforces student compliance and control, both in its emphasis on disciplinary content coverage and low-level recall through assessment, and in the context of its delivery, as exemplified in the image below of the timed Do Now, during which students are expected to enter the classroom, take their assigned seat, be “silent within 60 seconds,” and quietly respond to the questions projected on the whiteboard in their notebooks.

Figure 4: Classroom "Do Now" Instructions

A conversation held with Mr. Madsen, whose Do Now is shown in Figure 4, prompted me to capture the following field note:
Some teachers expressed trepidation about the new block schedule. No training has been provided. For teachers whose lesson planning essentially involves preparing for lectures, quizzes, and exams, migrating to block scheduling could be an impetus for rethinking how time is spent. Based on a conversation with Mr. Madsen today, I’m less inclined to believe this will be the case for most teachers. I proposed the idea of re-organizing the period to a 20-60-20 model, in which the first 20% of class time would involve introduction to new material, 60% of class time would be dedicated to student investigation of new concepts, collaboration with others, and opportunities to practice and apply concepts; and 20% of class time would be dedicated to synthesis and reflection on learning. I tried to demonstrate the ways in which this lesson design structure creates opportunities for students to engage with new material in a much more meaningful way. Mr. Madsen then suggested that I had the ratios “backward,” arguing that at least 60% of class time would be needed for lecture. When I asked for his rationale, he began to describe the amount of content he is required to cover as part of state assessments. “My students’ scores went up last year. Why would I fix what’s not broken?” I get this. If your job evaluation is tied to student test scores, then the system creates a disincentive to spend learning time on anything else. (Fieldnotes, 8/30/2017).

Mr. Madsen’s resistance to rethinking how class time is organized means that students are left to endure even longer spans of lecture time in the new block schedule. As others have argued, the high-stakes testing environment spawned by federal policy has created a structural barrier for teachers to implement responsive teaching practices, and has only reinforced dynamics of control, pressure, and rigidity in schools, creating conditions that ultimately undermine student motivation (Iachini et al., 2013, p. 114).

In a different classroom, I observed students complete a timed Do Now, then complete fill-in-the-blank notes as they listened to the teacher lecture and present PowerPoint slides that correspond to fill-in-the-blank note handouts provided to students.
Figure 5: Student Fill-in-the-Blank Notes Handout

<table>
<thead>
<tr>
<th>Intro to Ions</th>
<th>Atoms and the Periodic Table 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. A charged particle is called an _________</td>
<td></td>
</tr>
<tr>
<td>2. The _________ are the ones on the outside of the Bohr model.</td>
<td></td>
</tr>
<tr>
<td>3. Atoms like to have a full _________ shell of electrons.</td>
<td></td>
</tr>
<tr>
<td>4. If an atom loses an electron, the charge is now _______. This particle is now called a _________.</td>
<td></td>
</tr>
<tr>
<td>5. If an atom gains an electron, the charge is now _______. This particle is now called an _______.</td>
<td></td>
</tr>
</tbody>
</table>

The fill-in-the-blank notes created a natural dependency on the teacher as the keeper and transmitter of knowledge, and reinforced a particular asymmetry in the power dynamic between the teacher and students, reflective of the aforementioned “banking concept” of education that subjugates learners to passivity and dependency (Freire, 2000).

When observing classrooms that were involved in testing, I scanned the assessment materials. Though not uncommon in my experience, the assessment, which focused on solving systems of equations, mirrored questions found within a typical Algebra I textbook, and involved basic calculations and no application or transfer of knowledge to real-world contexts. All students were working on the same assessment at the same time.
This study did not involve a comprehensive analysis of curriculum across the school. However, my general observations of the curriculum at Aspiration High School, combined with the experiences shared by students and my in-depth work with two teachers on curriculum design in this study, collectively suggest that the curriculum employed by teachers at Aspiration High School create little opportunity for student choices in their learning that would optimize learner engagement or create opportunities for the development of self-regulatory capabilities. Further, the curriculum seemed limited in its fostering of high-order thinking skills across disciplinary contexts, or in its responsiveness to individual student needs, interests, goals, or cultural frames (Gay, 2010).

It seems to be an uncontested assumption among teachers that content coverage is the dominant driver for curriculum design decisions, which came up repeatedly in the
curriculum design workshop I facilitated with faculty at the onset of this study, as well as in my planning sessions with participating teachers (discussed in the preceding section). When planning with Mr. Harrison and Ms. Oliver, for example, the intense focus on content coverage presented as a significant constraint in our collaboration intended to explore choice design: “We only have a month left until the end of the course. I want to try to shove in cell reproduction and genetics, and replication,” or, “I need to get to World War I by the end of February (Interview, 1/7/18).”

Though perhaps less explicit than “no excuses” school models, Aspiration High School mirrors what can be described as a high-compliance learning environment. As previously discussed, recent studies have shown that these environments reinforce class-based skills and behaviors, creating “worker-learners” who defer to authority and withhold their opinions (Golann, 2015). In these environments, as at Aspiration High School, students are explicitly taught to follow behavioral rules such as to always raise your hand before speaking, and not to call out, rather than being prepared to independently navigate the world beyond school (p. 103). In middle-class settings, studies have shown that students are explicitly taught strategies for independently assessing the situation and behaving appropriately (Mehan, 1980), such as when to raise their hands, when to call out, and when to approach the teacher and ask for help (Calarco 2011; Streib, 2011). When this compliance orientation is considered in the context of a school that serves low-income, minority students, it calls into question the institutional role schools play in preserving and reinforcing systemic racial inequities in the United
States, or what has been described by some scholars as a “racial caste system (Alexander, 2010).”

Student Perceptions of Teacher-Student Relationships

Further exacerbating the student experience within Aspiration High School’s high-compliance learning environment is the perceptions of teachers’ level of investment in their work, and of teachers’ genuine sense of concern or care for students. As illustrated in Figure 7, among 107 students surveyed, more students indicated that they disagree or strongly disagree with the statement (42 respondents), I believe most of my teachers really care about me and how I’m doing, than those who agree or strongly agree with the statement (30 respondents). Specifically, 39% of students disagreed or strongly disagreed with the statement, 33% were neutral about the statement (35 respondents), and 30% of students agreed or strongly disagreed with the statement.

Figure 7: Student Survey Responses on Teacher Care

Students were also asked to indicate whether they believed they had a strong connection to at least one of their teachers. As shown in Figure 8, among students surveyed (107 respondents), more students indicated that they disagree or strongly
disagree (42 respondents) with the statement, “I believe most of my teachers really care about me and how I’m doing,” than those who agree or strongly agree with the statement (30 respondents). Specifically, 39% of students disagreed or strongly disagreed with the statement, 33% were neutral about the statement (n=35), and 30% of students agreed or strongly disagreed with the statement.

Figure 8: Student Survey Responses on Adult-Student Connection

Taken together, Aspiration High School’s classroom settings, dominant instructional modalities, grading policies, and curriculum represent a significant barrier to optimizing student engagement, and maximizing opportunities for students to make significant choices about their learning. Studies have shown that highly controlling environments can have detrimental effects on motivation, as it undermines one’s sense of autonomy (Ryan & Deci, 2000). It is against this complex cultural and structural backdrop that we examine student and teacher characterizations of student choice in learning at Aspiration High School.
Divergent Narratives on the Choice Experience

In this section, I further examine factors that influence students’ experiences with instructional choices in learning by exploring teacher characterizations of instructional choices provided to students at Aspiration High School, drawing primarily on data collected from a teacher questionnaire. I then triangulate this data by integrating insights from student survey data, as well as student focus group and interview data. I argue that teachers and students present distinctively different narratives about the frequency and types of instructional choices offered in classroom settings. I also integrate student perceptions on the value of choices in their learning, and conduct an analysis of teachers’ and students’ perceptions of student readiness for a range of different choices in learning.

Sixteen of twenty (80%) Aspiration High School faculty completed the Teacher Choice-in-Learning Questionnaire, designed to gain teacher insights into the types and frequency of instructional choices they provide to students, as well as their rationale for offering choices; perceived barriers to increasing choice opportunities; perceptions of student readiness for a range of instructional choices; and finally, teacher perspectives on the impact of offering more instructional choices to their students.

The Student Choice-in-Learning Questionnaire was administered to 108 students of Aspiration High School, representing a sub-section of approximately 20% of the total student body. All students who completed the survey were at the time enrolled in either one of Mr. Harrison’s classes or one of Ms. Oliver’s classes. Although intended for distribution prior to the lesson design cycle component of this study, unforeseen circumstances resulted in the survey being administered during the final lesson design
cycle, in which students were being presented with learning choices in class and asked to reflect on those choices through formal reflection forms. Though students were asked to respond to survey questions by reflecting on their experience across all classes at Aspiration High School, there is a possibility that the timing of the survey’s administration may have resulted in student responses reflecting their experiences of choice as participants in the study, rather than their experiences of choice at Aspiration High School prior to the study.

Choice Design: Reported Frequency

One important dimension of teachers’ conceptualizations of their approach to choice design is the frequency with which they integrate instructional choices as a regular part of their teaching practice. I gathered data on the frequency of choice provision through administration of a teacher questionnaire that involved both multiple choice questions and open-ended question prompts. One question on the questionnaire asked teachers to respond to the following prompt: “In my classes, students get to make meaningful choices (however you define this) in or about their learning...” selecting either daily, weekly, monthly, or rarely or almost never. Among the sixteen teacher respondents, 37.5% (6 respondents) reported that they offered meaningful choices to students on a daily basis; 25% (4 respondents) reported that they offered meaningful choices on a weekly basis, and 25% (4 respondents) reported offering meaningful choices in a monthly basis. Twelve and 0.5% (2 respondents) of respondents reported that they “Never or almost never” provide meaningful instructional choices to students.
These data suggest that the majority of surveyed teachers at Aspiration High School (63%) integrate instructional choice opportunities as a regular part of their practice; specifically, on a daily or weekly basis. Further, approximately 88% of surveyed teachers, or 70% of all faculty, at Aspiration High School claim that they integrate meaningful choices in learning on at least a monthly basis.

Given that students attend multiple classes each week with different teachers, one might anticipate that students would report a frequency level to choices in learning that correlate with teacher responses. Among the 105 students who responded to this particular question about choice frequency in the Student Choice-in-Learning Questionnaire, 60% of students (63 respondents) report that they have the opportunity to make meaningful choices in their learning on a daily, weekly, or monthly basis. Forty percent of students (42 respondents) report that they are permitted to make meaningful choices in their learning, across all classes in which they are enrolled, on a basis that is less frequent than monthly. Results are shown in Figure 10.
In comparing teacher and student perceptions of the frequency in which meaningful choices are offered to students, there is significant divergence between teacher and student responses: 63% of teachers report integrating choices into their instructional practice on a daily or weekly basis, while only 50% of students report the opportunity to make meaningful choices in learning on a daily or weekly basis. Further, 88% of surveyed teachers report offering meaningful choices at least monthly, while only 65% of surveyed students report that they experience meaningful choices in their learning at least on a monthly basis. This observed divergence may be the result of one or more factors: inflated choice frequency reporting on the part of teachers, under-reporting of choice experiences on the part of students, or differences in perceptions among teachers and students about what constitutes a “meaningful” choice in learning. Teacher and student perceptions of meaningful choices are explored in a later section, *Choice Value and Readiness*. 
Choice Design: Rationale

To further explore teachers’ conceptualizations of their approach to choice design, I examine teachers’ reported rationales for offering choices in learning. Exploring rationales provides a metaphorical window into teachers’ ways of thinking about the utility of instructional choices in learning and their impact on the student experience.

When asked to identify the most significant reason for which they integrate instructional choices in their practice, 63% of respondents (10 of 17 respondents) selected “to motivate or engage” as the primary driver for offering student choices in their learning. This suggests that the majority of teachers at Aspiration High School conceptualize choice in learning as primarily useful as a mechanism for motivating learners. Thirty-five percent (6 respondents) of respondents selected “to build students’ decision-making or self-regulation skills” as the most significant reason for offering choices, and 12% of respondents (2 respondents) selected “to increase relevance to students’ lives/interests” as the most significant reason for offering choice in learning.

There was no significant correlation found between teachers’ rationale for offering instructional choices and the frequency with which they reported offering instructional choices, although it is interesting to note that the majority of teachers (67%) who provide instructional choices on the least frequent basis (monthly or never) identified “to motivate/engage” as the primary reason for integrating instructional choices.

Interestingly, teachers’ stated rationales for integrating choice in learning correspond to students’ own valuations of choice in their learning. Through an open-ended response question in the student questionnaire, students were asked to respond to
the question: *Would having more choice in your learning positively or negatively affect your learning? Why?*

Among 104 total responses, 90% (93 respondents) indicated that more choices in learning would have a positive affect on student learning; 6% (6 respondents) of students anticipated a negative affect, and 5% of students anticipated a neutral affect (5 respondents).

As illustrated in Table 7 below, a range of sub-themes emerged from student responses. The number of references associated with each sub-theme is listed, as well as the number of total individual responses, and total percentage of respondents, that made reference to each sub-theme from among all student responses.

**Table 6: Analysis of Student Responses on Impact of More Choices in Learning**

<table>
<thead>
<tr>
<th>Sub-theme</th>
<th># References</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Student-Anticipated Positive Effects</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1 Engagement/motivation</td>
<td>21</td>
<td>93</td>
</tr>
<tr>
<td>1.2 Relevance</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>1.3 Autonomy/Voice</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>1.4 Style/Pacing</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>1.5 Effort/Attention/Focus</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>1.6 Decision-making/Strategic action</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>1.7 Attitude/Enjoyment</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>1.8 Transparency</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>1.9 Performance</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td><strong>Student-Anticipated Neutral Effects</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1 Unsure/Depends</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2.2 No affect</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2.3 Decision-making</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Student-Anticipated Negative Effects</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.1 Decision-making</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>3.2 Knowledge gaps/readiness</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>3.3 Overwhelming</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
Students who anticipated positive affects of increased choice in learning collectively identified nine different dimensions of their academic experience in which they anticipated a positive change: increased engagement or motivation (20% of respondents); increased relevance (17% of respondents); increased sense of autonomy or voice (16% of respondents); greater alignment of the learning experience or environment to one’s preferences related to style, approach or pacing (13%); increased effort, attention, or focus on academic work (9% of respondents); increased opportunities to practice or develop decision-making or self-regulation skills (7% of respondents); improved attitude toward or enjoyment of school (4% of respondents); increased sense of transparency about the learning goals or expectations for learning (3% of respondents); and improved performance in academic work (2% of respondents). Several sample “positive” student responses are shown below, as well as the codes applied to each response.

**Table 7: Sample "Positive" Student Responses of Increased Choice in Learning**

<table>
<thead>
<tr>
<th>Sample “Positive” Responses</th>
<th>Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positively because it would make me feel more in control and have the ability to be able to</td>
<td>Autonomy, Relevance,</td>
</tr>
<tr>
<td>steer myself to my future potential career.</td>
<td>Strategic Action</td>
</tr>
<tr>
<td>Positively because everybody deserves a choice of what they want to learn about and it is</td>
<td>Autonomy, Engagement</td>
</tr>
<tr>
<td>probably the best way to get a child interested in learning.</td>
<td></td>
</tr>
<tr>
<td>positively because i would pick what is at my learning level.</td>
<td>Strategic Action, Style/Preference</td>
</tr>
<tr>
<td>If I have more choices it would effect my learning positively because then I can choose</td>
<td>Effort, Relevance</td>
</tr>
<tr>
<td>what things interests me and I will be able to put all of my effort into that work.</td>
<td></td>
</tr>
<tr>
<td>Having more choices in my learning is better for me because it makes me choose wisely and</td>
<td>Decision-making</td>
</tr>
<tr>
<td>think about it.</td>
<td></td>
</tr>
<tr>
<td>Positively because it lets me be creative and actually</td>
<td>Engagement,</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
want to participate in my work instead of sluggishly working on a topic that I don't want to work on. I will have way more information on my own topic than a teacher chosen topic.

<table>
<thead>
<tr>
<th>Performance, Relevance</th>
</tr>
</thead>
<tbody>
<tr>
<td>It would positively affect my learning because I can focus on what I need more help on.</td>
</tr>
<tr>
<td>Strategic Action</td>
</tr>
<tr>
<td>I think having more learning choices would positively affect my learning because certain ways that some teachers teach doesn't help me to learn to the best of my ability.</td>
</tr>
<tr>
<td>Style/preference</td>
</tr>
<tr>
<td>It would affect my learning more positively because I would know when and what I have to do because I would be the person to make it.</td>
</tr>
<tr>
<td>Autonomy, Transparency</td>
</tr>
</tbody>
</table>

Students who anticipated neutral affects, shown in Table 8, either stated that there would be no affect to their learning (2% of respondents), or that they were either unsure of the affect or that it depended on the situation or learner (4% of respondents).

**Table 8: Sample "Neutral" Student Responses of Increased Choice in Learning**

<table>
<thead>
<tr>
<th>List of “Neutral” Responses</th>
<th>Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choices can go either way there is no way to tell.</td>
<td>Unsure/depends</td>
</tr>
<tr>
<td>It would not affect my learning</td>
<td>No affect</td>
</tr>
<tr>
<td>I don’t know</td>
<td>Unsure</td>
</tr>
<tr>
<td>it might change the way you learn things.</td>
<td></td>
</tr>
<tr>
<td>it depends because i usually have the choice i choose the easy things.</td>
<td>Decision-making</td>
</tr>
</tbody>
</table>

As illustrated in Table 9, students who anticipated a negative affect on their learning, which represented 5% of all respondents, raised concerns that are highly relevant to this study’s exploration of the influence of choice on both engagement and the development of self-regulation skills. One student expressed concern about a stress response to too many choices; namely, that too many choices are overwhelming. Two
students made reflective references to their own decision-making: one expressed concern over making the “wrong choice,” and another student indicated that he “wouldn’t do anything” if he had the choice, and as a result, identified more choice as negatively impacting his learning. The final two responses express concern about being prepared by having sufficient “knowledge,” in one case it was explicitly in connection to being prepared for his future; in the other case, the student simply expressed concern that having choices “won’t help me increase my knowledge.”

Table 9: Sample Negative Responses of Increased Choice in Learning

<table>
<thead>
<tr>
<th>Sample “Negative” Responses</th>
<th>Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negatively because to many choices are overwhelming</td>
<td>Overwhelming, decision-making</td>
</tr>
<tr>
<td>negative bc if i had a choice i wouldn't do anything</td>
<td>Decision-making</td>
</tr>
<tr>
<td>Yea because i might make the wrong choice</td>
<td>Decision-making</td>
</tr>
<tr>
<td>I think it would have a negative affect in my learning because I don't know all the subjects and topics I need to increase my knowledge and help in my future career.</td>
<td>Knowledge gaps/readiness</td>
</tr>
<tr>
<td>it will negatively affect me because i feel like it won't help me increase my knowledge</td>
<td>Knowledge gap</td>
</tr>
</tbody>
</table>

The questionnaire also asked students to identify their level of independence as learners: highly independent, semi-independent, or teacher-guided. Interestingly, nearly all students who self-identify as highly independent stated that increased choice would positively affect their learning (26 of 28 of respondents). Among highly independent learners, no student anticipated a negative response. Further, 100% of students who anticipated negative affects of increased choice on their learning self-identify as semi-independent learners, while 100% of teacher-guided learners anticipated a positive
response to increased choice on their learning. One possible inference that can be made by this data is that students who are confident in their level of competence as independent learners hold positive perceptions of choice in their learning because they self-appraise as competent, and increased choice opportunities affirms their sense of autonomy (Deci & Ryan, 2000); students who self-identify as semi-independent may appraise their own skill levels and feel a degree of uncertainty about their ability to manage choices that they are not accustomed to making (Wigfield & Eccles, 2000); and students who self-identify as teacher-guided may be assuming that more choices in learning would be offered within the context of a supportive learning environment that they identified as important to their own learning. In a later section, I further explore the relationships between students perceived and demonstrated readiness to manage new, more complex choices in their learning.

Choice Types Provided

On the Teacher Choice-in-Learning Questionnaire, teachers were asked to identify the most recent types of instructional choices that were offered to their students, as well as examples of choices they frequently give students during class time. The purpose of these two survey questions was to gain better insight into the ways teachers conceptualize their approaches to integrating choice design into their regular teaching practice. I then triangulate this data by examining students’ perceptions of the types of choices they regularly experience in classroom settings, and articulate a working choice typology for instructional choice design.
Sixteen Aspiration High School teachers, representing 80% of faculty, responded to the prompt, *The most recent type of instructional choice that I offered students in my class was...* In Table 10, I categorize choice types as procedural, organization, or cognitive, adapting and expanding upon a set of definitions for each type of autonomy-enhancing instructional choice (Stefanou, Perencevich, DiCintio, & Turner, 2004; Katz & Assor, 2007). Procedural choices refer to choices related to selecting from different formats for presenting ideas, such as for an assignment or an assessment; organizational choices refer to those that give students decision-making roles related to work, team, or time management, such as grouping (independent versus small group work), role-setting within a group or team, pacing, sequencing of activities, or establishing deadlines; and cognitive choices are those that involve an evaluation or creation of learning methods, learning resources, or solutions to complex problems (Stefanou et al., 2004).

**Table 10: Teacher-Reported Instructional Choice Types Most Recently Provided to Students**

<table>
<thead>
<tr>
<th></th>
<th># References</th>
<th>Participants N=16</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Procedural Choices Types</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1 Assignment</td>
<td>4</td>
<td>4</td>
<td>20</td>
</tr>
<tr>
<td>1.2 Product format</td>
<td>3</td>
<td>3</td>
<td>20</td>
</tr>
<tr>
<td><strong>Cognitive Choices Types</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.1 Solution</td>
<td>2</td>
<td>2</td>
<td>13</td>
</tr>
<tr>
<td>3.1 Topic</td>
<td>2</td>
<td>2</td>
<td>13</td>
</tr>
<tr>
<td>3.2 Resource</td>
<td>1</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>3.3 Lesson</td>
<td>1</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td><strong>Organizational Choices Types</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1 Grouping</td>
<td>3</td>
<td>3</td>
<td>20</td>
</tr>
<tr>
<td>2.2 Role</td>
<td>1</td>
<td>1</td>
<td>7</td>
</tr>
</tbody>
</table>
Eight different types of choices were referenced in teacher responses. *Procedural* choices had the highest number of references. Among *procedural* choices, I identified two sub-categories, including *assignment* choices, described by respondents as the opportunity to choose from among different assignments offered, such as a “choice board,” or “choosing the questions [students] will do in a set of problems.” *Product format* choices involve a choice that relates to the format of a culminating assessment, which included choosing from among format options, such as the choice between an “oral or written presentation/report,” or choosing from among format parameters, such as “length for an essay- 5 vs 11 paragraphs.”

*Cognitive* choices represented the third category of choice types reported by teacher respondents, and made up 38% of choice types identified. *Cognitive* choices were categorized as *solution* (2 respondents), referring to students being prompted to “choose their method” or “take different stances and defend them” for an assignment or assessment; *topic* (2 respondents), referring to the option to choose one’s research question or book for a book study; *resource* (1 respondent), referring to the ability to choose from among different learning resources to support one’s learning; and *lesson* (1 respondent), referring to the opportunity to select a small group mini-lesson to attend being offered by the teacher, based on one’s learning goals or needs.

*Organizational* choices made up 25% of choice types reported by teachers, and were organized into two sub-categories: *grouping*, reported by 20% of respondents (3 respondents) and referring to students’ ability to choose with whom to work on an
assignment or project, and role, reported by 7% of respondents (one respondent), which referred to the opportunity given to students to “choose own role for literature circles.”

In Table 11, I present my analysis of ten teacher responses to the prompt, *Examples of choices I often give students in class*. I applied the same three-part typology as discussed above to categorize responses and identify sub-categories. Responses, again, were near-evenly distributed among procedural, cognitive, and organizational choices. Additional sub-categories emerged while analyzing responses, including the cognitive choice about which target skill students could focus on, as well as three organizational choices; namely, pacing, sequencing of activities or assignments, and use of time, referring to flexibility around how class time is spent by students. Among responses, the most highly referenced, commonly given choice types include product format and topic, each reported by 30% of respondents.

*Table 11: Teacher-reported Most Common Choice Types*

<table>
<thead>
<tr>
<th>Choice Types</th>
<th># References</th>
<th>Participants N=10</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procedural Choices Types</td>
<td>5</td>
<td>5</td>
<td>50</td>
</tr>
<tr>
<td>1.1 Assignment</td>
<td>2</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>1.2 Product format</td>
<td>3</td>
<td>3</td>
<td>30</td>
</tr>
<tr>
<td>Cognitive Choices Types</td>
<td>6</td>
<td>6</td>
<td>60</td>
</tr>
<tr>
<td>3.1 Topic</td>
<td>3</td>
<td>3</td>
<td>30</td>
</tr>
<tr>
<td>3.2 Resources</td>
<td>2</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>3.3 Target skill</td>
<td>1</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Organizational Choices Types</td>
<td>5</td>
<td>5</td>
<td>50</td>
</tr>
<tr>
<td>2.1 Grouping</td>
<td>2</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>2.2 Pacing</td>
<td>1</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>2.3 Sequencing</td>
<td>1</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>2.4 Use of time</td>
<td>1</td>
<td>1</td>
<td>10</td>
</tr>
</tbody>
</table>
Perceived Choice Value and Readiness

Another important dimension to analyzing teachers’ conceptualizations of their approach to choice design is that of their perception of which choices are most valuable or important to students, as well as which choices in learning they believe students are ready to make. Perceptions of which choices students find most valuable, or which choices students are most ready to make, likely influence teachers’ decisions around which choices they offer, and which choices they might withhold, whether because they believe they are not important or because they believe students are not yet equipped to make the particular choice.

On the Teacher Choice-in-Learning Questionnaire, teachers were asked to rate a set of choice types based on the level of importance or value they believed the choice held for students, using a 1-5 scale, where a score of 1 = not at all important/valuable to students, and 5 = highly important/value to students. Teachers were also asked to rate students level of readiness to undertake the same set of choices presented in the previous question, using a 1-5 scale, where a score of 1 = not at ready/able, and 5 = very ready/able. Teacher perceptions of students’ valuation of choice types presented, and readiness for choice types presented, are shown in Table 12.

Table 12 presents the total number of respondents, as well as percentage of total respondents, that rated a choice type either a 4 or 5 in terms of choice value to students, as well as total number of respondents, and percentage of total respondents, that rated a choice type as either a 4 or 5 in terms of student readiness. The first row represents all choices presented for teacher rating. The subsequent rows organize choices by category:
organizational, cognitive, and procedural. The choice types presented are based on a curriculum design framework and methodology of reDesign, an educational design company regarded as a national expert on curriculum design and development (reDesign, 2017).

**Table 12: Teacher Perceptions of Choice Value and Readiness**

<table>
<thead>
<tr>
<th>Choice Types:</th>
<th>Valuable or highly valuable to students (N=17) (%)</th>
<th>Most students are ready to make this choice (N=17) (%)</th>
<th>Perceived Value-Readiness Gap (pp)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ALL</strong></td>
<td>12 71</td>
<td>9 53</td>
<td>-18</td>
</tr>
<tr>
<td>Collaborators</td>
<td>10 59</td>
<td>3 18</td>
<td>-41</td>
</tr>
<tr>
<td>Topic</td>
<td>10 59</td>
<td>3 18</td>
<td>-41</td>
</tr>
<tr>
<td>Use of Time</td>
<td>10 59</td>
<td>2 12</td>
<td>-47</td>
</tr>
<tr>
<td>Pacing/Deadlines</td>
<td>9 53</td>
<td>4 24</td>
<td>-29</td>
</tr>
<tr>
<td>Learning</td>
<td>9 53</td>
<td>5 30</td>
<td>-23</td>
</tr>
<tr>
<td>Activities</td>
<td>8 47</td>
<td>4 24</td>
<td>-23</td>
</tr>
<tr>
<td>Final Product</td>
<td>7 41</td>
<td>4 24</td>
<td>-17</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Choice Type: Organizational</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaborators</td>
</tr>
<tr>
<td>Use of Time</td>
</tr>
<tr>
<td>Pacing/Deadlines</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Choice Type: Cognitive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topic</td>
</tr>
<tr>
<td>Learning</td>
</tr>
<tr>
<td>Activities</td>
</tr>
<tr>
<td>Lessons</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Choice Type: Cognitive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final Product</td>
</tr>
</tbody>
</table>
Among the 17 teachers who responded to the question, 71% believed that students value or highly value being able to select their work partners or collaborators, though only 53% of respondents believe that most students are ready (rated as a 4 or 5) to make that choice. Fifty-nine percent of teachers believe that choosing topic, use of time, and pacing/deadlines were valuable or highly valuable to students, yet only 18% of respondents believe that students are ready to choose their topic or plan their own use of time, and only 12% of respondents believe that students are ready to set their own pacing/deadlines for their academic work. Fifty-three percent of teachers believe choosing learning activities and topics are valuable or highly valuable to students, while only 24% and 30% of respondents rated students as ready to make these choices, respectively. Fewer than half of respondents believe that choosing the lessons students engage in (47% of respondents) or the learning resources students engage with in their academic work (41% of respondents) are valuable or highly valuable to students, while 24% of respondents believe that students are ready or very ready to choose lessons or learning resources.

The dominant trend among teacher responses is a value-readiness gap, which I term as the measure of difference between perceived choice value and perceived student readiness among teachers, calculated in percentage points. Put another way, most teachers believe students are not ready to make the choices in learning that they perceive are most highly valued by students. The choices that teachers perceive as having the most substantial value-readiness gap, are pacing/deadlines, use of time, and topic choices, each with a gap of 47, 41, and 41 percentage points, respectively. Notably, the lowest
rated choice type, in terms of student readiness, was *pacing/deadlines*, while the lowest rated choice category overall, in terms of student readiness, was that of *cognitive* choices.

On the Student Choice-in-Learning Questionnaire, students were asked to valuate the same choice types as presented to teachers on the Teacher Choice-in-Learning Questionnaire, using a 1-5 scale, where a score of 1 = *not valuable to me, teachers can make this choice for me*, and 5 = *highly important/valuable choice that I want to make for myself*. Students were also asked to rate their own perceived level of readiness for each choice type using a 1-5 scale, where a score of 1 = *not yet ready to make this choice on my own*, and 5 = *I am totally ready to make this choice on my own*. Student responses are represented in Table 13.

**Table 13: Student Perceptions of Choice Value and Readiness**

<table>
<thead>
<tr>
<th>Choice Types: ALL</th>
<th>Highly important choice that I want to make for myself (N=107) (%)</th>
<th>I am ready to make this choice on my own (N=107) (%)</th>
<th>Value-Readiness Gap (pp)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaborators</td>
<td>61 57</td>
<td>57 53</td>
<td>-4</td>
</tr>
<tr>
<td>Final Product</td>
<td>60 56</td>
<td>71 66</td>
<td>-4</td>
</tr>
<tr>
<td>Use of Time</td>
<td>60 56</td>
<td>56 52</td>
<td>-4</td>
</tr>
<tr>
<td>Pacing/Deadlines</td>
<td>60 56</td>
<td>54 50</td>
<td>-2</td>
</tr>
<tr>
<td>Learning</td>
<td>55 51</td>
<td>58 54</td>
<td>-2</td>
</tr>
<tr>
<td>Activities</td>
<td>47 44</td>
<td>45 42</td>
<td>-2</td>
</tr>
<tr>
<td>Learning</td>
<td>47 44</td>
<td>58 54</td>
<td>-2</td>
</tr>
<tr>
<td>Resources</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Topic</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lessons</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 13 presents the total number of respondents, as well as percentage of total respondents, that rated a choice type either a 4 or 5 in terms of choice value, as well as total number of respondents, and percentage of total respondents, that rated a choice type as either a 4 or 5 in terms of readiness. The first row in Table 13 represents all choices presented for student ratings. Subsequent rows organize choices by category: organizational, cognitive, and procedural.

Overall, the majority of respondents indicated that most of the choice types presented are choices they not only want to make, but believe they are ready to make. In order of rated importance: 69% percent of respondents identified choosing collaborators as an important choice, and 74% of respondents indicated that they believe they are ready and able to make that choice; 57% of respondents identified choosing their final product as an important choice, while 53% of respondents indicated readiness for that choice; 56% of respondents identified use of time, pacing/deadlines, and learning activities as
important choices to make, and 66% of respondents indicated readiness for determining
*use of time*, while 52% of respondents indicated readiness for determining
*pacing/deadlines*, and 50% of respondents indicated readiness for choosing *learning activities*. Fifty-one percent of respondents indicated that choosing *learning resources* was an important choice, and 54% percent of respondents indicated readiness for choosing *learning resources*. Forty-seven percent of respondents identified *topic* and *lessons* as important choices, while 42% of respondents indicated readiness to choose their *topic* and 54% of respondents indicated readiness to choose which *lessons* to attend to support their learning.

Interestingly, it is not the case that, for students’ most highly valued choices, readiness ratings always matched or exceeded their valuation. In other words, it does not appear that students inflated their readiness ratings for choices types that they highly valued. In Table 14, I analyze the readiness ratings given by students who valued choice types at a rate of 4 or 5.

*Table 14: Student Readiness Ratings for Highly Valued Choices*

<table>
<thead>
<tr>
<th>Choice Types</th>
<th>Students Valued and Highly Valued Choices (4 or 5 rating) (N=107) (%)</th>
<th>Student Readiness Ratings for Valued and Highly Valued Choices</th>
<th>RBV (%)</th>
<th>Mean</th>
<th>Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaborators</td>
<td>74 69</td>
<td>22 4.51 5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final Product</td>
<td>61 57</td>
<td>41 3.92 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use of Time</td>
<td>60 56</td>
<td>25 4.42 5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pacing/Deadlines</td>
<td>60 56</td>
<td>36 4.01 5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning</td>
<td>60 56</td>
<td>37 4.10 5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activities</td>
<td>55 51</td>
<td>33 4.19 5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning Resources</td>
<td>47 44</td>
<td>52 3.83 3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Topic</td>
<td>47 44</td>
<td>34 4.09 5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
In column 1 of the Readiness Rates section of the table above, I calculate the Readiness Below Value measure, which I define as a measure of the percentage of students who, for a particular choice, rated their readiness level one or more ratings below the rating at which they valued the choice. In column 2 of the Readiness Ratings, I calculate the mean and mode readiness ratings from among the sub-group of students who value the particular choice at a rating of 4 or 5. For example, 52% of students who rated Topic as a valuable or important choice to make (rating of 4 or 5), rated their own level of readiness to make that choice at one or more ratings below the 4 or 5 they selected as their choice valuation. Further, within the sub-group of students who rated Topic as a 4 or 5, the average readiness rating was a 3.83, and the most frequently occurring rating, or mode, was a 3.

It is notable that among students who rated a choice as valuable/important or highly valuable/important to make (rating 4 or 5), the overall range for Readiness Below Value ratings was 22% to 52%, indicating that not fewer than one in five students who highly valued a choice rated their readiness level below their valuation. These data suggest that student respondents deliberated over their readiness level ratings, rather than simply applying high readiness ratings for choices they highly value.

The comparative data on teacher and student perceptions of choice value and readiness further substantiate the notion of divergent narratives among teachers and
students around choice in learning. In the Table 15 below, I summarize comparative choice value and readiness data, and highlight the perceived readiness gap, which I define as a measure of the difference between teachers and students' ratings on student readiness by choice type, calculated in percentage points.

**Table 15: Summary of Teacher and Student Perceptions of Student Value and Readiness by Choice Type**

<table>
<thead>
<tr>
<th>Choice Types:</th>
<th>Teacher Perceptions: Most Valued Choices</th>
<th>Student Perceptions: Most Valued Choices</th>
<th>Perceived Readiness Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Valued/Highly Valued (%)</td>
<td>Readiness (%)</td>
<td>Valued/Highly Valued (%)</td>
</tr>
<tr>
<td>Collaborators</td>
<td>71</td>
<td>53</td>
<td>69</td>
</tr>
<tr>
<td>Topic</td>
<td>59</td>
<td>18</td>
<td>44</td>
</tr>
<tr>
<td>Use of Time</td>
<td>59</td>
<td>18</td>
<td>56</td>
</tr>
<tr>
<td>Pacing/Deadlines</td>
<td>59</td>
<td>12</td>
<td>56</td>
</tr>
<tr>
<td>Learning Activities</td>
<td>53</td>
<td>24</td>
<td>56</td>
</tr>
<tr>
<td>Final Product</td>
<td>53</td>
<td>30</td>
<td>57</td>
</tr>
<tr>
<td>Lessons</td>
<td>47</td>
<td>24</td>
<td>44</td>
</tr>
<tr>
<td>Learning Resources</td>
<td>41</td>
<td>24</td>
<td>51</td>
</tr>
</tbody>
</table>

When analyzing teacher perceptions of student readiness against students’ self-reported perceptions of readiness for choice types presented, the overwhelming trend is that of teacher ratings falling significantly below student ratings of readiness for the same choice, with an average gap of 30 percentage points, ranging between 18 percentage points and 48 percentage points across all eight choice types. The widest gaps in perceptions of readiness are for two organizational choices, *use of time* (48 percentage point gap) and *pacing/deadlines* (40 percentage point gap), and for one procedural choice, *final product* (35 percentage point gap). One inference that can be drawn from
these data is that teachers either do not trust students to make good decisions, or that they believe that most students at Aspiration High School lack sufficient work and time management skills that would enable them to effectively manage their own time, pacing, and deadlines. Another possible interpretation of these data is that students have an inflated sense of their own ability to manage their time and workflow.

The choice type with the smallest readiness gap is collaborators, where 53% of teachers believe that students are ready to choose their work partners, and 73% of students believe they are ready to choose their work partners.

In sum, the majority of teachers at Aspiration High School believe that most students are not ready to make significant choices in their learning, such as choosing topics, planning their use of time, pacing/deadlines, selecting learning activities, choosing final products, lessons, or learning activities. The majority of teachers at Aspiration High School (53% of respondents) believe that most students are ready to choose their collaborators in learning. This is in sharp contrast to student perceptions of readiness. The majority of students believe they are ready to choose not only their collaborators, but also how they plan use of time, pacing/deadlines, final products, lessons, and learning resources.

Perceived Barriers

The final dimension to explore in this broad analysis of teachers’ conceptualizations of their approach to choice design is that of perceived barriers to providing students choices in their learning. On the aforementioned teacher questionnaire, teachers were asked to rate a pre-determined set of responses to the
following question: *In your own practice, what are the biggest barriers to offering students meaningful choices in their learning more frequently?* The pre-determined options were as follows: *time/design load, student capacity, (teacher) skill, (perceived) value, and (concern for missed or variance in) content.*

Teachers rated responses on a 1 to 5 scale, where 1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Neutral*, 4 = *Agree*, and 5 = *Strongly Agree*. Teacher responses are represented in Table 16, including the count and percentage of teachers who identified *Agree* or *Strongly Agree* for each of the pre-determined barriers, as well as mean, mode, and median for each barrier presented.

**Table 16: Teacher-Reported Barriers to Increasing Instructional Choices**

<table>
<thead>
<tr>
<th>Barriers</th>
<th>Agree or Strongly Agree (%)</th>
<th>Overall Responses</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(N=17)</td>
<td>Mean</td>
<td>Mode</td>
<td>Median</td>
<td></td>
</tr>
<tr>
<td>Student capacity</td>
<td>76</td>
<td>4.00</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Teacher Time</td>
<td>59</td>
<td>3.59</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Missing content</td>
<td>35</td>
<td>3.53</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Teacher skills</td>
<td>35</td>
<td>2.82</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Not valuable</td>
<td>12</td>
<td>1.94</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

Among the 17 respondents, which comprise 80% of the instructional staff at Aspiration High School, the most significant barrier identified was student capacity, rated as a 4 or 5 by 76% of respondents (13 of 17 respondents): *Most students struggle to make or manage choices in their learning.* The second highest rated barrier was teacher time, rated as a 4 or 5 by 59% of respondents (10 of 17 respondents): *Accommodating more choice is a major design load and burden on my time.* The third highest rated barrier was
concern for missing content, rated as a 4 or 5 by 35% of respondents (6 of 17 respondents): *I’m concerned that students will miss important content and/or come away with different learning outcomes.* Also rated as a 4 or 5 by 35% of respondents (6 of 17 respondents) was teacher skill: *I need more learning/support to know how to do this well.* Twelve percent of respondents (2 of 17 respondents) indicated that the most significant barrier to increasing the frequency of instructional choices was perceived value: *I don't see a value in offering students more choice when I have other more important things to focus on.* Although not the highest rated concern, it is notable that 35% of teachers identified a need for more learning and support as it relates to choice design. I identify this factor as a human capital factor that shapes students’ experiences with instructional choices, as teachers who lack confidence in their ability to design quality choices may be less inclined to experiment with or implement choice designs. I further elaborate on the human capital factor in Chapter 5, in which I discuss insights gained from my work with two participating teachers in several collaborative lesson design cycles.

Respondents also had the opportunity to respond to the follow up question, *Are there any other barriers you can think of, or any additional thoughts/insights you can offer about your selections above?* Six responses were analyzed and coded, with one additional barrier identified: *class size.* The responded identified large class sizes as an inhibitor to providing more instructional choices. The remaining responses provided further insight into teachers’ perspectives on barriers: one teacher indicated that students’ struggle to self-manage was the biggest practical barrier, while two respondents expressed concern about students choosing the “easy option” if given more choice.
Taken together, the majority of Aspiration High School teachers identify *student capacity* and *teacher time* as the most significant barriers to offering students more choices in their learning, while one in three teachers agree or strongly agree that concerns for missing content (or variance in content) and teacher skill gaps for effectively integrating choice in learning are barriers.

**Summary**

In this chapter, I have identified both cultural and structural barriers to increasing student choices in learning at Aspiration High School, including classroom settings, dominant instructional modalities, grading policies, and curriculum, drawing on triangulated data to draw conclusions about barriers to choice at Aspiration High School, including classroom observation data, teacher and student interview data, student focus group data, and teacher and student survey data. These data collectively tell a story about the student experience at Aspiration High School as one situated within a high-compliance, high-control learning environment, with significant doubts about the genuine care and investment of teachers in their work with students, and with clear aspirations for greater relevance and autonomy in their learning.

I have also explored teachers’ conceptualizations of their approach to choice design along several dimensions: teacher self-reported frequency and rationale for choice provisions; teachers perceptions of student valuations of a range of choice types, as well as their perceptions of student readiness for given choice types; and teachers’ conceptions of significant barriers to increasing choice types. The dominant narrative among teachers is that, first, the majority of teachers provide meaningful choices to students on a regular
basis, and second, that the majority of students lack the skills or dispositions needed to successfully manage most types of instructional choices provided. Teachers approach to choice design, and in particular, their perception that students lack readiness to make important choices in their learning, points to a deficit orientation and a deep cultural barrier to expanding student choices in learning at Aspiration High School.
CHAPTER 5: THE PROMISE OF CHOICE DESIGN

In this chapter, I discuss key findings from a series of collaborative lesson design cycles with two participating teachers of Aspiration High School. I argue that effectively designed, autonomy-enhancing choices positively influence student engagement in learning, while also creating valuable opportunities for learners to develop self-regulatory capabilities. Secondly, I argue that effectively designed instructional choices play an instrumental role in positioning teachers to accurately diagnose learners’ needs and design responsive interventions to support areas for student growth as it pertains to the development of students’ self-regulation skills. Finally, I argue that collaborative choice design is an effective entry point for supporting teachers who wish to shift their approaches to curriculum design and delivery in ways that more purposefully foster student agency, competence, and inquiry among students.

Quality Choice Design Increases Engagement, Fosters Self-Regulation Skills

In this section, I argue that high quality instructional choices positively influence student engagement and create opportunities for students to practice and apply self-regulation skills. I define key measures for quality choice design, derived from an analysis of qualitative data gathered through the lesson design cycles, including student focus groups and interview data, teacher interviews, classroom observations, and student work analysis, while also drawing on relevant literature from the field of learning science. I draw upon vignettes from the collaborative lesson-design cycles to illustrate each measure and its cultivating effect on learner engagement and self-regulation skills within the context of this study.
Five key measures of quality choice design emerged from this study: relevance, framing and structure, purpose, metacognitive prompting, and alignment to students’ zone of proximal development (Vygotsky, 1978). These measures are emergent; they were not prescribed at the onset of this study. The five key measures, described in Table 17, are based on insights generated through collaborative lesson design cycles, drawing on both trial choice designs that were effective and aligned to these measures, as well as choice designs that did not align to these measures and generated lessons learned.

Table 17: Five Key Measures for Quality Choice Design

<table>
<thead>
<tr>
<th>Choice Design Measure</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relevance</td>
<td>The choice involves content or learning experiences that are relevant to the cultural backgrounds, individual interests, goals, or learning needs recognized by learners.</td>
</tr>
<tr>
<td>Framing and Structure</td>
<td>The instructions and background knowledge necessary for navigating the choice set are clear, concise, and presented in multiple formats; structured choice pathways are transparent and easily referenced by learners prior to and throughout the learning experience.</td>
</tr>
<tr>
<td>Purpose</td>
<td>The choice purposefully aligns to a target self-regulation skill that will be developed, practiced, and applied through students’ execution of the choice.</td>
</tr>
<tr>
<td>Prompting of Metacognition</td>
<td>The choice involves a structured opportunity for student-led goal formation, and concludes with a structured opportunity for reflection that prompts learners to evaluate their choice and its impact on their learning.</td>
</tr>
<tr>
<td>ZPD-alignment</td>
<td>The level of choice complexity is balanced by appropriate supports and structures that are based on individual learners’ needs and readiness.</td>
</tr>
</tbody>
</table>
Quality Choice Design Dimension 1: Relevance

The importance of relevance in choice design is well documented. Numerous studies have shown that instructional choices that lack relevance to students’ goals or interests can significantly undermine student motivation, while choices that students find relevant and interesting can bolster motivation and engagement (Katz & Assor, 2007; Flowerday et al., 2004; Reeve et al., 2003). This study shares this finding. Students at Aspiration High School expressed repeated dissatisfaction about the lack of curricular relevance to their lives and future aspirations, as well as the lack of choices among and within course offerings. As discussed in Chapter 4, this emerged in multiple interviews and focus groups with students:

It’s like I feel as though preparing me for what I want to be in life is like, I'm not satisfied. I feel like they could do more. I feel like they teaching me, but I'm learning when I come to school, but it's like I'm learning just to pass the test that you're going to give me next week. I'm not learning so that it's stuck in my head for the future for when I get older.

I feel like a lot of stuff that we do, not really helping you for what you want. Like…we basically doing everything just to pass the next test. And then certain stuff will be so overwhelming that you just, once she teaches it, you're not really sticking onto the information, you're just learning right now. So the next test, or the next worksheet that comes, you pass that, rather than hearing something that will stick with you for good. Because that's how they really judge you. It's basically if you don't pass this test, you're looked at as if you're not that smart. It's how, not just in this school, I just feel like overall people look at tests as measuring your knowledge.

I just don't think that's right, because some kids want to learn other things that might actually help their future. Like some kids want to go into psychology when this gets over, because he does psychology, and they want to become a psychologist when they grow up, but they won't give it to him. Instead, they give him some really dumb class. Like I have genetics right now, that's basically biology all over again, and I already passed all my biology tests in the class. There's no point in me being in that class, it doesn't help me whatsoever. (Group Interview, 1/15/2018)
Echoing the student survey results, one student in a mid-cycle interview argued for the efficacy of choice and relevance in her learning, stating that more students would be more engaged, make greater progress, and even improve their grades if classes involved relevant topics and choices, as they were experiencing in Ms. Oliver’s class:

If it was more like this class, a lot of students would be more academically involved. I feel as though if the topics were about things that we cared about, grades would be better, there would be more academic progress and it’s just like, it’s not. Because of the way school is, and the way we learn, and the techniques of how we learn. (Interview, 1/30/2018)

The importance of curricular relevance to students’ lives and interests also emerged as an observable trend within our collaborative lesson design cycles. The following vignette, which focuses on Ms. Oliver’s first lesson design and implementation cycle of the study, illustrates the importance of relevance in designing instructional choices.

Ms. Oliver’s first choice-based lesson design involved giving students the opportunity to select from among three curated primary texts selected to explore multiple points of view on the post-Civil War experience: *What a Black Man Wants* by Frederick Douglas; *Triumph*, an excerpt from the diaries of Caroline Barrett White; and *Conquered*, a third primary source excerpt of the early Reconstruction era. In her lesson launch, Ms. Oliver previewed the day’s lesson and described each text to provide helpful context for the choice; she then asked students to select one primary text that they would read, annotate, and utilize during the planned learning activity.
At the end of the lesson, students were asked to complete a reflection on their experience. I designed the reflection form to include metacognitive prompts about the student choice experience. One such question prompted students to explain the rationale for the primary text they selected during the lesson. Results are shown in Table 18, and help to illustrate that, in instances when students have the opportunity to exercise autonomy in their learning, they gravitate toward learning experiences that they identify as relevant to their lives and interests. Notably, “situational interest” was the second most cited reason for the particular choice provided.

**Table 18: Oliver Lesson #1 - Student Choice Drivers**

<table>
<thead>
<tr>
<th>Choice Rationale</th>
<th># References</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N=37</td>
<td>%</td>
</tr>
<tr>
<td>1.0 Relevance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1 Relevance: Background knowledge</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>1.2 Relevance: Life experience</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>1.3 Relevance: general interest</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>2.0 Situational interest</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>3.0 Random</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>4.0 No Choice</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>5.0 Other: (e.g., text length, grouping, “I felt like it”)</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

Among the 37 respondents, 68% of students described a choice rationale based either on perceived relevance to one’s life or background knowledge (38% of respondents) or a compelling degree of situational interest (30% of respondents).

Examples of student responses that were coded as relevance include, “I love Frederick Douglasses poems & felt like I would connect & understand his speech better,” and “I felt as though I could relate to the African-American point of view better,” and “I made
this choice because it’s the article which had spoken deeply to me.” Examples of responses that were coded as situational interest include, “The title attracted me,” and “I wanted to see how South felt about losing War,” and “I’ve never been taught a perspective from a person from the South Post Civil War,” and “When Oliver was talking about it, it seemed interesting.” Fourteen percent of students (5 respondents) indicated that they made the choice randomly; 11% indicated that they had no choice (4 respondents); and among the 8% remaining respondents, one respondent indicated that he made the choice of text based on the selection that had “less stuff to read,” one made the text choice based on who she wanted to work with, and one respondent explained making the choice by stating, “I felt like it.” Interestingly, when students were asked to rate on a scale of 1 to 5 (where 1 = not at all important, and 5 = extremely important), How important is it to you to be able to choose your own learning resources?, 76% percent of respondents rated the choice as a 4 or a 5 for importance.

Figure 11: Oliver Lesson #1: Student Ratings of Importance for Choosing Learning Resources

This choice value rating significantly exceeds the student survey response to the same question, in which 51% of respondents indicated that selecting learning resources
was a valuable or highly valuable choice to make (for the subgroup of Ms. Oliver’s students, 55% of respondents rated learning resources as valuable). This is likely due to the fact that the question for students was contextualized by their immediate experience in class with the particular choice type, and suggests that contextualizing choice types through experiential learning may significantly improve accuracy of student valuations of choice types.

Implementation decisions greatly affected the choice experience for learners in Ms. Oliver’s class. I had not anticipated Ms. Oliver limiting the total number of text copies from which students could choose. This had not been discussed in our lesson-planning session. As I observed Ms. Oliver’s lesson opening, I heard her explain to the class that there were an equally distributed number of copies of each of the texts available, and only enough total copies for one per student. This meant that unless student interest was equally distributed among the three articles, not all students would have the opportunity to select their preferred text. I captured my observations of this choice design parameter in the following post-lesson reflection memo:

_The devil is in the details. I had not anticipated that Alison would limit the number of texts available for each of the three POV choices. I understand her rationale: she wanted multiple perspectives to be explored for the sake of the discussion and the learning activity. What if every student chooses Frederick Douglas’s piece, What a Black Man Wants? This begs the question, what are the right parameters to place around choices in learning? In reality, not every student had a choice today - at least 4-5 kids didn’t get the source they wanted to read. Some were visibly disappointed. I observed an interaction between Alison and one student who was upset because the last Douglas copy was gone. She asked Ms. Oliver if she could read it anyway. Alison was a bit dismissive, saying, “Too bad, they’re all gone! Choose something else!” She had said upfront, “First come, first serve.” What kind of behavior does that incentivize? Kids running to the front of the room to get their preferred text before others grab the last one? I wonder whether Alison thought this through._
The student returned to her desk and slouched in her chair. She looked deflated, understandably resistant to the idea of participating in this activity if it wasn’t going to be with the text of her choice. I think I would have felt just as disappointed. I gave it about 10 minutes, then headed over to her, and noticed her working away. I kneeled down at her desk, and posed the question: “So which one - this one is the Day of Triumph, isn’t it? Not the one you wanted. Which one did you want?”

“What a Black Man Wants.”

“Aww, OK. How is that making you feel?”

“Good, because, I took a picture [of the article] and I’m reading it anyway!”

I couldn’t help but laugh and think, “Good for her.” She cared so much about being able to make the choice that related to her interests, she found a workaround by finding a classmate who had the Douglas text, taking a picture of it on her phone, and then completing the learning activity using the text of her choice.

The lesson here? I think we need to avoid creating what probably feels like a false choice, or empty choice, to learners. In this case, a parameter was placed on the choice design that ultimately meant not every student got to make a choice that related to their interests. I know this happens in the “real world” – ‘first come, first serve,’ as Alison said. But this is school, and school is about learning, and right now, it’s about exploring multiple perspectives on the Civil War. Can we achieve that end without taking this student’s choice away? Would it be OK if there were a few more kids exploring Douglas’ POV than the southern white lady’s POV? (Fieldnotes, 1/16/2018)

This vignette from Ms. Oliver’s Lesson #1 provides a glimpse into the importance of relevance in designing choices that foster student engagement, and of creating choice parameters that don’t ultimately undermine students’ ability to make a relevant choice, which can have adverse effects on student engagement. This outcome aligns with findings of related studies that examine the importance of relevance in choice (Katz & Assor, 2007). In analyzing student responses on the end-of-lesson reflection form, two of the four students who reported having no choice in the text selection rated their interest
level in the day’s topic a 1 out of 5, where 1 = *not interesting at all*, and 5 = *extremely interesting*; the other two students rated the lesson topic as a 3. Notably, among the 35 total responses, the two aforementioned students were the only two who rated the lesson topic of the day as a 1. Further, all 4 respondents who indicated that they did not have the opportunity to choose their resource rated the importance of choosing their own learning resources as a 5 on a scale of 1 to 5. In this particular vignette, the choice type of *learning resources* offers a context for examining the importance of relevance in choice design. Student responses to the instructional choice suggest the importance of not just having a choice, but of having choices that either align to one’s interests or cognitive and cultural frames of reference (Gay, 2010), or that generate situational interest for the learning experience, as Ms. Oliver achieved in her lesson launch, even if direct connections to one’s life are not apparent (Schraw et al., 2001).

*Quality Choice Design Dimension 2: Framing and Structure*

There were several instances within our lesson design cycles that both Ms. Oliver and Mr. Harrison identified that clearer framing, instructions, and transparent choice “pathways” would have helped more students successfully navigate the choices provided and make better use of their time. In one of Ms. Oliver’s lesson debriefs, she shared her insights on the struggle and confusion caused by offering choices to learners at levels of complexity that they had not yet experienced in her classroom:

I think the progression of events or, the like ... juggling of multiple things was confusing and unless you were on top of it all you got lost. I feel like ... I was feeling that a little bit with this, too. So I'm asking you to do a lot of different things and so the setup is super confusing and I'm wondering if a full year class, if you had the time to ... like if you started this in September, ‘This is confusing.
This is going to get confusing.” But it might have made ... make it easier to then, be like, okay here's our next unit, here's what we're doing, let's go.

Yeah, I think my takeaway was, we need like a checklist, or we need a ... more than just one check list. Because they have one on the front board. They had to do this, to do this, right? So like a ... I'm wondering if almost it's like a web, a map. So if you go this way, you need to do this, this, and this. If you go that way, you need to this ... because that is part of the problem with choice, it's like, "Well if you're gonna do this, then here is what you have to do." (Interview, 1/23/2018)

Ms. Oliver observed her students struggling to gain clarity on the instructions for the day, and on instructions for navigating a sequence of choices in which an initial choice made impacts the secondary choice set and expectations for students. Although directions were provided in the launch of the lesson, there was no visual reference during work time to help students locate themselves in the sequence of the lesson. Ms. Oliver’s suggestion of creating visual tools to support students in navigating choices is a strong one, and aligns with Universal Design for Learning’s framework that recommends that teachers provide “multiple means of representation” of new material to support diverse learners in accessing information how and when they need it (Meyer, Rose, & Gordon, 2014).

Mr. Harrison shared a similar insight in his first lesson debrief. Mr. Harrison observed students struggling to implement the decisions they made because of either confusion within the room or lack of clarity on instructions, which Mr. Harrison partly attributes to the size of his classroom, and partly to students’ level of attentiveness to directions given:

Mr. Harrison: I was thinking about it a lot, through a lot of things I picked up on. Okay. The main thing is that this could have gone better if we were in a larger room...I feel like if we were able to separate the two choices- So we
wouldn't have to overlap and students would not have been as confused. I did have one student say to me in fourth grade, "Mr. Harrison there's just so much going on, I don't know where to look." I feel like the choices are great... It doesn't work as well as it would in a larger room where we can physically separate the groups.

Sydney: I also was thinking, I know we didn't go over the learning target with period 2. Then we went over the learning target with the period 4. I realized we wrote that learning target. Remember the last part, 'how well will you expect me to do it?' That's where you and I brainstormed what are the criteria. I realized today students were sharing their activity with me to collect it or for me to check it. A common trend that I noticed was that, students didn't always remember to label and did not always remember to write the caption. They drew the picture. Most of the times there were arrows involved, but they didn't always label or caption. I just realized it could save us a lot of time if we prompted kids to check their work against the criteria before they asked us to hand it in or to come and check their work, right?

Mr. Harrison: Yes. I feel like the criteria was there in the directions. I just feel like sometimes students don't always read the directions. We said it verbally. We had it written out. Maybe we could have it a power point slide with bullet points. Make sure your picture has the three following things. (Interview, 1/16/2018)

These examples provide further evidence to support existing educational research that argues for the importance of creating structures to support students in navigating autonomy-enhancing choices, such as clear expectations, responsive communication and classroom-based supports (Skinner & Belmont, 1993).

**Quality Choice Design Dimension 3: Purpose**

In addition to *relevance* and *structure*, I identify *purpose* as an important component of quality choice design. *Purpose* refers to a clearly defined pedagogical purpose for the choice design; specifically, a purpose that directly aligns to a target skill associated with self-regulation, such as the ability to set goals, appraise tasks, make strategic decisions, and practice metacognition (Zimmerman, 2000; Moos & Ringdal,
Within the context of my broader argument for quality choice design as a mechanism for cultivating students’ self-regulation skills, I assert that a high-quality instructional choice is one that is purposefully constructed to help students develop, practice, and apply one or more self-regulation skills. Drawing on Winne and colleagues’ four-part model for self-regulation, this study seeks to present the case that instructional choices should be purposefully designed, not solely to motivate, but to support students in one or more of the following self-regulation skills: task appraisal, goal-setting and planning, metacognitive monitoring of learning, and application of relevant learning strategies in service of advancing toward one’s goal (Winne & Perry, 2000; Winne & Hadwin, 1998; Winne, 2001). Through our collaborative lesson design cycles, several prototypes emerged of choice designs that purposefully integrate one or more dimensions of self-regulation skill development in this manner. I again draw upon vignettes from the collaborative design cycles to illustrate these prototypical examples of instructional choice designs aimed at cultivating self-regulation skills among learners.

In Ms. Oliver’s second choice-based lesson design, she introduced to students a multi-week project that would involve several significant choices. First, students were asked to choose the essential question from among a choice set provided: *How could America improve the immigrant experience? Does the US government owe reparations to the living descendants of slaves? Should the US be held responsible for damages done to imperialized nations?* Alternatively, students could propose a different essential question for Ms. Oliver’s review and approval.
A second significant choice presented to learners was the final product of the project. Two options were provided in the choice set: an Opinion Editorial, and a Spoken Word poem. Students had the opportunity to propose an alternative final product. Figure 12 shows an excerpt of the Student Project Overview Sheet, which presents project choices to students.

In anticipation of students needing varying levels of support completing the project, Ms. Oliver and I developed a set of “checkpoints” designed to help students visualize, plan for, and achieve key milestones toward completing the project. Excerpts
from the first checkpoint are shown below, which illustrate several ways that self-regulation skill development was purposefully embedded in the design of the choice-based project.

Figure 13: Oliver's Choice-based Project Checkpoint #1 - Prompting Task Appraisal

<table>
<thead>
<tr>
<th>PART 1: MY CHOICES</th>
<th>CHOICE VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>My Essential Question:</td>
<td>Choice Value</td>
</tr>
<tr>
<td>Why Did You Choose This EQ?</td>
<td></td>
</tr>
<tr>
<td>Choose all that apply:</td>
<td></td>
</tr>
<tr>
<td>□ Seems easy</td>
<td></td>
</tr>
<tr>
<td>□ Seems interesting</td>
<td></td>
</tr>
<tr>
<td>□ It personally connects to my life</td>
<td></td>
</tr>
<tr>
<td>□ Other:</td>
<td></td>
</tr>
<tr>
<td>How important is it to you to be able to choose your own topic of study? 1 = not at all 5 = extremely</td>
<td></td>
</tr>
<tr>
<td>1 - 2 - 3 - 4 - 5</td>
<td></td>
</tr>
</tbody>
</table>

| My Final Product |
| Why Did You Choose This FP? |
| Task Appraisal |
| Choose all that apply: |
| □ Seems easy |
| □ Seems interesting |
| □ Seems valuable to me |
| □ Other: |
| How confident are you that you can complete this task successfully and on time? 1 = not at all 5 = extremely |
| 1 - 2 - 3 - 4 - 5 |

Figure 13 shows an excerpt from the first project checkpoint, which asks students to identify the essential question and final product that they have chosen, indicate their rationale for the choice they made, and rate the choice value as well as their level of confidence that they can complete the final product successfully and on time. The choice valuation question was intended to serve as another data point to triangulate students’ self-reported valuations of different choice types. The task appraisal prompt was designed to gather insight on students’ level of confidence on whether they could complete the task successfully and on time. Drawing on motivational theory, this task appraisal question was informed by the research behind Expectancy-Value Theory, which suggests that student engagement on tasks corresponds to their level of confidence or expectation about their probability for success on the task (Toshalis & Nakkula, 2012; Wigfield & Eccles, 2012).
2000). In this way, the checkpoint is designed to prompt students to practice a self-regulating activity (task appraisal), and to generate important student expectancy data to signal to the teacher whether or not an early intervention is needed to prevent disengagement. It also serves as an artifact for post-project reflection, creating another opportunity for students to practice metacognitive skills.

**Figure 14: Oliver's Choice-based Project Checkpoint #1 - Prompting Advanced Strategy Identification**

![Table showing project checkpoint dates and due dates](image)

Figure 14 shows a second project checkpoint excerpt, which presents questions that prompt students to self-assess their readiness to complete checkpoints within the teacher-proposed project pacing guidelines. Students are also asked to identify strategies that they plan to use if they get “stuck” at a particular checkpoint, prompting the self-regulation skill of identifying strategic actions (Winne & Perry, 2000; Winne & Hadwin, 1998; Winne, 2001).

**Quality Choice Design Dimension 4: Metacognitive Prompting**

Consistent with their purpose, the choice design examples integrate multiple metacognitive prompts for learners. The metacognitive prompts embedded in the choice
design play two important roles: first, the prompts create a structured opportunity for students to exercise the metacognitive “muscles” that are essential to developing the self-regulation skills of lifelong learners. Purposefully crafted metacognitive prompts help to embed self-appraisal into the learning experience, guiding learners to identify and apply helpful strategies for learning, thinking, and problem solving (Pintrich, 2003).

Importantly, research has shown that metacognitive practices are critical to enabling learners’ to transfer learning from one context to another (Bransford et al., 1999; Palincsar & Brown, 1984; Schoenfeld, 1991), and that learners who are aware of the different types of strategies that can be applied to learning are more likely to consciously apply them as they learn (Pintrich, 2003).

Secondly, the metacognitive prompts generate real-time qualitative data available for teacher analysis, enabling identification of skill gaps or engagement issues, diagnosis of student needs, and design of timely and responsive interventions. For example, if a student rates her level of confidence in task completion at a 1, where 1 = not at all confident, this provides an immediate signal to teachers of the need to follow up with the individual student, to investigate the underlying issue, and work with the student to identify strategies for addressing the need. Put another way, purposeful choice design that embeds metacognitive prompts is a strategy for teachers who conceptualize their roles as action researchers within their classrooms (Cochran-Smith & Lytle, 2009; Ballenger, 2009).
Quality Choice Design Dimension 5: ZPD-Alignment

The final emergent measure of quality choice design is ZPD-alignment, referring to Vygotsky’s *zone of proximal development*, which approximates what learners can accomplish with guidance (and cannot accomplish without guidance) as a means of identifying the appropriate level of challenge to optimize learning (1978). This measure of quality choice design emerged as an important recurring insight throughout each lesson design cycle with participating teachers. As expected, different students responded to the choice sets in different ways, demonstrating different levels of readiness for the cognitive and organizational choices introduced to them in the lessons. To gain insight beyond my own classroom observations during lesson implementation, I conducted post-cycle interviews with students who self-identified as *emerging self-regulated learners*. I define *emerging self-regulated learners* as learners who meet the rating criteria shown in Table 19 for at least five of six questions. In the Choice-in-Learning survey, students were asked to themselves on a scale from 1 to 5, where 1 = *not me at all* and 5 = *totally me* for each of the following six questions.

**Table 19: Rating Criteria for Emerging Self-Regulated Learners**

<table>
<thead>
<tr>
<th>Self-regulation Assessment Questions</th>
<th>Rating Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. When I get stuck on an assignment, I just stop and do something else.</td>
<td>4 or 5</td>
</tr>
<tr>
<td>2. I usually make a plan before I begin a big project or task.</td>
<td>1 or 2</td>
</tr>
<tr>
<td>3. I regularly stop and ask myself, &quot;Am I on the right track?&quot; OR &quot;What could I have done differently?&quot;</td>
<td>1 or 2</td>
</tr>
<tr>
<td>4. I usually like to ask lots of questions about what we’re learning.</td>
<td>1 or 2</td>
</tr>
<tr>
<td>5. My emotions are really hard to manage, especially when someone disrespects me.</td>
<td>4 or 5</td>
</tr>
<tr>
<td>6. When I read something, I usually think about what is important for me to remember.</td>
<td>1 or 2</td>
</tr>
</tbody>
</table>
Seven of Ms. Oliver’s students met these criteria. Among these students, all but one student, Josh, described the choice of project topic as positive, valuable, and preferred during the post-cycle interview. During an interview, Josh expressed appreciation for the choice, but indicated that his preference would be that the choice were made for him by his teacher:

Sydney: What was it like for you being able to have those choices for the project and the topic? Did you like having those choices, or it didn’t make a difference for you?

Josh: I like having the choices but I feel like it would have been easier or better or more constructive if the teacher gave the choice because then, like, if the teacher gave you the choice you would have, like, a set focus on what you gonna do. Like, if she gave the option, I feel like you might think about the difference choices you could make too much or longer.

Sydney: So it’s, like, kind of easier if the teacher would just decide what the topic is, versus you trying to decide between these three big topics?

Josh: Yeah. (Interview, 3/1/2018)

Josh offers a clear rationale for his preference: having to choose one’s own topic could require “too much” thinking, or too much time; if a teacher makes the choice for you, you have a “set focus” and know exactly what to do. In this particular choice design, Josh’s response suggests that he experienced some level of discomfort with the cognitive choice of selecting from among three pre-determined topics for his project. Josh’s survey responses to the self-regulation assessment questions are shown in Table 20. It is worth noting that Josh also rated the value of choosing topic as a 1 out of 5 on the questionnaire, where 1 = *not valuable to me* and 5 = *highly valuable to me*.
Table 20: Josh's Self-regulation Ratings

<table>
<thead>
<tr>
<th>Self-regulation Assessment Questions</th>
<th>Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. When I get stuck on an assignment, I just stop and do something else.</td>
<td>5</td>
</tr>
<tr>
<td>2. I usually make a plan before I begin a big project or task.</td>
<td>2</td>
</tr>
<tr>
<td>3. I regularly stop and ask myself, &quot;Am I on the right track?&quot; OR &quot;What could I have done differently?&quot;</td>
<td>1</td>
</tr>
<tr>
<td>4. I usually like to ask lots of questions about what we’re learning.</td>
<td>1</td>
</tr>
<tr>
<td>5. My emotions are really hard to manage, especially when someone disrespects me.</td>
<td>2</td>
</tr>
<tr>
<td>6. When I read something, I usually think about what is important for me to remember.</td>
<td>1</td>
</tr>
</tbody>
</table>

From an instructional design perspective, Josh’s experience provides valuable insight that can inform the design of appropriately challenging choice sets. In Figure 15, I draw inspiration from Josh’s experience to identify a possible choice continuum that rejects a choice/no-choice analytic tendency, and instead identifies stages of choice design that are responsive to Josh’s expressed concern about making a thoughtful choice, without struggling to spend too much time trying to decide among options given.

Figure 15: Example Choice Trajectory for Project Topic or Research Question
Josh’s preference that the teacher make the decision for him, along with his responses to the self-regulation assessment questions, together suggest that Josh needs support developing or applying cognitive strategies in this particular setting (and not necessarily in other contexts) to independently make the choice at hand. Josh’s ZPD may require a differently designed choice set, such as a Bounded Choice-Guided. In this choice design, Josh would have explicit teacher guidance through the process of selecting from among a pre-determined set of choices. Importantly, the teacher would model the cognitive processes used by experts to make decisions such as these (Zimmerman & Schunk, 2011), and would also articulate and explicate a set of criteria for identifying a quality topic or research question. Metacognitive modeling, along with a transparent set of decision-making criteria applied in an authentic context, could provide Josh with the tools and experiences to ease the cognitive load in similar settings in the future, while also preparing him for more sophisticated choice sets.

Josh’s experience is one of several examples that illustrate the importance of appropriately challenging, well-structured choice designs, as well as the diagnostic power of choice design, discussed in a later section.

In a debrief with Ms. Oliver, she shared several concerns that speak to ways in which the choice designs we tested in her classroom may require adjustments to ensure more appropriate supports for learners:

Sydney: I'd like to debrief, I know it's been a couple of weeks, but you implemented this very cool, choice-based project several weeks ago and I wanted to sort of get your headline thoughts on how it went: what you observed, how the experience was for you and for your students. How did it go?
Ms. Oliver: I thought it was okay. I think we definitely struggled a little bit, mostly because there wasn't enough background information. So, I'm thinking about how to implement it, or how to implement student choice again for this next unit and I feel like we're still doing a lot of regular work because they're not at a place where they have a basis of information in order to work off of. That's, I don't know how to fix that problem except to just teach it to them in different ways, right? But what we have been doing a lot of is mini lesson breakouts where they can have a choice between one or two topics that they pick but they have to come to at least one in the class period. Which is good and it's giving them a little bit more choice. I would say my other big issue with how I did this was I didn't have enough checks in place so students were not able to, there was no accountability until the very end. So I have students who, "I didn't do the project." I just figured that out. That was like, oh, okay.

Sydney: Do you feel like, I guess I want to diagnose what's beneath this. Do you think it's a skill gap, that they don't have the skills to do this on their own? Or do you think that something else is getting in the way of them not being able to build their own background knowledge? Because you curated the resources, right?

Ms. Oliver: Oh, okay. Yeah. They assume that the teacher will give them the knowledge, right? So we're having that problem where they're being passive learners. So they don't know how to go look something up, and they also don't want to. That's maybe a bigger issues is that, "Okay, I don't know this," and so their response isn't, "Maybe I should look it up," it's just, "Okay, I don't know this." So, figuring out how to tell them this is important, or how to make it exciting to want to find that out? I think that's something I struggled with.

Sydney: What's your sense of kids' actual ability to make meaning of those resources without needing the lecture or guided support? Would they still need a lot of skill building, or do you think it's just a culture thing?

Ms. Oliver: I think it's just a culture thing. Which, you know, but also we're not, we don't have a cohesive model of teaching them that.

Sydney: Okay, so that was the first issue. The second issue was the lack of accountability over the course of the project. Tell me about how those checkpoints worked out, because that was part of the intention— was to create some structure.

Ms. Oliver: Right. The checkpoints were, and this is on me, probably. Actually. I was not good at checking them in at the checkpoints and I guess what I needed to do, not a, "Hey, you should be at this point," it should have been, "this is due today." Instead of being, "Here's my suggestion." It needs to be, "You have to be done with this today."

Sydney: And if they’re not, there's some kind of intervention, right, so we don't
get far behind? That’s good learning for us. Did you find the checkpoints a helpful way to structure the project itself, or is there another structure that you feel might have been more helpful?

Ms. Oliver: Yes, I did. I think, yeah, I don’t know. That’s a good question. I feel like I would have to do another project in order to figure that out. (Interview, 2/28/2018)

The exchange between Ms. Oliver and I during our final debrief exemplifies an important lesson gleaned from the experience about the importance of the design and implementation of appropriate structures to support students in managing choices (Skinner & Belmont, 1993). Though checkpoints were designed as an intended structure for guiding students through project milestones, and for generating important formative data for Ms. Oliver along the way, the checkpoints went unused and unaccounted for. While the utility of the checkpoints and their particular design cannot be evaluated as part of this study, they represent an example of a tool intended to scaffold the learning process for students who are not yet ready to, for example, define their own milestones toward project completion.

It is interesting to note Ms. Oliver’s observations on the impact of the broader school culture on students’ own demonstrated sense of agency and initiative as learners. According to Ms. Oliver, students have internalized the expectation of compliant behavior at Aspiration High School, which manifests as high levels of passivity in classrooms: “We’re having that problem where they’re being passive learners. So they don’t know how to look something up, and they also don’t want to.” This observation echoes findings discussed in Chapter 4 on the culture of compliance and control.
The lesson vignettes, choice design prototypes, and reflections discussed above present an early evidence basis for the five measures of quality choice design presented in this study: relevance, framing and structure, purpose, metacognitive prompting, and ZPD-alignment. In the next section, I build upon the notion of quality choice design as foundationally important to nurturing self-regulation skills, and argue that quality choice design can serve as a strategic diagnostic tool for evaluating students’ self-regulation skills and identifying responsive interventions to support skill development.

**Choice Design as a Diagnostic Tool for Responsive Interventions**

Though the majority of teachers at Aspiration High School conceptualize choice as a tool for motivation, this study argues for the efficacy of quality choice design as a tool for assessing and targeting self-regulation skill development. In a high-compliance environment in which adults and schedules constantly dictate students’ behaviors and actions, it is difficult to assess the self-regulation skills of any students who regularly meet expectations for compliant behavior. However, when choice is introduced, students’ ability to self-regulate or self-direct their learning is revealed, and both teachers and students can use this formative data as diagnostic information to help identify areas for growth and support. In the following vignette, I describe relevant insights that emerged during Mr. Harrison’s first lesson implementation and lesson debrief, which illuminate the diagnostic power of choice design.

Mr. Harrison’s first lesson design involved several different choices drawn from our typology referenced in Chapter 4; namely, *activities, pacing,* and *lesson.* After the lesson’s opening Do Now, Mr. Harrison introduced three learning outcomes for the 104-
minute class period. First, all students would be able to successfully complete the Draw-Label-Caption activity to demonstrate their understanding of the relationship between work and power. Secondly, all students would be able to solve the work and power practice problems #1-7 to demonstrate their ability to solve work and power problems. And finally, all students would be able to complete the Calculating Power Quick Lab independently, through which they could demonstrate their ability to solve work and power problems in a novel context. After presenting the three goals, students were presented with a set of choices about how to navigate their individual path during the lesson. Each learning outcome represented a “gateway” for advancing to the next goal.

Figure 16: Mr. Harrison Lesson #1 Excerpt - Lesson Outcomes

In order to achieve the first goal, students could choose between sitting in on a mini-lesson with Mr. Harrison, reviewing several digital resources to review the key concepts, or attempting the Draw-Label-Caption Activity without either form of support. The second choice set involved several options for achieving the second goal: follow
along with Mr. Harrison’s guided practice of the work and power practice problems;
attempt the guided practice problems independently and check your answers prior to
completing the mandatory work and power problems; or attempt the mandatory work and
power problems #1-7 and request that your work be checked with feedback. The third
choice provided to students was whether to work independently or with others on the
Review Problems. In my fieldnotes, taken immediately after the class period, I make a
note of the level of engagement I observed in the classroom:

This lesson went surprisingly well. Students seemed highly engaged today,
completing activities, asking questions about their work, or clarifying questions
about the choice opportunities and what to do next. In particular, students whom
Mr. Harrison had identified as his “troublemakers” were working diligently on
the activities, and opting in to some of the additional supports offered. I found
myself playing a very hands-on role today and not just observing. While Steven
was leading the mini-lesson, I was circulating throughout the room, checking in
with individual students, responding to questions, giving feedback, collecting
completed activities, and helping students figure out subsequent choices. The
energy felt very positive in the room, and the time seemed to fly. I watched Mr.
Harrison deliver the lesson to a small group – which was difficult in such a tight
classroom space – and he seemed particularly relaxed, even lighter in his tone.
There were only a handful of times when I observed a few students sitting
passively in their seats. I walked over, kneeled down, and asked how it was going
and whether they needed anything. In each case, there was something the student
needed – clarity about the task, or help understanding how work is defined, and
how it relates to force and direction – and once we talked it through, the students
got back to work. There was no moment in which I observed resistance to doing
the work itself. (Fieldnotes, 1/16/2018)

During Mr. Harrison’s and my first lesson debrief, Mr. Harrison reflected on the
very different configuration of class time and learning activities that we had trialed
together. In the following excerpt from our debrief, Mr. Harrison identifies the way in
which the choice set in his lesson prompted students to self-assess and make changes (or
“take strategic action,” per the aforementioned self-regulation framework) in real time to support their own learning:

Mr. Harrison: Some of them thought, "Oh I could go right into the independent practice." Then realized as they were doing it they probably thought, maybe I need the extra support. They weren't sure in the beginning whether they were ready. Thinking they were ready and then had to reassess, "Okay so maybe I'm not."

Sydney: Yeah. What do you think about that sort of realization for students?

Mr. Harrison: I think it's interesting. I feel like there's nothing wrong with changing your choice. There's no harm in it. I feel like students don't really monitor their own learning the way they should just in general. I feel like maybe that was a way of giving them an opportunity to monitor their learning.

Sydney: I totally agree. That's a really great point. From my perspective, it is awesome that they essentially did their own check for understanding... I think it's awesome that they sort of wanted to jump into the demonstration of learning. Just by having that choice. There were not high stakes involved. We weren't penalizing them for choosing one thing that they ended up not needing. They needed something different.

It's kind of neat that in the span of that hour and a half, just by the way we designed the choices, they naturally self-appraised. I also noticed kids were sort of working but also listening in and I think just wanting to check that they knew what they needed to know. Anyway, I think that's such a great point that something we did today helped them to reflect on what they knew or didn't know and make a change to get what they needed. I think that's great. (Interview, 1/16/2018)

During a focus group that took place with Mr. Harrison’s students not long after his first choice-based lesson implementation, students demonstrated remarkable insight into their own experience with the choice sets described in Mr. Harrison’s first lesson.

Alyssa: I like Mr. Harrison, right? But ever since you came in with all the choices and stuff, it's been so much better because now I have, I get to choose and I get to tell him, I get to realize if I need more help or not. Or I get to choose who I want to work with and then I get a choice and which it makes me not feel like I'm forced to learn but I want to learn.
Sydney: Can I just have anyone respond to that? Do you feel a similar or different way about it? Tell me about your experience.

Jalen: I love this class. He's so funny and he always says he doesn't like to lecture us. He hates that we have to do a lecture and do all this work but he tries as best as he can to make it be tolerable.

Sarah: Yeah, like, he didn't have a lecture on Thursday so that we could have choices on Tuesday. And when you came in with the choices that we can listen to him or give us-

Sydney: Yeah, like you could do the mini lesson with him or you could read stuff-

Sarah: It was better because I didn't really know it until the mini lesson and it helped me better learn.

Sarah: Instead of just skipping to the work. (Group interview, 1/16/2018)

In the focus group excerpt above, Alyssa explains that class has been “so much better” not just because of the increased quantity of choices now made available to her, but because of the efficacy of those choice designs in fostering her awareness of her own level of understanding: “I get to choose and I get to tell him, I get to realize if I need more help or not.” For Alyssa, the choices provided in Mr. Harrison’s first lesson design prompted metacognition, which enabled her to make a real time decision about what she needed in order to achieve the learning goal. For Sarah, the optional mini-lesson created the opportunity for her to engage with the material in a new way that helped her learn it better; the opportunity to access additional supports prevented her from “skipping to the work” that involved demonstrating content knowledge that she admittedly did not yet fully understand.

In the same focus group, a ninth-grade student named Jalen insightfully calls out the limitations of the choice sets provided in Mr. Harrison’s first lesson, which provided no flexibility or variation on content, only sequencing of activities and options for
additional support. He expresses a desire for choices that are more relevant to student interests and preferences:

Jalen: It's just like self-evaluation basically- The choices that I would like to see is the actual choice in what we learn—

Sydney: Yeah, like what you're learning-yes. To be ready for the world, you’ve got to be able to do your own research, pose your own questions- you’ve got to be independent.

Sarah: Yeah, I would love to be independent.

Kenya: So, my friend, she goes to EHS and she says that they give them so many choices, like, for example, for midterms, their midterms wasn't to sit down and memorize all these things. For her math midterm, she has to go out and ask architects about buildings and stuff and then actually know about them and then actually herself go out in the world and-

Sarah: They're geniuses.

Kenya: And I like that. I think it's really good because EHS is a really-Prestigious.

Mr. Harrison: Yeah, they really help their students become independent. They give them so many choices and I really like that. (Group interview, 1/16/2018)

In this exchange, Jalen and his classmates recognize that the approach to choice design applied in the lessons, which coupled instructional choices and metacognitive prompts, created opportunities for “self-evaluation.” Put another way, the instructional choices experienced by Mr. Harrison’s students prompted students to monitor their own learning, a key self-regulation strategy (Winne & Perry, 2000; Winne & Hadwin, 1998; Winne, 2001). Students also shared insight about their own discussions with peers about the types of learning experiences that are happening in high school. This particular group of students had highly positive conceptions of a nearby high school, which they described as “prestigious,” that employed a project-based learning model and ensured that students, whom they described as “geniuses,” regularly had the opportunity to make important
choices in their learning to “help their students become independent (Group interview, 1/16/2018).”

In a series of post-cycle interviews, I asked six of Mr. Harrison’s students, all of whom self-identified as emerging self-regulated learners based on the aforementioned survey criteria, to share about their experience with the end-of-lesson reflections. The dominant narrative among students interviewed was one of a highly positive experience with the structured end-of-lesson reflection; learners cited such benefits as being able to express oneself, improve understanding of content, gain more timely insight into how well one is learning the material, and feeling a stronger sense of care and attentiveness from their teacher:

It was a five. It was nice. Because like, this was the only time I really got to express myself and like how I really felt. (Interview, 3/1/18)

That was the first time a teacher ever asked for us to reflect on the choice. It was just new…it felt like the teacher really cared about what the students are feeling about the choice that they made. And teachers should actually take the time to read every single response so they can understand what the student needs and what the student doesn’t need. (Interview, 3/1/18)

I like being asked to write reflections, cause it’s like I’m in class for like, what, an hour and something minutes? So I really want to leave class and be like, oh yeah, I learned this. I don’t want to leave class and be like, ah, I don’t remember. Or I don’t know. I didn’t understand. (Interview, 3/1/18)

At the beginning of the lesson, the teacher is just telling you everything and she gives you a paper and didn’t ask at the end of it. She’s just going to see what you’re doing. Now a student may think they got it right, they may feel confident about it but at the end of the day, you don’t know if you did your best until you get that grade back. Then, by the time you get that grade back, we’re moving onto a different lesson so its not really like you could go back and stay after school. If we’re doing that [reflection] at the end of a lesson and the teacher was like talking to us, then it would be easier. (Interview, 3/1/18)
I mean it was different, because I rarely do that, sometimes. I mean, yeah. Cause it tells you that you need to do something different or help yourself by just thinking sometimes, instead of completely going so fast. Slow down and pace yourself and think before you do. (Interview, 3/1/18)

During a lesson debrief, Ms. Oliver had a similar insight into the diagnostic power of choice designs. During Ms. Oliver’s second choice-based lesson, she introduced the practice of offering optional “mini-lessons” that targeted specific skills or content knowledge, and that students could opt into based on their own assessment of their learning goals and needs. This was a significant shift from the whole-group lecture model and mandatory note taking that Ms. Oliver described as a consistent part of her lesson design and delivery prior to the collaborative lesson design cycles. In this new instructional approach, a schedule for mini-lessons was posted for the current and upcoming week, along with sign-up forms by class period, shown in Figure 17. Each mini-lesson corresponded to specific skills or knowledge that were essential for the projects students were working on, such as outlining an essay, editing a draft essay, or preparing to submit your work for publishing. The mini-lessons were designed to create opportunities for students to self-assess and opt into learning opportunities that aligned to their self-identified needs.
In the excerpt below, Ms. Oliver reflects on the ways in which optional mini-lessons, in contrast to mandatory whole-group lectures, shed light on students’ own ability to self-assess their skills and learning needs, and take initiative to attend a mini-lesson that corresponds to an identified need. Ms. Oliver reflects on how she might respond differently to a student who doesn’t show up to a mini-lesson that, in her estimation, should be there:

Yeah. Maybe it's ... you give them the stuff and then as they're struggling if they don't show up to your mini lesson, you go, "Okay, I need to see Josh. I need him in this mini lesson." And there is no backing out of that, or you know what, maybe there is points incentive, right? "If you correctly identify which mini lesson you think you need to be in and I think you need to be in, you get a bonus point? Right, it could be something like that, or you must choose a mini lesson or ... yeah, like I've identified the mini lesson I think you need to be in, let's see if you can do same, and if you do, you get a bonus point, and if you don't, no harm,
no foul, we'll figure it out. And then the mini lesson is designed to teach them that skill that they're struggling in.

Yeah ... I wonder if part of it is just like, as a teacher, you have to figure out which kids need help and like ... that's your job to then find ways to help them in that, but ... like make mandatory lessons for certain students. And it can even be, "Okay, today is a mandatory mini lesson day, you have been signed up for one of these mini lessons that you must complete. If you choose to add a second one, you may, period." Right? (Interview, 1/30/18)

In trying to identify strategies for supporting students, Ms. Oliver describes how she might use grade incentives to persuade students to attend a mini-lesson. Though arguably Ms. Oliver is defaulting to the use of punitive measures to change student behavior, the important insight she has articulated, which is prompting her to brainstorm possible strategies, is that giving students choices means lifting the proverbial hood on the needs of students who may lack the self-regulation skills to make the decisions in their daily learning that are most supportive of their goals. Importantly, Ms. Oliver is identifying her own role as the teacher in this critical work: “I wonder if part of it is just like, as a teacher, you have to figure out which kids need help and like…it’s your job to then find ways to help them in that.” It appears that a paradigm shift is underway for Ms. Oliver, who is beginning to recognize that her role extends beyond instructor to learning designer and diagnostician.

Choice Design as an Entry Point for Learner-centered Curriculum and Instruction

In this section, I argue that choice design as a collaborative process has utility in shifting teacher practice and approach to curriculum design that is much more learner-
centered, oriented around the student experience, and attuned to students interests and needs.

Ms. Oliver and Mr. Harrison, both self-selected, voluntary participants of the study, are young, white, second-year teachers at Aspiration High School. Both participated in a pre-cycle interview, during which I gathered insights into their teaching practice, perspectives on choice in learning, and aspirations for their involvement in the study. Next, each teacher engaged in three collaborative lesson design cycles that involved lesson planning, lesson facilitation (during which I conducted observations), analysis of student work, and a cycle debrief. After the final design cycle, a final debrief took place to reflect on the global experience.

Over the course of the three lesson cycles, each teacher implemented lessons that integrated new types of instructional choices into their practice. As part of the lesson, students were asked to respond to a series of questions about the choices they made in their learning, providing insight into the student experience, and specifically, the student response to the choice provided. Additionally, focus group and interview data were gathered to deepen insights on the student experience. New insights were generated through each lesson design cycle that helped expand our understanding of student preferences and needs in their learning, as well as insights that informed our thinking about choice design.

In the initial teacher interview, which preceded all three collaborative design cycles, Ms. Oliver and Mr. Harrison shared their visions for their classrooms and their conceptions of choice in learning. Both teachers described visions for learning in their
classroom that involved high levels of engagement and autonomy. Mr. Harrison explained his vision for his classroom is a place in which learners are “in charge of their own learning,” and have the intrinsic motivation to learn on their own:

An ideal classroom. I would say, one where ... Well, everything needs to be organized, although I am not as organized as I would like to be. Lots of space to move around and to learn, which I don't have at the moment, but that's just the logistics of it. Where students are asking questions. The best feeling is when you're going around and monitoring groups when students are working in groups and you have that one student leading and kind of taking control ... Not control, but like, "All right, here's what I'm going to do. Here's what you need to do," and kind of being like the director of the group, and them all kind of sharing it and having their input, I guess you would say. Like, them being in charge of their own learning without me having to force it to them, they have the motivation to want to learn themselves or to complete the task themselves. (Interview, 1/7/2018)

One observable shift that has taken place over the course of the lesson design cycles is an expanded conceptual understanding and sense of possibility as it relates to instructional choice design. In my initial interviews with Mr. Harrison and Ms. Oliver, I asked about their current approaches to choice design. Mr. Harrison’s response revealed a limited view on choice design, and a sense of uncertainty: “When I think of student choice, and correct me if I'm wrong, it means not just giving one way of a student to be assessed on how they're learning?” When asked about choices that related to content, resources, or activities, he responded by saying:

I would like to do more of that, it's just teaching physical science for the first time, I was kind of just thinking let me just stick to a straight curriculum type feel. Then, once I get more resources and get more comfortable with teaching it, then in the future, my teaching might evolve and give more opportunities for more choice. (Interview, 1/7/2018)
Prior to our work together, Mr. Harrison had conceived of choice in learning as primarily referring to options about how to be assessed, and, understandably, he deprivitized choice design until he felt more comfortable with the new disciplinary content he was teaching in his courses. Similar to Mr. Harrison, Ms. Oliver described her current practice as involving assessment-based choices, primarily of assessment format, but as a more regular part of her teaching practice:

So like when we're doing a project, I feel like I actively seek out choice, because I don't want to read the same thing 12 million times. So, I'm like, "Oh my god, please write about anything else." So, I think that's where I do it the most. And that would be like ... so we did ... when we wrapped up our American Revolution Unit, they could choose a battle or a person that was important to the American Revolution and they had to write a first person, either diary entries, or children's book, or make a website first person. Or I think that ... or a scrapbook. So, like they chose ... they chose both their medium and their person or event. And then I gave them sort of the constraints. Like, it has to be first person. You need primary sources. It needs to be a certain length. (Interview, 1/7/2018)

Though there was intentionally no prescribed choice set to guide my engagements with Mr. Harrison and Ms. Oliver, our collaborative design meetings created space for discussion and brainstorming around choice design, and during these meetings I assumed the role of collaborator and coach, proposing ideas and suggestions while drawing from my own experience in curriculum design as a former teacher and current curriculum designer. Collectively, a range of different choice types were trialed in our lessons, and through the experience of implementing lessons with these choices, both Mr. Harrison and Ms. Oliver developed expanded views on choice possibilities, and demonstrated observable shifts in their practice.
One such example relates to each of their experiences implementing a lesson that involved optional mini-lessons. The notion of an optional mini-lesson that students could voluntarily join based on their own self-assessment of their needs was new to both Mr. Harrison and Ms. Oliver. For Mr. Harrison, the experience led to reflection on his role as facilitator of learning. In a lesson debrief, I asked Mr. Harrison how it felt to him that students were choosing to participate in optional mini-lessons with him, and whether he felt any change in the teacher-student dynamic from his perspective:

Mr. Harrison: I think it's interesting that you brought that up because I did notice that. As a teacher, you kind of feel like, these kids don't want to come to me for anything. Or I can be up there talking all day and they don't care. Then when they actually come to you and actually choose, "I want to listen to Mr. Harrison, that's the way I learn." It kind of makes me feel like, okay they do need me. It also makes me feel more like a facilitator rather than a direct instructor.

Sydney: Yeah. Can you say more about that?

Mr. Harrison: Yeah. Instead of having to directly kind of show that I'm being able to guide them along or be able to kind of push them in the right direction—as opposed to having to do direct instruction, it was more of give them a nudge or the push they needed to kind of figure it out on their own.

Sydney: That's great. You were there. You're exactly right. Instead of it being, "Oh we all have to listen to Mr. Harrison." It's like, "Oh Mr. Harrison can help with what I need to reach the goal for today."

Mr. Harrison: Yeah.

Sydney: It's interesting how that shifts the dynamic a bit.

Mr. Harrison: Exactly. Yes.

Interview, 2/28/18

In my final debrief with Ms. Oliver, I learned that Ms. Oliver has made mini-lessons a regular part of her teaching practice, although not always choice-based:

Sydney: What was your experience of sort of shifting the lesson to the choice-based lesson? Did that change any dynamic for you with the kids or what did you observe with the students in that, what was that
experience like for you?

Ms. Oliver: Well, I loved it. I loved it so much that I do it all the time with them now. Now, before they walk in, there's sign up sheets at the door where they have to sign up for a mini lesson slot. It's currently, everybody has to attend a mini lesson, and we might only do one topic of that mini lesson, but if nothing else, it's just that small group dynamic is giving me more access to the students. That's really helpful. Yes, that has been really great.

Sydney: What do you think changed for them, in terms of their experience as learners, in that mini-lesson setting?

Ms. Oliver: I think they were more aware of their time, they are more aware of their time when I do mini lessons because they're like, okay, well, I gotta get to that mini lesson, but I also have to finish this work. So I actually think it does push them a little bit harder. Which is nice. I'll call them over and they come over and sit down and engage for, even if it's just a few minutes. I think they see more accountability in that, they're held to a standard now, right? I'm asking them to be present with me in this period of time, even if it's only five minutes. Yeah, I also really liked it because I thought it gave them choice and I felt like I wasn't, I didn't have to teach people things that they weren't gonna just, they weren't gonna use in the next few minutes. Basically, right? All of the stuff we worked on was stuff that they were about, that was super applicable to the work that they were required to do. I liked that aspect of it.

(Interview, 2/28/18)

When asked to identify her most significant gains from the experience of participating in this study, Ms. Oliver described additional insights into her teaching practice that didn’t necessarily involve increased instructional choices, but that had significant implications for the student experience: in addition to mini-lessons, Ms. Oliver identified crafting units that are organized around a series of well-structured milestones: “I liked the model of the lesson or of the crafting that unit. In doing that with the different stages of learning…I think it was an easy way for them to understand and for me to visualize exactly what I was asking them to do;” creating the opportunity for students to engage “authentic audiences” for their final products, such as submitting essays for publication to the local newspaper, or posting pieces of work online; and
crafting visually appealing digital curations that consolidate learning resources for student exploration. Each of these aspects of curriculum design, which we had opportunities to test during our collaborative lesson design cycles, are directly in service of fostering student engagement and increasing structured supports for learners.

In my final debrief with Mr. Harrison, it was clear that continuing to integrate engaging instructional choices for learners remains a high priority and an open question for Mr. Harrison. He expressed a desire to “aim bigger” with choice design in his class, and identified the need to purposefully build skills for the types of more engaging projects he would like to see embedded in his curriculum.

**Sydney:** Were there any, is there anything you experienced, any part of this experience, that you think has changed the way you think about your lesson design or has changed the way you will approach some part of your practice?

**Mr. Harrison:** Oh yeah, definitely. Anytime that I am about to make a decision for them, I think okay, well they could have this choice or maybe I can give them choices and maybe they can decide—instead of me making a choice and then them being unhappy about it, so then it's kind of they're in control of how the classroom is going.

**Sydney:** Here's my next question. If we are to keep moving forward in this exploration of choice, what would you be interested in doing next? I think you answered that a little bit about having more, you said, bigger choices?

**Mr. Harrison:** Yeah, I want to kind of aim bigger with the choices. I think our choices have been really small. Instead of the little choices, whether you can do this or that, kind of have them kind of drive how do they want to learn about what we need to learn about. Like do they want to do research, do they want to do a project, do they ... and do they want to do surveys? You know, all these different options that come to mind.

And then, along the way, how can we build skills? Not just science content but just like, you know, presentation skills or public speaking skills or discussion skills.

**Sydney:** Awesome. That's great. And was there a moment when the notion of skill development became more top of mind for you, or more "that's a really important part of this"? Where did that sort of come from?
Mr. Harrison: Well what I, that comes into play when I notice that I want them to do a certain thing like maybe have a discussion, or do a presentation, or do a lab report or, and then I realized after asking them to it, you know, from my experiences from last year as a teacher, I know they may not know how to do it and they don't always come with these skills or they never had this experience before so then that puts me in the situation where I have to ask myself well, how can I prepare them? How can I teach them how to have a meaningful discussion amongst the classroom? (Interview, 2/28/18)

Arguably, choice design was an entry point for Mr. Harrison to begin purposefully exploring ways to increase student engagement in learning and make learning more meaningful to students. Mr. Harrison recognized that, in order for students to be able to “drive” their own learning—a similar notion to his initially shared vision for the classroom—they will need to have the opportunity to develop and practice important skills, such as research, discussion, and presentation of ideas.

**Summary**

In this chapter, I have described key findings from this study’s collaborative lesson design cycles that took place with two participating teachers of Aspiration High School. I have presented a framework for quality choice design derived from an analysis of qualitative data gathered through the lesson design cycles, including student focus groups and interview data, teacher interviews, classroom observations, and student work analysis, while also drawing on relevant literature from the field of learning science. I draw upon vignettes from the collaborative lesson-design cycles to illustrate each measure and its cultivating effect on learner engagement and self-regulation skill development. Further, I have argued that effectively designed instructional choices play an instrumental role in positioning teachers to accurately diagnose learners’ needs and to
design responsive interventions to support areas for student growth as it pertains to the development of students’ self-regulation skills. Finally, I have presented a case for collaborative choice design as an effective entry point for supporting teachers who wish to shift their approaches to curriculum design and delivery in ways that more purposefully foster student agency, competence, and inquiry among students.
Choice design is a gateway. For teachers, a well-supported, low-risk exploration of instructional choice design can lead to significant shifts toward more learner-centered curricular designs and pedagogical practices. For Ms. Oliver, this meant a restructuring of class time and a shift away from lecture as the dominant instructional model, toward more intimate, more purposeful interactive skill-based “mini-lessons;” it meant rethinking curricular assets and designing materials that supported more visually appealing and more effectively organized resources for student self-paced exploration; it meant evolving from pop-up assessments to well-planned, structured, and communicated culminating performance tasks that involved an authentic audience. For Mr. Harrison, it meant developing a new orientation toward fostering student agency in learning that now has him weighing daily lesson planning decisions against this new criterion of student choice; it meant experiencing a new dynamic between himself and his students, in which he felt genuinely needed and useful, once he released control and gave learners the opportunity to self-assess and choose the additional supports he had to offer; it meant frustration with “small choices” and the desire to “aim bigger,” but uncertainty about how and what bigger choices could look like in his classroom.

For students, the experience of participating in an instructional choice design study, and experiencing new forms of choice in their learning, meant their voices were heard, their sense of autonomy was affirmed, and their capacity to make decisions in their learning was honored; it meant an experience of volition in an environment that expects, and demands, passivity; it meant irritation, when choices presented were irrelevant to
one’s actual interests; it meant struggle, when choices were beyond one’s level of comfort or current ability to navigate its complexity; it meant insight, formed when prompted to reflect on one’s own choices and to self-assess one’s own needs for achieving the learning goal. For some, and rightly, the choices were too small in effect; too constrained by the same old confines of linearity and standardization to be meaningful.

For researchers, choice design is a frontier. It means re-conceptualizing choice in learning from a tool that motivates, to a pathway that illuminates the self-regulatory and metacognitive skill trajectory of independent learners so that they are transparent and accessible to teachers and students alike. It means studying this pathway alongside practitioners, and exploring ways to carefully scaffold the journey for learners at all levels on the K-12 continuum, so that learning systems in the United States are not factories of social reproduction, but thriving communities in which learners’ sense of autonomy, competence, and belonging are nurtured and cultivated at the highest levels.

In this concluding chapter, I discuss limitations of this study and present theoretical and practical implications for further research.

**Limitations of the Study**

Several methodological issues limit the generalizability of this study’s findings. First and most important, this study involved only two teachers who participated in the collaborative lesson design cycles. Both teachers self-selected into the study, suggesting a level of enthusiasm and interest in learning and change in practice that may have been a major factor in the productivity of our collaborations, and therefore should not be
considered predictive of outcomes with other teachers who may participate in a similar series of collaborative design cycles. Second, this study was short in duration, involving only three lesson design cycles with each teacher over the course of several months. Additional cycles over a more sustained period could provide more insight into the efficacy of the collaborative design cycle as a methodology for supporting shifts in teacher practice. Further, the study could have been elongated to include a fourth stage, in which after a period of time, teachers’ approach to choice design without ongoing coaching support could have been examined to assess the long-term affects of the collaborative lesson design cycles for participating teachers. Third, this study did not involve opportunities for Aspiration High School faculty to elaborate on their survey responses in a way that may have differently shaped my interpretation of the questionnaire data. Although classroom observations helped contextualize faculty survey responses to an extent, it could have been highly valuable to engage with faculty members individually through interviews and invite them to elaborate on their responses to questions relating to their perceptions of student valuations and readiness for certain choice types. Specifically, asking teachers to describe specific examples of their observations to contextualize their responses may provide a more holistic understanding of the phenomenon of instructional choice design at Aspiration High School (Ravitch & Carl, 2016). Finally, in my role as researcher, it is impossible for me to disentangle the ways in which my own implicit biases and limited understandings influence my interpretation of data. My positionality as a young, white, middle class woman, pursuing a credential from an Ivy League institution, and engaging as an external consultant with
no long-standing relationships to the community at Aspiration High School, creates a complex backdrop for this study that undoubtedly shaped my interactions with students and their perceptions of me.

**Implications for Research**

This study highlights several opportunities for future research. First, future research could examine within an experimental context the efficacy of the five-part quality choice design framework presented in Chapter 4, scrutinizing each dimension of the framework and possibly refining the framework, while also mapping more comprehensively the existing research that substantiates each dimension. The field of education could greatly benefit from more sophisticated, evidence-based discourse around “choice and voice” in learning, and an agreed-upon framework for quality choice design could serve as a valuable practitioner resource. While past studies have explored the affects of choices on student motivation and engagement (Zuckerman et al., 1978; Cordova & Lepper, 1996; Parker & Lepper, 1992; Patall et al., 2008; Patall et al., 2010), few studies have provided actionable insights for practitioners approaching instructional choice design. Several such studies include that of Flowerday, Schraw, and Stevens (2004), which suggests that choice design should consider factors of relevance and interest to students; Reeve, Nix, and Hamm (2003) argue that choice design should foster students’ sense of volition through “action choices;” and Katz and Assor (2007) argue that choice design should be informed by self-determination theory, and that choices can be categorized as either organizational, procedural, or cognitive in nature. These studies each provide insight into factors that should be taken into account as teacher design
instructional choices; however, there does not yet exist a holistic, practitioner-oriented framework for quality choice design. The framework presented in this study offers an early prototype of such a framework, but needs further field-testing and evaluation. This could take place through a more comprehensive scan and analysis of current literature to further substantiate or revise the framework, as well as through additional choice design research studies specifically designed to test individual elements of the choice design framework or the choice design framework in its entirety. For example, to what extent does metacognitive prompting help learners internalize a practice of self-monitoring and appraisal, and to what extent are other forms of intervention needed? Further, exemplar choice sets that reflect all aspects of the quality choice design framework could be codified for the benefit of practitioners, and create opportunities for practitioner action research to further test and validate the five-part framework.

Second, future research should further explore the relationship between instructional choice design and self-regulation skill development, and specifically, study the effects of different types of quality choices on the development of self-regulation skills among learners at all ages and developmental levels on the K-12 continuum. It is known that not all choices are equal in effect on student motivation (Parker & Lepper; 1992; Reeve et al., 2003; Flowerday et al., 2004); little is known about how different types of choice designs differently effect learners’ development of self-regulation skills. This study argues that an important relationship exists between instructional choice design and self-regulation skill development among learners, and that the field of education has yet to conceptualize how this relationship might inform teacher practice.
and school model design in ways that centralize and prioritize the development of student agency.

There are two particular dimensions of this relationship that might be explored further through future studies. The first dimension involves a horizontal analysis of choice design; namely, which types of choices are most efficacious in creating opportunities for students to develop self-regulation skills? Assuming the choices are designed using the quality choice design framework, are there different choice types that are more efficacious in building students’ self-regulation skills than others? The choice typology presented in Table 21 captures the breadth of choices identified in this study that might be explored relative to self-regulation skill development. For example, is choosing one’s collaborator any more or less efficacious in developing self-regulation skills than choosing one’s topic, or establishing one’s own pacing/deadlines for a project?

Table 21: Instructional Choice Typology

<table>
<thead>
<tr>
<th>Choice Type</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Topic</td>
<td>The real-world issues and related disciplinary content explored through the unit of study</td>
</tr>
<tr>
<td>Target skills or strategies</td>
<td>The skills or strategies of focus that will be learned, practiced, and applied through the unit of study</td>
</tr>
<tr>
<td>Final product/performance</td>
<td>The culminating performance task/s through which students will demonstrate key content knowledge and target skills and strategies of the unit</td>
</tr>
<tr>
<td>Learning resources</td>
<td>The varied sources of diverse information through which learners will build their knowledge (e.g., books, articles, videos, websites, field trips, digital games, guest speakers) necessary for the final product</td>
</tr>
<tr>
<td>Learning activities</td>
<td>Small tasks designed to create the conditions for meaningful,</td>
</tr>
</tbody>
</table>
constructive engagement with, and application of target skills, strategies, and content knowledge

Lesson or mini-lesson
Teacher-facilitated learning experiences that involve direct instruction, facilitation of learning activities, and synthesis and reflection prompts

Collaborators
The individuals with whom the learner engages in learning experiences or works together on a final product/performance

Use of time
How learning time is utilized

Pacing/deadlines
The target due dates for key assignments and final products, as well as the speed at which the learner progresses through key milestones in the unit of study

Generating a broad knowledge base about the specific choice designs that are most impactful in cultivating self-regulation skills could help practitioners optimize their choice designs in service of student skill development, rather than default to choice offerings that have little impact on the development of self-regulation capabilities.

A second possible dimension for further exploration is that of a choice trajectory. The example choice trajectory presented in Chapter 5, and shown again in Figure 18 below, offers one possible way to conceptualize a vertical analysis of the relationship between instructional choice design and self-regulation skill development. Specifically, further studies could examine ways to stage or scaffold levels of choice complexity within a particular choice type.
For example, students could be presented with choice sets that represent each of the three levels in the trajectory, and their managing of choices could be documented and analyzed. Students who demonstrate self-regulation skills at a level similar to Josh for a particular choice, for example, would be temporarily located in the *Bounded Choice-Guided* category. Choice designs could then be introduced that correspond to this level on the trajectory. After multiple, well-structured experiences with *Bounded Choice-Guided*, students could be presented with a *Bounded Choice-Independent* choice type, and growth along the trajectory could be assessed to determine the efficacy of a choice design trajectory.

Finally, further research could identify ways to reduce the instructional design burden on teachers. In my assessment, Ms. Oliver and Mr. Cooper could have benefited greatly from a set of tools or models to apply to their own practice from the onset of the study. In our final debrief, Ms. Oliver suggested that “pre-baked essential questions” and other ready-to-use resources would be immensely helpful for teachers seeking to implement more engaging choices but who are not sure where to start (Interview,
2/28/2018). A future study could involve the testing and analysis of a carefully crafted set of tools, templates, or prototypes to support choice design among a large group of teachers at various locations along the K-12 continuum.

Implications for Practice

This study has several important implications for practice. First and foremost, this study suggests that practitioners should critically examine the cultural and structural contexts of their school settings, as well as their own practice, to identify and scrutinize ways in which they may be enforcing the norms of compliance and control, rather than fostering student agency through opportunities to make meaningful decisions about their learning. High-compliance learning environments, as well as deficit-oriented views on students who are not provided with opportunities to make meaningful choices in their learning, can profoundly undermine students’ sense of autonomy, competence, and belonging. As previously discussed, when choice is not present, or when learners feel that they are subjected to highly controlling environments, this can have detrimental effects on motivation (Ryan & Deci, 2000).

Second, teachers can optimize quality choices in their instructional practice by utilizing and building upon the quality choice design framework presented in this study that draws upon insights from this study as well as upon literature from the field (Katz & Assor, 2007; Flowerday et al., 2004; Reeve et al., 2003; Gay, 2010; Schraw et al., 2001; Meyer et al., 2014; Skinner & Belmont, 1993; Zimmerman, 2000; Moos & Ringdal, 2012; Winne & Perry, 2000; Winne & Hadwin, 1998; Winne, 2001; Toshalis & Nakkula, 2012; Wigfield & Eccles, 2002; Pintrich, 2003; Bransford et al., 1999; Palincsar &
Brown, 1984; Schoenfeld, 1991; Vygotsky, 1978). High quality choices meet five key criteria: they are relevant to students’ lives and interests; well-structured and clearly framed; aligned to a specific purpose related to self-regulatory skill development; coupled with metacognitive prompts; and designed for an appropriate level of complexity for learners. Further, teachers can begin to conceptualize their essential role in staging the path for learners toward independence through quality choice design, explicit skill and strategy instruction, and recurring opportunities for students to practice, apply, and transfer their skills to new contexts.

Finally, practitioners can begin to leverage quality choice design as a diagnostic tool for assessing students’ current self-regulation skill levels, and designing specific, strengths-based interventions for developing skills. Ultimately, this study argues that instructional choice design is a powerful form of teacher inquiry, aimed at cultivating new insights on learners’ needs, and new opportunities to purposefully cultivate their self-regulatory capabilities.


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