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# Empowered Learning Systems in Student Success

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**Empowered Learning Systems in Student Success**

by

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A culminating thesis submitted to the faculty of Dominican University of California in partial fulfillment of the requirements for the degree of Master of Science in Education

Dominican University of California

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## Abstract

Although various support systems are attempted by public schools to cause changes in student motivation and academic performance, many students continue to consistently underperform and doubt their academic potential. A literature review revealed a growing body of research outlining a direct relationship between internal beliefs and performance outcomes. Yet little has been done to understand student thought patterns from their perspective, or to what extent they are able to recognize and address the internal systems of language, belief, and emotion that interact with learning. By analyzing a wide range of student perspectives, this study examines what tools and strategies students have for understanding and addressing their unique psychological landscapes and successfully navigating internal dialogue. This research utilized an exploratory–mixed methods, phenomenological approach, gathering over 1000 responses to open-ended questions from focus groups and anonymous surveys from an economically and culturally diverse student body at a public high school in San Francisco. Data included interviews, focus groups and randomized surveys to provide a dynamic range of student voices. Findings suggest students have not been taught effective strategies for overcoming negative thoughts that cause emotional disruption, and, as a result, lack the capacity for new action. These findings have implications for all students, especially those from communities predisposed to inequity, historical suffering, or psychological trauma. This work proposes that in order for a meaningful change in student self-confidence and academic achievement to occur, empowered learning systems—instructional frameworks for teaching metacognitive agency, must be created and implemented at all levels of public education.

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We are teaching students to be knowledgeable,  
but we are not teaching students to be wise.

-Vita Quintanilla 12th Grade Student

“The educator has the duty of not being neutral.”

-Paulo Freire

## Preface

When I was six years old, my parents were told by my doctor that I would face great difficulty in learning how to read, and that literacy likely always would be a significant shortcoming. They could have accepted that professional assessment, but they didn't. Instead, my family proceeded to surround me with language experiences, reading to me every night and immersing my developing mind in stories, questions, and conversations. My parents firmly believed that given the right experiences and guidance, I would be able to overcome my learning challenges. By age 12, my brain had been measured by a pioneer in the field of Attention Deficit Disorder, who informed me of my subpar cognitive functioning, and that I would always need external support to enhance my brain activity. I was given every breakthrough technique and strategy available, from psychotherapy to biofeedback, and had taken all diagnostics of learning impairments. By every measurement at the time, I was a textbook example of a student with severe learning limitations.

In high school, although I excelled at dramatic arts, I struggled with the academic rigor of core content areas, and often felt disconnected and misunderstood by my teachers and my parents, who would tell me that I had great potential but was squandering it. In my head I had repetitive sentences continuously reminding me that no matter what I accomplished, I would “never be good enough.” I ended up graduating high school with a subpar GPA to match my subpar brain, with subpar goals and a lack of clarity with regard to what I wanted to do with my life. Finally, in my early twenties I had the good fortune of meeting a teacher who changed my life by giving me the one thing that had been missing—he reminded me that everything I needed to understand about myself was accessible to me, and that I had authority over the inner workings of my own mind. I learned that negative beliefs about myself could be changed through

examining the quality of my perception, and that past failures and challenges that had often occurred to me as limitations could be reimagined. I learned that my perception about events in life could be transformed by using techniques for reframing the foundation of negative ideas about myself and my abilities that I had come to accept as fact.

I share this experience here because even as I write these sentences, I am aware that I still harbor negative beliefs from long ago. These patterns of disempowering internal dialogues of language once colored my choices and affected the actions I was able to take. I would guess that all readers of these words can resonate with the experience of being overly self-critical at times, comparing oneself with others, or listening to an all too familiar negative internal dialogue that fixates on limitations and doubt rather than on powerful possibilities.

Today as a high school teacher, I witness the consequences of negative beliefs in my students, and I want to do everything possible to help them realize their own power over their mental machinery. While it could be argued that the techniques for disarming negative belief systems to access empowering states of mind are not the only things one needs to achieve high levels of achievement in any area, without them, success is improbable. If I had not met the teacher who helped me understand my unique psychological landscape, it is likely that I would not have graduated from college, traveled the world, or become a credentialed English Teacher, now completing my master's degree. An old Chinese proverb says that the journey of a thousand miles begins with one footstep. Rewiring belief systems is not an easy process, but now, having walked the journey and reached the conclusion of this thesis, I am certain that assisting students with tools for transforming their internal limiting beliefs is a critical piece in the struggle for student success, as well as for educational equity.

## Chapter 1: Introduction

In our society, it is repeatedly acknowledged there is a crisis in education. Researchers, school districts and government officials decry an “achievement gap,” pointing at various causes and influencers, often assigning many short-term pilot programs and research studies to understand and mitigate perceived problems of student performance (Porter, 2007). Often the understanding of this “gap” is convoluted, as approaches to education reform often use the term “achievement gap” as if everyone understands and uses the term in the same way (Anderson, Medrich, and Fowler, 2007). This term here is understood as the difference in academic achievement among student demographic sects, with particular emphasis on both the disparity between performance of students from the highest and lowest socio-economic backgrounds, and Caucasian and minority student populations. With many efforts by school districts and public policies in recent years to change academic shortfalls, and in spite of some success at causing improvements, this overarching gap has stayed wide and constant since 1954 (Hanushek, E. A.; Peterson, P. E.; Talpey, L. M.; & Woessmann, L. 2019). Yet without a uniform collaboration between teachers, school districts, political figureheads, and students themselves, understanding the specific trends in student dropout rates and academic underachievement is approached inefficiently and misunderstood, with too many conflicting approaches and perspectives.

As research demonstrates a correlation between a lack of student achievement and negative self-image, it is reasonable to conclude that those groups of students showing trends in underperformance experience negative beliefs about themselves that influence their capacity to learn (Hong, Chiu and Dweck, 1995). Due to the socio-economic and racialized inequity often found within this achievement gap, it follows that any system-wide change with regard to academic performance must necessarily address the subjective nature of student belief systems

that likely impact their academic success. However, research shows that for all students, changes in performance are only made possible through changes in perception – when students critically examine their beliefs about themselves and are able to reimagine what is possible (Palomino, 2017).

While there are various support systems being put in place at some elementary, middle and high schools to help students achieve higher levels of performance by addressing metacognition (or internal understanding of one's own mental process) and associated behaviors, still a large number of students underperform and doubt their abilities. While these interventions appear to be common sense, many are implemented without enough testing, ultimately proving to be ineffective. (Wilson, T. D., & Juarez, L. P. 2015). One salient example in recent years has been Carol Dweck's Mindset intervention and its online iteration Brainology. These programs focus on informing students about the value of hard work and having a "growth mindset," or more flexible beliefs about their levels of intelligence (Wilkins, P. B. B. 2014). While programs such as Dweck's have been tested in both middle and high schools, and are based in psychological theories of learning and behavior, many of these approaches are not student centered. In fact, most academic interventions treat student perspective as peripheral rather than focal, and place little merit in the inherent self-knowledge and metacognition that students bring with them to the classroom. While some of these interventions see incremental improvements in specific academic areas, current models for changing student achievement do not assist students in learning *how* to navigate their own negative beliefs about themselves to overcome the mental conditions which can cause academic failure.

Although most contemporary learning initiatives aim to achieve increases in student agency, these methods, in fact, focus on metacognitive regulation of external behavior rather

than metacognitive agency. The distinction is that metacognitive agency is the awareness of and ability to reframe psychological systems of meaning, and to consciously address patterns of language and emotion. Indeed, while some studies focus on “self-talk” in a general way, the underlying causes for the subjective manifestations of student efficacy beliefs are largely unexamined and grossly overgeneralized. Moreover, students' self-doubt and patterns of internalized negativity are ignored in most classrooms, even though it is precisely within this environment of intellectual growth and standardized measurements of performance where a learner’s developing psyche and intrinsic views sets their trajectory towards either success or failure as a productive learner and member of society.

As human beings engage and interpret the world through language, the beliefs and internal “maps” one develops about their inherent value as a human being and capability as a learner are experienced through expressions of internal language constructs: patterns referred to in this thesis as *internal dialogue*. These internally experienced, intimate conversations with oneself are the immediate thoughts that can motivate or deflate one’s sense of worth and capability. And while a student’s positive self-image as a learner does not always guarantee success, as sometimes is the case with specific cognitive differences, developmental levels, or divergent learning styles, without positive beliefs and empowered internal dialogue, no student can actualize their full potential.

Given the correlation between unique self-perceptions and performance outcomes, when large groups of students are underperforming, it is reasonable to conclude that a majority of these students hold disempowering beliefs about themselves. Nevertheless, at the onset of this thesis existing research had done little to understand student awareness of their subjective beliefs and internal dialogue from their perspective, or to the extent to which students are able to address

negative internal dialogue about themselves in order to create changes in their performance. Thus, this study sought to understand the internal territory of student metacognition, inquiring whether and to what degree students were aware of and able to navigate their internal beliefs and manipulate the linguistic expressions tied to these beliefs.

### **Statement of Purpose**

The purpose of the study conducted for this thesis was to explore students' awareness of and ability to recognize and address their belief systems and internal dialogue about their own capabilities and self-worth. Additionally, this study sought to learn from students what tools and approaches they use to positively and consistently impact their perception of their own capabilities, personal engagement in school, and level of academic achievement. A review of literature revealed an intersection of multiple theories dealing with the interplay of psychology and behavior. These theoretical frameworks provide both a scientific and psychological basis for understanding how human beings can gain control over their subjective internal and external realities (consciously and unconsciously), and how individual interpretations about their life experiences, academic or otherwise, can influence behaviors towards success or failure. When applied to education, these theories provide insight into how a student's internal experience directly effects external behavior, which leads to social and academic results.

### **Overview of the Research Design**

This research utilized an exploratory–mixed methods, phenomenological approach through a constructivist research lens to examine student awareness of core beliefs about themselves, and their ability to revise patterns of internal dialogue that may negatively interact with performance in school and life. Student data was collected from 116 high school students in the researcher's five classes at Jasper High School, an inner-city high school in San Francisco,

California where he teaches (school and student names in the thesis are pseudonyms). This sample group included a diversity of ethnicities and nationalities, ages and grade levels, gender orientations and learning levels. Data was collected from both an online anonymous Google Survey of 106 students in eleventh grade and below, as well as from two focus groups consisting of 10 high school seniors in the researcher's homeroom class.

By participating in this project, students were given an opportunity to gain greater self-knowledge that can help them personally and academically, and to bring unconscious beliefs about learning to the surface, thereby giving them access to new approaches to self-awareness and empowerment. Students also gained practice in self-reflection and critical thinking about the processes through which learning occurs.

### **Positionality**

The researcher is a professional educator who has built rapport and community with the students in the study. During the process of conducting his study, he endeavored to reduce the effects of personal bias on data collection and analysis. As an educator in the public-school system, a former licensed NLP Practitioner and Conversational Hypnotherapist, and having worked as a social worker in the justice system, and with youth programs for two decades, the researcher has extensive experience with student needs, therapeutic approaches, and personal empowerment. This gives the researcher significant bias towards helping students succeed academically. The potential consequence could be that during the process of coding, the researcher could have made judgments about student experiences and beliefs that aren't true to the intention communicated by the students, and by so doing could have misinterpreted the results of the research. However, the researcher's awareness of this positionality helped him control bias during data collection and analysis by allowing the him to remain open to all perspectives and divergent opinions.

## **Significance of the Study/Research Findings**

After concluding this study, the data shows that students are not only keenly aware of their beliefs about themselves and the patterns of thoughts that contribute to their academic performance, but that they also desire to transform their negative thoughts and do not currently have strategies for achieving this. Student responses suggest that there is metacognition, but not metacognitive agency. In other words, students are aware of their unique beliefs about themselves – they have metacognition of efficacy beliefs and internal dialogue – but they do not have strategies to transform disruptive thoughts autonomously (metacognitive agency). After reviewing these results, this thesis proposes that students be taught psychological tools for addressing their epistemological constructs. Students need to learn how they come to know what they believe about themselves and how negative ideas affecting self-image and learning can be changed.

The findings of this study suggest that students would be best served if, across their years of learning, they were taught how to address and change, not just identify, negative beliefs about themselves. For students to achieve their highest potential in school and life, they should be exposed to instruction that aims to cause metacognitive agency, or the ability to reform negative beliefs about self and the internal dialogue thereof. This also necessitates that both educational policies and classroom teachers recognize student self-awareness and psychological empowerment as the prerequisite of learning success. This thesis advocates for the implementation of empowered learning systems at all levels of public education: explicit instruction of techniques and practical strategies for achieving metacognitive agency. These metacognitive skills could provide all students with the internal conditions for more consistent

academic resilience, heighten student achievement across subjects, and more directly address the achievement gap in public education.

## Chapter 2: Literature Review

This literature review seeks to understand the psychological and educational theories and approaches that have given rise to a conceptual understanding of the interplay between internal states of mind and behavioral outcomes. There is an overwhelming body of research suggesting that one's internal perception of ability is directly linked with one's capacity to take action, and that critically examining one's internal perceptions can cause radical shifts in confidence and can lead to behavioral change. With this in mind, new curricula and support programs have been created and attempted by some elementary, middle and high schools to help students achieve higher levels of academic success. Many of these interventions have their roots in applications of educational theories and psychological studies of learning, including Albert Bandura's Social Cognitive theory and theories of self-regulation, Carol Dweck's Implicit Theories of Intelligence or Mindset Theory, Transformational Learning Theory, and Personal Epistemology.

These learning systems and interventions often claim to empower student self-awareness, improve their habits of academic motivation, and transform their problem behaviors in school. Nonetheless, even with these interventions a large number of students continue to academically underperform and doubt their potential. A review of research shows that in spite of innovative programing and new terminologies touting to cause changes in student self-confidence and agency, little has been done to understand students' awareness of *their own* unique belief systems and internal dialogue. As stated previously, internal dialogue refers to patterns of internal language through which these beliefs are expressed. This aspect of human experience remains largely unaddressed directly with students, even though the research shows a strong correlation between examination of internal systems of meaning and performance. Moreover, still less has been researched concerning *how* students actively recognize and address these

patterns that directly influence ideas about capability, interact with self-image, and, by extension, with learning. (Hoffer and Pintrich, 2012; Dweck, 1995; Bandura, 1991; Formica, 2008).

This review considers multiple theoretical frameworks, behavioral intervention strategies, and methods of linguistic empowerment and self-awareness concerning the experience of meaning-making and achievement. Particular attention will be paid to how theories, interventions and approaches are/can be applied to learning, student experience, school success, and lasting changes in self-perception. First, the review will outline the origins of several prominent learning theories that describe the connection between human perception and performance, explain how they came to be, and show where they intersect. Second, the review will examine some noteworthy studies and interventions that have used these theoretical approaches to promote changes in student perception, agency and academic improvement. Third, the review will show how internal dialogues have been explained through studies in Neurolinguistic Programming (NLP) and the importance of internal awareness through “mindsight” theory.

### **Theoretical Frameworks**

**Brief overview.** As school systems are in the business of directly causing changes in human cognitive and social development, teachers are on the front lines when it comes to facilitating cognitive and behavioral breakthroughs. There is then, an inherent relationship between education and psychology. Indeed, while teachers are not able to provide therapeutic services in the same way as psychologists, on a daily basis, teachers are faced with student behaviors that must be addressed and changed for optimal learning to happen. When seen in this light, it is understandable that more teachers and schools have begun to emphasize the importance of empowering student motivation in the classroom, looking for effective techniques and lessons

that might increase student self-confidence and academic resilience. Through a psychological lens one could argue that educators are constantly in a laboratory of thought, utilizing B.F. Skinner's process of operant conditioning, often without full understanding or training in the basic principles of behavioral psychology. (Skinner, B. F. 1963)

Due to the absence of psychological training for teachers, the actual reasons behind behavior can be misunderstood, and the internal triggers for student motivation and agency appear elusive and difficult to pinpoint. Moreover, without an accepted framework for understanding the internalized mental processes through which students approach learning, it becomes difficult to expect uniform increases in student academic achievement.

Each of the theories reviewed in this thesis offers an answer toward helping people become productive, conscious agents of their own lives through meaningful self-analysis—they all are interconnected ideas. For example, Albert Bandura's Social Cognitive Theory inspired many educational researchers and psychologists in their studies and curriculum designs, not least of which included both Carol Dweck's theory of Growth Mindset and Implicit Theories of Intelligence (Bandura, A. 1989; Dweck, C. S. 2008). In recent years, many curricula and intervention models have emerged that draw heavily on Bandura's concept of self-efficacy or belief in one's ability, and self-regulation, the process of having resources to govern behavior in various contexts. Bernard Weiner's Attribution Theory shares a familiarity with Bandura and Dweck, in the sense that his "attributions" are in essence human interpretations of experience, comparable to the subjective intelligence beliefs about one's abilities that Bandura's and Dweck's theories attempt to unmask. (Graham, S. 1991; Weiner, B. 1972)

Barbara Hoffer and Paul Pintrich's work on Personal Epistemology theory also resonates with Weiner's Attribution Theory, as both ideas explain the cognitive processes through which

human beings incorporate, use, and adapt knowledge to increase personal empowerment and agency. Similarly, Jack Mezirow's Transformational Learning Theory and Paulo Freire's Social Emancipatory perspective on transformative education, assert that all people can revise previously entrenched beliefs about themselves and the world to achieve paradigm shifts in perspective. In forwarding their ideas, Mezirow and Freire argued that the work of becoming aware and in control of one's own psyche, requires acknowledging and working through entrenched beliefs and social conditioning. Transformational learning theory posits that the ultimate goal of education ought to be a liberation from internal limitations and preconceived constructs in the service of human dignity, equity, and social justice (Freire, P. 1970; Mezirow, J. 1981).

While Hofer and Pintrich's Theory of Personal Epistemology is concerned with understanding how meaning/knowledge is constructed, Transformational Learning Theory scrutinizes the subjective nature of these meanings and beliefs, emphasizing the importance of revising uncritical "meaning structures" learned during childhood to create critical, more reliable systems of meaning (Mezirow, J. 1981; Hofer, B. K., & Pintrich, P. R. 2012). Additionally, Gregory Bateson's Levels of Learning intersect with these frameworks, as his work further illustrates the potential for action when individuals learn how to identify and revise systems of knowledge by becoming aware of interrelationships, understanding patterns of thought and behavior, and connecting one's own personal reality with life's communal predisposition. Bateson's work in the field of anthropology and epistemology emphasizes the interconnection of self-understanding, human relationships, and larger social structures. Bateson saw society as "evidence of mind" with distinct patterns and a logical organization based on a community's shared system of beliefs. Bateson's work advocated for a cultivation of internal awareness and

agency not only towards personal empowerment, but also in the service of societal change (Bateson, G. 1972).

In the review of theoretical frameworks that follows, rather than presenting each theory chronologically, the research is organized by its logical relevance to education and more specifically to this study. These theories have contributed to the field of education by demonstrating the direct influence of psychological processes over human behavior, and, when viewed collectively, show the great potential for metacognitive agency to cause performance breakthroughs.

**Bandura's social cognitive theory.** Bandura's Social Cognitive Theory is an overarching framework for understanding how and why behavior occurs within various conditions (Bandura, 1977). Bandura was interested in how changing external factors such as environmental stimuli and social relationships could influence the cognitive experience of subjects. He focused on how behavioral change occurs, and can be replicated. In the formulation of his theories, Bandura incorporated the primary tenants of Jean Piaget's classical conditioning (learning happens through association) and B.F. Skinner's operant conditioning (learning happens through rewards and punishments). In synthesizing these behavioral theories, Bandura added two distinct innovations. First, he proposed that between the stimulus and the subject there is a mental process of mediation where an individual assigns appropriate behavioral responses to a respective stimulus, and second, that behavior can be learned through social interaction through a process of modeling whereby observation of others can teach appropriate action (Bandura, 1977).

Bandura went on to explain that in order for desired behavioral outcomes to be possible, individuals must have self-efficacy- they must believe in their capability to succeed with such

behaviors and goals and, also, self-regulation-to have the internal ability to control their responses to regulate their behavior (Bandura, A. 1993). Bandura coined these two processes for governing behavior: “self-efficacy” and “self-regulation.” He argued that all human beings are in the constant activity of “self-influence” whereby internal “self-monitoring” --assessment and judgment--and “affective self-regulation” --responding appropriately to changing conditions --are the immediate and constant drivers of human decision making and action. In other words, if one believes he or she is capable, self-regulation and independent application of coping and learning strategies are possible. According to Bandura, without self-efficacy, any proposed treatment for changing behavior and inciting self-regulatory processes is improbable (Bandura, 1977).

For the purposes of this inquiry, Bandura’s self-efficacy theory deserves special focus, as it is concerned with the power of perceived ability over behavioral outcomes and goal achievement. Self-efficacy rests at the center of Social Cognitive Theory and proposes that all people have a myriad of beliefs around achievement and performance capabilities. The higher self-efficacy a person has, the more resilient a person will be when confronting obstacles (Bandura, M., & Dweck, C. S. 1985). Self-efficacy beliefs can be separated into four categories of learning sources through which individuals glean knowledge about their capabilities. Mastery experiences are the most powerful, as these relate to experiential learning where one is able to “know” they can achieve a particular result based on prior success in an area. Heightened self-efficacy occurs when individuals experience obstacles and persevere to achieve success whereas failing to accomplish the desired result can deflate this belief in ability. Vicarious experiences, on the other hand, affect learning through observation of others in social contexts. The third source of learning is verbal persuasion, which refers to learning that occurs after being moved to act by the persuasion and influence of others (Akhtar, M. 2008). Emotional and physiological

states, the fourth source of learning, involves learning rooted in powerful generative states of emotion, physiology, and imagined experiences. These sources of self-efficacy are paramount in education (Akhtar, M. 2008). Indeed, in an effort to help students motivate themselves and change behaviors teachers often use a combination of these ideas in instruction through new learning experiences, or by shifting environmental factors. In other words, teachers often change the stimuli around the student with the hope that these qualitative shifts in information and environment cause a change in student behavior.

Bandura not only explains the concept of self-efficacy as an internal phenomenon but also as a confluence of mental constructs that interact with one's immediate environment, relationships and social conditions (Bandura, A. 1991). This "living system" is evident in educational structures, where multiple belief systems interact. While Bandura focused on the subjective nature of the human mind, he also explained that organizational learning structures, made up of people, also play an inherent role in contributing to academic performance results. School district officials and teacher beliefs, and their ability to collaborate effectively, informs both policy and practice for institutional approaches to learning, which impact's student achievement (Bandura, A. 1991). In other words, because the human psyche exists within a social context, self-perception, as it is influenced and informed by social experience does not exist in a vacuum and has direct influence over the various interpersonal systems within which it operates.

Finally, Bandura argues that perceived competence is orchestrated through four overarching processes cognitive, motivational, affective, and selection. In addition, Bandura categorizes the influence of these self-efficacy processes within three different levels: student beliefs, teacher beliefs, and faculty beliefs (referring to faculties as a whole). Bandura sees these

three levels as interwoven and mutually influential, intersecting to create individual and institutional outcomes. The interaction of these three living bodies, from the individual student and teacher, to the collective, causes educational outcomes seen on both the micro and macro scale, in the subtle layers of learning and in the outward expression of understanding. As explained here, Bandura's theoretical concepts within Social Cognitive Theory not only have implications for students, who often struggle with self-control and positive belief in self, but also for schools and districts in need of greater unification and collaborative approaches. (Bandura, 1993).

**Implicit theories of intelligence & growth mindset.** Implicit Theories of Intelligence, more commonly referred to as “fixed” or “growth” mindsets, examine the importance of entity theory (intelligence is a fixed entity), and incremental learning theory (intelligence is malleable), originating in the work of Ellen Leggett. Leggett proposed her ideas about intelligence beliefs on “achievement behavior,” to the Eastern Psychological Association in 1985. (Leggett, 1985). Her ideas, drawing on Bandura's social cognitive theory and self-efficacy, inspired Carol Dweck to research the connection between these intelligence beliefs and student resilience and motivation. Implicit theories are defined by Hong, Chiu and Dweck (1995) when they write: “Implicit theories of intelligence are beliefs about the fundamental nature of intelligence, specifically whether intelligence is a fixed entity that cannot be changed (an entity theory) or a malleable quality that can be increased through one's efforts (an incremental theory)” (Hong, Chiu, and Dweck, 1995, p.198). Dweck and Leggett joined their efforts in 1988 when they explained that entity and incremental beliefs about intelligence have predictable behavioral patterns that are either maladaptive or adaptive (Dweck, Leggett, 1988). These maladaptive patterns of cognition, behavior and affect are directly linked to beliefs about their ability in various contexts. Dweck

and Leggett argued that cycles of failure or success are largely determined by one's ability to perceive obstacles as either deterrents or steppingstones to mastery of specific skills and goals. Dweck explains the adaptive mental pattern as characterized by challenge seeking and high, effective persistence in the face of obstacles. In contrast, the maladaptive pattern is characterized by challenge avoidance and low persistence when experiencing challenges (Dweck, 1986). These initial conclusions about the impact of specific beliefs on learning were substantiated in subsequent studies, reiterating the correlation between belief in ability and academic achievement. Dweck ultimately used implicit theories to form curricula to assist students in achieving changes in "mindset" to cause academic improvements. Within her Mindset framework, entity theory and incremental theory became known as "fixed" and "growth" mindsets. Dweck's mindset interventions have been taught in schools and aim to cause breakthroughs in student self-confidence and shifts in intelligence beliefs to encourage student resilience, academic motivation and agency (Hong, Y. Y., Chiu, C. Y., & Dweck, C. S. 1995; Wilkins, P. B. B. 2014)

**Self-concept and self-actualization.** Self-concept is a term coined by psychologists Carl Rogers and Abraham Maslow, and refers to the overall identity created through the confluence of factors including one's subjective conclusions, past empirical experience and beliefs about the future (Maslow, 1965). As Dweck and Leggett would later agree, Maslow and Rogers categorized learners into two major categories: intrinsic or adaptive, and extrinsic or dependent. According to these theorists, the goal of human development is to become intrinsic, adaptive learners, propelled toward choosing growth and change in service of achieving their full potential. This is what Maslow would call Self Actualization (Maslow, 1965). Maslow understood that there are a myriad of self-concept beliefs contributing to an overall or "global"

self-concept. One's confidence as a swimmer, for example, might be different when compared with their opinion of themselves as a writer. Ultimately, the converging ideas about self in various contexts cause a person to be either intrinsically motivated and an independent self-actualizer, or extrinsically motivated and dependent on factors and influences in the environment.

Given the integral connection between personal beliefs and achievement, "self-concept," or perception of identity, has been researched and reimagined over time. Seymor Epstein argued that given that world and subjective perspectives are in constant interaction, all beliefs about world and self are incorporated into what he called self-theory (Epstein, 1973). His work is a minor reimagining of the initial term popularized by Rogers and Maslow, which refers to one's overall or global self-concept, a summation of the myriad of self-esteem beliefs one holds in life's changing contexts. (Maslow, 1965). Epstein argued that the subjective ideas about oneself that form through experience and emotion converge and ultimately make perception of identity possible. Maslow's concept of schemas—one's strategic comprehension of needed action in various contexts—overlaps with Epstein's postulates—one's learned beliefs derived from emotional and behavioral experience (Epstein, 1973). Epstein's Cognitive-Experiential Self-Theory (CEST), diverges from Maslow and Rogers by proposing that human beings have both an experiential system of beliefs an automatic experience driven system for habitual action), and a rational system (a language driven, conscious system). Epstein saw one's self concept as being a combination of these two processes, significant in educational settings because a student's conscious awareness can conflict with learned unconscious automatic behavioral patterns. For Epstein, the interaction of these two parallel systems drives one's self-confidence and respective performance in learning environments and in life.

**Attribution Theory.** Bernard Wiener's Attribution Theory is closely linked to implicit theories and self-efficacy beliefs as it attempts to explain how beliefs are initially constructed. Weiner asserted that all people assign causes or "attributions" to life experience as empirical events are filtered and evaluated by the human mind. These causes are essentially subjective interpretations about the why of experience and therefore may not accurately reflect reality (Weiner, 1972). Weiner's work explores how beliefs about self and world originate and how these interpretations, if unexamined, can lead to self-judgement and negative beliefs about one's abilities (Graham, 1991). In education, for example, if a student asks a question and the teacher responds in what the student interprets as a harsh tone, the student might attribute the teacher's reaction to mean disapproval or a negative evaluation. This, in turn, may impact this student's perceived potential to succeed in that respective class and cast doubt on the student-teacher relationship.

Attribution theory has implications for all teachers as often the perception of student ability levels or behaviors can color the level of support students receive. Sandra Graham's application of Weiner's concepts in her work with underperforming African American students demonstrates the importance of better understanding the impact of these internal mental judgements on learning. According to Graham, when teachers perceive student academic failure as caused by low ability, this elicits pity or sympathy during instruction. In contrast, when teachers attribute academic underperformance to students' low effort output, this incites teacher anger (Graham, S. 1991). Graham's study showed an interrelationship between teachers' perceptions of students and student perception of themselves. Graham found that when teachers provided neutral support to students with a perceived high ability level, this conditioned

independence. On the other hand, premature help, often was linked to teachers perceiving low ability in students, which conditioned dependent learning and negative learning beliefs in students (Graham, 1991). According to Graham, given these findings, both student and teacher awareness of their subjective attributions concerning one's capabilities ought to be further examined by researchers in service of providing a more equitable, rigorous learning experience in public education.

**Personal Epistemology.** The subjective beliefs we hold, as they exist as unique structures of knowledge, can only be understood and changed by examining how this information is formed (Hofer and Pintrich, 2012). Hofer and Pintrich's work on Personal Epistemology theory explains the psychology of this process, arguing that an ability to distinguish between knowledge as impersonal input, and knowledge as internally-formed, can be a defining factor in greater learning success and empowerment. In their 2012 study, these theorists argue that understanding how we know what we know is a crucial skill, not only in the interest of effective learning, but also in the interest of cultivating a more critical and conscious society (Hofer and Pintrich, 2012). Hofer and Pintrich further suggest that an understanding of the origin and nature of knowledge ultimately can lead to greater self-understanding, self-confidence and to a sense of personal power. They argue that learning is most effective when individuals are aware of and actively inquiring into the nature of their own subjective understanding of the world.

Personal Epistemology also forwards the argument that a student's active metacognition of learning and of their own *internal* knowledge constructs is more impactful than passively absorbing information in the classroom. In school, students face new information daily and approach learning differently depending on whether and to what extent they view themselves as

“constructors” of knowledge or “passive recipients” (Hofer and Pintrich, 2012, p.3). In this regard, this theory becomes critical to this thesis concerning the cultivation of metacognitive agency. If all students understood themselves as powerful constructors of their own systems of personal knowledge, as well as understood how they create meaning from lived experience, they would be more equipped to address negative self-perceptions and internal dialogue affecting their learning success in school and in life.

**Transformational learning theory.** Jack Mezirow’s transformational learning theory is a form of constructivism (subjective meanings about the world are constructed by the learner) whereby human beings have the potential to change their worldview and achieve paradigm shifts in thinking about their world (Taylor, 2017). This theory proceeds from the premise that human beings innately make meaning about the world and can potentially revise these meaning structures. Transformative learning argues that people must learn to move beyond assimilated, uncritical beliefs (meaning structures, or worldviews) learned during childhood by revising prior beliefs to forge critical, more reliable systems of meaning (Mezirow, J. 1981; Taylor, 2017). When individuals identify their uncritical beliefs, these meaning structures or frames of reference are open to revision and a synthesis with more mature values. Mezirow’s ideas were modified by other transformational learning theorists, most notably Paulo Freire.

Freire's socio-cultural stance and research in disadvantaged contexts led to his social-emancipatory perspective on transformational learning (Freire, 1970). Freire believed that personal empowerment and societal transformation were inherently linked. He argued that in traditional educational models, the overarching social hierarchy is mirrored in the classroom—the teacher unwittingly enacts the role of the oppressor, feeding the student information, training learners to be receptive and passive. Freire explained this instructional style as a “banking

model” of education, where students are treated as empty vessels rather than impactful generators of personal and social change (Freire, 1970). Freire also argued that to cause educational equity and personal liberation within inequitable societal constructs, it becomes necessary for educators to squarely address the intergenerational trauma faced by historically oppressed communities. These historical experiences, he argued, have led to an *internalized oppression* that causes self-doubt, self-sabotage and, left unchecked, can lead to academic and social failure ad infinitum. Freire, like Mezirow, saw the internal mental landscape as the pathway to personal and social liberation. Finally, this educational theory also advocates for a reimagining of the student & teacher relationship, and a restructuring of the classroom into a space of open dialogue and inquiry, where introspection and self-examination become the foundation of academic and societal transformation.

**Bateson’s levels of intelligence.** Gregory Bateson’s work in systems theory, cybernetics, and ecology, has spanned across various disciplines and studies, not least of which has been behavioral psychology and education (Bateson, 1972). Bateson regarded the human learning process as the essential component in the cultivation of a sustainable world and ultimately, the key to forwarding human evolution (Bateson, 1972). According to Bateson, the development of human intelligence is transformative in nature, as seen in his Levels of Intelligence, also referred to as Systemic Epistemology or Levels of learning (Tosey, 2006).

Bateson’s levels of intelligence describe distinctly different plateaus of consciousness that offer increasing behavioral flexibility as one’s metacognitive skills develop. At level zero, an individual is merely reacting to their environmental conditions and no learning happens. At level one, the individual bases their behavioral choices on prior learning and repeats behavior predictably when faced with familiar stimuli. At level two, the individual is able to evaluate new

alternatives and try new actions. Finally, at level three, one is conscious of how they incorporate knowledge and take action, and able to change the process of learning, moving beyond prior knowledge to intentionally create new learning systems and choices. Bateson's learning levels illustrate the integral role of metacognition in behavioral change, showing that without the cultivation of internal awareness, one's unique learning process, academic or otherwise, may stagnate, leading to repetitive behaviors, which, for students, predict correlate academic results (Tosey, 2006; Bateson, 1972).

Bateson's learning levels stem from his views about the nature of human existence, where the independent human mind, ecology, and society are interconnected. In Bateson's view, when more individuals achieve higher levels of intelligence, this positively impacts the collective human consciousness and the world at large. In this way, Bateson connects subjective learning and states of mind to the overarching social and the ecological context within which human beings operate (Bateson, 1972) Bateson's ideas coincide with Freire's as both thinkers emphasized the transformative potential of self-aware learning as a societal influencer.

Today, in an interconnected world, with the wealth of human knowledge at one's fingertips, without knowing better, one might assume that knowledge of these aforementioned theories have been synthesized extensively in educational curricula to enhance student metacognition, and mental stability. While some interventions cited in the following pages will utilize these frameworks, most do so using instructional models designed to complement the status quo. Students still too often face archaic instructional models in classrooms that too often reflect overarching social hierarchies (Goodman, R. D., & West-Olatunji, C. A. 2010). As the aforementioned theories note, students need to learn most about the mechanics of their own psyche, and how to develop and direct the quality of their consciousness in the learning space.

Yet still, too often public education treats students as isolated entities who merely take in information, and ignores the shared territory of mind and environment, which Bateson and others understood as co-extensive (Tosey, 2006).

### **Interventions and Studies**

All interventions that aim to support students in improving academically have roots in psychological learning theories, many drawing heavily on the aforementioned theoretical frameworks. Each intervention shares the distinction of attempting to address shifts in student awareness to some degree, and to incite student academic motivation towards higher achievement. These interventions and behavioral studies show a strong correlation between positive belief in self and learning success. Overwhelmingly, the research shows that when school interventions meet students on the level of subjective beliefs and experiences, this can improve student resilience when facing academic challenges, thereby increasing student performance.

**Mindset interventions.** In Growth Mindset interventions, intelligence beliefs and motivational processes are examined using strategies to increase student academic resilience and motivation. According to Carol Dweck, student feelings about their success or failure can directly lead to academic outcomes (Dweck, 1986). Those applying these interventions typically draw from Bandura's social cognitive approach in that the motivational intervention strategy attempts to infuse the development of positive efficacy beliefs into the learning experience. Mindset interventions propose that when students become aware of their perceptions about their own intelligence and abilities, their behavior and performance can be positively influenced. These interventions assert that motivation is the intangible necessity all students must be able to access within themselves.

In studies of Mindset interventions, researchers found that students approach educational tasks differently, depending on their level of self-confidence in that particular task. In their 1985 study, Dweck and Bandura found that learning goals rather than performance objectives were more effective at enhancing student motivation (Bandura, M., & Dweck, C. S. 1985). When students approached academic tasks with the goal of mastering a skill rather than achieving a teacher directed performance “product,” Dweck found that students’ anxiety was reduced, thereby increasing student effort. In this study, she and a colleague taught three science principles to two groups of students over a one-week period. They found that students with learning goals, as opposed to performance goals, scored higher and were able to demonstrate greater content comprehension. This data showed that use of learning goals empowered student perception of ability thereby increasing the number of students able to master academic skills (Bandura and Dweck 1985). From this study, these researchers focused their efforts on asking how and to what degree students could adapt sustained, adaptive mindsets about learning capabilities to encourage transdisciplinary academic motivation and agency.

In 1995, Dweck and colleagues conducted a two-year behavioral intervention where motivational strategies were taught through explicit instruction about the malleability of human intelligence (Hong, Y. Y., Chiu, C. Y., & Dweck, C. S. 1995). With one sample group from this study, the researchers collected data from observations of seventh grade math students over time. Findings showed that students with incremental, malleable, perceptions about intelligence (growth mindsets), also held stronger academic goals and had fewer negative attributions about academic abilities. Moreover, students showed improvement in academic performance in math when they received incremental theory training to cause changes in their intelligence beliefs (Hong, Chiu, and Dweck, 1995).

In 2013, Jeni L. Burnette and colleagues conducted a meta-analysis of mindset interventions based on Dweck and colleagues' mindset theory. These researchers focused on student academic resilience and broke down the self-regulatory process into observable processes that demonstrated the connection between mindset, goal setting and performance (Burnette, O'boyle, VanEpps, Pollack, and Finkel, 2013). Their study examined the relationship between implicit theories of intelligence and academic behavior in diverse contexts, using 30,000 observations of students from diverse academic content areas, cultures and ethnicities, countries, and ages. The study concluded that incremental beliefs not only correlated with positive self-image and optimistic mindsets towards goal achievement, but also strengthened internal self-regulatory processes of operating and monitoring (Burnette, O'boyle, VanEpps, Pollack, and Finkel, 2013). The authors concluded that students with entity or "fixed" intelligence beliefs had a tendency to set performance goals and avoided perceived challenges whereas students with incremental or "growth" intelligence beliefs often approached perceived challenges and set learning goals to achieve skill mastery. Burnette and her associates concluded that their research substantiated the strong correlation between intelligence beliefs and corresponding performance outcomes. (Burnette, O'boyle, VanEpps, Pollack, and Finkel, 2013).

As the popularity of Mindset theory grew, Dweck became interested in testing the potential scalability of her mindset intervention model. To this end, she worked with software developers to create Brainology, an online based software program consisting of mindset intervention courses. Dweck's goal was to offer her classes online to make her curriculums accessible to more school districts and teachers. Once this program became available, it was analyzed by researchers to evaluate the efficacy of growth mindset to increase student performance. Paula Benez' Boozer Wilkins conducted a study in 2014, where she evaluated the

effectiveness of this curriculum in five schools in North Carolina. This software program explicitly taught students about the brain's cognitive functioning during different tasks, and during situations of stress and ease. Wilkins ultimately concluded that students' study techniques and initiative did not show significant change (Wilkins, P. B. B. 2014). Additionally, she pointed out that these courses were administered once every two weeks, making it an inconsistent experience for students, and, according to Wilkins, did not include student discussions or personal reflections, making student voice. (Wilkins, 2014). Wilkins, further concluded that more research is needed to better understand which programs are most effective at assisting students in achieving significant motivational and academic breakthroughs (Wilkins, 2014).

In spite such criticisms of Mindset Theory, Dweck and colleagues continued moving forward to administer additional interventions with her online software. In one of their 2015 study, Paunesku, Walton, Romero, Smith, Yeager, and Dweck collaborated to administer online mindset interventions to high school students. This effort consisted of over fifteen hundred students in thirteen American high schools of diverse locals. The data revealed that for students at risk of dropping out of school, each intervention was followed by an increase of student scores in their core content areas (Paunesku, D., Walton, G. M., Romero, C., Smith, E. N., Yeager, D. S., & Dweck, C. S. 2015) From this study, Dweck and colleagues claimed that her online interventions made the mindset program scalable as a possible answer to system-wide high school dropout trends, to academic underachievement and to negative self-concept in underperforming students (Paunesku, Walton, Romero, Smith, Yeager, and Dweck, 2015). As the students in this study were administered lessons only once every two weeks, Dweck and colleagues additionally concluded that computer based Mindset interventions like Brainology

offered a scalable student support that could easily be implemented in public schools and also, could accommodate the demanding time constraints of content teachers.

**The narrative-based instruction model.** Where mindset interventions look to change student motivation through information about intelligence, the Narrative-Based Instruction Model looks to encourage motivation through narrative based modeling. This intervention was studied by Lin-Siegler and colleagues to help students confront negative belief systems and increase agency by exposing them to stories of famous scientists who overcame challenges. The study included a sample group of 402 high school students in 9th and 10th grade. Three types of stories were taught depicting how famous figures were shown to have struggled intellectually, faced personal life challenges, or made innovations and uncovered new ideas (Lin-Siegler, X., Ahn, J. N., Chen, J., Fang, F. F. A., & Luna-Lucero, M. 2016). In each story these famous scientists were shown to have faced conflict and made mistakes before overcoming their various challenges. These resilience narratives showed a positive effect on student achievement within the science classroom. In the study, student self-belief systems were empowered through stories about prominent figures who beat the odds and made a huge impact in the field of science within their lives. The findings showed that students improved academically in science after this intervention. This intervention model was shown to be particularly beneficial for low-performing students and the researchers argue that when students feel connected to stories of self, or scripted narratives about personal ability, motivation and perseverance/resilience, academic breakthroughs became possible (Lin-Siegler, Ahn, Chen, Fang, and Luna-Lucero, 2016). This study further demonstrates the impact of self-perception as linked to internal stories and meaning structures, and substantiates the idea that a view of oneself begins within the internal dialogues and recurring stories one tells about themselves. Witnessing new narratives offers students new

choices and models for becoming aware of the internal stories and power to revise the internal dialogue one has about themselves.

**Self-concept as academic influencer.** As shown here thus far, personal beliefs about one's abilities and self-confidence towards goals and behavior is foundational in any achievement or aim. Research shows an immediate correlate between academic self-concept and academic success and that this relationship is ubiquitous worldwide (Ghazvini, 2011). In his 2011 study of Tehrani students, Sayid Dabbagh Ghazvini conducted a study to determine the relationship between self-concept and academic performance. The research conducted consisted of a study of 363 students of 176 males and 187 females from ten high schools in Tehran. The students were given a "Self-Concept Questionnaire" (SCQ) designed by Rajkumar Saraswat from a 1984 study. The study looked for a relationship between academic self-concept and global self-concept by asking questions about six different aspects of self-perception: "physical, social, intellectual, moral, educational and temperamental." The study claims that "self-concept is the chief driver of academic success" (Ghazvini, 2011, p. 1034). Ghazvini found that failing students suffered from a negative "academic self-concept" whereas successful students had a "positive academic self-concept." Ghazvini concluded that self-concept is a predictor of academic performance outcomes and asserted that teachers should be trained to better understand and assist students in achieving positive self-concepts throughout the academic experience (Ghazvini, 2011). This study, conducted in Tehran, illustrates that self-conception is a universally experienced phenomenon.

**PATHS curriculum.** The ability to internally reframe perceived difficulties within oneself has been shown to be a driving agent in academic success (Greenberg, 2006). The PATHS curriculum integrates neuroscience with social emotional learning and has led to

improvements in student executive functioning and metacognition with the use of linguistic tools. Mark Greenberg's research in this area incorporates current findings from neuroscience and neuropsychology with preventative strategies to help youth improve executive function and mitigate negative influences affecting cognitive development. Similar to Bandura's self-regulation conceptually, Greenberg's chief assertion is that resilience is encouraged in child development through preventative interventions that improve executive function in the brain (Greenberg, 2006). Using evidence from personal work as a psychologist, neuroscience, and randomized samples from the Promoting Alternative Thinking Strategies (PATHS) curriculum, Greenberg advocates for collaboration of psychologists and professional educators. Greenberg calls for a reconceptualization of methods for assisting students in achieving academic resilience (Greenberg, 2006). The PATHS program tested Greenberg's "curriculum logic model," and aimed to help students regulate their internal impulses and to use language to turn behavior toward more positive and effective social interactions and communication with peers.

When this model was tested, the intervention was shown to improve student executive functioning and help children use language to solve problems and change behavior. The Greenberg study looked at data from 318 elementary school children where schools were selected to implement the PATHS program. Teachers received training in instructional techniques to help students build metacognitive skills to independently control their behavior. Students demonstrated a reduction in student perception of emotions and social situations as problems and were able to apply metacognitive skills for seeing problems as opportunities to grow rather than limitations (Greenberg, 2006). In this program students are explicitly taught about the neuroscience behind the psychological and scientific cognitive processes responsible for resilience. In this study Greenberg argues that students ought to be supported with

preventative interventions and innovative assessments that appreciate the interrelationship between human experience and brain organization and development.

**Social emotional learning and positive youth development.** Although many public schools lack the funding to implement extra programs and supports for students, there is evidence to suggest that all people have social emotional necessities that must be met in order to achieve optimal performance. With this understanding, schools have incorporated social emotional learning supports and intervention programs to assist students in overcoming social emotional barriers to learning success (Taylor, Oberle, Durlak, and Weissberg, 2017). Two prominent examples of these were assessed by Taylor and Colleagues; Social Emotional Learning, and Positive Youth Development.

Social Emotional Learning (SEL) initiatives in public schools are formed on the premise that teaching students how to navigate their emotions powerfully, build positive relationships, and achieve their goals will empower students to become more resilient and successful in academics and life. Most of these programs often consist of core teaching points such as self-awareness, self-regulation, empathy, social skills and making good choices. Similarly, Positive Youth Development (PYD) programs also focus on empowering students, but does so in different ways. This approach places greater emphasis on unifying a student's academic, family and psychological support systems. This approach to social emotional support focuses on the student as a member of larger groups and works to teach students how to become productive agents of change in their own lives and in their communities (Taylor, Oberle, Durlak, and Weissberg, 2017).

In their meta-analysis, Taylor, Oberle , Wiessberg, and Durlak argued that school-based Social Emotional Learning (SEL) programs have a long-term positive influence on student

wellbeing, academic achievement, and personal growth and that this approach leads to the same benefits seen with Positive Youth Development (PYD) programs when applied effectively.

These researchers used data gathered from multiple grade levels and student experiences to illustrate the powerful impact of SEL initiatives on student wellbeing over time. They also noted the merits of both PYD and SEL interventions as theoretical parallels and thus call for a move toward integration of these two aligned methods in educational curricula. While these researchers found preventative social emotional interventions can improve student resilience, they argued there is inconsistency with regard to application of these supports (Taylor, Oberle, Durlak, and Weissberg, 2017).

While there exist scientifically proven methods for enhancing student achievement, these supports often either do not arrive for students to experience, are tested without school district follow through, or are implemented haphazardly and ineffectively. It is for this reason that student advocates and educational professionals and researchers advocate for preventative social-emotional support programming as an integral learning experience at all grade levels (Taylor, Oberle, Durlak, and Weissberg, 2017). Taylor and colleagues further examined the shortfalls of current efforts by school systems to implement such programming, citing a lack of effective evaluative and policy measures for providing educational assistance to address the needs of the whole child (Yoder, N. 2014). While in certain districts much has been accomplished to advocate for and attempt to provide meaningful social emotional support to students, Taylor and colleagues conclude that both research-based programming and more oversight and accountability are needed to assure that those social emotional support programs designated for students, are implemented effectively (Taylor, Oberle, Durlak, and Weissberg, 2017).

**Other Curricular Efforts.** Although there may be, in the pursuit of educational innovations, subjective or structural resistance to the prioritization of programs that put student psychology ahead of academic content, the research shows that social emotional supports can be effective, and that the quality of one's unique consciousness produces correlate performance academic results. In their study 2009 study, Seligman and colleagues argued that teaching towards wellbeing and happiness in school is as important as academic content (Seligman, M. E., Ernst, R. M., Gillham, J., Reivich, K., & Linkins, M. 2009). After considering extensive studies around positive emotional wellbeing in school programs these researchers implemented two curricula models at the Geelong Grammar School: The Penn Resiliency Program (PRP) and the Strath Haven Positive Psychology Curriculum (PPC). Their longitudinal study consisted of randomized data evaluated from PRP consisted of 2000 students ages 8-15 and across twenty years. Findings from student data collected showed that PRP reduced symptoms of anxiety, depression and increased overall wellbeing. Strath Haven's PPC on the other hand, pooled data of 347 9<sup>th</sup> grade students. These learners were randomly assigned classes with or without PPC embedded in their Language Arts program. The Seligman group evaluated data they had collected from a parent and student questionnaire, which showed an increase in skills such as empathy and assertiveness, academic engagement and resilience, and concluded that teaching students the skills for achieving positive emotions enhances rather than detracts from traditional learning in classrooms.

The Seligman study showed that students could be taught skills that are usually passed over in public education. These researchers argued that having a positive mentality is more likely to lead to success, and therefore students should be taught skills that assist them in achieving greater positivity and happiness. The Seligman group believed that school systems ought to

prioritize the emotional wellbeing of students, as mental health precedes success with academic content.

### **Neurolinguistic Programming & Metacognition**

Research suggests that attention directed inwardly—toward one’s own lived experience and process of meaning-making—can give individuals powerful tools for navigating life’s challenges. The innate ability of human beings to examine and interpret experience is also a skill that can be made more explicit and then directed toward achieving one’s personal aims. There have been notable contributions to the field of psychology and hypnotherapy in understanding how the deep inner-workings of the human subconscious are involved in expressions of internal dialogue which, when left unchecked, can become cyclical patterns of negative beliefs and behaviors. Additionally, to the extent that these internal processes manifest in internal meaning structures, or internal dialogue, there are corresponding physiological responses. These psychosomatic responses to the habitual cognitive patterns one experiences results in predictable patterns of behavior and, for students, corresponding academic performance.

For a deeper understanding of the interconnection between consciousness-the mind’s awareness of itself—and patterns of neurolinguistics—one’s reoccurring internal structures of meaning and the mental images, memories, and emotional triggers associated with them— this thesis looks to the metacognitive framework designed by Richard Bandler and John Grinder: Neurolinguistic Programming (NLP) (Bandler and Grinder, 1975). Bandler and Grinders’ framework for human achievement, Neurolinguistic Programming or NLP, synthesized the work of Gregory Bateson, Bandura and others, to form their own practical guide for assisting human beings in achieving performance breakthroughs. They believed that all people could liberate themselves from limiting beliefs, negative associations, and even phobias by becoming

conscious of how human beings create meaning about self and life events, through a psychological process of coding. Through intentional metacognition of one's own meaning structures, Bandler and Grinder posited that one could change the connotation of previously entrenched beliefs rapidly, and consequently, alter patterns of associated behaviors.

Bandler and Grinder showcased techniques and tools designed for therapists to assist clients in quickly reframing their coding or "maps" of the world (Bandler and Grinder, 1975). They showed that belief systems exist as internal neuro-linguistic structures of meaning and language and argued, "the most sophisticated study of human rule-governed behavior is human language systems...we do not operate directly on our world in which we live, but rather that we create maps or models of the world and use these maps to guide our behavior" (Bandler, R., & Grinder, J. 1975, p. 2). Bandler and Grinder practiced their techniques with Virginia Satir, a prominent and successful practitioner of hypnotherapy. These researchers ultimately found that when clients had both metacognition of their own internal maps, and used specific strategies to intentionally alter aspects of how these patterns were represented, these individuals could experience rapid, sometimes implausible paradigm shifts in perception and behavior.

While NLP's is known in some circles, as a powerful tool for psycho-behavioral change, it has met some criticism in the arena of psychotherapy chiefly due to the fact that it doesn't fit with the conventional discipline within which it functions. While it could be argued that NLP fits snugly in its parent field of applied linguistics, it is often frowned upon by academics of that persuasion. With its focus on personal empowerment through subjective metacognitive strategies and the "unseen" language of the subjective mind, NLP finds itself, unapologetically, as a staunch nonconformist (Harris, T. 2001). The unpopularity of NLP in academia has led to a general lack of knowledge surrounding its usefulness and potential application in related fields.

While life coaches, psychologists, hypnotherapists, and performance consultants, draw heavily on its strategies and philosophically, it is, habitually overlooked. Tony Harris speaks to this when he writes, “NLP has not been accepted into the fold as a mainstream methodological option because it is presented in a way that does not conform... the general lack of coverage of NLP in applied linguistics manuals and reference books carries with it a tacit message of non-approval.”(Harris, T. 2001, p. 29).

**NLP strategies.** In spite of the skepticism some have regarding NLP, Bandler and Grinder’s conclusions and methods deserve more serious consideration for use in education. Indeed, since its initial conception, hundreds of strategies and metacognitive tools have been created to cause more specific changes in negative beliefs and behaviors. Of these techniques, probably the most famous is the Phobia Model—a simple visualization process shown to ease and even release subjective phobias built on fearful experience of a past event. This strategy was one of the most effective at causing lasting change with immediacy. (Einspruch, E. L., & Forman, B. D. 1988) During this technique, the participant learns to disassociate from the root memory, and life events which caused and perpetuate their phobia belief. They learn how to reorganize the emotional triggers, the fear based language patterns, and the images and colors attached to this emotional experience and fear belief. By adjusting the colors, images, internal dialogue, and location of this memory and belief in the mind’s eye, the individual effectively has the ability to change the meaning they originally created to make sense of this fearful event. (Einspruch, E. L., & Forman, B. D. 1988)

While this process of visualization may seem trivial at first, what is happening cognitively is more complex. By simply attempting NLP strategies in the classroom, for example, a student’s mind is forced to accept that it is in fact, in control of its own meaning

systems (Tosey, P., & Mathison, J. 2010). One way to use NLP quickly with students is to challenge their negative beliefs to cause metacognitive agency through questioning techniques. Take the example of a student who holds the disempowering internal dialogue; “I will always fail in math.” We might use NLP questions to show them *how* to manipulate this negative internal dialogue belief, to play with it, and to reframe it. Imagine we asked them the following: ““When you say, “I will always fail in math,” What does failing in math look like, as a sentence, as your mental picture?” “When you think about getting an F in math, what else is being said in the background?” “When you get that F on your report card what are you telling yourself about your future and what do others say?” “Is that fun? Feel that feeling.” “Now, shrink that failure picture and feeling into a picture frame. Toss that failure picture to the side like a Frisbee.” “Now, what does success and complete happiness look like for you when you get what you really want?” “Is *that* fun?” “How does that feel?” “What if you change the color of that old failure picture?” “How far away do you need to throw it so you can jump into your success picture?” “What can your internal voice say about math now?”

These questions, while they likely would not immediately change this student’s negative association with math right away, the student would be forced to suddenly create and imagine, critically thinking about the process through which they form self-judgements and negative internal dialogue. Questions that begin to encourage students to manipulate their internal dialogue and the surrounding systems of information, create the context for metacognitive agency techniques and student psychological empowerment.

**NLP Interventions and studies.** To this end, Bandler and Grinder’s Neurolinguistic Programming has become a focal point for some researchers looking to use applied psychological NLP techniques in the classroom. Paul Tosey and Jane Matheson advocate for

application of NLP as a catalyst through which transformative learning can be cultivated (Tosey, P., & Mathison, J. 2010). In order to cause systemic shifts in academic trends, these thinkers believe that educational systems should look to assist students in understanding the inherent link between neurological linguistic processes and human action.

The potential power and usefulness of NLP in education lies with teaching students about their own internal process of incorporating information to form meaning and enable transformative self-awareness. By changing one's internal maps, behavior and life trajectories can be altered (Tosey and Mathison, 2010). Additional research has pointed out that NLP strategies, with their focus on understanding how personal epistemologies are constructed in the first place, may have a role in teaching students the internal process of meaning making or how to learn. In his 2005 study for the University of Bath, Trevor Day identifies NLP as an approach that has proved influential in empowering individuals to manage their own learning in the work place (Day, 2005). Day went on to conduct a small-scale application of NLP in the classroom using a modeling approach. His work found that teaching NLP techniques of mapping and modeling processes assisted students in becoming aware of their own internal maps for learning and for incorporating the specific modeled behaviors of successful peers (Day, 2008).

**NLP's global reach:** Finally, it should be appreciated that the particular skillset of the NLP practitioner has been shown to produce changes on a global scale, where people dealing with critical life issues seek transformative changes in perception and purpose. Anthony Robbins, arguably the most influential NLP practitioner today, uses language strategies that merge Bandler and Grinder's techniques with the empowerment philosophy of Napoleon Hill and Andrew Carnegie, known for their formulas in success strategies, to help his clients produce dramatic results autonomously and consistently (Robbins, 1999.) What makes Robbins

significant here is that he has taken NLP's core principles and incorporated proven strategies for causing human transformation, and uses simple language and sentence frames to help people understand how they learn, and how they can take ownership of their unique internal thought processes. According to Robbins, when human beings become self-aware, they are able to take control of their internal language patterns and differentiate between beliefs that hold them back from performance achievement.

With his *Unleash the Power Within* intervention model, Robbins simplifies internal linguistic drivers of behavior into three categories: What stops us, what controls the quality of one's life, and the fundamental drivers of human action. In this model, he attributes non-action to fear beliefs such as, "I am not enough," or "I won't be loved," and argues that teaching about the inevitability of fear in tandem with power phrases such as, "you use fear or fear uses you," and, "you use stress or stress uses you," are effective coping strategies that give individuals power (Robbins, 1999). Robbins also teaches that meaning and emotion, language and physiology are all interconnected phenomena that govern the quality of one's life and determines how one will feel. Lastly, Robbins teaches that there are six human needs that call human beings into action towards living a life of meaning, including growth, connection, contribution, significance, certainty and uncertainty (Robbins, 1999). Robbins uses anchoring techniques, power words, subtle linguistic structures, and nonverbal cues to inspire and help his clients achieve metacognition of their internal dialogic experience, success mindsets, and behavioral choices. Given the magnitude of his success, Robbins work suggests that linguistic empowerment and metacognitive strategies may prove to be a scalable intervention that could assist teachers in empowering their students. For teachers who often look for motivational tools to inspire

learning, NLP contains powerful instructional guides and could potentially incite student self-awareness, self-confidence, and metacognitive agency (Day, 2008).

**Mindsight.** Where NLP provides a formulaic understanding of internal thought patterns, Daniel Siegel's concept of "mindsight," speaks to the awareness needed to identify internal dialogue. Siegel argues for a return to self-understanding through the observation of thought (Siegel, 2010). Siegel explains mindsight as the capacity to see one's own process of thinking with new clarity, and argues that a cultivation of this ability, "allows us to reshape and redirect our inner experiences so that we have more freedom of choice in our everyday actions, more power to create the future, to become the author of our own story" (Siegel, 2010, p.XII). Mindsight theory considers self-understanding as the transformative act of inward awareness. According to Siegel, the awareness of internal dialogue, language patterns and emotions can give students access to their own innate tools for self-understanding and empowerment (Siegel, 2010). He believed that there is tremendous personal freedom possible through observing internal dialogues and emotional states through "seeing the mind," where human beings are able to transcend patterned and reactive thoughts and their physiological, emotional consequences.

## **Conclusion**

The literature studied illustrates the nature of beliefs and how they are created-through subjective interpretations of experience, perceived capabilities and self-assessments. Furthermore, this review explains how these beliefs express themselves through patterns of meaning constructs, here referred to as *internal dialogue*. These structures of meaning become the fundamental driver of human behavior and consequently of student academic performance. Through theories and interventions that utilized qualitative, quantitative and mixed methods approaches for gathering data in diverse contexts and frameworks, these internal worlds have

been shown to be critical to learning success. The research shows the benefit of further interventions that directly and explicitly engage student metacognition and awareness of internal beliefs and enacted behaviors. Upon considering contributions of the literature to the field of education, there is ample reason for researchers to continue to study, develop, and test instructional methodologies for teaching the mechanics of internal psychological systems and the processes for meaning construction explicitly (and in language accessible to students of all ages).

The literature clarifies the various psychological discoveries that have contributed to learning theory and interventions from psychologists, educators, scientists and empowerment philosophers. These advancements explain the historical terminology and cognitive behavioral processes that have led to previous interventions engaging with belief systems. The literature provides insight into how theoretical frameworks have inspired practical applications such as specific case studies of student resilience and instructional models of Socioemotional Learning utilized in classrooms. As shown in the research, there are now a variety of methods, each targeting similar changes in human self-understanding, awareness and behavior; and ideas surrounding how learning occurs and how behavioral breakthroughs become possible.

Nonetheless, a review of prior research also showed that little has been done to understand student metacognitive awareness from the perspective of students, or to help them actively recognize and address patterns of belief and internal dialogue that interact with self-image, and by extension, with learning. Research shows a strong correlation between student motivation and academic achievement (Hong, Chiu and Dweck, 1995), yet based on a persistent achievement gap, continued drop-out rates, and high incidence of students in need of remedial classes, students would benefit if they could learn how to explicitly utilize an empowered internal dialogue to increase their learning success.

As shown in the research, there are a myriad of different approaches to improving student self-esteem regarding their academic potential, and although most interact with the cognitive linguistic processes governing student self-perceptions, they do so without engaging with student internal dialogue explicitly. To this end, this thesis uses the terms “empowered internal dialogue” or “disempowered internal dialogue” to encompass key components of several theories, causal attributions, self-efficacy beliefs, implicit theories of intelligence, self-actualized learning, and personal epistemology.

Internal dialogues are referenced here as internal meaning structures which either empower or *bring one into a state of belief in one's ability to act effectively* or to disempower or detract from one’s sense of power, worth, or belief in their ability to be effective (Duhon-Haynes, G. M. 1996). This global definition of subjective beliefs and meaning systems integrates transformational learning theory, NLP and one’s own personal epistemology in order to better qualitatively identify the mental processes for creating meaning that either lead to greater effectiveness and success, or to ineffectiveness and underperformance.

Even though the research demonstrates that psychological processes and meaning structures are critical influencers of learning success, in public education, the nuances and impact of student perspective remain collateral rather than central. In consequence, those learning interventions that do bring instructional innovations outside of traditional content areas, often compete with standardized learning expectations, course content and teacher time, which can often cause these programs to be identified as inconvenient and sidetracking the traditional content goals.

**Purpose of This Study**

The purpose of this study explores student awareness of and ability to recognize and address their internal dialogue and belief systems about their own capabilities and self-worth. This ability can provide a foundation for personal empowerment that supports student success across subjects and enables a sense of agency. This study seeks to learn from students what tools and approaches positively and consistently impact their understanding of their own capabilities, personal engagement in school, and level of academic achievement. This study further aims to directly examine how students understand the impact of their own internal dialogue about academic performance and life trajectory, and to explore the tools students employ to address their ideas about themselves and about learning.

## Methods

There have been multiple research studies and behavioral theories demonstrating the connection between internal cognitive processes and the external behaviors that human beings express, from Bandura's Social Cognitive Theory of Self-efficacy and Self-Regulation Bandura, A. (1977), to Transformational Learning (Mezirow, J. 1981), and Personal Epistemology (Hofer and Pintrich, 2012). However, little research has been done to directly study the awareness of students with regard to these internal processes from the students' own perspective. Indeed, even in the field of education many theories are studied without giving authoritative weight to student voice. Therefore, more data is needed to better comprehend students' ability to recognize and effectively revise the internal thought processes responsible for their academic motivation and behavioral output.

The researcher designed the methods that follow by considering ways in which student thought could be engaged to provide the greatest yield of substantive data concerning students' metacognitive knowledge of their internal structures of meaning (internal dialogues). In this study, the voice of students was seen as the direct authority and primary source of data on the subject of student metacognition and systems of meaning that impact learning.

### Research Questions

This study focused on student responses to a question series, presented in both survey and focus group format for ease of implementation and breadth of substantive data. To this end, the survey and focus group questions were formed based on the following central questions:

What are students' existing beliefs about themselves and their own learning?

In what ways are students aware of the ways in which their core beliefs and internal dialogue interact with learning?

What internal dialogues about personal abilities do students use in moments of challenge?

What strategies do students currently have for navigating negative narratives/internal dialogues, and how/when do they utilize them?

These central questions were used to focus the study around the level of student awareness of the relationship between internal dialogue and learning, to examine the existing types of internal dialogue that students use in moments of academic difficulty, and to reveal current strategies that students have for overcoming negative internal thoughts.

### **Research Approach**

This research utilized an exploratory–mixed methods, phenomenological approach through a constructivist research lens to examine student awareness of core beliefs about themselves, and their ability to revise patterns of internal dialogue that may negatively interact with performance in school and life. The constructivist approach was chosen for its appreciation for how human beings construct and create subjective interpretations of their social reality (Creswell, 2018). The use of the constructivist approach allowed the researcher to focus on students' perceptions of their own abilities, and also to examine the impact of his own potential bias throughout the study.

A phenomenological approach, which focuses on the importance of diverse perspectives and worldviews, was also important in this study given that the data collected and evaluated was drawn from the lived experience of participating students. According to Creswell, the subjective worldview, or one's central beliefs that mediate behavior, are the focus of this research approach (Creswell, 2018). This study used phenomenological research methods in that data collected

focused on the lived experiences of individuals – in this case, the internal subjective knowledge students have for understanding how their subjective internal dialogic processes and patterns impact their academic performance and life trajectories (Giorgi, A. 1997).

The rationale for an exploratory mixed-methods approach is that use of both qualitative and quantitative data allowed the researcher to code the nuances of subjective internal dialogues and beliefs, as well as look for and identify any larger trends and patterns among students. Data was analyzed using an exploratory mixed-method design to discover trends in student responses across the data spectrum. Both qualitative and quantitative data was useful in order to look at the details of student self-perceptions, as well as commonalities and differences in student responses. One further salient reason for analysis of both of these aspects of collected data is that certain results may be compared both qualitatively and quantitatively to related phenomena. For example, given the nature of the achievement gap in education, and the demographic populations of students under study, certain trends in empowered/disempowered internal dialogue may directly reference efficacy beliefs or issues of social/educational equity. Within the current study, particular attention was paid to the prevalence of negative beliefs, and the patterns and frequency students identified a presence or absence of support for addressing those beliefs.

## **Research Design**

### *Sites and Entry to the Field*

Out of one hundred forty-three high school students who were invited to participate in this study from the researcher's five classes at Jasper High School, in San Francisco, California, 116 students participated (all names in the thesis are pseudonyms). Jasper is an inner-city school where the researcher is currently a classroom teacher and had pre-existing relationships with the student participants as one of their classroom instructors. Students in one sophomore English class, three classes of junior English, and one class of mixed-grade level students in Policy Debate were recruited to complete the Google Survey designed for this study. In addition, 18 students from the researcher's homeroom of seniors were recruited to participate in on-campus focus groups of which 10 students contributed their answers to the focus group questions.

### *Participants and Sampling Procedures*

Participants in this study were of mixed ages, ranging from 14 to 18 years old. Some recruited participants had already turned 18, while some were still minors, under 18 years of age. This sample of students included all genders, and Middle Eastern, African-American, Latino, Chicano, Caucasian, and mixed-race participants. Student participants were solicited through direct invitation after an introductory presentation where the purpose of the study and the research rationale was explained in the researcher's classes and homeroom. For this reason, the study relied heavily on a convenience population sample based on the number of individuals who accepted the invitation to volunteer for contribution to the research. For this particular study, this type of sample was desirable because the classrooms in question are ethnically and culturally diverse, and representative of the makeup of inner-city classrooms nationwide. Jasper High

School's classroom is therefore *purposefully selected* (Creswell, 189) by the researcher, as it contains a diverse sample group, representative of an inner-city public school.

At Jasper High School, students in five of the researcher's classes were asked to participate in the Google Survey. Students were introduced to the research study and informed about the invitation to participate verbally in class. Additionally, the researcher sent a consent letter home to the parents of all students that outlined the purpose of the study and provided details on how the survey data would be collected, used and protected. Students who returned the parental consent form were given the survey.

An additional 18 Jasper students, who are seniors in the researcher's homeroom, were asked to participate in two separate on-campus focus groups. All seniors in the researcher's homeroom were given the option to participate, and parental consent was requested in a letter home to families. These senior students were sent a different consent form from students participating in the survey that specifically detailed how focus group data would be collected, used and protected.

## **Methods**

Survey participants completed an online Google Survey that consisted of open-ended questions (see Appendix B for Google Survey questions). The survey consisted of ten questions, and it was expected that the survey would take no more than 30 minutes to complete. Each of the questions was designed to gather information about student awareness of their internal dialogues of language. For example, the following two open-ended questions gave the researcher a baseline of student awareness of his or her own existing belief patterns and his or her awareness of the interaction of these patterns on learning, thus answering the researcher's overarching central question and sub-question #1:

Central question: What are students' existing beliefs about themselves and their own learning?

Sub-question #1: In what ways are students aware of the ways in which these internal dialogues and core beliefs impact their learning?

Google Survey Questions 1 & 2:

1. Can you describe one pattern of thinking that you have about your academic capabilities?  
How does this pattern of thinking make you feel?
2. Describe one way in which your thoughts influence your academic success.

Data collection for the Google Survey was administered by the researcher through the distribution of computers to students. The researcher provided individual laptop computers for each student, and students were given time to securely log into computers using their SFUSD district provided emails. Once the survey was completed, laptops were returned to and stored in a locked cart. All student answers were protected in the Google Survey, read by the researcher, and no personal data from any of the students was collected or accessible, including e-mail addresses.

This survey was administered to consenting general education students out of a possible pool of 143 students recruited. Of this sample pool, 106 students participated in the survey. The survey was administered in January 2019 (the academic spring semester of 2019) during class, for those students who opted to participate.

In addition to the online survey provided to participating students, two focus groups were conducted with a heterogenous group of high school seniors, with a sample size of 10 consenting participants out of 18 possible (see Appendix C and D for focus group questions). The focus group questions consisted of ten questions each for student reflection and discussion, and each

focus group discussion lasted no more than 45 minutes. Each of the focus group questions was designed to gather information about student awareness of and ability to revise internal dialogues, i.e., the thought patterns and beliefs that govern their behavioral performance in school as well as in life. These focus group questions also explored student voice from the perspective of high school seniors, who have completed 12 years of general education classes and who have the longest and greatest depth of experience with regard to learning in public education.

Focus group questions were designed to provide data and insight into the central question of this research, as well as sub-question #3, both of which are listed below for reference. Specific examples of focus group questions also are provided to show their focus toward understanding student response to study questions:

Central question: What are students' existing beliefs about themselves and their own learning?

Sub-question #3: What strategies do students have for navigating disempowered narratives/internal dialogues and how/when do they utilize them?

#### Focus Group Questions 6 & 8

6. How have your beliefs about yourself influenced your success in high school?

8. How has your school provided strategies and supports for understanding your beliefs about yourself as a learner?

Through asking questions of seniors with a rich knowledge and experience of public education, including questions that invited them not to express their opinions about their own patterns of belief and the metacognitive supports available to them at Jasper, the research hoped to uncover student awareness of personal beliefs and mental support systems. The research was

also designed to elicit whether, and to what degree, students feel supported in developing strategies for overcoming disempowered internal dialogues autonomously.

The senior focus groups occurred as planned on the campus at Jasper High School in the researcher's classroom. The groups occurred in two separate 45-minute sessions in January of 2019. Students who opted to participate were included in both focus groups. Data collected during focus groups provided the researcher with empirical data illustrating internal modes of thought that influence student existing beliefs about themselves and their own learning. These groups also provided data concerning the level of support and instruction provided in schools around proactive and empowered learning approaches where student belief systems and internal dialogue are concerned.

During the process of completing the focus groups and live discussions with high school seniors, the conversations were recorded on the researcher's phone or computer, both of which were password protected. Notes were taken during the focus groups, and students who were more comfortable with answering focus group questions in writing were allowed to do so. Written information did not include any names of identifying information (e.g., addresses, phone numbers, e-mail addresses, or other personal references).

### **Data Analysis**

Results of all Google Surveys were automatically transcribed into spreadsheets in Google. All data was read and reviewed, both for each student and comparatively for each question asked in the survey. The researcher assigned initial codes to the data based on statements self-identifying the presence of belief systems, negative patterns of belief, awareness

of the impact of belief patterns on learning and achievement in school and life, and the existence or absence of support structures.

After data was collected and reviewed, the researcher confirmed the total number of students who did and did not participate in the study and examined the possible response bias in collected data and results. Response bias and predictable trajectories for changes in the data collected by non-responses was estimated by considering the known demographics of students who did and did not participate based on which students brought in consent forms and which students opted out of the study. After reviewing these absences, which did not change the demographic makeup of the participants, no response bias was found, however, after administering the study, the researcher questioned whether certain questions could have been even more open ended and randomized in the future for the most unbiased results possible.

While in traditional qualitative research no variables are tested, the exploratory mixed-methods approach with phenomenological considerations allowed the researcher to code qualitative data through interpretive analysis. Concept mapping also was used to categorize initial codes of student responses into themes of meaning inductively, using a grounded theory process of open coding. As the relationships between codes reveal themselves through concept mapping, the researcher used small units of language to name and define these categories of meaning. Several codes the researcher had not initially expected and were combined with other anticipated codes identified above. These included the following: apathy responses in which a student didn't attempt a response to the question, awareness responses in which a student could observe and articulate his or her own internal dialogues meaning structures in various contexts, resilience beliefs about overcoming obstacles, and dependent beliefs about needing peer support or external motivation to succeed. Other codes that emerged were blame responses, in which the

cause of a personal challenge or learning problem was attributed to someone or something else, and ownership responses, in which one's academic experience was identified as a result of his or her own actions. These codes were analyzed. In conducting the analysis for this study, the researcher compared, and related themes found in data to analyze trends found in student internal dialogues and belief systems (Bazeley, 2013, pg. 16).

After concept mapping, as a final step in analysis, the researcher conducted further narrow and focused coding, looking even more closely at the specific language used across a student's entire body of comments. At this phase, the researcher was looking at consistency in student response across questions, as well as for anything that stood out as unusual with a given student's overall response pattern. Throughout this phase of analysis, the researcher employed deductive reasoning to identify additional evidence to support or refine the initial themes, and clarify finding, limitations and implications of the study. Data also was analyzed to look for comparing and contrasting codes generated through survey results in comparison with student comments recorded during focus groups. The researcher was interested in understanding what similarities and differences existed in response patterns when students were able to answer a survey anonymously as compared with in a group conversation.

### **Validity and Reliability**

As a working professional who has taught hundreds of students, the researcher is an authority on the influence of student internal dialogue on learning success. It was in the researcher's best interest as an educator to conduct objective, unbiased research as both he and his students would directly benefit from gathering and evaluating student data that could empower students and enable learning success and academic improvement. The researcher used validity strategies such as member checking (Creswell 201) to substantiate the validity of

findings with participants documenting results in descriptive analysis. The researcher also used peer debriefing with a colleague in the education field to involve interpretation beyond the researcher to enhance validity of findings and research methods (Creswell 202).

### **Research Positionality**

The researcher is a professional educator who has built rapport and community with the students in the study. During the process of conducting his study, he endeavored to remove all personal bias and did, to the extent possible, identify and remove these biases before coding and categorizing data. As an educator in the public-school system, a former licensed NLP Practitioner and Conversational Hypnotherapist, having worked as a social worker in the justice system, and with youth programs for two decades, the researcher has extensive experience with student needs, therapeutic approaches, and personal empowerment. This gives researcher significant bias towards helping students succeed academically. The potential consequence could have been, that during the process of coding, the researcher made judgments about student experiences and beliefs that weren't true to the intention communicated by the students, and by so doing misinterpreted the results of the research. However, the researcher's awareness of this positionality helped control personal bias during data collection and analysis. Moreover, the researcher used member checking and peer debriefing as safeguards to test the results and validity of the research findings.

## Findings

This thesis sought to discover whether and to what extent students could recognize and address their belief systems and patterns of internal dialogue about their own capabilities and self-worth. Additionally, this study sought to learn from students what tools and approaches they use to positively and consistently impact their perception of their own capabilities and their academic performance.

After concluding this study and evaluating hundreds of student generated responses, the findings show that although many students are able to identify disruptive patterns of internal dialogue that negatively interact with learning, there is a disconnect between this acute awareness and their capacity to change beliefs and behaviors potentially detrimental to academic achievement and their long-term educational trajectory. This inability to enact change is rooted in the fact that students have not been taught effective coping strategies for independently dealing with negative thoughts that cause emotional disruption, interact with self-image, and, by extension, with their learning.

Several overarching themes emerged through close examination of the student responses. First, the vast majority of students have metacognition of internal linguistic patterns and intuitively sort their internal dialogue into empowering positive beliefs or disempowering negative beliefs. Moreover, students are quite adept at linking these linguistic patterns to corresponding emotions, academic performance, and behavioral outcomes. Second, although students use coping strategies for negative mental states and academic challenges, they have not been taught strategies or received support for achieving *metacognitive agency* when negative and disruptive beliefs arise. As a consequence, students lack the capacity to transform their thought patterns and take new actions. Finally, the findings illuminate that students have a strong desire

to change disruptive beliefs and negative emotions detrimental to learning, but do not have the tools to autonomously achieve this.

In the following descriptions and analysis of student data, student responses to research questions will be identified as empowering or disempowering internal dialogue. The use of these terms empowering, or disempowering serves to express the impact of these internal cognitive patterns that either can cause greater self-confidence and agency or deprive and limit one's sense of power and authority over their own psyche.

### **Metacognition of Internal Dialogue**

Findings from student data collected revealed that *all* 116 students who completed the survey and participated in focus groups had some awareness of their own internal beliefs and expressions of internal dialogue. Even students who did not answer all survey questions were able to say something to articulate their own internal narratives of thought. One student, for example, who wrote "not applicable" to several other responses, said, "my procrastination and laziness makes me hate myself in a way." While this student did not link this self-directed negativity to academic results, this student was metacognitive of this pattern of disruptive self judgement. In contrast, another student demonstrated empowered internal dialogue and made connections to school. She shared that when she faces academic challenges, she tells herself, "that's good but you can do better." Despite the fact that both students did not fully participate in the survey, they both demonstrated evidence of their awareness of patterns of internal dialogue relating to behavior. The data also illustrated similarities in the language of internal dialogue with many students articulating the same positive or negative phrases. Interestingly, many iterations of empowering internal dialogue seemed to express the overarching notion that hard work and staying positive leads to successful outcomes. Two of these students wrote, "When I

think about my academic capabilities I think about doing my best. I can only succeed if I try my best. I keep on telling myself that I got to do better in school and keep up with grades to have a good future.” There were many examples in student responses that used phrases such as “work harder,” “trying my best,” “I can do better,” to articulate the sentiment that academic success is ultimately a result of effort alone. Negative themes in the language in contrast, demonstrated the underlining connotation of self-doubt. For example, “I think I'm going to fail,” “I don't know how,” and “I'm not good enough.” The prevalence of these similarities shows that the basic internalized linguistic structure for failure and success beliefs is shared by all.

In both the survey and the focus groups, there were students who expressed empowering internal dialogue which they connected to helping them succeed in school. These students expressed language with more positive connotations and often equated internal states of thought and emotion to self-confidence, school success, and future prosperity. One student wrote: “My thoughts can lead to my success, for example, when I push myself to keep working or work harder. Even if there is something in the way of my success, I think of a way to push it out of the way or find a way around it, instead of thinking that I'm not good enough to do it.” This quote articulates an empowering internal dialogue. The student believes in approaching obstacles as a means through which to learn and grow. One of the three students who directly referenced growth mindset in this study writes, “A pattern of thinking that I have is growth mindset because it helps my academic success a lot. It makes me feel capable of learning anything because of the rule that failure is only a learning experience. Nevertheless, this student admitted that she nevertheless copes with reoccurring patterns of negative thoughts and anxiety, and that, when faced with disempowering thoughts about herself, growth mindset doesn't help.

**Academic internal dialogue.** Of all students in the survey and focus groups, 91 out of 116 participants, or 78.4%, explicitly attributed internal self-directed conversations to cause academic outcomes with 83 in the survey and all 10 focus group participants making this connection. In one salient example, a student stated, “I sometimes think that I can't get an A in a class because I think it's difficult and I will never understand the work. This affects my academic success because I get lower grades due to thinking that the class is challenging even though I need to spend more time on it.” This student attributes the internal dialogue, “I can't,” to their falling grades, a limiting phrase that many low performing students come to accept and believe. Another student similarly shared, “When it's something I don't really care about or see value in, I feel as though I just do enough to get by and don't show my full potential. Therefore, if I am not fond of a subject or topic, I am less likely to do well and get good grades.” This student attributes underperformance to a lack of interest in the subject matter and cannot articulate a method for breaking this limiting pattern that may inhibit full engagement in classes this student is not already interested in. Students also showed how difficult emotions play a role in classroom engagement, as with the following student who explained how an emotional dark cloud can halt academic focus and interest. In the words of this student; “If I am in a dark place mentally, I would be disinterested in everything that revolves around academics.” This student data makes explicit connections between states of mind and academic behavior, showing that most students are aware of the how the quality and connotation of their internal dialogue influences corresponding performance results.

**Disempowering internal dialogue.** In this study, whether or not students connected their mental constructs to academics, or had a more positive academic self-concept and empowering internal dialogue, *all* students nonetheless articulated disempowering language as a mental

challenge in life. Indeed, at times, both positive and negative ideas about student self-esteem seemed to coexist. One student demonstrated this when they wrote: “My pattern of thinking is like an on-and-off pattern, where sometimes I feel like I have high potential and sometimes I can't do my work because I am overwhelmed or not good enough. This pattern of thinking makes me feel okay, because I know it is normal to not always feel good about my capabilities all the time.” The presence of both student awareness of high performance and the limiting belief; “I can't,” in the same response, shows that disempowering internal conversations can run parallel to high performance efficacy beliefs. Indeed, all 106 student survey responses, and in 10 focus group respondents this presence of negative, disempowering internal dialogue was acknowledged as a familiar internal thought pattern. Even seemingly resourceful linguistic patterns in high performing students were followed in subsequent responses by disempowering internal dialogue. One student linked receiving a B to challenging psychosomatic responses, “I still cry myself to sleep over a bad test or punch a wall when I end the semester with a B. Similarly, one of the students who completed the survey even stopped attending school after receiving a C in her English class. This student data found the language of limitation and disempowerment to be a ubiquitous phenomenon with various expressions and perceived causes.

Although some examples of disempowering internal dialogue were grounded in intelligence beliefs, a close examination of the data revealed academic beliefs to be more nuanced in scope and complexity. For example, one student articulated disempowered dialogue relating to expected future performance results: “I believe I will fail.” This language is not about intelligence, but a specific pattern of language and meaning system about a perceived future academic outcome. This student wrote: “One pattern of thinking is that is I constantly think I'm going to fail my classes. I start to actually believe myself when I say it so much. this thought sort

of automatically comes to my work, if I even think I got something wrong or I don't understand something I think I'm going to fail that test, lose points, or just fail the class." This student directly traced their academic confidence to a reoccurring pattern of internal dialogue which assumes a negative performance result. They attributed this pattern to having a powerful influence over their self-confidence and experience in school. In contrast, a different student identified a disempowering dialogue articulating a belief about their comprehension ability. This student wrote: "During class, I automatically think I don't understand whatever the teacher is saying. I eventually understand what the teacher is saying though. I say I don't understand at the first time because I have low standards for myself and don't think I'm smart enough." This student's response expresses the pattern: "I don't understand." On the surface this is a belief about cognitive ability. It would follow that growth mindset theorists would identify this as an intelligence belief. Beneath this pattern however, is also a global self-concept: *I have low standards for myself because "I don't think I'm smart."* Even though the student described an intelligence belief, they also have decided that having low expectations is an aspect of *who they are*. Thus, low expectations exist as a prophesy for this student because they have decided that it is central to their identity. Another student response expressed disempowering internal dialogue concerning how they assess their own performance in different concepts. This students judgements seem to collapse academic results with self-worth. This student wrote: "Sometimes my thoughts about certain aspects of my academic ability make me feel like I suck. This pattern often occurs when I do a task that isn't helpful to what I want to do in the future like art. It also occurs when I do a task that just outside of my ability and it leads to me trying to hide and cover up that work." This student's language pattern: "I suck," relates to attempting new or challenging academic experiences and a fear of not doing it right. Even though they are able to attempt and

complete academic tasks, this student identifies negative assessments of their own performance to be a repetitive pattern. These three student responses each identify problematic academic perceptions, and demonstrate the nuances of even seemingly related learning beliefs. The first student is certain of negative academic results, whereas the second student is sure that they won't be able to learn the material and the third student believes that any slight misstep or mistake in performance, ultimately means that they are a failure. These differences in meaning between the internal dialogue of each student may not seem significant, but the particular root cause of each belief is meaningful for each student, and without examining these subjective internal discourses, these disempowering internal dialogues will likely continue.

### **Coping vs Strategies**

All students in this study expressed disempowering dialogue as a familiar experience, with a majority linking these patterns to emotional and academic consequences. Yet after evaluating student data, findings showed that students had no explicit strategies for changing these patterns of mental negativity on their own. While students did cite coping behaviors—actions that relieved mental problems momentarily—such as exercising, “letting it go,” talking to a friend or a teacher, working harder, or using drugs, these “solutions” had ephemeral affects, as they did not change the underlining drivers of damaging negative thoughts and beliefs. Indeed, after reviewing the data, findings showed that no student had articulated strategic psychological approaches to transform disempowering mental contexts. For example, the following two students said they use short term solutions for internal frustrations to mentally check out. The first explained their response to negativity when they wrote, “I go home, sleep, or play video games until the pain goes away.” A second student explained, “The strategy I use is smoking weed outside of school. But inside school there's nothing I could do if I'm frustrated.” These responses suggest that some

students believe they have effective strategies for navigating their negative thoughts and feelings, when in fact, their solutions are coping behaviors that momentarily relieve their problems. Alternatively, one student described a less avoidant coping method for their frustrations but similarly, had no metacognitive strategies. They remarked, “Honestly my strategy is to either rant to someone or furiously scribble manic ideas on a piece of paper or type until I’m less angry.” This student’s approach is more metacognitive, as they are actively addressing the need to relieve the mental problem, but still, with no strategic approach for changing the pattern. This sentiment was also echoed when another student wrote, “I don't have any strategies for dealing with frustrations so, what I usually do to calm myself is to listen to some music.” These last four responses exemplify how students attempt to achieve greater ease and relief from negative mental states, some through avoidance, others through conscious action. Nevertheless, these students clearly had no explicit strategies for changing negative belief systems or disempowering states of mind.

Although there were students who articulated some understanding of methods resembling psychological tools, they described these concepts as ineffective because their comprehension of these strategies was incomplete. One individual stated, “I have found that letting out my emotions doesn't work because it makes me feel sorry for myself which isn't the mindset I should have towards school.” This student refers to letting out emotions as a strategy and even mentions the word mindset, but neither point demonstrates any explicit methodologies or actual actions for emotional release or “letting go.” Similarly, the following respondent described trying breathing techniques in a limited capacity, and it not helping. They explain, “Most people say to just breath in and out when someone is mad but when I'm frustrated like a lot I honestly start to cry because I'm not those type of people who go by "breath in and out," it personally doesn't help me.” In their responses, these last two students touched on concepts used in therapeutic techniques, but without

any knowledge of this. Releasing difficult emotions is possible through specific techniques of breathing and metacognition of thought and emotion, but without prior knowledge of this, neither student could access their ultimate goal of feeling better and lacked the capacity for taking new action.

It should be noted that out of over a thousand responses, there were isolated instances where students had recalled school experiences where they learned mental strategies for overcoming mental challenges. In the data collected from the survey and focus groups, Dweck's Mindset interventions were clearly referred to three times and Mindfulness meditation was mentioned once. One of these students referenced a lesson about growth and fixed mindsets in 8<sup>th</sup> grade. Another student had experienced a group discussion on Growth Mindset in her Avid college readiness class and said that students needed more exposure to lessons of this kind. A senior student expressed that she had found growth mindset to help her motivate herself to learn new things but claimed it did not help in stressful situations. Finally, a different student described learning about mindfulness meditation in health class during several lessons a year prior to this study. In spite of these rare exceptions, while students were aware of complex patterns of their own thoughts and behaviors, they had not been exposed to curricula designed to cause lasting changes in consciousness. Moreover, the coping methods students used for addressing disempowering mental states were behaviorally ineffective. That is, these solutions helped students cope with academic frustrations and psychological challenges, but did not cause changes in reoccurring patterns of disempowering internal dialogue and self-directed negativity. Therefore, without clear strategies for metacognitive agency, student lack the capacity to cause spontaneous change in those negative mental states and disempowering dialogue which impact their beliefs about self-worth, their ability as learners, and their behavioral flexibility to take new action.

**School supports.** Many students surveyed, and all students in the senior focus groups agreed that their education lacked effective support systems for navigating emotional traumas and personal hardships. One student mentioned that although a wellness center is offered to students with school nurses, psychologists and a social worker, many students still cannot access the help they need. In a follow up with the school wellness coordinator, the researcher was told that the wellness services on campus are “prohibitively busy” with a staggering number of students dealing with depression, academic anxiety and substance abuse issues. One senior student said that these services, even when accessed, “do not help with self-confidence.” This student had attempted suicide due to academic anxiety earlier in the year. Other students in the focus groups discussed family trauma and life outside of school as a strong influencer of efficacy beliefs and academic potential. One student commented that “family issues can stay with you” and ultimately “impact whether you pass or fail your classes.” Students also stated that teacher support is not always available and this can also impact self-beliefs about academic importance and personal ability. One honor roll student mentioned that teachers often forget about the self-confidence needs of high performing students and offered that too much focus can be placed on failing students. This student explained, “I get A’s, and I deal with stuff too.” According to this student, the extra check ins and wellness support appointments “go to students in crisis” and in this way, the negative mental states of top tier students can go unaddressed by schools.

### **Students Desire Change**

The final theme discovered in the data was that the vast majority of students who participated in this study expressed a desire to change specific limiting beliefs. Students cited self-doubt, academic resistance, and fears that they would want to overcome, if they had the knowledge for how to achieve this. One student shared, “I would like to change that when I get a

bad grade I won't be going anywhere in life because that's not true and I know it but in the heat of the moment that's what I think. Another student wrote, "I sometimes believe that I'm not good at things because I was meant to not be good at. If I try something and I don't succeed the first time I just stop. But you can't assume something without trying it multiple times and that's something I really want to change." These students both show a clear desire for understanding how to think differently about themselves and yet, they are unable to do so. Both students understand that they *should* think differently to achieve different results, but do not know *how*. The following students described an understanding that positive thinking is powerful in achieving academic results and for causing motivation, and yet both expressed feeling trapped and wanting to change disempowering internal dialogue. The first linguistic pattern relates to feeling controlled by external events. This student wrote, "I want to change my belief that I cannot complete certain things (academically-wise) because of certain circumstances." Similarly, this linguistic pattern deals with a student feeling trapped but not by external events but by the disempowering dialogue itself. This student articulated, "I want to change my negative thoughts about me because I feel like I can't do anything but if my thoughts become positive I'll push myself hard." These students all expressed feeling disempowered by differing beliefs about themselves which manifested in disempowering internal dialogue. Although the way these systems of meaning are felt and understood differs for each student, these learners expressed a succinct desire to be free from the mental boundaries imposed by these mental conditions.

Additionally, students in both survey and focus groups proposed that supporting positive student beliefs and self-confidence ought to be addressed in schools consistently. In both survey and focus group, students argued that there should be more focus on psychological awareness and wellbeing in the classroom. This sentiment was highlighted by in senior focus groups who

criticized the current educational status quo and proposed that any new in-class supports, would be helpful, but that many of these initiatives “won’t work anyway.” Many senior participants agreed that even when new learning interventions or motivational strategies are taught, they often fail due the fact that most teachers “don’t know what up,”—they aren’t well versed in awareness strategies themselves. Students pointed out teacher ignorance as a factor that could limit the implementation of metacognitive supports in the classroom pointing out that many teachers aren’t on the same page with school rules, available supports, or with the realities diverse student groups face. Yet all students agreed that if there were an effective class available, with trained teachers for educating students how to develop confidence, and to better understand and overcome negative mental patterns, this would be a step in the direction of positive academic change. This might make all the difference for failing students, because, as one senior noted, “some students don’t succeed because they don’t think they can succeed.”

**Conclusion.** Findings in both survey responses and senior focus groups demonstrate that students are well versed in the language of empowerment and disempowerment, that they understand the connection between mind and action, and that currently, most students are not fluent in skills for understanding and transforming their negative internal dialogues and overarching beliefs. Additionally, data shows that most students would welcome the tools for becoming more powerful in affecting change over their internal dialogical constructs. If students have no reliable strategies for transforming internal frustrations and disempowering internal dialogues concerning education, then changes in academic patterns become improbable. Although they can identify short-term solutions, like taking a walk, talking to friends, smoking weed, playing videogames, being alone, or not yelling at anyone, all of these solutions lack a systemic, internal protocol for empowerment. These coping solutions to internal frustrations

illustrate the internal worlds of students in public education, who attempt academic success with little knowledge for cultivating the awareness and metacognitive agency needed for lifelong self-confidence, resilience, and empowerment. Indeed, even the most confident students still referenced disempowering internal dialogues, revealing that they had not been taught how to reframe and transform disruptive patterns of thought and emotion. Thus, without learning how beliefs that govern a sense of self are constructed, manifest internally and can be examined, students do not have the capacity for change.

## Chapter 5: Discussion

The findings of this study showed that students have metacognition of their belief systems and internal dialogue but that they do not have not metacognitive agency. Students are aware of their beliefs about their own capabilities and self-worth, and how subjective expressions of internal dialogue impact their lives. And yet, in spite of this awareness, responses in both survey and focus groups revealed that students have no explicit strategies for transforming negative thoughts and emotions as they arise and thus, lack the capacity for new action. Given that research has shown that behavioral change is only possible with both a belief in one's ability to succeed and effective strategies for forging new thoughts and behaviors, without the tools for transforming patterns of disempowering internal dialogue, students will not be able to break trends in academic underperformance associated with disruptive states of mind.

In the discussion that follows this thesis will show how seemingly separate theoretical frameworks and intervention strategies considered in the literature share simple yet powerful principles, that could be synthesized for teaching metacognitive agency in public schools. This thesis views the agency and empowerment of the student mind, as the necessary precursor of a learner's success in meeting content objectives, as without this, equitable learning is undeliverable. This discussion will also outline how findings in the study coincide with principles of behavioral psychology, and also shed light on the shortcomings of Mindset interventions and its theoretical approaches for causing academic change. This discussion will also propose that theory must be applied to educational policy and practice through a reexamining systemwide priorities. Paramount emphasis must be placed on creating effective curricula for teaching students *how* to autonomously confront and overcome negative mental states and disempowering dialogue—found in this study to be ubiquitous as a limiting factor to

student wellbeing. This chapter will also address the limitations of the study conducted for this thesis and offer suggestions for future research in the area of student metacognition and psychological empowerment. Finally, this thesis will conclude by reiterating its simple arguments: Educational equity does not exist in the status quo. Current interventions do not cause systemwide change. Student psychology is responsible for correlate performance results, for which public education, as a civic institution is accountable.

### **Implications for the Literature.**

The student data analyzed in this study showed consistencies with the major psychological theories covered in the literature review. Bandura's self-efficacy beliefs were exemplified in student responses when they identified specific patterns of internal dialogue about their abilities, and in responses that described how their thoughts and emotions caused academic results (Bandura, A. 1993). Findings from the study were also congruent with Weiner's Attribution Theory, which emphasizes that human beings assign causes to empirical events, as students attributed reasons for trends in their academic performance that often expressed uncritical and unexamined belief systems (Weiner, B. 1972). Student data also aligned with transformational learning theory in that students' expressed a clear desire to change negative beliefs and disempowering internal dialogue, suggesting that they would be receptive to examining and working to change disruptive beliefs that negatively impact learning (Mezirow, J. 1981). And yet, while students identified patterns of beliefs and internal dialogue, they did not show any comprehension of the actual mental processes governing how their beliefs originate. This suggests that teaching students personal epistemology, how they know what they know, and methods for reforming these meaning systems would be beneficial in empowering students (Hofer, B. K., & Pintrich, P. R. 2012).

Given the findings from the study conducted in this project, this thesis argues that a unification of the theoretical frameworks reviewed in the literature is warranted. Too often changes in student performance are approached with theories and interventions that attempt to address changes in student psychology, but with different methods and without consistency. Many of these instructional approaches, although based in scientific research, nevertheless focus on isolated learning beliefs and concepts by providing students with information rather than methods and do not offer a student centered approach to metacognitive agency.

The theories considered in this thesis have often provided the foundation for learning interventions and classroom strategies, each holding principles and methods which, when examined, all deal with aspects of the same central premises about how the human mind operates. Each of these theories carry the same core assumptions, about how human beings create their own meanings about reality. Weiner's Attribution theory for example, focuses on specific meanings about the *cause* of events, whereas Hofer Pintrich's Personal Epistemology, and Siegel's Mindsight Theory, focus on how this meaning making process can lead to agency through critical observation (Weiner, B. 1972; Hofer, B. K., & Pintrich, P. R. 2012; Siegel, D. J. 2010). Dweck's *Mindset* Theory on the other hand scrutinizes overarching meanings about intelligence (Dweck, C. S. 2008). Bandura's Social Cognitive Theory and Maslow, Rogers' and Epstein's Self-Concept, all look at the impact of meanings about one's perceived abilities and limitations to behavior in various contexts, with some variation in approach and terminologically (Bandura, A. 1991; Maslow, A. 1965; Epstein, S. 1973). Finally, Bandler and Grinders' Neurolinguistic Programming focuses on the specific meanings one makes and how to manipulate disruptive perceptions and internal "maps"(Bandler, R., & Grinder, J. 1975). When synthesized, these frameworks each look at a different aspects of the same conclusions: that the

human mind creates meaning about the world, that the confluence of these meanings drive human action, and that this process constructs one's unique beliefs and internal dialogue about self-worth and capabilities. Freire's Social emancipatory perspective within Mezirow's Transformational Learning Theory, and Bateson's Ecology of Mind offer the philosophical backdrop for the unification of these theories as these frameworks advocate for examining the interrelationship of one's own unique beliefs, their social conditioning and the process of personal empowerment and liberation from psycho-societal constructs (Freire, P. 1970; Mezirow, J. 1981; Bateson, G. 1972). In the service of assisting students to achieve greater psychological confidence by understanding their own "meanings," this unified theory of empowered learning could merge the central principles of transformational learning theory with instructional systems for teaching metacognitive agency in public schools.

**Criticism of growth mindset.** Although this thesis agrees with growth mindset conceptually—that intelligence is ever-expanding and that having fixed views about one's innate capability in most areas is unproductive, the focus on intelligence beliefs is over simplistic and inappropriate for the diversity of influences on human learning. With respect to Dweck, although academic studies have advocated for growth mindset instruction in the classroom, her theory and intervention model is inherently problematic. As research shows, all human beings hold a variety of distinctly different self-concepts and perceptions of themselves in various contexts (Maslow, A. 1965). As illustrated in the literature, in an effort to understand existence, the human mind also assigns causation to life experience, creating meaning structures governing one's sense of identity, core values, and the nature of external reality. Each of these systems of conscious and unconscious information can drive human decision making and behavior. Simultaneously, the mind accepts or rejects information on the basis of whether such knowledge is compatible with

these preconceived ideas about what is or is not possible. Thus, with its focus solely on intelligence beliefs, Mindset theory, in an attempt to make its teachings accessible and practical for widespread application, ignores the influence of the myriad of converging factors within one's subjective mental space and environment.

Even with evidence for the efficacy of Growth Mindset Interventions in the classroom, methodologically, students received more information than methods for transforming their mindset. Dweck's approach is based in the idea that one powerful idea can overcome the strongest limitations. In her book, *Mindset: The new psychology of success*, Dweck attributes growth mindset to everything from academic success to physical fitness and financial opulence, to refined artistic abilities—simply by believing one can, makes it possible (Dweck, C. S. 2008). Dweck posits that anyone can learn and achieve anything when they shoot for the moon and work hard to achieve mastery. In the end, while Dweck's many publications and studies, and her theoretic posturing is engaging, anecdotal and inspiring, her suggested solutions ring hollow for the teachers and students who need to be shown the way to move forward rather than told where they should already be.

In this in mind, this thesis departs from Dweck's Mindset Theory and suggests that the terms disempowering and empowering internal dialogue are more practical than growth and fixed mindset as these terms cover the whole host of negative recurring cognitive patterns, not merely intelligence beliefs. Instead of focusing on *what* intelligence beliefs are, students are better served by being taught *how* any belief can be identified, deconstructed, examined and changed. While one could assume that the metacognition demonstrated by students in this study was achieved through past experiences with mindset instruction, based on the nearly nonexistent references to mindset theory and terminology in student responses, this thesis finds any influence

of mindset interventions to be negligible and an unlikely driver of student metacognition of psychological patterns. Given evidence of student metacognition and findings from the literature, notably the phenomenon of self-monitoring, it is more likely that all linguistic beings have some awareness of their internal dialogic patterns, especially those which reoccur. Nevertheless, the apparent metacognitive awareness of student's surrounding the nuances of their unique mental landscapes does not equate to metacognitive agency, or the ability to actively transform beliefs to achieve psychological growth and overall wellbeing. Indeed, while interventions based on Mindset theories can lead to greater metacognition of intelligence beliefs in the immediate term, for the most students, an awareness of these beliefs and mindset terminology does not cause lasting changes in student consciousness or behavior. Students need strategies for achieving agency over their own psyche across the educational spectrum and throughout their cognitive development.

### **Implications for Policy and Practice**

In this study, although students expressed an understanding of the power of harnessing powerful beliefs about themselves, and the potential of theories like mindset, there seems to be no systematic approach for teaching students how to shift negative mental states of language and emotion, based on student responses. While the study conducted was congruent with previous conclusions made by behavioral psychologists and the overarching theories outlined in this thesis, findings unveiled the shortcomings of current psychological learning interventions and supports in public school. One salient example of this was seen in how infrequently students seemed to incorporate Dweck's mindset interventions. Students could neither articulate an understanding of "growth" or "fixed" mindset, or explain how intelligence beliefs originate--

even though students in the school district under observation include mindset lessons in many middle school classrooms as well as occasional lessons in this high school's health and college prep classes. Indeed, in over one thousand student responses, students referred to mindset explicitly only three times. This calls into question whether mindset curricula, which deals directly with beliefs about learning and intelligence, is effective at generating long term changes in student metacognition and academic resilience. Furthermore, the absence of healthy coping strategies for overcoming disempowering internal dialogue in student responses suggests that the psychological supports and learning interventions available to students in public schools fail to provide students explicit strategies for achieving metacognitive agency and for understanding their subjective epistemological beliefs with fluency.

Based on previous research as well as the findings of the study, this thesis argues for a restructuring of current models of standards-based instruction. The findings of the study illustrate the disturbing and often damaging phenomenon of disempowering internal dialogue as a ubiquitous challenge to learning that all students navigate to some extent. The absence of a uniform and systemwide effort to support students in overcoming the negative mental states that influence trends in academic underachievement vivifies the failure of public education to act on the most basic principles of behavioral psychology. This systemic breakdown is evidenced by the internal dialogue of students who express no crystalized understanding of how to change deficient beliefs about themselves. Even with innovations in pedagogical strategies, student based instruction initiatives, and the availability of cognitive linguistic techniques for psychological restructuring, these advancements are overshadowed by a prioritization of standards based instruction, increased focus on academic content knowledge, and high stakes testing.

As America's current model of public education fails to acknowledge student psychological empowerment as the foundation upon which learning is made possible, it becomes the responsibility of all teachers to seek out and incorporate strategies for assisting students in becoming actively engaged in their own psychological growth and development. The study conducted in this thesis revealed that students need to be taught *how* to transform disruptive beliefs and disempowering internal dialogue about their capabilities that affect not only academic experience, but also feelings about their own value as human beings. Given the long term academic and psychological disruption caused by self-directed negativity, and the lack of systemwide efforts to empower student self-perceptions, teachers do not have the luxury to wait on the larger educational system to change. All teachers have a role to play in making their classroom a safe space, where standardized tests and requirements can be honored, but where students are consistently exposed to techniques for maintaining empowered internal dialogue. To this end, student metacognitive agency ought to be a constant learning objective underwriting all curriculum designs, at all levels of development and grades, and accepted as complimentary and supportive of student success in standards-based instruction.

### **Limitations of the Study and Future Research**

There were several limitations of the study conducted for this thesis project. First, the students in this study had built rapport with the researcher and felt safe sharing their views. This comfort level could have colored how thoroughly students responded to certain questions. Data might not have been as extensive for example, if conducted with a population where the teacher-student relationship had not been previously established. Second, the research consisted of a predominately working and middle class student population where affluent students were the minority. It is possible that if this study was conducted with students of higher socioeconomic

status, perhaps the findings would change or even show some relationship between wealth and metacognitive ability. Third, the findings of this study were limited to the geographic region of San Francisco, where divergent viewpoints and self-awareness are openly discussed, and, in many cases, are encouraged. It is unknown if similar results would be found across geographic locations, however, one might conjecture whether personal belief systems could be discussed or even researched by a teacher in more restrictive or conservative school districts.

Future research in this area might use similar methods to explore teacher metacognition of personal bias and its impact on delivery of instruction and lesson planning. Research might also examine how teacher behavior and teacher-student interaction impacts learners' self-efficacy beliefs. Future studies could also consider how internal dialogues influence the interactions of school faculty members and the decision making of school administrators through anonymous surveys like the one used in this study. Understanding the metacognitive abilities in adults, especially those in leadership positions in schools, would provide insight to better support all individuals who contribute to the public learning space.

Future studies could also inquire into the perspectives of people who make up the socioemotional supports students receive, such as parents and school psychologists, or anyone who has been through the public school system, to evaluate perspectives on the lack of explicit instruction regarding internal dialogue. In addition, a similar study to the one conducted in this thesis might explore the inner mental experiences of middle school students, given their more consistent exposure to social emotional learning initiatives and learning interventions such as Mindset instruction. Other research endeavors might explore the consequences of a lack of metacognitive strategies in students attending college, inquiring into whether or not a deficit of psycho-linguistic tools correlates to academic underperformance in higher education.

**Conclusion.** The research outlined in this study demonstrates the interrelationship between traditional behavioral psychology, educational theory and student metacognition. This thesis has explained how theoretical concepts translate into curricula implementation, focusing on promising instructional ideas found to be successful in helping students improve their resilience, motivation and academic performance. Findings from student data of over 1000 responses illustrated student awareness of their internal dialogue and subjective beliefs, and also that all students, irrespective of their level of self-confidence, navigate negative internal dialogue. Students had a desire to change these negative, often disruptive beliefs but had no explicit strategies for doing so, and therefore, currently lack the capacity for new action. These negative internal states are connected to academic underperformance and, while interventions exist to mitigate system-wide trends in learning deficits and students' negative beliefs, these attempts are ineffective at causing lasting, systemwide change as they ignore the root cause--the absence of metacognitive agency in America's student population.

This thesis also recognizes the fact that historical trends in socio economic extremes continue to mirror performance gaps in public education (Hanushek, E. A., Peterson, P. E., Talpey, L. M., & Woessmann, L. 2019). While interventions do suggest that academic resilience and student motivation can be improved through self-examination and metacognition of overarching beliefs and behavior, public education has no structure for arming students with strategies for learning how to achieve mastery of internal psychological conditions. These various approaches are well intentioned but fail to address the nuances and volatility of human perspective, or help students examine the qualitative connotation of various expressions of their own internal dialogue, or teach how to transform damaging ideas affecting self-image, culture and community. The contribution of students in this thesis showed the uniformity of self-directed negativity and self-

doubt among students and that these students desire, but do not know how to change these disruptive internal patterns. These disempowering psychological contexts in students is linked to trends in student dropout rates, failing grades, and probable social trajectories, however the means through which these students have adapted these negative frames of self-understanding is unacknowledged by public education at large. Indeed, most students carry patterns of internal dialogue expressive of the “work or fail” learning philosophy of American Individualism shared with the growth mindset (i.e., If you simply try hard, you’ll have it all.) For many at risk students, living in impoverished communities, panacea theories like growth mindset are fairytale approaches to academic change that fly in-the face of their lived experiences: households of hardworking parents, communities of incarceration and violence, memories of missed opportunities, and psychosis’ of internalized oppression synonymous with socio-economic inequity (Goodman, R. D., & West-Olatunji, C. A. 2010). And yet in this study, surprisingly, all students, not just those from disadvantaged communities, faced internal negativity. Given the reality these students face, the psychological implications where education is concerned is an issue of social justice. When any student believes that he or she is pre-destined to fail, this is an education issue. When any student believes that he or she will not be supported by teachers, school districts and leaders, and those in positions of power, this is an education issue. As the internal maps human beings have are directly connected to immediate behavioral responses, it follows then that for students, especially those from disadvantaged populations, the absence of direct instruction for how to manage the nuances of their psychological experiences is not only counterproductive to academic change, but socially irresponsible. Given that public education as a civic institution is charged with the cultivation of the human intellect, it’s democratic duty should be to assure educational equity. Yet the fact that socioeconomic trends have been linked to academic shortcomings for over the last

half century, and that the connection between mental health and successful performance is common knowledge, the lack of guidance for teaching students self-empowerment strategies and metacognitive agency makes compulsory education, not only accountable for achievement deficits, but complicit in contributing to the very learning problems it often proposes to solve (Hanushek, E. A., Peterson, P. E., Talpey, L. M., & Woessmann, L. 2019).

The findings of this study suggest that students would be best served if, across their years of learning, they were taught how to address and change, not just identify, negative beliefs about themselves. The only way to understand and address these subjective constructs of identity in education is by taking student perspective seriously, using their realities as the basis for learning systems that acknowledge self-awareness as the building block of all educational breakthroughs. This also necessitates that both educational policies and classroom teachers recognize student self-awareness and psychological empowerment as the prerequisite of learning success. If all students were consistently taught *how* to strategically approach their unique beliefs about themselves, to critically examine and actively change disempowering internal dialogue and emotions, trends in academic underperformance might be radically altered. This thesis asserts that any discussion in educational reform must place students' unique psychological wellbeing at the forefront of educational policy and practice, with the goal of teaching metacognitive agency.

To forward this objective, this thesis proposes the creation and implementation of empowered learning systems at all levels of public education –explicit instruction of techniques and practical strategies for achieving metacognitive agency. These metacognitive skills and curricula could provide all students with the internal conditions for more consistent academic resilience, heighten student achievement across subjects, and more directly address the achievement gap in public education.

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**Appendix A: IRB approval letter.**



November 29, 2018

Craig Laupheimer  
50 Acacia Avenue  
San Rafael, CA 94901

Dear Craig,

On behalf of the Dominican University of California Institutional Review Board for the Protection of Human Participants, I am pleased to inform you that your proposal entitled *Empowering Learning Systems in Student Success* (IRBPHP application #10730) has been approved.

In your final report or paper please indicate that your project was approved by the IRBPHP and indicate the identification number.

I wish you well in your very interesting research effort.

Sincerely,



Randall Hall, PhD  
Chair, IRBPHP

**Institutional Review Board for the Protection of Human Participants**  
Office of Academic Affairs | 50 Acacia Avenue, San Rafael, California 94901-2298 | [www.dominican.edu](http://www.dominican.edu)

**Appendix B: Google Survey Questions**

1. Can you describe one pattern of thinking that you have about your academic capabilities? How does this pattern of thinking make you feel?
2. Describe one way in which your thoughts influence your academic success.
3. What do you usually tell yourself when you get a bad grade? Can you think of something else you might tell yourself if you get a bad grade?
4. How have your positive or negative experiences in an academic setting influenced your learning experience and academic achievement?
5. How would you describe your level of confidence in your ability to succeed and excel in your classes? Do you think your level of confidence in your school abilities has been increased through your school experiences or decreased by your experiences in school? Provide one example of how school has impacted your level of confidence.
6. What beliefs about yourself would you like to change?
7. Have you learned strategies for dealing with frustrations in school or life experiences? If so, what are they?
8. What specific beliefs do you feel help you succeed in school?
9. What support systems and tools do you feel that schools need to emphasize and provide to help students believe in themselves?
10. When you are feeling negative emotions in school, what do you do to feel better about yourself and keep going

**Appendix C: Senior Focus Group # 1 Questions**

Looking back on your High School experience and earlier...

1. What would you tell a younger student to help them succeed in the face of academic challenges?
2. What five words would you use to describe yourself as a student?
3. What five words would you like to represent you moving forward in your life as a learner?
4. How have social/family relationships influenced your success in high school?
5. How have social/family relationships influenced your beliefs about yourself?
6. How have your beliefs about yourself influenced your success in high school?
7. If there was one thing you would like to believe about yourself as a learner what would that be?
8. How has your school provided strategies and supports for understanding your beliefs about yourself as a learner?
9. What supports do you wish you had to better understand how to face and overcome challenges during high school?
10. If a general education course was offered specifically to teach you about understanding your beliefs as a learner and how to act powerfully in life, would you take the course? Why? What skills should be offered in such a course?

**Appendix D: Senior Focus Group #2 Questions**

1. Please describe one pattern of thinking that you have about your academic capabilities? How does this pattern of thinking make you feel? Describe one way in which your thoughts influence your academic success.
2. What does self-knowledge and/or internal dialogue mean to you? Is it important in school? If so how does it relate to success in school and why is it important?
3. What specific beliefs do you feel help you succeed in school? Describe one way in which your thoughts influence your academic success.
4. Throughout school, what have you told yourself when you received a bad grade? How have your beliefs about success or failure changed throughout high school?
5. How have your positive or negative experiences in an academic setting influenced your learning experience and academic achievement throughout high school?
6. How would you describe your level of confidence in your ability to succeed as you move forward beyond high school? Do you think your level of confidence in your school abilities has been increased through your school experiences or decreased by your experiences in school? Provide one example of how school has impacted your level of confidence.
7. What beliefs about yourself would you like to change as you think about success after high school?
8. Looking back on your academic experience as a high school senior, have you learned strategies in school for dealing with frustrations in academics or life experiences? If so, what are they?
9. What support systems and tools do you feel schools need to emphasize and provide to help students believe in themselves?
10. When thinking about helping students feel powerful in life and school, what should schools be doing to support students face and overcome academic challenges?