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Restoring Self-Efficacy in Learning: A Critical Examination of the Modern Test-Centric Educational Environment and its Impact on the Psychology of Underachieving Students

Scott Liacouras
sl797558@wcupa.edu

Restoring Self-Efficacy in Learning: A Critical Examination of the Modern Test-Centric

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Scott Liacouras

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Thesis Advisor: Dr. Dana Morrison Ph.D.

Dedication

The project is dedicated to my past students who have taught me so many lessons about what it means to be a quality educator. It is also dedicated to my present and future students in the hope that the concern and intervention that I have studied and subsequently created will have a positive influence on their motivations and capabilities to become lifelong learners.

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To my father, thank for instilling value for education and constant afternoons and evenings pushing me to study, not only for tests, but more importantly for a depth of understanding. Thank you for teaching me how to be resourceful and seek out sources of information and challenges that will allow me to be a lifelong learner.

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Abstract

Throughout education in the U.S., students are many lessons. Most are designed to help them succeed on a slate of standardized tests that are claimed to measure and predict their ability and future success in the global market. This narrow view of the role of education in society creates an environment passing on many other messages to students. These messages, the hidden curriculum, has a significant impact on students' beliefs in their ability to participate and thrive in learning, and so often it goes overlooked. This thesis will attempt to examine the effect of the hidden curriculum on one core aspect of psychology that is essential to engagement and motivation: self-efficacy. It will also propose a program to encourage teachers to recognize the hidden curriculum that is unintentionally taught to their students and brainstorm modes of reengaging those students who have been negatively impacted by that curriculum.

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Chapter One: Introduction

An important notion to consider when examining any work completed by a person is the power of narrative learning, that is, understanding the motivations and the life history that has guided someone toward a particular research topic. According to Schutz (as cited by Dahl, 2015), our own worlds and our own lives deliver the most meaning to us. Although we have the potential to learn about various topics originally conceived by others, it is our own life choices that can most enlighten our actions moving forward. I feel that most articles that I have examined through my research fail to connect to the personal story of the author. While I understand that many times the goal of the article is to fill in gaps in the literature, understanding the general background and story behind research provides insight into motivation, a truly great force in attaining knowledge. Connecting with someone else's motivations can create a deeper connection with the findings because readers have better access to the lens of the author. This opening chapter will present a brief story of me and how I have come to care about self-efficacy in education.

My Life in Education Part 1: How My Life as a Student Influenced My Teaching

I am a child of the No Child Left Behind (NCLB) era. This piece of legislation is often connected with a dramatic increase in the standardization of curricula and testing. At the time No Child Left Behind was enacted, I was 11 years old. I did not have any active political affiliation or agenda, yet I now realize that the NCLB political ideology shaped my school experience in profound ways. My schooling consisted of a very rigid structure where teachers would present lessons (often in PowerPoint and lecture format), and then have follow up questions to check for "comprehension." At the end of each unit, we would be given a test, almost always limited to multiple choice and a few essay questions. The rationale of my teachers was that this format

would prepare me for standardized tests and get me ready for the SAT and college. So, I worked hard, and I earned very high grades and I embraced this style of school because I "succeeded." It made me feel intelligent to get high scores on tests. My success in this format of education encouraged me to identify with the values that were associated with it. I felt accomplished in school, and therefore felt that the schooling that I was receiving was appropriate and effective. I took pride in being ranked high in my class, and I worked hard to achieve that position, so I felt that I had earned it and that was all that mattered.

However, about twice a year, teachers would branch out from this format and assign a group project or encourage us to research something related to the topic we were discussing in class. These projects were usually extremely open-ended, encouraging the students to take the topic in any direction that we wanted. Looking back, I remember that these assignments were met with feelings of anxiety by my classmates and myself. This was novel to us and many of us did not know where to begin. We lacked the confidence and independence to take off on our own, and often times, we claimed that the teacher just wanted to be lazy and have us do his job for him. I realize now that this is not the case. The teacher was giving us the chance to make the learning and topic our own and to be creative with the material: something that I now realize is extremely valuable.

My Life in Education Part II – What I Have Noticed Since Beginning My Teaching Career

As a sixth-year teacher, I still have limited experience compared to many in the field. That said, there has been one assumption with regards to teaching that has consistently concerned me since my entrance into the profession: "It is all on the teacher." This is the way that I have felt from the beginning. I feel that I have been solely responsible for how much my students grow while they are in my class. This has also been the mindset of the students and their

parents as well. I believe that this is another unintended consequence of a test centric environment. Many times, I have heard students bad-mouthing their teachers if they are not walked, step by step, through every inch of information that will be on the next test. If I try to intentionally create space for freedom of thought in class, it is often met with resistance and a sense that I am trying to be lazy as a teacher. What's worse, parents often reinforce this notion. It seems that people believe that learning today is sitting and listening, and that thinking and discovering for themselves is above and beyond. Thinking deeply about and discovering the material should be the baseline! At minimum students should be expected and encouraged by their teachers and parents to engage with, read about, discuss, and apply the topics that they learn about. Sadly, this actively engaged approach is not embraced by the students or their parents because they have been a part of test-based school system for their whole lives, and therefore is very difficult to utilize in the classroom.

Another issue is that testing dramatically narrows what can be taught. If rewards or punishments in the form of funding, college admission etc. are based around a set curriculum of standards, then the only things that can be taught are said standards. As Theoni Smyth (2008) reflected, "because teachers' jobs are at stake, student promotion is in jeopardy, and graduation opportunity is riding on the scores of these tests, it is no wonder that teachers think they are doing their students and themselves a favor by teaching to the test" (Smyth, 2008, p. 134). Not teaching to the standards runs the risk of low test scores, which could hinder students from reaching college, cause teachers to develop bad reputations, and reduce funding received for school districts (Sheldon & Biddle, 1998). Countless colleagues have expressed this exact concern in conversations, and I have felt this pressure myself. Standards completely dictate what is taught and strip diversity of thought from education. All teachers must teach the same thing

and all students must learn the same thing. This is antithetical to the truths about people. We are all unique and education should be cognizant of that. "Teachers must cope with a role that is demanding, complex, and moral, and students must be considered as works-in-progress, with multiple interests, and unique goals and perspectives" (Sheldon & Biddle, 1998, p. 165).

I now have to admit that I have become part of the problem. Because this method of schooling was used throughout most of my life, it has spilled over and influenced the way that I have taught since beginning my career. I have emphasized correct responses over thought process. I have used mainly multiple choice and essay questions tests as the form of assessment. This approach, after years of influence, has become the "correct" way to teach in my eyes. Over the past six years, I have presented the information that I have been assigned to teach in the most clear and straightforward manner, in order for the most students to "gain access" to it, and I have raised standardized test scores for my students each of the last three years and I have been patted on the back for it.

However, this is not why I got into education. I want to truly impact lives, whether that is through educating science or educating in a manner that transforms a student into someone more capable of acting in the world themselves. I feel like I have made a difference for some, but not nearly as many as I should have, and I believe it is because I have been educating in a way where I assume the responsibility of learning for my students. I have been educating in a similar manner to the way that I was educated: using lecture, labs, and short-term assignments to present the information. After several of these lessons, I would give a quiz, just like I was given in school. Furthermore, I have noticed myself describing the same rationale to my students that my teachers gave me: "This format will best prepare you for the standardized tests that await." I am aware of the issues with that a test focused learning environment creates, and it is still difficult

for me to break from it because of the pressure and weight that they carry in the educational system.

The fact that I am teaching in such a way that I philosophically disagree with is both difficult and disturbing to me. However, it is not surprising. The negatives of a standardized testing based educational system have been known since before NCLB was enacted. The standardized testing paradigm of education was supported in the early 1900's by manufacturing leaders like Henry Ford for a time when the primary economic revenue stream of the country came from assembly line manufacturing (Au, 2011). Because a vast majority of jobs were involved in performing manufacturing tasks, production leaders, like Ford, believed that establishing standards for what people should know in order to fill these roles was the most beneficial way to educate. Friere (2000) contends that standardization, or "the banking model of education" (p. 47), leads to oppression and control, and creates a relationship of prescription. In Freire's (2000) words:

> One of the basic elements of the relationship between oppressor and oppressed is prescription. Every prescription represents the imposition of one individual's choice upon another, transforming the consciousness of the person prescribed to into one that conforms with the prescriber's consciousness. (p. 46)

This quote illustrates my concern perfectly. Our educational system is designed for outside "power players" to "prescribe" the content that will be taught to students. After this happens for so long, students simply succumb to these methods and eventually even believe that this is the way that it should be. Standardization crushes motivation, which ironically, was one of the key reasons why politicians argued for standardized tests in the first place. According to Ramirez (1999), the key assumptions by policy makers in increasing testing were "that students are

unmotivated and need more immediate consequences tied to their learning" and "that teachers are either inadequately skilled or lack the motivation to inspire students to higher levels of learning" (p. 205).

Here is what standardized testing has actually done. According to Amrein and Berliner (2003):

> Researchers have found that when rewards and sanctions are attached to performance on tests, students become less intrinsically motivated to team and less likely to engage in critical thinking. In addition, they have found that high-stakes tests cause teachers to cake greater control of the learning experiences of their students, denying their students opportunities to direct their own learning. When the stakes get high, teachers no longer encourage students to explore the concepts and subjects that interest them. (pp. 32-33)

Sheldon and Biddle (1998) further argue that testing has the exact opposite effect of what policy makers intended:

> States of intrinsic motivation are fragile; they are easily undermined by factors such as concrete rewards, surveillance, contingent praise, and punitive sanctions. The common denominator connecting such factors is that they tend to move the "perceived locus of causality" for the activity outside the person's phenomenal self and into the external environment. When this happens, the person feels like a "pawn," rather than an "origin." And once a person begins to feel like a pawn, it is difficult for him or her to reclaim the self-directed initiative and sense of involvement that promote maximal learning, creativity, and performance. (p. 167)

My Life in Education Part III – What I Hope to Change

Moving towards the concern that will be the main focus of this thesis, another unintended flaw is that a test-based environment diminishes motivation. In my opinion this is a very intuitive relationship. By rigidly dictating what is taught, both teachers and students lose motivation to be creative. Learning becomes a forced routine. It is unreasonable for us to expect students to be interested, when they feel like they have no control over what they learn. If we fan the flames of students' natural interests, we can increase students' intrinsic motivation and achieve gains in education. However, because so many students have experienced this manner of schooling for so long, attempting to break this mold and reopen educational diversity to them is incredibly challenging.

By the time students have reached my high school classroom, they are incredibly reliant on me. I truly want to help my students. However, I imagined that the type of help that I would be giving would be to hone students' critical thinking skills and help them expand upon their means of expression. I imagined that students would want to express their independence by the time they reached high school and be willing to engage in discussion, but this is not what I have seen. What I witness, especially in my lower-level classes, is a group of people who want the minimum amount of information to get them through the school year. These students are completely devoid of the thirst to learn. One of the most common questions that I am asked is, "Will this be on the test?" Students want me to feed them answers and tell them what they need to know. What is worse, is that in the moments where their curiosity is piqued, they do not believe that they can understand something unless I am there to deposit that information for them.

When I have tried to branch out from this top-down brand of education and get the students working from the ground up, I am met with the same sentiment from my students that

my classmates and I shared years ago. They resist diving into the material, and they ask me to revert back to the lecture format. This style of education not only causes students to become more passive, but it causes them to believe that a passive role is in their best interest. They claim that they just want to know what they "need to know," and I cannot blame them for feeling that way, because I remember thinking the exact same thing when I was in their position. This is truly concerning. The issue with this trend is that students grow up feeling that they always need guidance to reach the correct answer. Because of this, they lose their voice, and become less involved in the creation of the policies that impact their lives. If these examples are commonplace in classrooms nationwide, then our younger generations are becoming more and more open to submission and allowing hidden figures in power control their lives. This is the larger societal problem that I think education is creating, and the one that I wish to address: that the standardized and testing focused environment of school strips students' self-efficacy in their learning ability.

Why self-efficacy?

Self-efficacy is a psychological concept developed by Albert Bandura in the late 1970's that he believed influenced an individual's behaviors and the degree to which they engage with various activities. Part of the reason why I am choosing a psychological topic as the central issue in education is due to my background. My undergraduate degree is in psychology. Therefore, when I think about many different situations, the first things that pop into my mind relate to ideas like motivation or how someone will feel in that moment. It has become my default lens for viewing different institutions and specific situations. A deep dive into self-efficacy and its importance in learning will come in chapter three, but stated simply, self-efficacy is a person's belief in their ability to succeed within a given scenario. It is not a general belief, like self-esteem

or self-worth; it is very specific, like do you believe you can learn math, or do you think you could knit a scarf? Just because someone has low self-efficacy does not mean they have low overall belief in themselves (Bandura, 1977).

To see the importance of self-efficacy, think about some different activities where you would have very high self-efficacy ratings, where you really believe you will be successful. You likely find yourself engaging in those activities somewhat regularly, or maybe you did at one point in your life. Now, think about various activities where you would have low self-efficacy ratings, where you can be relatively certain that you will struggle. You are probably not participating in those activities on a daily basis. There is a relationship between self-efficacy and engagement. Perhaps you were never exposed to certain activities and therefore it is completely intuitive as to why you do not participate in or have high self-efficacy in those activities. Think about one more scenario. Think about something you were exposed to at a young age: something that your parents or other family members introduced you to and something in which they truly desired success for you, but no matter what, success never came. You tried to succeed. You pushed yourself and had support from others, but still did not achieve. Given a truly honest rating of self-efficacy, it is this activity in which you would likely have your lowest self-efficacy scores, and it is likely that participation in this activity is either nonexistent or compulsory.

My concern is that in the way public schooling is organized and delivered, it is becoming the final scenario that I presented in the previous paragraph: a situation in which students put forth effort, but are repeatedly told that they are not successful, and so they naturally develop a belief that this activity is "not for them" – that they will not achieve. This is truly damaging and antithetical to education. Education is the core institution in our society that can create opportunity for its citizens. Because of this, it can either be the gateway to a successful and

fulfilling life or the barrier to it. I believe, based on my experiences first as a student and now as a teacher in a test-centric educational environment, that education is functioning more as a barrier to opportunity in many ways instead of a gateway. Therefore, we have to try to reframe the educational environment from one that primarily acknowledges correct responses into one that acknowledges student mindset, stress levels, and self-efficacy.

Chapter Two: Theoretical Frameworks

Critical Lexicon

The following terms are essential to understanding core ideas of this thesis, and the definitions that fit closely with the context in which the terms are being used. In other words, these definitions will be based on how these terms operate within this thesis and may not perfectly match your previous understanding or the widely accepted definition.

Authoritarianism: A relationship structure where one member of the relationship (can be a single person or an institution) forces their decision(s) onto the other member(s) of the relationship.

Banking Model: A term coined by educator and philosopher Paulo Friere (2000) that describes a very passive learning experience for students. In this model, Friere describes students minds as bank accounts in which educators deposit knowledge.

Capitalism: A market based economic and political system where private (meaning non-governmental) entities create the agenda of production, a by-product of which is that money and production become the central focus of that society, even beyond well-being and equity.

Collective Consciousness: The mindset of a group of people as a whole. This can be interpreted through the values that the group hold dear and the actions or taken by that group.

Critical thinking: The ability to think in depth about problems from multiple angles. To critique and to question when thinking.

Extrinsic Motivation: Motivations to engage in an activity due to external rewards like money or grades. The actual activity provides little satisfaction, but the reward or compensation makes the activity worthwhile.

Globalization: The changes that result from worldwide communication on a particular topic. Through easier access to communication and travel, information, techniques, beliefs, etc. can be shared quickly and effectively. This information share allows for easier learning of alternative views, but also can be used to further spread ideology around the globe. Educational examples could international standardized tests and evaluations, such as the PISA exam. More on this in chapter 3.

Hidden Curriculum: An idea explored by many educational philosophers from Dewey to Friere to Giroux that describes what students learn from participating in a system with a specific organization and structure. It is taught by the school itself, not by teachers. It is more about learning how to operate within that structure and developing an attitude toward learning (Meighan & Harber, 2007).

Historically Underperforming Student: A student that is below state defined proficiency levels, according to standardized test results. Often these are low socioeconomic status and racially marginalized students. Although I hope that my intervention discussed in chapter 4 will be able to create a better educational experience for all students, it is this group in particular that I am looking to serve with this intervention.

Interpellation: A particular event that acts a focal point for an historical examination. Allows for the analysis of a historical time period with a specific context. Historical analysis can be achieved through multiple means. Commonly, very large events are

examined and are chosen by expert historians as influential. Interpellations are often

much smaller, overlooked moments that can help clarify societal ideologies. When

examining one moment, you can branch out and question why the moment happened.

What societal norms influenced the event? What ideologies were forced upon the

individuals and subsequently internalized by the individual? Etc. (Backer, 2019).

Intrinsic Motivation: Motivations to engage in an activity due to the satisfaction of the

activity itself.

Pedagogy: The practice of teaching. This encompasses the decisions a teacher makes

regarding the material that will be taught and the manner in which it is taught.

Prescription: When decisions are made by an authoritative person or organization that is

not directly impacted by the results of that decision. In education, this is seen through

school district curriculum being designed by the school board or state standards. The

curriculum is "prescribed" for the teachers and students, who are the people actually

being impacted by these decisions.

Resilience: The ability of a substance to absorb pressure and retain its shape, or spring

back. This thesis will be using this term primarily with respect to psychology, or the

ability of someone to withstand adversity, stress or other psychological pressures without

losing sense of self, identity, or motivation.

Self-efficacy: A psychological construct, developed by Albert Bandura (1977), that

describes someone's confidence in their ability to succeed at specific tasks. There can be

general self-efficacy ratings, but it can also be very specific. For example, there can be

general academic self-efficacy ratings, in which someone will rate their ability to succeed

in an academic learning environment in general. There can also be more specific ratings, where someone can rate their ability to complete a specific type of math problem.

Self-Regulation (AKA self-reg): A psychological process of recognizing and managing stressors in a manner that leads to growth and engagement rather than regression and avoidance (Shanker, 2020).

My Philosophy of Education

Education, to me, is the means through which citizens discover their place within the society in which they live. This can be a very difficult task, as societies are extremely complex constructs, and being able to participate in society requires knowledge about that society from a wealth of various experiences. These experiences provide information about social institutions, or the "patterns of behaviors and beliefs that satisfy societal needs," as defined by *Introduction to Sociology,* an OpenStax textbook. Institutions may be political, economic, social, or cultural. As a student proceeds through their education, they should develop understandings of these social institutions and how one institution impacts the others. Furthermore, students should develop confidence that they can succeed and participate within all of these institutions and be able to recognize when these institutions are being perverted for the sake of oppression and control.

By exploring the various impacts that many different institutions have on society, a person naturally becomes a critical thinker because they approach problems facing society from more than one lens. If, for example, racism is a societal issue that is rooted in every social institution, one can clearly make arguments about how racism has developed through political law, through economic advantages created for one race over another, through cultural divides, and through social stigmas. Consequently, in order to try and improve this societal issue, we need to approach it from all of these viewpoints. I believe that education should be the

instrument that provides people with the tools to critically examine, from multiple perspectives, their society and improve it for themselves and future generations.

After observing and participating in the educational system as a student and as a teacher, it has become clear that the U.S. education system is focused on the economic institution of capitalism more than other institutions. What I mean by this is not that education only teaches about economics (I knew very little about economics when I graduated from high school), but rather education creates a mindset that money is the reason why someone should learn. A great example of this is that now when asked, "What is the role of education for you?" a vast majority of students' answers are "to help me get a job." In people's minds, school has diminished in its role from preparing students for society to solely preparing students for the workforce, an incredibly narrow view.

Capitalism and Education

Capitalism defines success through profits. Are you generating more money than you are investing? It forces individuals or corporations to compete for a place in the market to survive. This fundamental principle can be approached in two different ways. One way is through financial manipulations like, "the monopolistic power to raise market prices, or the monopolistic power to lower contracted costs (which in the crucial special case of the labor market, entails a redistribution of income from wages to profits)" (Cantwell & Santangelo, 2000, p. 132). Taking money away from workers and hiking prices allows a company tremendous profit, but it is also directly at odds with democratic ideals.

On the other hand, there can be a positive approach to achieving success in a competitive market: innovation. As explained by Cantwell and Santagelo (2000):

Innovative profits, which add new value to the circular chain through endogenous change (rather than exogenous disturbances), involve principally the development of new technologies of production, defined in the broad sense of new products and processes, and reliant upon the adaptation of social organization. (p. 132)

Capitalism can drive innovation. Due to market competition, individuals, small companies, or massive corporations are pressured into creating useful products or services for the population. If they do not create something that is valued, then they lose their place in the market. This approach encourages corporations to think about benefitting all people, including stockholders, rather than benefitting only stockholders. If companies design products or services that are needed, then everyone wins.

However, in my view, the government has not reigned in the ability of companies to simply manipulate pricing in order to achieve capital success. If capitalism continues to build unregulated power, then this potentially positive economic system could reduce democracy. My concern is that capitalism is becoming too big because policy makers (and therefore the educational system) seem to favor the economic institution more than democracy. What is more tragic is that the education system seems to be favoring the creation of consumers and laborers, not true producers and innovators. In other words, the education system creates a vast majority of citizens that will purchase the products or assemble the products, but not own the idea of the products. Take a quote from the Lowell Mill Girls in the 1840's "When you sell your product, you retain your person. But when you sell your labor, you sell yourself, losing the rights of free men…" (as cited by Chomsky, 2002, p. 29). To favor the development of this type of individual means you favor the development of someone reliant on other's "professional" opinion or ownership on what to do, instead of an individual who wants the freedom and independence of

deciding for themselves. This has occurred by turning students into passive consumers of knowledge, rather than creators of knowledge. As I will describe below, the primary classroom construct is one where the teacher hands out an activity telling the students what they should know and how they should work, and the students sit and listen to their teachers and complete the assignments.

Another side effect of this form of education is that students are taught to look to external "goods" as a sign of their value. The grade at the end of a unit is the metric of value, not how hard they worked, or how they have grown. Therefore, all that students want to know is what will be on the test, so they can achieve that status symbol of a high grade. This external value system causes people to become vain and seek material goods (which benefits big business) and subconsciously causes them to associate most with the economic institution.

The Authoritarian Personality

The subtle shift toward favoring capitalistic control happens through a variety of means, as I have hinted at above, one of which is the creation of the submissive authoritarian personality. This may seem like an oxymoron, as the common view of authoritarianism examines the leaders who have stopped at nothing to take over and force certain beliefs and policies onto their people. However, the collective attitude of a society is partially responsible for allowing such leaders to take over. Eric Fromm (1957) defines this as the submissive authoritarian personality. This personality type desires an authority figure to dictate to them what they should do. This type of person wants someone to tell them what they should know and how they should act.

Thinking about my own life, I can admit that I developed this personality type without realizing it. I learned growing up that there is a correct answer and an incorrect answer, a right

way to do things and a wrong way. This may not be alarming, as everyone develops their own approach to the world based on their experiences, but this absolutism was not my own approach; it was implanted in me through my education. School taught me that the value of correct answers is the only thing that mattered because that's where grades and evaluations were based. Nearly all of my classes were centered around scores on quizzes or tests. Class work was given minimal points because classwork was only seen as a steppingstone to performing well on the test. Additionally, school showed me that there are certain ways that you must behave, as you get punished if you behave differently. Most of my assignments were to be done alone with my textbook as my only resource.

Reflecting on these experiences, it is not surprising that I accepted this style of education because, for me, life was easy to fit into and understand due to clearly defined expectations. On top of that, I excelled in this style of education. I earned high grades and placed tremendous value in the status that those grades gave me, causing me to ignore the pitfalls of this mode of learning. For a long time, I failed to think about gray areas: the underlying, difficult to see forces that shape the way education works, and sadly, I did not realize that I was simply learning what was given to me to learn and I was becoming reliant on other people to inform me what I should and should not think about.

This realization has caused me to reflect on why I wanted to become an educator in the first place. Simply, I want to change people's lives by restoring the belief that they can be the expert of their world. Each person should have the confidence to speak about their own thoughts on a subject. People should not rely solely on the expertise of another. They should seek out expert advice, and then determine for themselves if it is worth using. I appreciate that this is not an easy task, as I still battle with the ability to let go of my fear of being an independent thinker,

but I truly believe that if we have more people getting involved in the conversations about the major issues of our time, rather than sitting back and listening, then the world will become a more equitable and balanced place.

The Banking Model

One theorist, Paulo Friere, expresses many sentiments about education that are similar to my own. In *Pedagogy of the Oppressed*, Friere lays out a dialectical relationship between education for control of the population and education for freedom of the population. Friere calls education for control the banking model and describes that this is what many would recognize as the modern public education format. The curriculum is decided by a common core standards committee, or by a state education committee. Then, the content of the curriculum is deposited from the head of the teacher into the heads of the students, similar to the way money is deposited into a bank. This layout creates a massive divide between the educational decision makers and the classroom. Neither students nor teachers have a significant impact in deciding the content that is taught. Then, the teachers decide how the information is taught, making the students the most passive members of the educational process.

Friere (2000) believes that the banking model leads to oppression and control, and describes this relationship as follows:

> One of the basic elements of the relationship between oppressor and oppressed is prescription. Every prescription represents the imposition of one individual's choice upon another, transforming the consciousness of the person prescribed to into one that conforms with the prescriber's consciousness. (p. 47)

Look at public schools today. Values to be taught are prescribed for the teachers by the state committees, making the teachers oppressed. Not only are the teachers oppressed because they do

not get to participate in the development of curricula, but this model of education hamstrings how teachers can teach their students. Often, the content that must be covered for standardized tests created by the state contains more material than can be taught realistically. Teachers must use teacher centered techniques, like lecture, to ensure that all of the material is, at minimum, brushed over. "The teacher talks about reality as if it were motionless, static, compartmentalized, and predictable. Or else he expounds on a topic completely alien to the existential experience of the students" (Freire, 2000, p. 71).

It is even worse for students. Values to be learned are prescribed by state committees, and teachers prescribe the method in which those values will be learned. This structure ensures that the primary beneficiaries are those in power. Friere (2000) believes that the banking model paints students "as objects, as 'things,'" who "have no purposes except those their oppressors prescribe for them" (p. 60). Students are reduced to becoming tools: things to be used and manipulated by those in power. Further, because teachers often verbalize a static reality, students are stuck believing that their only option is to sit and try to listen and absorb the information being presented to them.

The banking model is one of narrow perspective. The teacher must pass on information and the student must take in that information. Learning in this fashion does little more than to "adapt" people into the current society. People learn to understand their place in society and accept that place when they have been passive participants in their learning from the beginning of education. Again, the people who reap the benefits are those in power. "The more completely the majority adapt to the purposes which the dominant minority prescribe for them (thereby depriving them of the right to their own purposes), the more easily the minority can continue to prescribe" (Freire, 2000, p.76).

The powerful minority can so fully hide their intent to oppress, that the oppressed majority can be truly unaware of their "less than fully human" state. One of the more apparent trends in society today, is that people are developing the submissive authoritarian personality. People now are hoping for a strong leader that will make decisions for them. Further, people believe that by rooting for a leader like this means that they have actually become engaged in changing their world when all they have done is given away their voice to someone else. Freire (2000) summarizes this notion extremely well, "… the oppressed, who, by identifying with charismatic leaders, come to feel that they themselves are active and effective" (p. 78). The most frightening thing is that this is incredibly common today. A majority of American citizens want someone else to solve their problems for them.

This should not be a surprise after examining the hierarchical structure of American Public Education. The U.S. model of education, while making many claims of wanting to build a critically conscious citizenry, has more parallels to the authoritarian minded banking model than not. From day one of their educational lives, people are trained that they should not try to recreate or transform their world by choosing what they learn. Students can add their own creativity as long as they are working on the assignment that was prescribed by the teacher. Make sure you accomplish the goals that the teacher wants you to accomplish but accomplish those goals in any manner that you want. This illusion of freedom and interaction with the material causes people to accept their position as a passive recipient of knowledge, rather than a creator of knowledge.

Additionally, the grading system employed in schools shifts the value of learning to externally and objectively assigned scores. Due to this value system, students are subconsciously taught to seek values from other people or society in general, instead of creating value for

themselves. At the same time, they are told that they simply did not work hard enough if they did not earn a high grade. As a result, students have no urge to think critically about the world on a wide scale. Their natural curiosity is stripped from them and their primary concern becomes, "how can I do better on quizzes and tests, and therefore earn higher grades." Extend this self-centered consciousness to life outside of school, and it is evident that people's primary concern is earning more for themselves, instead of fully connecting and participating in the world around them.

The Hidden Curriculum

As defined earlier, the hidden curriculum encompasses all that students will learn from simply attending school. What hierarchies exist? Am I encouraged to speak up or should I just stay quiet and listen? Do the teachers care about me or just my grade? These are all examples of what students will naturally figure out because of the environment of their school and their classes. These implicit lessons have a profound effect on a student's attitude and their self-efficacy (Meighan & Harber, 2007).

The modern style of education that I have described in this chapter so far is one that reflects the competitive spirit of capitalism, incorporates an authoritarian personality, and reduces students' minds to passive bank vaults where information is deposited. Let's think about what these hidden values would do to a student where learning is not as easy, or for a student who does not have a strong support structure at home.

Imagine you are a student with a reading or language disability and you are placed in an educational structure where you are being tested for your reading ability half a dozen times before graduation. Your results on these reading exams often influence the track of classes that you will take throughout your schooling life, so your struggles on these exams place you in a

lower track. This lower track often has lower expectation of your abilities and the presence of these classes on your transcript will often reduce your candidacy for acceptance into colleges. It is impossible not to learn that the educational system is not looking out for your best interest in this scenario. It is very likely that you will lose your self-efficacy and become disengaged a because you recognize your struggles and how those struggles will impact your life. If teachers are not explicitly attempting to maintain your self-efficacy, then the system will naturally erode it. Therefore, teachers need to not only think about the hidden curriculum that is forced upon students, but directly and explicitly discuss it with their students. Teachers need to evaluate their students feeling through discussions to make sure that their students still believe that they can learn.

Democratic Education - A More Holistic Approach

A democratic educational system should be built on a cooperative consciousness, a mindset centered on interaction. It should be focused on understanding others, not just focused on the self. Students must feel that they are a part of the process for this to happen. Education cannot be one sided. Students must be exposed to a dialogue. Dialogue is not about power; it is about sharing. In a true dialogue, teachers should be forcing their opinions onto their students. Freire (2000) clarifies the antithesis between dialogue and power by posing the following questions, "How can I dialogue if I am closed to – and even offended by – the contribution of others? How can I dialogue if I am afraid of being displaced?" (p. 90). Education, from the beginning, should teach students to be comfortable with dialogue, and therefore, be comfortable with sharing their ideas.

Unfortunately, this is not what I observe in my classes. Today, many students are uncomfortable sharing their thoughts with a group. I have asked some students why they do not

like to participate in group discussions very often, and they respond that they are scared of being wrong or worried that someone may disagree with them. I believe that this fear is rooted in the way students have been taught. Students in modern education have been taught by teachers who are not interested in sharing ideas, but rather instilling a specific set of ideas. Before they are able to join the conversation in full, they must develop a sense of trust for those with whom they will share the dialogue. They must trust that even if someone disagrees, that they will not disagree in a way that will harm them, but in a way that will encourage more discussion. "Trust is contingent on the evidence which one party provides the others of his true, concrete intentions; it cannot exist if that party's words do not coincide with their actions" (Freire, 2000, p. 91). When a teacher says that they value their students' perspectives, they must take the time to actually consider their perspective and consider changing their approach because of the way their students think about a particular topic.

Once dialogue begins, it has the potential to completely revitalize student outlooks. A true dialogue opens minds and presents the members with new lenses through which they can view a problem. When a student only has one perspective, and when that perspective has been exclusively handed down to him by a teacher, he will begin to view the world as static: that it cannot be changed. Conversely, having his own opinions valued, as well as many other opinions, shows the world as a living entity that may be transformed.

I believe that a similar transformation is needed among teachers. Teachers need to have more input in the dialogue with administrators or school policy makers. It is difficult for teachers to feel inspired to innovate and create immersive learning experiences when they are not given significant time to accomplish this goal, or when they feel that the curriculum is rigid and closed to alteration. If teachers are given more time to reflect and create dynamic and critical lesson

plans and provide input into how their schools are run, then policies can be made that will actually impact learning in the classroom.

There is a natural sense of hope when finally joining the conversation to better the world. Hope empowers people to act. It fills them with a sense of purpose. This is the goal that education must strive for in a democratic society. Democracy is based on the idea that its citizenry will be informed and participate in the act of changing the world. Knowing that the world may change gives teachers and students a rebirth. They believe that their choices and feelings may make their situation better; that the world does not have to be a place that holds them back and forces them to behave a certain way or believe a certain truth. They can join with others, and together, participate in transforming the world. In order for that to happen, citizens must have a sense of self-efficacy that they can affect change and solve problems.

Freire (2000) favors a problem posing educational model that can assist students in developing the important sentiments described above. Instead of being told a "correct" answer, students should be brought into the investigation from the beginning. In other words, students should be doing, not just sitting and listening. The problems that will be solved can begin as simple questions. Then, through cooperation between all members of the class, a decision is made about how to approach answering those questions. By having input on the route taken to reach a solution, students learn that their actions and thoughts have significance. As a result, they develop a voice and believe that their voice should be heard.

This philosophical perspective also meshes with another educator with whom I draw much of my own educational philosophy: John Dewey. Dewey believed in experiential learning, but to Dewey, sitting and listening to lectures is not an educative experience.

"Experiences in order to be educative must lead out into an expanding world of subject matter, a subject matter of facts or information and of ideas. This condition is satisfied only as the educator views teaching and learning as a continuous process of reconstruction of experience" (Dewey, 1998, p. 111). Education is about expanding experience and then reflecting on how that experience can be folded back into the learner's own life. Through this reflection, you can find further areas to expand moving forward and the cycle continues.

Dewey (2012) also believed that thinking about education goes significantly beyond the content that will be taught; "We never educate directly, but indirectly by means of the environment. Whether we permit chance environments to do the work, or whether we design environments for the purpose makes a great difference" (p. 24). Much of what educators should be concerned about is the environment that they create. Education is defined by fostering growth and learning, and it seems that most of what educators today are concerned with is the details about the content that students internalize. Dewey suggests, and I agree, that environments will teach students just as much as any other aspect of their schooling. No matter what, human beings will pull from experience and will package those experiences neatly in their minds. The feelings they felt or sounds they heard or smells they smelled will have an impact on how that experience will be packaged. This can have a huge impact on how that gets remembered and how that encourages future engagement. But oftentimes, environmental considerations, like encouraging social interaction to make the classroom more positive or meditation breaks to reduce stress, take a backseat to powering through content.

The collective consciousness of society is shaped by its societal institutions and perhaps none more important than education. For the last few decades, it has been shaped by a model that causes the population to shrink into themselves. It has become a competition in which your place

is not guaranteed, so everyone has been educated to ignore one another and only focus on themselves. Those who are not successful in this competition suffer and stop participating all together. It is time to equip the population with the confidence to engage in debate and alter the landscape of the world. It is time to get more voices into the conversation, hear more views, and make changes that benefit all and not just a few. These are the responsibilities of a democratic society and it is time that education reflected these responsibilities and united the public in reaching the full potential of democracy.

Chapter Three: Historical and Literature Review

This chapter will be broken up into three major sections. First, I will provide an historical framework that attempts to explain the creation of the testing culture that pervades education today. Because a heavily standardized and testing based educational experience is counter to my educational philosophies and counter to the development of holistic democratic citizens, it was important to create a context for how this form of education developed. Second, I will incorporate other theories of influence that explain the prominence of testing culture that is present today. Finally, I will dive into the literature on self-efficacy to show why it such an important aspect of learning and why a test-centered environment erodes self-efficacy.

Historical Analysis: How Did Achievement Testing Become the Norm?

While the testing environment in which I grew up and in which I teach is a direct result of NCLB, centuries of social influence have impacted the testing and accountability movement. I will be completing this historical section by analyzing interpellations: a method of analysis closely associated with Louis Althusser, a French Philosopher. I was introduced to interpellation by a professor, David Backer, who described interpellations as moments where societal ideology or common societal rules can be determined. By beginning at a particular moment, you can zoom out and ask why this may have happened (Backer, 2019). In this section, I plan to use three distinct interpellations—a letter from Thomas Jefferson to John Adams in 1813, the appointing of Horace Mann as Secretary of the Board of Education in Massachusetts, and the Nation at Risk report of 1983—and the major movements that influenced those interpellations to illustrate that the current standards and accountability format of public education has been a slow and steady development. One last point that I would like to make about this historical section is that the conclusions that I draw from these interpellations are my interpretation of how the movements

and events shaped the history of testing. The decisions made by the people mentioned and the contemporary influences are not nearly as streamlined as presented in this section, but with hindsight, a clear picture of influence has developed for me. That picture is presented in the following section.

Thomas Jefferson and the Ideology of Testing

In 1813, Thomas Jefferson and John Adams were exchanging ideas on how to determine who should occupy the offices of leadership in society. In one of these exchanges, dated October 28th, 1813, Jefferson writes,

> … there is also an artificial aristocracy founded on wealth and birth, without either virtue or talents; for with these it would belong to the first class. The natural aristocracy I consider as the most precious gift of nature, for the instruction, the trusts, and government of society. And indeed it would have been inconsistent in creation to have formed man for the social state, and not to have provided virtue and wisdom enough to manage the concerns of the society. May we not even say that that form of government is the best which provides the most effectually for a pure selection of these natural aristoi into the offices of government? The artificial aristocracy is a mischievous ingredient in government, and provision should be made to prevent it's ascendancy... Worth and genius would thus have been sought out from every condition of life, and compleatly prepared by education for defeating the competition of wealth & birth for public trusts.

Within this excerpt we can see the result of centuries of movement against monarchical leadership and feudal hierarchy to the belief that a democratic and meritocratic leadership is best suited for society. Jefferson distinguishes between two aristocracies, the artificial — founded on

wealth and birth — and, the natural — founded on virtue and talents. It is clear that Jefferson believed that leaders should be chosen based upon ability to lead, and not simply birth into nobility. The artificial aristocracy are those who have assumed leadership positions simply because of familial legacy. The natural aristocracy, which Jefferson favors, are those that possess the qualities and character of good leaders.

The appreciation of human talent built over centuries. Looking back to the late 14th through the 17th century, the Renaissance period displayed a wave of artists, poets, and philosophers that showed the incredible value of the human condition: from the detail of Michelangelo's David to Shakespeare's insight into the human condition in Hamlet to Erasmus's philosophy of free will. The major historical figures of this time period all cultivated increasing value in people.

Toward the tail end of the Renaissance, Descartes laid the foundation for the rationalist movement. Rationalism was rooted in reasoning and deduction. Descartes believed that knowledge is gained not from sensory experiences, but in doubting what the senses tell you to the point where you can analyze and deduce truths (Russell, 2004). At the same time, the empiricist movement was beginning. Empiricism countered rationalism, in that empiricists believed sensory experiences were evidence of the way the world really worked. Intuitions and rationales must be tested and proven before they can be considered truths (Baird, 2016). These movements were important due to their emphasis on epistemology and the nature of what it means to think and to know. These movements carried into the Enlightenment period, and rationalism and empiricism continued to grow and clash for the true way in which knowledge is gained. The scientific method and reductionism became prominent methods of analysis. The next

two centuries contained countless figures who consistently stress the value of knowledge and the ability to reason (Outram, 2006).

Politically, this movement continued the transition from authoritarian governments to constitutional governments as can be seen by the Revolutionary War and the setup of the United States Government and the French Revolution. You can see this history play out in Jefferson's letter. Jefferson noted that government should be led by the natural aristocracy, or those with the best natural ability, and that education is the key to discovering those best suited for leadership. The ability to reason was viewed as perhaps the most valuable talent by the time Jefferson was writing this letter, and therefore he believed that it should be those that possess the talent of reason that should lead. This emphasis on discovering leaders opened the door to standardized testing because there needed to be a method to identify the individuals with high reasoning skills.

In another letter, from Jefferson to Joseph Cabell in 1816, Jefferson shed light on how he sees schooling being implemented to educate the public, so that they may find the individuals who will lead most effectively.

> If it is believed that these elementary schools will be better managed by the Governor & council, the Commissioners of the literary fund, or any other general authority of the government, than by the parents within each ward, it is a belief against all experience… No, my friend, the way to have good and safe government, is not to trust it all to one; but to divide it among the many, distributing to every one exactly the functions he is competent to. Let the National government be entrusted with the defence of the nation, and it's foreign & federal relations; the State governments with the civil rights, laws, police &

administration of what concerns the state generally; the Counties with the local

concerns of the counties; and each Ward direct the interests within itself.

Jefferson believed that each locale should educate students in the areas that were important to

that particular region. Had Jefferson's vision continued until the present day, the current

standardized testing educational model may not have developed. Although he desired the spread

of reason and the leadership of the reasonable, he did not want this process to become centralized

and standardized. The reason this is so important ties in with the next interpellation that will be

discussed. Jefferson's ideal of finding and cementing a natural aristocracy as leaders creates a

foundation for a societal use for tests, but again, Jefferson believed that the values that should be

used to evaluate and select those leaders should be kept local, as local citizens know what they

need to thrive better than outsiders. The interpellations that follow will undercut this initial

vision of Jefferson, and turn education in general, and testing more specifically, into a more

centralized tool to grasp power.

Horace Mann & Testing

The second interpellation, the appointing of Horace Mann to the Secretary of the Board

of Education in Massachusetts, occurred in 1837 – only two decades after Jefferson wrote his

letters about finding the natural aristocracy. As a result, significant motions were put into effect

to identify these mentally talented individuals. By the mid 1800's, it was a common idea that

education was the key to defending against the artificial aristocracy's rise to power. Garrison

(2009) describes this ideology:

that class struggle should be replaced with the struggle for education, that social

distinctions are not to take place on the basis of class. Through government

intervention, a system of public education would be a means by which to

eradicate the unnatural distinctions (p. 62).

These unnatural distinctions, things like economic status or social status, were not a part of the individual's natural biology. Therefore, thinkers suggested, in providing common education for all, the only determining factor left in a student's performance would be natural intelligence and reasoning ability. Mann used this common Enlightenment Era notion to argue for and then build a common school system in Massachusetts. By centralizing education under state control, Mann believed that all would have an equality of opportunity as the rich and the poor would both attend the same schools (Garrison, 2009). The last thing missing was gaining public backing.

Prior to progressive school reforms in the mid 1800's, the format of testing was largely oral examination and discussion, with each student being questioned by the teacher based on what the teacher felt was appropriate for that student (Garrison, 2009). Therefore, each student was formatively tested on different topics. Initially during Mann's tenure as Education Secretary in Massachusetts, he was not given much authority over the path of education: state law really only allowed him to gather information and some statistics on the schools and report them to the state. Due to the individual nature of oral examinations and the judgment of teachers to decide what questions to ask each student, Mann argued that bias and favoritism were highly possible, going against the meritocratic ideology building in the U.S., which was swelling from the influence of Jefferson decades earlier. Mann used this cultural sentiment to call into question this format, and to reinforce the benefits of achievement testing. By 1845, Mann administered his first standardized written exams, where all of the questions for all children were identical. Mann initially administered this under the idea that he wanted to gather more information on the Boston Grammar and Writing Schools, he did so with good intent. In Mann's Twelfth Annual

Report in 1849, he cites many reasons for creating a universal education system, including

"countering the domination of capital and the servility of labor," creating a knowledgeable

enough constituency that they will oust bad leaders from office, and developing a collective

morality.

The ideals Mann wished for education were admirable, his reforms set the stage for the

public education system that led to incredible progress in the late 1800's and 1900's, and his

arguments are incredibly persuasive. However, the key development in Mann's tenure as

Secretary of the Board of Education in Massachusetts with relation to testing reform was how he

used the data from the tests. As explained by Resnick (1982),

> Although the tests showed that there were deficiencies of instruction, and perhaps
>
> excessive difficulty of the curriculum, the results seem not intended primarily as helpful
>
> advice for teachers. The most important reported result, an unintended one from the
>
> standpoint of the school committee, was to make city teachers and principals accountable
>
> to supervisory authority at the state level. (as cited by Garrison, 2009, p.64)

While Mann was very progressive in his vision for the role and impact of education in society,

the use of his exam information laid a foundation for using tests to gain control of the

educational system. Rather than using the data in his early tests to actively help schools improve,

he published data to the public and used it as a tool to gain control of the educational system and

reinforce his agenda. This is incredibly important in the history of testing, as this has been the

primary use of testing data since that time. Test scores have been used repeatedly to identify a

failing system and allow a visionary to quickly influence public opinion and institute a new

agenda.

A Nation at Risk

More than a century after Mann used the citation of a failing system via test scores to put in place his educational agenda, we see the same pattern repeated. *A Nation at Risk*, an educational study published by the National Commission on Excellence in Education (NCEE) in 1983, used broad testing data to suggest and then execute significant education reform based around accountability and control rather than good pedagogical practice. Again, the use of the data was to ignite fear in the public opinion, this time citing significant fear of the standing of American education in a global context. And again, the ideals that the report seems to support are admirable. Take the opening stanza of the report:

> All, regardless of race or class or economic status, are entitled to a fair chance and to the tools for developing their individual powers of mind and spirit to the utmost. This promise means that all children by virtue of their own efforts, competently guided, can hope to attain the mature and informed judgement needed to secure gainful employment, and to manage their own lives, thereby serving not only their own interests but also the progress of society itself. (NCEE, 1983, p. 6)

As stated above, the language and ideals expressed are admirable. Wanting all children to reach their full potential should be the kind of motivation that those involved in education carry with them.

However, even in this ideal laden mission statement, another motivation for this report and for many of the policies that follow can be seen. The last phrase—thereby serving not only their own interests but also the progress of society itself—I believe, highlights the mindset and the bias of those writing the report. I think of the context in which I have heard the term "interests" used, and it always refers to economic resources or political power in various regions.

Using a term like that in the mission statement for an education report creates an economic slant that continues throughout.

What drove this report? Going back to the 1940's, the U.S. became the world superpower, with a vast military industrial complex and a highly centralized and influential government (Zakaria, 1998). In that time, the government believed the key to maintaining this influence was education. In the 1950's, tension and competition between the U.S. and Russia continued to grow, and Russia's launch of *Sputnik* prompted the federal government to look at education as the possible explanation for the "more advanced" Soviet technological achievements. The response was the National Defense Education Act of 1958, which created more funding for states to develop tests (Kaestle, 2013).

The 1960's and the civil rights movement brought many critiques about expanding the scope of testing, including examining biases on tests like the SAT and the attempt to restrict such wide use of tests. Despite these motions, money continued to be poured into the testing industry.

> One reason is that although civil rights advocates initiated critiques that led to restrictions on the uses of tests, they also contributed to an increased emphasis on tests because of concerns about the highly publicized gap in test scores between students of color and white students, and between poor students and more affluent students. (Kaestle, 2013, p.24)

Now that a clear achievement gap was exposed in testing, test makers and supporters could cite this as a use for maintaining strong testing as a means to identify how to fix race and class disparities in education. The achievement gap also became a commonly cited reason to question the value of integration (Kaestle, 2013). Again, testing data is used to cite failure that promotes decisions based on political power rather than the well-being of schools and their students.

The 1970's saw a stall in progressive reforms, most likely due to lack of money after the Vietnam War. Economic growth slowed, unemployment increased, and inflation grew rapidly creating an economic phenomenon called stagflation (Campagna, 1991). The economic hardship created a testing movement that focused on "minimum competency." Politicians began to point the finger at low test scores and low accountability in education as the cause of low employment and a lack of innovation. Beginning in 1976 in Florida, graduation from high school began to be contingent upon passing a minimum competency test (Beard, 1986). *A Nation at Risk* clearly identifies a fear of falling behind on the global stage as the motivation for educational overhaul:

> The risk is not only that the Japanese make automobiles more efficiently than Americans and have government subsidies for development and export. It is not just that the South Koreans recently built the world's most efficient steel mill, or that American machine tools, once the pride of the world, are being displaced by German products. It is also that these developments signify a redistribution of trained capability throughout the globe. (NCEE, 1983, p. 7)

It seems, based on these concerns, that the responsibility of education is to heighten the "trained capability" of workers. This purpose of education reinforces the mindset that testing, or more specifically raising test scores, are the key to maintaining power on the global stage. This is evidenced in the report section titled "Indicators of the Risk." In this section, the Commission of Educational Excellence lays out 13 bullet points for how the risk was identified. Nine of the bullet points referenced either international or national standardized test scores (NCEE, 1983).

Testing is not a new phenomenon. The earliest record of testing has roots extending back to 1900 B.C. (Elman, 2013). The development of national standardized testing measuring achievement has a long history, with the increased recognition and appreciation of individual

talent during the Renaissance and the emphasis of logic and reason in the enlightenment. While these are desirable values in society, it is troubling that testing, in its 150 year history in the U.S., has not been developed as a tool to maximize these values, but instead as a tool to attack education and launch sweeping political agendas. Furthermore, this history of using testing data to recognize the failure of education has created a national attitude that a poor educational system causes the flaws we see in society, so education has often become a scapegoat for other institutional flaws. Overly stressing testing performance, this pattern has not only prevented education from helping students reach their full intellectual and social potential, but it has also prevented society from recognizing and addressing other institutional flaws.

Other Theories That Can Illuminate the Spread of Testing Culture: Globalization

Education, especially in the US, has been under a microscope for the last few decades. It is undoubtedly an essential element to any political candidates' platform, and it is of great importance to nearly all citizens. However, an alternative explanation for the in-depth examination of the US education system is the ease with which we can compare educational rankings across nations; as the US is seemingly falling behind in the global educational rankings, the search for the educational panacea has become more important than ever. There are dozens of explanations and rationalizations and philosophies that claim to answer the education conundrum. However, each of these philosophies views the purpose of education differently. This section will take a comparative educational approach and examine several factors that have had a major influence on educational systems around the world and how it relates to the U.S in particular.

This comparative approach is essential in today's world, as rapid globalization is impacting and influencing policy makers' perspectives of the purpose of education. According to

Joel Spring (2009), "Globalization of education refers to the worldwide discussions, processes, and institutions affecting local educational practices and policies" (p. 1). As the world becomes smaller—due to technological changes like faster travel, easier communication via video conferencing and other media, and, perhaps most importantly, increased economic interdependency—policies are becoming increasingly overlapped. As more global focus has shifted to maintaining the United States' placement within the global economic hierarchy, educational policy has been forced to shift to serving this goal.

There have been both positive and negative results from this global consensus on economic growth. On the positive side, information is being more readily and easily shared across the world in order to coordinate between international organizations. Additionally, as workers are migrating for occupational opportunity, some multicultural acknowledgement is required. However, one of the most common results of this spread of information has been to standardize what should be communicated and to create one common world culture. This is evident through seeing that the more powerful political players on the world stage have had much more influence on the direction of education globally, as can be seen by the spread of common economic policies and common methods of education across many developed countries.

For example, beginning in the late 1970's the US and Great Britain have made significant and similar changes to their education systems ranging from national or state level curricula, to dramatically increased standardized testing. Below, in table 1, is a comparison of the US and UK in their standardized testing policies.

Table 1. Assessment and accountability

United States	Great Britain
Standardized tests were first introduced at the state level in the early to mid-1990s, with some states (New York, Texas, Florida) requiring that students pass one or more standardized tests in order to graduate. School scores are published and often used by parents to select schools. NCLB requires that standardized tests be given in math, reading, and science initially in grades 3 through 8, and by 2007-08 in grades 3 through 12. Schools are required to make 'adequate yearly progress' (AYP) and all students are to achieve proficiency by the year 2014. Schools failing to make AYP face numerous consequences, including losing students, funds, and, potentially, the privatization of the administration of the school or the school as a whole.	Standardized tests were introduced as part of the Education Reform Act of 1988 as a means to 'measure the performance of pupils at the end of four Key Stages, but also to make it possible for market forces to operate by providing a currency of information which would fuel competition between schools' (Broadfoot, 2001, p. 142). The act also included the introduction of the General Certificate of Secondary Education (GCSE) exam at the end of Key Stage 4. The publishing of league tables promoted the comparison of schools.

Note: Reprinted from Neo-liberalism, Markets and Accountability: transforming education and undermining democracy in the United States and England (Hursh 2005).

Within both of the descriptions above, we can see the underlying force of the economy as a major influence on the decision to enact these policies. In the US, inadequate growth leads to the loss of funds and the privatization of the school; in Great Britain, the goal was to apply market style competition to the educational landscape. Both policies were presented in a way that suggest they are about improving education, but it is impossible to miss the underlying economic tones that accompany these policies.

The rise of economic concerns has caused many to favor these neoliberal policies, and so I would like to examine neoliberal ideology specifically before looking at its specific impacts on educational policies. Elmore and Simone (2015) have argued there are two central principles of the neoliberal ideology. "The first is the neoliberal assessment of narcissistic self-interest as the

sole motivator of human beings, and second is the neoliberal revaluation of the concept of a

common or public good, which it deems misallocated, if not outright hazardous" (Elmore &

Simone, 2015, p. 2). When you see a definition of the core beliefs of a political/economic in

these terms, it is hard to imagine that this is the primary ideology of the United States: one of the

most common examples in the world of fair and just country. This description forces the

question: how can a country be seen as a just country when it is guided by principles of

"narcissistic self-interest" and that "common or public goods are hazardous?" However, when

looking at some of the changes in the US in the last 40 years, there is significant evidence that

supports these notions.

Since the mid 1960's, Milton Freidman, along with other pro market neoliberal

economists, discredited the efficiency and effectiveness of many public institutions that thrived

on public money collected by taxes have been defunded and then privatized through a belief that

offering people a choice would lead to better allocation of resources. Friedman believed that

when people could choose to send their children to better schools, and therefore, those schools

would receive the most business and be able to provide the best education. As a result, students

become consumers within the competitive education market. On its face, this may seem fair and

just. More people choose a school and choose to give their money to said school, leading to more

resources, a better product, and the cycle repeats (Carnoy, 2000). What many fail to consider is

that in a competition some are more advantaged and some are less advantaged. Furthermore,

what many fail to consider is that often times what begins as student choice on which school to

attend turns into the schools choosing which students to accept. Schools that are excelling will

draw a larger number of people, but with only a specific number of seats available in the school.

With more students applying than can possibly be admitted, the school can now choose the

criteria on which it will base admission. Often, the school will use criteria that benefit a specific subset of the population, while indirectly discriminating against another subset.

To be able to accept this viewpoint, one must consider the purpose of education to be simply another industry within the political/economic/industrial complex. With this in mind, students are dehumanized looked at as consumers and pieces of future profit, rather than people with rights to have access to the best education possible. Again, I have to ask, how did this logic arise? Martusewicz et al. (2011) describe the process of globalization in a slightly different light that can make this clear. They present the results of globalization from the perspective of the "undeveloped." According to the authors:

Globalization has meant that millions of people have been to enter into a global market where foods that were once part of their daily lives are no longer grown, and extended families that once depended on each other and lived in strong communities are pushed into urban centers to look for low wage work and live in squalor. (p. 209)

Globalization is possible due to the technology that allows for faster travel and easy communication, but these things are only important to a specific group of people. Many cultures are thriving on a simpler form of life yet are being forced to give up their life all in the name of helping the "third world" become more "developed." The result is that the people of those cultures become the very poorest, sickest, and most exploited group of the "developed world," while those who created this economic agenda are gaining more resources and wealth. This globalization primarily benefits those countries at the top, while sometimes damaging the countries brought in at the bottom.

Understanding this pattern of globalization, it is not hard to imagine that globalizing education may not be beneficial to all, as education should be. Unfortunately, this negative

pattern is already evident in schools. Because nations are concerned with their place on the pecking order of educational achievement lists, prescribed standards, like the common core, are now being taught more and more. In a U.S. News and World report article, Allie Bidwell interviewed some of the architects of the common core standards. The common core was born out of a concern of the countries competitive standing. The standards were designed to be more aligned with international education standards. Again, poor rankings, this time on international exams like the PISA, caused us to create sweeping changes to the educational system and dictate to teachers and students what they should learn for no other reason than performance on a test (Bidwell, 2014). This top-down structure, that is so common among neoliberal policies, is greatly harming the people whom these changes are supposed to help: students. Students that are high achieving, who already had many advantages in terms of family income and home life, are reaping the most benefits from this shift. Now, to go along with the money to be able to pay for higher education, high income students are showing off high test scores, giving them another leg up in the educational competition. Students that struggle on these exams, often from low-income families or marginalized groups, have another external force telling them that they do not deserve to go to college. These students internalize their failing test scores because that is the source of failure in neoliberal meritocratic societies, and the result is a dramatic dip in self-efficacy and a dislike for learning.

Think about this for a moment. Growing up many children have a dream about what they want to be: an astronaut, a professional musician/singer, a professional athlete, etc. 99.9% give up on this dream because they recognize that the competition is incredibly intense for careers like these. Neoliberal policies are beginning to turn education into a competition, and what happens is that those individuals who do not compete as well as others (through no fault of their

own due to things like SES, lack of proper nutrition, lack of proper supervision), recognize that they are not able to keep up and give up. And who could blame them? When they do not succeed, we say study harder and blame them for "their failure." We say it's alright to stop pursuing a dream career when you know the odds are stacked against you, but we do not understand that the educational world we are creating is causing students to lose their self-efficacy in their learning, and therefore see school as a stressful and discouraging place. Children are extremely receptive and do what they are taught. Sadly, we are teaching many that school is not for them, and then blaming them when they act according to that lesson.

The Center vs the Periphery

The philosopher Enrique Dussel proposes a powerful relationship that can be found in all aspects of the world today: the center versus the periphery. The center is the group of people, from as small as one person to as large as a multinational alliance that generates the "rules" for whatever aspect is being examined. Looking back throughout history, Dussel (1985) relates the center through philosophical ontologies. Society since the Age of Enlightenment in the 17th century has favored the belief that our conscious and rational thought is the greatest attribute of our being. Dussel calls this ontology ego cogito, or I think therefore I am. What Dussel forces us to consider in the first chapter of his book, *Philosophy of Liberation,* is why this emphasis on purely rational, practical and efficient thought arose and began to spread across the world. Think about the other modes of thinking that have been pushed to the periphery due to the spread of rational thought like sustainability or social and emotional awareness. For nearly 500 years, objectivity has been valued as the most fundamental characteristic of knowledge. Dussel (1985) reflects why:

That ontology did not come from nowhere. It arose from a previous experience of

domination over other persons, of cultural oppression over other worlds. Before the ego

cogito there is an ego conquiro; 'I conquer' is the practical foundation of 'I think'. (p.3)

Dussel traces back this ontology to ancient Greece. Great philosophical minds, like

Aristotle, believed that others outside of Greece were lesser due to differences in other cultures

from the "center." As history progresses, countless examples of this simple distinction between

the powerful and self-driven center and the inhuman and weak periphery can be recounted.

Medieval times expressed the center through the vision of God. Semitic religions dominated and

used God to justify what was appropriate and what was seen as subhuman. Then, through marine

expansion by Portugal and Spain, and eastward expansion of Russia, the modern center was born

and continues to exist in Europe. What all of these examples have in common is the force of

thought from a center onto the periphery, or from the dominant onto the conquered. The

periphery is forced to adopt this thinking after being physically conquered. Think about the

natives in the Americas, the slave trade from Africa, or the constant warring in the Middle East

and Asian. Before philosophical thought can be spread, physical conquering must occur.

Dussel continues that the those that are enmeshed within the ideology of the center can rarely

progress. Progress comes from the periphery. This is due to the nature of those two powers. The

center is the dominant force and people within the cultural center hold power and take for

granted the aspects of society that provide their power. Dussel (1985) explains, in speaking from

the perspective of individuals in the center:

Our life, because it is 'natural' and obvious, is lived in an acritical naivety with very great

consequences. Our way of facing beings is conditioned by this everydayness that is our

own being, our second nature, our ethos, our cultural and historical character. (p. 32)

Again, looking back through history, this pattern appears to be reinforced. Societies constantly give way to new ways of thinking. The early centers (e.g. Egypt, Greece, Rome, Aztec, Inca) viewed aspects of nature as Gods, but eventually this gave way to peripheral views that developed into modern religions. Religion is only one ideology that continually gives way to others throughout history. There are also political ideologies, military ideologies, social ideologies that all can undergo the same displacement over time, but according to Dussel, this displacement can only arise out of a critical view from the periphery.

The totality of the world is never fixed; it displaces itself historically or spatially. Inasmuch as we incorporate new beings into our world every day, the horizon of our world displaces itself in order to comprehend and embrace them (Dussel, 1985, p. 28). The peripheral peoples have an exterior perspective, allowing them to question the ideologies of the center, and potentially lead to progress.

Within education, the center consists of the educational organizations and policy makers that decide what should be learned and, more importantly, how learning will be evaluated. The periphery is those who are the recipients of the ideas of the center, or the students in today's model of education. The students do not get to develop their own modes of learning and instead are force-fed the goals of the center, removing student action in learning. Education always seems to be a step late in developing new strategies, but perhaps by embracing the knowledge and observations of the periphery, or the students, we could have an educational system that is much more adaptive and beneficial to those involved.

The Coloniality of Power

Anibal Quijano (2000) provides a theoretical view that marries the historical framework of Dussel to the current globalized world. Quijano explains that the current centrist ideologies

stemmed from the European colonialism. Quijano observes that the European colonization of the Caribbean and America caused the birth of two previously nonexistent forms of power, one social (racism) and one economic (global capitalism). During the colonization period, Europeans based labor forces and cultural hierarchies on skin color, as it was a simple way to determine whether one was of European, Native American, or African descent. Additionally, this time period saw the use of labor begin to influence world markets on a larger scale. Slave labor in the Americas was used to produce goods that would affect life in Europe. "In this way, both race and the division of labor remained structurally linked and mutually reinforcing, in spite of the fact that neither of them were necessarily dependent on the other in order to exist or change" (Quijano, 2000, p. 536).

This colonization also led to a Eurocentric (originating or focused in Europe) world economy, and it is not difficult to understand why. Europe arrived in the Caribbean and Americas and forced the natives into an unwaged labor arrangement. This labor ended up leading to widespread genocide of the Native Americans in many Caribbean Islands and mainland America, and once the original labor force was largely extinguished, the slave trade was developed to renew the unpaid labor force. For centuries, the European colonizers in the Americas gained access to precious metals and other various natural resources that created a new center of power based on the control of resources and trade. It has been this ideology that has since been dispersed across the globe, and it is this ideology that has dominated the modern world. Rich nations have gained control, and poor nations have been pushed to the periphery. In order to perpetuate this center, institutions of control (politics, education, healthcare, etc.) have all been created to favor economic gain. Education today makes students believe that the only function of school is to be compared to other students and ranked to determine their career. From

early on, those that realize that they are not compared favorably to others quickly lose interest in learning. Most often these are students from lower SES or minority backgrounds, so in a way the coloniality of centuries ago is just changing form and allowing those with previous wealth to further increase their wealth, rather than giving everyone a chance to achieve wealth.

Understanding Self-Efficacy

As mentioned in the previous sections, the modern educational environment in the America is centered on testing, and more specifically, the minimum competency assumed to lead to success. This approach attempts to take the complex process of learning and boil it down to performance and outcomes on individual tests. It is overly simplistic and often times can negatively impact many aspects of learning. Part three of this chapter will take an in depth look at one area that I find central to learning: self-efficacy. The correlation of self-efficacy to so many important psychological aspects of learning (self-regulatory behavior, motivation, resilience, etc.) is the reason why I chose it as the focus of this thesis. Learning is not an easy process, and it is far from an automatic process. It requires a choice to engage, reflect, and continually revise one's approach, all of which are not necessarily innate qualities. However, based on my experiences both as a student and as a teacher, the modern education system views these psychological aspects of learning as fixed characteristics. This section will demonstrate that these are not fixed traits, but malleable psychological qualities that can be built up or torn down. This understanding has helped me realize that I need to pay as much (or maybe more) attention to explicitly discussing how students think and feel about their educational experiences as I do to discussing content specific topics like evolution or biochemistry.

Bourdieu's Field and Habitus

Pierre Bourdieu (1993) defined a particularly useful concept for understanding how to think about self-efficacy, which he called the field. According to the construct of the field, Bourdieu views each interaction that a person has throughout their life as taking place within a framework of particular relations or forces. For example, each different class that a student attends during a school day represents a different field; the interaction that a students has with a friend during lunch takes place within a different field, and the discussion that a student has with his parents before he or she goes to school for the day represents a different field.

The construct of self-efficacy is best approached in a manner similar to Bourdieu's construct of the field. Within each field, people develop a strategy for how best to survive or thrive. Self-efficacy can be thought of as the belief that someone has about their own developed strategy for a given field. People with high self-efficacy ratings in a given field will have strong beliefs that their strategy will lead to success within that field. On the other hand, people with low self-efficacy will have very weak beliefs that they have developed a strategy that will lead to success within that field. The field that will be examined within this thesis is a biology remediation class for students that have failed the Pennsylvania State Keystone Exam in Biology. The reason I specify this field for this thesis is because an important aspect of fields to understand that each field has its own stakes and rules that have been created by the power relations of that field and that must be interpreted by those participating in the field. As previously pointed out, the rules and stakes of many classrooms in the U.S. today are defined by an economic focus. The committees designing educational standards want students to learn facts, and to learn how to listen to authority because they view students only as workers in the larger economic-industrial complex. While students may not be consciously thinking about this while

they are in the classroom, they do respond to environment in which they are placed. They learn how best to survive in the environment that has been created for them: a concept that Bourdieu (as cited by Meo, 2011) calls habitus.

Habitus can help us understand how subjects develop the strategies they use for each field in which they act. Habitus describes the individual actions and beliefs of a person based on the experiences and encounters that a person has throughout their life. In other words, habitus is the strategy that you apply within each field in which one participates. These strategies are developed based on a lifetime of lessons that you have learned about that field. Unfortunately, due to the subjective nature of habitus, not all strategies that are developed are effective for all fields. This thesis will address common strategies that students in remedial classes employ and will attempt to explain how low self-efficacy has led to the breakdown of positive strategies in favor of negative strategies. To take it a step further, I believe that the education system, in its current form, is actively preventing the development of successful strategies for creating a lifelong, critical learner.

How efficacy stands apart from related constructs.

Based upon the observations discussed in chapter 1, I believe that many students today, as a result of our educational system, have lost their educational self-efficacy, their confidence in their ability to succeed in learning. Self-efficacy, however, is an often very confused construct in educational circles. Albert Bandura (1977) defined self-efficacy as "the conviction that one can successfully execute the behavior required to produce the outcomes" (p. 3). This seems like a very specific definition, but with only this definition, it is hard to differentiate self-efficacy from other psychological constructs that are related.

The first construct that Bandura (1977) compared to self-efficacy was outcome expectations or "a person's estimate that a given behavior will lead to a specific outcome" (p. 3). As explained by Bandura (1977):

> Outcome and efficacy expectations are differentiated, because individuals can believe that a particular course of action will produce certain outcomes, but if they entertain serious doubts about whether they can perform the necessary activities such information does not influence their behavior. (p. 3)

For example, someone may believe that doing their homework will lead to a better understanding of a topic (outcome expectancy), but they may not feel that they can adequately complete their homework in the first place (efficacy expectancy).

Another closely related construct is self-concept. Marsh and Shavelson explain that where this differs from efficacy is that "self-concept is a more general self-descriptive construct that incorporates many forms of self-knowledge and self-evaluative feelings" (as cited in Zimmerman, 2000). Self-efficacy is not general, it is very specific. Self-efficacy is the belief in one's ability to perform a specific task successfully, and not a general belief in one's overall ability. An example of this distinction is that self-concept poses questions like, "How good are you in English?" Alternatively, self-efficacy focuses on more specific tasks, such as "How certain are you that you could accurately diagram this sentence?" (Zimmerman, 2000). Bandura explains that it is possible to have high esteem ratings for a particular subject and have low efficacy ratings for a task within that subject and vice versa.

A third key construct associated with self-efficacy is perceived control. As explained by Zimmerman (2000):

Perceived control refers to general expectancies about whether outcomes are controlled

by one's behavior or by external forces, and it is theorized that an internal locus of

control should support self-directed courses of action, whereas an external locus of

control should discourage them. Locus-of-control scales are neither task nor domain

specific in their item content but rather refer to general beliefs about the internality or

externality of causality. (p. 85)

An example question from Rotter's (1966) original locus of control scale asks you to pick which of the following statements that you agree with more: "Many of the unhappy things in people's lives are partly due to bad luck," (external locus of control) or "People's misfortunes result from the mistakes they make" (internal locus of control). As is evident by these questions, locus of control measures provide insight to a person's general view of events and whether or not his or her own actions play a role in creating those events. Once again, self-efficacy ratings are much more specific in their focus than perceived control. Perceived control ratings may impact someone's efficacy beliefs on a specific task, but does not actually measure their beliefs about specific tasks.

The dimensions of self-efficacy

Bandura (1977) noticed three different dimensions that should be considered when evaluating efficacy ratings: magnitude (level), generality, and strength. Magnitude refers to the level of difficulty of the task at hand. For example, within a mathematical framework, someone may be asked what their efficacy belief may be in solving a mathematical equation. The efficacy response will be vastly different if the equation is 2+2, then if it was a complex calculus equation. Generality reflects how efficacy beliefs on one task translate to efficacy beliefs on different tasks.

Once established, enhanced self-efficacy tends to generalize to other situations. As a result, behavioral functioning may improve across a wide range of activities. However, the generalization effects occur most predictably in activities that are most similar to those in which self-efficacy was enhanced. (Bandura, 1986, p. 399)

If a student has had success and high efficacy beliefs with single digit addition and subtraction problems growing up, then those efficacy beliefs are likely to be very similar regarding double digit addition and subtraction questions, while less similar regarding questions of equal difficulty in English. However, there has been evidence of some generalized academic efficacy (Bong 1997). Finally, strength measures the persistence of efficacy beliefs. "Weak expectations are easily extinguishable by disconfirming experiences, whereas individuals who possess strong expectations of mastery will persevere in their coping efforts despite disconfirming experiences" (Bandura 1977).

Self-efficacy, self-regulation, motivation and resilience

Perhaps the most difficult target to hit as a teacher is motivating every student that enters the classroom. Motivation theory typically identifies two overarching constructs of motivation: intrinsic and extrinsic motivation. Intrinsic motivation is defined as "an innate drive, a process nurtured by feelings and needs from within," while extrinsic motivation is defined as "behavior that is directed by outside forces" (Kolenick, 2010). There are many theories that extrinsic motivation can actually hinder motivation and get in the way of learning. Kolenick (2010) presents a more practical view: "An effective teacher recognizes that students vary in their motivation. An effective teacher knows how to support intrinsically motivated students and seeks the variety of strategies necessary to provide extrinsic motivation to students who need it. An effective teacher helps students find their own reasons to learn."

A person is more likely to invest in something that they believe they can influence (Schunk, 1991, pp. 209-210). Even more so in something in which they believe they can succeed. "There is evidence (Bandura, 1997) that self-efficacious students participate more readily, work harder, persist longer, and have fewer adverse emotional reactions when they encounter difficulties than do those who doubt their capabilities" (Zimmerman, 2000). Unfortunately, our educational system does not allow for students to place any input in what they are taught. This causes students to reduce the amount of effort they put into learning and feel as if they are helpless to achieve their academic goals. They do not believe that they can overcome difficulties.

> People of high efficacy focus on the opportunities and view difficult obstacles as surmountable. Those beset with self-doubts dwell on impediments which they view as obstacles over which they can exert little control. They easily convince themselves of the futility of effort, so they achieve limited success even in environments that provide many opportunities (Bandura, 2000, p. 181).

This is especially true among the historically underperforming students that I teach. I teach a course that is designed to help remediate students who have failed the state required biology exam. I have had countless discussions with students in this class where they have said "I cannot do this; I will never pass this test." They get caught in a vicious cycle where they have lost their self-efficacy and motivation to learn, which leads to disengagement, further failure, and further depression of their educational self-efficacy.

Self-efficacy is also highly correlated with self-regulatory behavior. Students that have high efficacy ratings are proactive learners in that they set academic goals for themselves and will have higher motivation to achieve those goals. "Efficacious students were better at

monitoring their working time, more persistent, less likely to reject correct hypotheses prematurely, and better at solving conceptual problems than inefficacious students of equal ability" (Zimmerman, 2000). Interestingly, a study completed by Schunk (1981) found that students who received modeling on many of the self-regulatory behaviors, increased efficacy ratings and increased academic performance. The study goes on to say that the link between modeling regulatory skills and self-efficacy was not directly correlated, but "that treatment differences exert their effects directly on changes in skills and indirectly through changes in self-efficacy" (Schunk, 1981).

Goal setting is one of the most fundamental self-regulatory behaviors discussed because it can force one to self-monitor, reflect and revise their approach. "Goals increase people's cognitive and affective reactions to performance outcomes because goals specify the requirements for personal success" (Zimmerman, Bandura & Martinez-Pons, 1992). The correlation between goal setting and efficacy can be seen in that as goals are reached, efficacy ratings rise, and higher goals are set. What this suggests is that the vicious cycle of diminished efficacy and failure mentioned above can be reversed. Students can be shown how to monitor their progress, and this will equip them with strategies to use that lead to significantly higher efficacy beliefs, which will boost test scores and create a cycle of success, rather than a cycle of failure.

Another area where supporting the growth of a student's efficacy beliefs will have a positive impact is on anxiety. In a study by Siegel, Galassi and Ware (1985), it was found that efficacy beliefs outweighed and correlated stronger with results on mathematics performance than did anxiety. Though this study was completed in 1985, this correlation is extremely valuable in today's academic climate. With competition for colleges ratcheting up, so has academic

anxiety for many students. Students today understand that their educational success has a significant impact on the outcome of their lives, and yet motivational issues are common.

Students must be re-engaged in their learning. They must be encouraged to participate in the process. Perhaps more important, is that students must be given tasks that require effort and in which it is alright if they make mistakes. In the current test-driven format, students do not see mistakes as learning experiences, but as signs of failure.

Resilient efficacy requires experience in overcoming obstacles through perseverant effort. The route to high attainments is strewn with failure and setbacks. Success is achieved by learning from mistakes. Resilience must also be built by training in how to manage failure so that it is informative rather than demoralizing" (Bandura, 2000 p. 185).

Because so much today rides on test performance, students have incredible anxiety when it comes to testing and have severely negative reactions to making mistakes. Wrong answers are supposed to happen when learning something. No one has all of the answers to all of the questions, but education today has created an environment where not having the correct answers has powerful consequences. Worst of all, the way education is set up today does not allow students to reflect and adjust. Students receive their test results, and that's it. There is no review of the questions or creation of lessons based on their specific misunderstandings. They just receive a numbered score and an evaluation of basic or below basic.

This can have a tremendous impact on a student over years of this form of feedback. PN Johnson-Laird (1980) described how people make mental models of things based on perception and experience. These mental models are typically used for analytical thought and are used to make inferences based on data that has been presented to us. A simple example is mathematical transitivity in that A=B and B=C, therefore A=C. However, Hacker (1996) described that mental

models can be created in the mind for larger processes or action sequences. A useful parallel to education and building mental models can be applied to video games.

> After each session of play, players' ideas of what they experience during a certain type of action (computer game play) are expanded, modified, and completed. Therefore, those who reflect on a long personal playing history should have valid mental representations of their own psychological condition during game play, even if their mental models do not include every detail of each experience. They can use this knowledge for future decisions and activity choice. In actions of selective exposure, they can evaluate their anticipated experience against their current personal preferences. If the expected experience matches the desired one, the individual selects and performs the action.
>
> (Klimmt & Hartmann, 2006, p. 135)

However, an alternative model can be built where expected experience does not match the desired experience, reducing participation. Even worse, internal models can be constructed where expected experiences are negative and therefore strongly avoided. I believe that these negative models are very common in today's students when they think about school.

So the question is why do a tremendous number of current students play hours of video games each week and complain about the hours of school that they have each week? Undoubtedly, part of the success of video games can be attributed to pop culture trends and the entertainment factor. However, video games are also designed with a structure that naturally promotes motivation and efficacy. Klimmt and Hartmann (2006) provide an excellent psychological dissection of how video games keep players coming back for hours.

To begin, the motivations for playing video games are largely intrinsic. People play for either the process of playing, as the action provided by video games can be entertaining, or for

the direct result of winning and reaching achievements that give the player a sense of accomplishment and satisfaction. People rarely play video games because of an outside consequence like earning money or status (Klimmt and Hartmann, 2006). Comparing this to learning in school, students' number one reason for attending school is to earn the marks to be able to attend college and access a well-paying job, a purely extrinsic motivation. This minimizes the connection between the learner and their motivation because it is influenced by external factors. While I mentioned above that teachers must know how to tap into extrinsic motivators to keep all students engaged, I believe that education would be much better off if, at an early age, intrinsic motivational factors were developed and cultivated in students. This would make education much more of a process-based system, placing the primary focus on the skills the students learn instead of the consequences of the skills the gain.

Additionally, video games create an environment where the player has the largest responsibility on the outcome of the game. The interactivity of video games causes the player to feel like their actions create the effects that lead to success or failure. Video games are designed to give immediate feedback. If a game runs as intended, as soon as a player inputs a command, they can see the results of said command appear on the screen and evaluate the success of said command. "The immediacy of response removes ambiguity from the perception of causal agency, making the experience of effectance intuitive and requiring little cognitive effort" (Klimmt & Hartmann, 2006). The player can instantly recognize success or failure, and therefore quickly build strategies that lead to success.

It is this format that allows game players to reach adequate levels of mastery. As explained by Klimmt and Hartman (2006),

They offer mastery experiences even to novice players and thus support the development of game-specific efficacy expectations, which in turn increase the players' motivation to sustain the activity even when they face opposition and obstacles, and to return to the game later when the current session is terminated. (p. 141)

Well-designed games build a cycle of mastery and incremental increases in self-efficacy. By ensuring mastery of basic skills during the initial moments of game play, video games build self-efficacy beliefs to a point that players will persevere through more difficult encounters later. The motivation to persevere leads to mastery of more difficult skills and the cycle repeats again.

What Can the World Tell Us About Self-Efficacy?

An important aspect of addressing educational questions, in my specific field of a biology remediation class in Downingtown, PA, is to realize that I am not alone in my concerns about my students. I am not the only educator who has witnessed students' dislike for learning. Self-efficacy, although a relatively young psychological concept that was introduced only decades ago, has been studied across the country, and across the globe. It would be irresponsible not to consider what other educators and researchers around the world have managed to find out about self-efficacy. Although, I seek a potential solution for a very small subset of students, understanding different worldviews and educational structures will provide a vast range of strategies for addressing this concern. Looking abroad may also shed light how educational patterns have been implanted globally, and if similar educational structures elsewhere produce similar self-efficacy ratings among students.

A longitudinal study, conducted in Australia by Huy P. Phan looking at elementary school aged children over the course of a school year. According to Phan, (2012) the type of

teaching that a student experiences can have significant effects on their self-efficacy beliefs over time. Phan (2012) suggests,

> a focus is made to ensure a classroom environment is facilitative of mastery and deep learning. A classroom environment emphasizing the saliency of personal competence and individual growth, rather than normative evaluation and social comparison may serve to stimulate children's thinking and engagement in deep learning. (p. 206)

Phan furthers his analysis, describing that traditional methods of assessment, like testing, encourage rote memorization. This very narrow form of assessment allows for easy normative comparison as well. Therefore, an undercurrent of competition is embedded into education from elementary school onward. The unintended consequences of this competition is the lowering of self-esteem, academic self-efficacy, and often learning achievement.

Another study, examining third grade students in France, provides insight on gender differences in self-efficacy in the subjects of math and French (Joet, Usher & Bressoux, 2011). The authors found that although girls have a higher general self-efficacy rating, in mathematics that pattern reverses and boys tended to have higher math specific self-efficacy ratings than girls. This pattern has been reflected in other studies done in the U.S. as well. It has been suggested that feedback from teachers could be a potential cause for this difference. Teachers unconsciously seem to respond more positively to males than females with regard to mathematics. Further, it seems that western socialization encourages more experimentation for boys and being more reserved for girls, which can be another potential explanation for this finding. One last telling finding from this study suggests that collective efficacy may impact individual self-efficacy ratings in students. Joet et al. (2011) suggest that there could be a contagious effect in self-efficacy and that students who are constantly around others with high

self-efficacy will increase their own self-efficacy beliefs. To me, this is further evidence that cooperation in school is more beneficial than competition. Students will pick up on study habits and self-regulatory behavior from their peers if given the chance to work with them.

The fact that these two studies are noticing patterns that are consistent across cultures is important, but there is something that is common about these cultures: they were all born out of a Eurocentric history. The fact that we see classrooms set up in Australia that is similar to what we have in the U.S., and that it leads to similar outcomes in self-efficacy beliefs in their students, and the fact that we see similar gender differences in self-efficacy beliefs across the U.S. and Europe supports the coloniality of power and demonstrates how globalization has impacted worldwide educational practice.

Moving away from a solely Eurocentric education model focus, a study by Laura Johnson et al. (2012) compared participants in environmental clubs from the U.S., Tanzania, and Uganda on self-efficacy. Basic results show that Tanzania had the highest ratings of self-efficacy. The particular environmental program run in Tanzania stresses student voice and action. The experimenters took this to be a sampling bias, perhaps misrepresenting the true innate self-efficacy distinctions between the three countries; however, this model of education is very telling for what could potentially raise self-efficacy beliefs in students. This study also discovered another interesting correlation: the relationship between self-efficacy ratings and age. There was a stronger correlation between age and self-efficacy ratings from the African participants. This may seem like the pattern that is present in the U.S., as we expect students to develop more polished study habits and achieve higher scores, but an important distinction is that the African students were described as participating in experiential learning that is less fact based and more fluid.

Olli-Pekka Malinen et. al. (2013) completed a study of teacher self-efficacy in teaching within an inclusive classroom. The study compared results between teachers in China, Finland, and South Africa. One major finding was consistent across all three cultures: that previous experience with students with disabilities was the largest predictor of self-efficacy ratings. Teachers with more prior experience with this population of students with disabilities had significantly higher efficacy ratings when faced with an inclusive classroom. While this is a very intuitive finding: that people with experience in a given situation will have stronger beliefs that they will know what to do in that situation in the future, it is important to demonstrate what kind of education can lead to increased self-efficacy regardless of their cultural background. Experiential learning is a common factor toward developing proper self-management strategies, leading to higher efficacy and further learning.

My thoughts on critiques of self-efficacy theory when applied to education.

As self-efficacy is a construct closely associated with many other psychological determinants (outcome expectancy, perceived control, etc.), many of the critiques of self-efficacy attempt to place the observable behavior changes in motivation and action onto one or more of these alternative concepts. Very often, it requires incredibly specific questions and analysis to determine a difference in effect on behavior of self-efficacy versus the other related constructs. The reason why I am choosing not to dive in deeper in this separation is that within the classroom, I believe these associated constructs are very useful as well. Perceived control deals with how much a person feels like their behavior impacted an outcome. If I am going to try to raise a student's belief in their ability to problem solve and learn complex information, it is necessary that I create an environment where their behavior impacts the outcome. I can make the same example with the relationship between self-efficacy and nearly every other related

construct, so I do not see these critiques as a sign that bolstering self-efficacy is futile, as it has little direct impact on changes in behavior. Instead, I view these critiques as a series of tools that can all be used to create an environment of motivation, which will increase self-efficacy and create a cycle of success.

Alternative critiques attempt to credit environmental factors on the resulting changes viewed in individuals. Biglan (1987), a behaviorist contemporary of Bandura, attributed each behavioral change to the differences in treatment that certain subjects received and correlated conditioning or reinforcement models to the changes in behavior. I can understand the relationship that he saw, in that individuals who received treatment ended up displaying desired behaviors more often than those who did not. Therefore, it is logical that the reinforcement received during the treatment sessions resulted in the changes in behavior. However, from my perspective, the treatment builds efficacy and confidence that the individual can accomplish the task in front of them, and this is why the behavior is shown. Humans are not robots that automatize their feelings and actions. Thought and motivation and emotion go into many of our decisions. Because of this, I believe that it is the resulting efficacy and confidence that people feel after treatment or reinforcement that leads to the change in behavior. That is not to say that treatment is not necessary or important, as it is the learning process and coping mechanisms that lead to the growth in efficacy, but I feel that the ultimate reason for seeing new behavior is due to the cognitive changes within that person and the new mental models that the person has created.

Chapter Four: Critical Action Research Program Proposal

The information age has brought with it significant convenience in terms of access to information, but as with all the significant shocks to society, I believe that some negative consequences have gone overlooked. From increased intolerance and hardening of opinion due to the ease of access to information that confirms individual beliefs to obsessive data collection often used to increase competition, the country feels more polarized than ever before. This is not to say that others have not acknowledged these consequences or studied them at length. In 1997, David Alberts and Daniel Papp edited an anthology examining all of the potential impacts of the information revolution that was underway. In the preface of the anthology, a section describes the challenges that face society, regarding the information age.

> Each of us, individually and institutionally, has developed mechanisms to either shield us from or deal with complexity and change. Sometimes these mechanisms work too well. That is, they prevent us from sensing how much our worlds are changing, thus robbing us of an opportunity to understand our environment and appropriately modify old responses or develop new responses. The results are often catastrophic; we break rather than bend. History is replete with examples of changed environments that were recognized too late for an institution to successfully adapt. (p. iii)

The amount of information available to us is unmatched, and the speed with which we receive feedback is approaching instantaneous. But, despite all seemingly wonderful educational tools, the previous chapter laid out a case that our educational system leaves much to be desired. The rapid proliferation of technology has further painted education with a quantitative and analytical brush. Testing has only increased since we have developed programs and algorithms to house and interpret the data. While I believe data is an extremely valuable tool that has an important

place in making education better, I believe that data has become the be all end all in education, and we are failing to recognize or question what pitfalls these changes may thrust upon the most important people in the educational system: students.

Put another way, schools today seem more concerned with students' training rather than their education. This distinction, while seemingly small, has significant ramifications in the learning environment in which students learn and the expectations of what students will accomplish. Training is used to teach people specific skills for use in predictable situations, like training a basketball player how to shoot. They can be trained in the correct positioning of the arms and hands, the use of their legs, and follow through. Education is about preparing someone to deal with unpredictable scenarios. Using the same analogy, this would be broadly teaching the player about things like spacing and movement in the hopes that the player will be able to make quality decisions in unpredictable situations (Posner, 1995). Training is more easily quantified and measured, so this shift seemingly fits with the increased value of quantifiable data in society.

Diving headfirst into the pool of numbers and stats and rankings without considering the cultural impact all the way down to teachers and students is a tremendous risk. However, as the quote in the previous paragraph alluded, we often get swept up in these changes, and it takes coming to the edge of a cliff before we realize that the path we have been on is potentially dangerous. For example, according to the CDC, from 2003 to 2012, the diagnosis of anxiety or depression increased from 5.4% to 8.4% in school aged children (ages 3-17). This is occurring within a window of increased data collection on schools and students due to NCLB, and this is in addition to the primary arguments of this thesis in the previous chapter outlying the impact of the testing culture of education on students' self-efficacy.

Purpose

Having a background as a science teacher, I believe in starting small. Since beginning this endeavor, I have changed my teaching style in ways that I believe have helped my students cope with the new learning environment and restore their efficacy in their learning. Now it is time to expand the reach of my practice. The next step, which will be the focus of my action plan is to get my thoughts out to my fellow educators. I want to create a series of voluntary professional development workshops that will discuss my thoughts and concerns about the state of education, hopefully persuade some educators to slightly alter some of their methods, and provide some of the tools that educators can use to help students become lifelong learners.

Additionally, we need to consider the environment that is naturally created when the culture is one that is centered around testing. The hidden curriculum that is thrust upon students is very influential, and through open discussion in these workshops, I hope that teachers are willing to critically examine these influences and make small tweaks to their approach in the classroom to reinforce that they value the human aspect of education and not just the content aspects of education.

Goals

With this action plan, I do not wish to completely remove quantitative analytics from education but remind teachers that numbers and scores and comprehension of curricular topics as measured through summative assessment should not be the only priority. I am not looking to rewrite the district's official curriculum, what Posner (1995) describes as, "the curriculum described in formal documents" (p. 12). Instead, I am trying to get teachers to acknowledge what Posner describes as the hidden curriculum. These are the lessons that are passed on indirectly through the culture and interactions that occur on a daily basis. The context and environment of a

school and a classroom can have as much of an impact as the topics outlined in the official curriculum. The context in which students learn, while never directly taught by the teacher, sends powerful messages. Most people forget a vast majority of the official curriculum they learn in school once repetition in that subject area stops. But you ask most students who their favorite teacher was, and they remember them not for the lessons they taught, but the manner in which they taught: how the teacher treated them, the excitement the teacher had for the subject. This is the hidden curriculum that Posner references. This is the curriculum that I believe is central to fostering or diminishing self-efficacy in our students. Therefore, this is the curriculum that I want to call attention to with my peers.

I want to make education more holistic. I want to persuade teachers within my district to recognize that the current standards driven educational structure creates a context that is not favorable to the holistic development of students, and I want to persuade teachers to recognize that devoting time to intangible and immeasurable skills and characteristics is not a waste of time. Through this, I hope that teachers begin to carve out time in class for discussions on values and habits that lead to healthy mindsets, critical thinking, and increased agency: all of which will restore the self-efficacy so that many students have lost.

In simply thinking about these goals, certain frame factors, or hurdles, come to mind that must be overcome (Posner, 1995). Curriculum documents have become more and more detailed, and with test scores being put under a microscope, teachers have been forced to give up their discretion in the classroom. For some, they feel there is no time to do anything other than teach the next topic in the curriculum because the amount of information required feels insurmountable. For others, what they do in the classroom is scripted by their school boards or curriculum committees down to every assignment and activity. Any teacher who is willing to

buy into my ideas needs to be comfortable with the fact that they will be breaking from the script and not allotting as much time to a topic as advised in curriculum documents, and this can be scary. Part of the concern arises from a fear that today a successful teacher is largely defined by the amount they progress their students' scores on exams. To truly change the classroom culture, it will take convincing administration to accept teachers giving class time to discussing topics like resiliency, reflection, and self-regulation.

Another frame factor relates to following the appropriate district protocols to run a workshop series. Convincing administration to allow me to offer this to teachers during scheduled professional development meeting times is the most likely form in which teachers would want to attend, yet the administration could see my vision as being overly theoretical, idealistic, or not practical enough, and prevent me from offering during paid professional development days. Should this be the case, I would have to resort to reaching out to teachers to meet during unpaid times. While my plan is intended to be largely informal discussion, this would create significant challenges in getting my message out to teachers.

Methods

Posner (1995) describes five general perspectives for delivering content: traditional, experiential, structure of the disciplines, cognitive and behavioral. I will be using a combination of these perspectives in the workshops in which teachers can participate. However, I will primarily be pulling from the experiential perspective. This method pulls primarily from the theories of John Dewey. "Experiential learning aims to 'increase competence in areas such as planning, finding and making use of appropriate resources; persistence at a task; coping with new ideas, conflicting opinions, and people who are different; taking responsibility for others' welfare; and carrying out commitment to others'" (Hamilton, 1981 as quoted by Posner, 1995, p.

92). Additionally, the experiential perspective attempts to build new learning upon the foundation of each participant's experiences. Through my workshops, I am attempting to demonstrate to teachers that increasing the amount of time spent on discussing experiences and not only content will increase student engagement and motivation, while also attempting to get teachers to recognize the potential harm of cutting out the experiential perspective. Therefore, I feel that the learning environment that I use in conducting my workshops should be largely experiential. That said, there is some training, especially in terms of the scientific background and vocabulary that I will present that may need to tap into the traditional perspective. Ideally, most of the learning will be done through discussion being generated from teachers speaking their minds and bringing their own experiences as agents of education.

Program Structure

When considering the creation of a program, content structures must also be considered. The workshops that make up my professional development plan will contain discrete topics that could be studied at separate occasions, so if a teacher were only able to make one workshop, I believe that they would still benefit from the conversation. However, if a teacher attends all of the workshops, they will see each consecutive meeting builds upon the previous meetings, which is in line with Posner's (1995) view of a linear curriculum structure. As previously mentioned, the aim of this program is to foster discussion amongst the participants. Although the basic presentation of core information is controlled by the facilitator and represents a vertical content structure, the openness of the discussion should allow for cross curricular exchanges as well. Because my concern stems from psychology and the learning that our educational culture has created, and because my belief in what may help students rebound lies in focusing on aspects of teaching that will not directly aid in increasing student proficiency in a content area, I recognize

that I may need to be involved more in the conversations if the teachers are not persuaded. I want honest opinions and candid discussions during these workshops, so if teachers are not convinced that there is this issue in schools, then I may need to adjust and present information in a more traditional fashion in an effort to argue my case.

The program will be centered around three workshops. Each workshop will have a reading that I have chosen to prime the discussion of a particular topic by providing the participants with adequate background information or by placing them in a certain frame of mind. From there, I will simply act as a facilitator, ready with broad questions that can push the conversation if needed, but ideally, those that were interested enough to sign up for my workshops in the first place will drive the conversation themselves.

Workshop Plan

Workshop 1- A reflection and critique of education

Overview. The first topic will be the classroom environment, educational structure, and political forces in education**.** I believe that beginning with broad reflection of the educational system in which teachers work sets the stage for the recognition and acknowledgement that there are problems within the educational system that are worth combating, and that there are some issues that we can push back against without changing the overall structure of education, but recognizing the part that we play in the classroom in maintaining by simply changing the way we treat our students, and what we stress as important.

So much of a teacher's job is a day-to-day grind filled with delivering lessons, managing the class, organizing, and grading assignments, quickly reflecting on the effectiveness of the lesson, and then making small tweaks and future plans. There is little time for a critical look at why the job has transformed into this grind. This workshop will set the tone that we are not

discussing a new tech tool or lesson format, but a philosophical examination that can raise awareness of the consequences that environment can have on our students.

Workshop Plan. I will provide a brief introduction about the organization of the workshop and describe that my hope is for the group participating to become a community that is open-minded and willing to brainstorm ways to help students as people and lifelong learners first, and content specific learners second. This workshop will function as a pre-workshop discussion and will be centered around discussion generated from several questions designed to get teachers to look at their place in education and education as a whole. The workshop will begin with teachers being given the questions first. The teachers will have about 15-20 minutes to answer the questions for themselves. Then, we will discuss each question for between 5 and 10 minutes. The purpose for immediately jumping into discussion questions is to ascertain hopefully uninfluenced responses from teachers about their thoughts about education. After responding to the discussion questions, I will describe my goals for the workshop and what will come in workshops two and three.

Discussion Questions:

- I want to start off with getting an idea of what your day-to-day life in the classroom looks like. Please take us through a day in your classroom. Be as specific as possible: go through each class that you teach and some examples of interactions and implantation of lessons.

- Based on your opinions and beliefs, what should be the purpose of education in our society? How does that compare with the actual function that you think education holds in society?

- Is the reality of the educational system at large, in which you have been a student and are now a teacher, achieving that purpose? Why or why not?

- What outside factors influence you to teach a certain way? What would you change about your teaching if those influences were removed?

- What are the common lessons that children are learning from the hidden curriculum (will explain the hidden curriculum if necessary)?

Workshop 2 - An overview of self-efficacy

Purpose. The second of the three workshops will focus on self-efficacy. Teachers need to be able to recognize and understand the concept of self-efficacy and its related constructs. After first learning about what encompasses self-efficacy, teachers will connect their reflection from the first workshop to the concept of self-efficacy.

Workshop Plan. It will begin with the participants reading a chapter from "Self-efficacy and educational development." This book is a compilation of chapters from various self-efficacy psychologists, and it was edited by the originator of the self-efficacy construct, Albert Bandura. The specific chapter focuses on academic self-efficacy, its connection to many aspects of learning, like motivation and self-regulatory behavior, and therefore how improving self-efficacy can improve learning. After the reading, the participants will be given time to first consider their own thoughts on several discussion questions, followed by a discussion of their thoughts with the group.

Discussion Questions:

- Please write down your initial thoughts on the reading. What do you think of self-efficacy? What questions do you have about self-efficacy? etc.

- Based on your observations in your teaching career and what you learned of self-efficacy in the reading, how would you describe the self-efficacy beliefs of your students? Do you notice differences in self-efficacy beliefs among the different levels of your classes (level 2 vs level 1 vs honors vs AP)? Do you have any specific examples of conversations or observations of students that you would be willing to share (omitting student names) that shed light on your prediction.

- Please look over the state tests that in which students participate throughout their education in Pennsylvania (handout – Appendix A) Does this create a hidden curriculum that can impact students self-efficacy? Why or why not?

- How might the current structure of education foster or hinder student self-efficacy?

- What lessons might the hidden curriculum be teaching our students that could impact their self-efficacy?

Workshop 3 - Incorporating self-reg discussions in the classroom as a possible tool for increasing self-efficacy.

Overview. The third topic will be self-reg. Self-reg describes the science behind why students can become anxious and defiant, often due to environmental stimuli, and can teach strategies that help students recognize that they are off balance and therefore overcome their anxiety. Self-reg helps students recognize their agency in gaining control over their emotions. The actions one takes for self-reg can also be applied to learning as well, so when frustration builds during learning, students can stop, reflect, and recognize the source of frustration and overcome it, restoring their self-efficacy in their ability to learn. After the discussion questions, I will introduce a procedure called *A Descriptive Review of the Child* (highlighted more in chapter 5 and appendix B) that we will use as part of evaluating our progress towards paying attention to

the self-efficacy and self-regulation of our students and the environment that we create in our classrooms.

Hopefully, by the end of this workshop, teachers will have a greater respect for the hidden curriculum that they deliver to their students. Furthermore, I hope that they will value the impact that self-efficacy can play on educational motivation and see self-reg as a potential tool into restore or bolster the self-efficacy that has been lost in students. Finally, I hope that they use the information that they have gained on the influence of classroom environment and paying attention to student stress to tweak their approach in the classroom.

Workshop Plan. The workshop will begin with reading a chapter from *Reframed: Self-Reg for a Just Society* by Stuart Shanker. This chapter will introduce the psychology behind some negative behaviors; it will classify misbehavior versus stress behavior; it will differentiate positive versus negative forms of self-regulation; finally, it will distinguish between self-control and self-regulation and argue that self-regulation is more important in development. Then, as in the past workshops, participants will be given a series of discussion questions to consider and share with the others.

Discussion Questions:

- Please write down your understanding of the concept of self-reg and any questions that you may have regarding the reading.

- What is something that struck you about the importance of social connection in psychological development and self-regulation?

- Think again to the hidden curriculum that is presented in school. Does it create an environment that pushes students towards healthy modes of regulation or unhealthy modes of regulation?

- Do you feel that the ideas discussed in these workshops are important enough to carve out time in class to addressing?

- Do you see any changes that you could make to your daily teacher habits that may provide students with healthy mode of self-regulation and increase their self-efficacy beliefs regarding school?

Implementation

There are pluses and minuses regarding my philosophy of teaching and action plan design. As the design requires minimal resources and is meant to be fluid and based on each individual's experiences and interpretations of the questions and readings, it can be adapted for a number of modes of presentation. It can be implemented in person, which would be my personal choice to encourage connection and create a sense of community more easily. However, it could easily be adapted to a digital format using either zoom discussions or discussion boards. I also believe that this mode of learning, where things are not forced and are instead created from each individual's experiences and sharing those experiences often leads to the most significant chance to change people's actions.

The potential barriers to my pedagogical choices and philosophies are that they rely on intrinsic motivation and a desire from the participants to be truly open minded: something that is not necessarily commonplace in the task centered, time constrained lives that most are living today. Furthermore, the method that I described above as potentially the most transformative is often the most difficult in which to create a sense of buy-in. Beyond intrinsic motivation and a desire to examine on a deep level the educational system and one's own actions, it takes high levels of trust between participants to have the candid discussions that could have the largest impact. This style of pedagogy relies on participation. I realize that I may have to kickstart or

guide the process in many instances. However, with a subject area that is very fluid and open-ended, there is not going to be one correct approach or one thing that teachers should change, and I want teachers to determine what changes they should make for themselves based on what they have discussed.

This workshop is not meant to be a cookie cutter fix, but a recognition that the current educational system has problems in fostering student self-efficacy, and that there is a chance that more time committed to discussing values and passing on self-reg habits may address that problem. How teachers choose to carve out that time and have these conversations with their students is up to them.

Chapter Five: Program Evaluation

Assessment and Evaluation Theory

When creating a curriculum, one must always consider and develop a plan to evaluate the success of the curriculum in reaching its intended outcomes. Essentially, one must predict whether or not the intended purpose of the curriculum was achieved prior to the curriculum being executed (Posner, 1995). This can be a very difficult needle to thread, and I believe that this has played a part in the evolution of public education curricula in becoming more standardized, detailed, and rote. The desire to say that a curriculum plan can numerically predict or improve the outcome of learning ahead of the execution of that plan has created a top-down structure where every last detail of the curriculum is prescribed. This dramatically reduces flexibility. The more detailed the expected outcome, the narrower the prospective pathways to achieving said outcome (Posner, 1995).

Being conscious of this, combined with my overall concern with the hidden curriculum, my goal is to evaluate in an open manner. I do not want the participating teachers to feel limited by detailed preplanned outcomes. I want the process to be a pursuit of ongoing collaboration, brainstorming, and revision.

Assessment Measures

Before describing my specific plan for monitoring the impact of these workshops, it is important to describe a divergence that is present in my mind regarding evaluation of the program. As a science teacher, I feel a strong pull to find a way to evaluate the program in a way that is easily understood and concrete. However, due to my psychology background and considering my goals of building a community with the participants of my program, and getting teachers to spend more time focusing on the less measurable yet impactful areas of learning in

their classrooms, I feel that simple surveys or test data (numbers in other words) would be me falling right into the same negative pattern of evaluation that I claim is harmful to students. Therefore, most of my evaluation methods are meant to be open ended and fluid. It is possible, or perhaps likely, that my first post workshop evaluation could start this entire process anew by coming up with new ideas, new strategies and a total rethinking of what is useful in the classroom.

As is evident by my action plan, the target of my interest is not a very tangible and easily measurable area of research, and therefore I will be using an array of qualitative assessments to gain insight to the impact of my action plan. I will request the participating teachers give an academic self-efficacy survey to their students at the beginning of the school year, at the midpoint of the year, and at the end of the school year. Students will be asked to reflect and elaborate on their scores and communicate why they feel the way they do. If their scores change over the course of the year, they will be asked to explain why they are evaluating their own self-efficacy differently, so they may recognize what is having positive or negative impacts on their beliefs in their abilities to learn.

I will also ask participating teachers to reconvene with the group once every two to three months (at the end of each quarter) and share what conscious changes they have made to their approach in the classroom to increase self-efficacy, and any specific moments where a student was showing stress behavior and how they handled it. In order to provide the participant teachers structure for their reflections, I will be using a procedure developed by Patricia Carini in the 1960's called *The Descriptive Review of the Child* (Cushman, 1997). Using this procedure (detailed in Appendix B) will allow teachers to focus on one student to begin developing strategies that work for them in reengaging students and restoring self-efficacy. The reason I am

choosing this procedure is because it purposefully pushes teachers to look beyond grades, assignment completion, and test scores. It pushes teachers to take note of (and even document if possible) behavior, body language, and the interactions of that child. Furthermore, the whole point of this procedure is to ask why is that child displaying or acting in this manner or how is the environment that I create potentially bringing out these behaviors or attitudes. To start, I will recommend that each participating teacher only complete this procedure with the student that scores the lowest in their classes on the self-efficacy questionnaire at the beginning of the school year. This will allow teachers to build comfort with the procedure and have a very specific focus. Each meeting we will have two teachers share information about their students with the lowest self-efficacy ratings. Through sharing and collaborating about potential solutions for each student, teachers will be hearing strategies that worked for others, and will be brainstorming potential strategies to try moving forward.

My action plan is not meant to directly connect to test scores. It is meant to increase reflection and increase teacher's ability to adapt and make their classroom environments better suited to the holistic development of students. More importantly, it is meant to increase reflection in students, and increase their ability to be resilient and find ways to learn in all environments. Therefore, I do not want to create an assessment strategy that relies solely on some objective evaluation that a third party administers. I want the participants to evaluate themselves and seek out barriers to self-efficacy in the classroom. With something so grounded in the psychology of learning there will not be a silver bullet. What is a barrier for one student to develop high self-efficacy in their learning may not be a barrier for others. This is why it is important not just to create an environment that supports learning, but to have open conversations about students' thoughts about school and their classes. Furthermore, people have been trained to connect an

assessment period with the end of the training or unit, and they move on without further consideration on the subject. I want the evaluation of student self-efficacy and the environment of the classroom to be ongoing and continue beyond my program. I believe it is arrogant to boil down the complexity of this issue to a score on a test. That said, I do recognize that this brings me to another potential frame factor in the perception of my program. It may be difficult for the administration to approve my program due to the lack of numerical data that it would generate, and I may have to come up with more quantitative assessments in order to run the program despite my own beliefs that these assessments may undermine the true change that I am seeking to instill in minds of teachers and students.

Looking to the Future

As mentioned in the previous sections, I have a background in science, and believe that science is ongoing and humble. With these two core principles in mind, I know that this project will most likely lead to more questions than answers. I hope that the open-ended nature of the workshops and the candid conversations between the participants presents me with many new strategies to increase student self-efficacy beyond focusing on self-reg. Additionally, I hope that hearing other educator's honest critiques of education can inspire them to address other areas that may bolster the holistic education of our students.

That said, for the sake of this project, I hope that the information discussed in the workshops provides some positive changes to the self-efficacy of students. What is being presented in these workshops is really only the tip of the iceberg regarding both self-efficacy and self-reg, and the rest is being created through the inclusion of each individual teacher's experience. If there are promising returns, these workshops could be extended and perhaps even an entire course could be created to build a large toolbox of strategies to pass on positive self-reg

habits to students. Also, if there are positive results, this would encourage the administration to acknowledge the gaps in the educational model and perhaps make positive changes to school culture.

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Appendix A - Academic Self-Efficacy Survey and Student Elaboration

Self-Efficacy Formative Questionnaire

Please **CHECK ONE** response that best describes you. Be honest, since the information will be used to help you in school and also help you become more prepared for college and careers. There are no right or wrong answers!

Student ID_____   Date _____

	Not very like me				Very like me
	1	2	3	4	5
1. I can learn what is being taught in class this year.	☐	☐	☐	☐	☐
2. I can figure out anything if I try hard enough.	☐	☐	☐	☐	☐
3. If I practiced every day, I could develop just about any skill.	☐	☐	☐	☐	☐
4. Once I've decided to accomplish something that's important to me, I keep trying to accomplish it, even if it is harder than I thought.	☐	☐	☐	☐	☐
5. I am confident that I will achieve the goals that I set for myself.	☐	☐	☐	☐	☐
6. When I'm struggling to accomplish something difficult, I focus on my progress instead of feeling discouraged.	☐	☐	☐	☐	☐
7. I will succeed in whatever career path I choose.	☐	☐	☐	☐	☐
8. I will succeed in whatever college major I choose.	☐	☐	☐	☐	☐
9. I believe hard work pays off.	☐	☐	☐	☐	☐
10. My ability grows with effort.	☐	☐	☐	☐	☐
11. I believe that the brain can be developed like a muscle.	☐	☐	☐	☐	☐
12. I think that no matter who you are, you can significantly change your level of talent.	☐	☐	☐	☐	☐
13. I can change my basic level of ability considerably.	☐	☐	☐	☐	☐

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Reflection Questions for Students After Completing the Questionnaire for the first time.

- I want you to look closely at your responses to the questionnaire. Please try to describe why you answered the way you did. Here are some guiding thoughts that may help:
  - o Has anyone in particular caused you to feel this way about yourself (if you do not want to name anyone, you may simply write a teacher or a family member etc.)? Can you provide a specific example of something that they did or said to make you feel this way?
  - o Do you think that these feelings about yourself can change? What types of things would help you increase your rating about yourself for a particular question?

Reflection Questions for Students After Completing the Questionnaire in the second, third and fourth marking periods (students will be given their previous questionnaires after completing this attempt).

- How have your efficacy ratings changed since the beginning of the year?
- Have you noticed anything different in your feelings during the school day about your classes, your fellow students, or your teachers?
- Can you think of any other changes that would help you increase the ratings for a particular question?

Appendix B - A Descriptive Review of the Child Post Workshop Meeting Procedure (Cushman, 1996)

Making the Whole Student Visible: The Descriptive Review of a Child

At the Prospect Center for Education and Research in Bennington, Vermont, Patricia Carini developed one of the earliest and most influential processes for reflecting on students and their work. As the Center began to archive examples of student work from the Prospect School, an independent school founded in 1965, Carini and her staff recognized the potential for teacher learning through close collaborative looks at such work. The ensuing "Descriptive Review of a Child" comprised a series of rounds of description in which the observations of a number of participants accrue around a few focused questions.

The process aims, writes Rhoda Kanevsky in her essay condensed below, to "make the child visible" as a "unique person who is trying to make sense of the world." Guided by a facilitator, the presenting teacher describes the child; then questions and comments from other participants evoke new information and insights. The intent, she says, is not to change the child but to help the teacher see the child in a new light, and "use the child's interests and values to create harmony in the child's school life." The protocol is summarized as follows:

1. The chairperson convenes the session. The teacher-presenter gives the child's basic statistics: a pseudonym for the sake of privacy, as well as such facts as grade, age, and birth order. The chairperson describes the teacher-presenter's "focusing question" (e.g., "How can I help Jason work more productively with other children in the classroom?").

2. The presenting teacher may describe the classroom context if it would be helpful to participants: the room plan, setting, schedule, etc. Then she describes the child, including both characteristic and unusual behavior, using the prompts in the following categories:

Physical Presence and Gesture. Characteristic gestures and expressions: How are these visible in the child's face, hands, body attitudes? How do they vary, and in response to what circumstances (e.g., indoors and outdoors)? Characteristic level of energy: How would you describe the child's rhythm and pace? How does it vary? How would you describe the child's voice: its rhythm, expressiveness, inflection?

Disposition. How would you describe the child's characteristic temperament and its range (e.g., intense, even, up-and-down)? How are feelings expressed? Fully? Rarely? How do you "read" the child's feelings? Where and how are they visible? What is the child's emotional tone or "color" (e.g., vivid, bright, serene, etc.)?

Relationships with Children and Adults. Does the child have friends? How would you characterize those attachments? Are they consistent? Changeable? Is the child recognized within the group? How is this recognition expressed? Is the child comfortable in the group? How would you describe the child's casual, day-to-day contact with others? How does this daily contact vary? When there are tensions, how do they get resolved? How would you describe the child's relationship to you? To other adults?

Activities and Interests. What are the child's preferred activities? Do these reflect underlying interests that are visible to you? For example, does drawing or story writing center on recurrent and related motifs such as superhuman figures, danger and rescue, volcanoes, and other large-scale events? How would you describe the range of the child's interests? Which interests are intense, passionate? How would you characterize the child's engagement with projects (e.g., quick, methodical, slapdash, thorough)? Is the product important to the child? What is the response to mishaps, frustrations? Are there media that have a strong appeal for the child (e.g., paint, blocks, books, woodworking)?

Formal Learning. What is the child's characteristic approach to a new subject or process or direction? In learning, what does the child rely on (e.g., observation, memory, trial and error, steps and sequence, getting the whole picture, context)? How does that learning approach vary from subject to subject? What is the child's characteristic attitude toward learning? How would you characterize the child as a thinker? What ideas and content have appeal? Is there a speculative streak? A problem-solving one? A gift for analogy and metaphor? For image? For reason and logic? For insight? For intuition? For the imaginative leap? For fantasy? What are the child's preferred subjects? What conventions and skills come easily? Which are hard?

3. The chairperson summarizes the teacher's portrayal, calling attention to any dominant themes or patterns.

4. The chairperson asks for descriptions from others who have worked with or observed the child. The presenter may also report comments from others who are not present.

5. The chairperson briefly describes the child's previous school experience, any important medical data, and any family information directly supplied to the school by the family (not by hearsay). The teacher also reports what she knows directly from the family. Unless the family is included in the Review, the review focuses primarily on what the teacher can do to support the child.

6. After the chairperson restates the focusing question, the participants offer questions or comments. This opens out multiple perspectives and generates new information that may enhance the teacher's insights, expectations, or approach, or may even shift her focusing question itself.

7. The chairperson summarizes this new information, restates the focusing question, and asks for recommendations drawn from both the foregoing description and participants' own experiences and knowledge of other children. These recommendations focus on ways to support the child's strengths (not change the child) and create harmony in his or her school life. They may contradict or build on each other, and the teacher need not comment on them or take them. They serve as a resource for all present.

8. The chair pulls together and critiques the Review, summarizing any themes of the recommendations or follow-up plans.

Condensed with permission from Exploring Values and Standards: Implications for Assessment. *New York: NCREST, Teachers College, Columbia University, 1993.*

The focusing questions that the group will attempt to untangle when listening to the description of each student will be:

1. How do the behaviors described about this student shed light on their overall well-being (mentally, physically and emotionally)?

2. How do the behaviors described about this students shed light on their attitudes towards school?

3. How can we use this information to make small changes to our classroom environment or interactions with this student to increase their self-efficacy of learning?