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Effectively Teaching for Self-Efficacy: Empowering Students through Mastery Learning, Trauma-Informed Teaching, and Anti-Racist Education

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Abstract:

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**Effectively Teaching for Self-Efficacy: Empowering Students through Mastery Learning,
Trauma-Informed Teaching, and Anti-Racist Education**

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Education Studies Capstone

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Abstract

This capstone explores the concept of self-efficacy and provides an overview of why it is such an important factor influencing student motivation, engagement, and achievement. It examines how the promotion of student self-efficacy is currently limited by a range of classroom and environmental variables, as well as how teachers can modify these conditions to effectively cultivate student self-efficacy. By synthesizing literature from the scholarly fields of self-efficacy, mastery learning, trauma-informed teaching, and anti-racist education (ARE), this capstone provides a theoretical framework for teachers to effectively promote self-efficacy for all students, thereby promoting optimal student motivation, engagement, and achievement. Implications of this framework include combatting socioeconomic and racial inequity, as well as ultimately diminishing the opportunity gap.

Introduction

Within the United States, students from low-income families do not perform as well as students from high-income families on various metrics of achievement, such as standardized test scores, grades, graduation rates, and college enrollment and retention rates.¹ While some label this phenomenon as the “achievement gap,” others label it as the “opportunity gap,” highlighting the lack of opportunity for low-income students to access high-quality teachers.² Indeed, research demonstrates that teacher quality plays a significant role in determining student achievement. Although low-income students are the most in need of high-quality instruction, they are more likely to be taught by inexperienced teachers.³

¹ Reardon, “The Widening Income Achievement Gap.”

² Noguera, “THE ACHIEVEMENT GAP.”; Akiba, LeTendre, and Scribner, “Teacher Quality, Opportunity Gap, and National Achievement in 46 Countries.”

³ Akiba, LeTendre, and Scribner, “Teacher Quality, Opportunity Gap, and National Achievement in 46 Countries.”

Moreover, the opportunity gap is inextricably intertwined with racial inequality, as most children living in poverty are minority students living within urban environments.⁴ Schools serving predominantly low-income minority students, such as those located in center cities or poor rural areas, are disproportionately more likely to employ the least prepared teachers, who are more often uncertified, possess low SAT or ACT scores, or lack a major in the subject that they teach (i.e., out-of-field teachers).⁵ Students of color, especially African American and Latinx students, face these inequities within both the classroom and the school system, as they are more likely to experience low teacher expectations and inequitable per student funding.⁶

Government officials have attempted to mitigate the opportunity gap, such as when the Bush administration implemented national standardized testing benchmarks through No Child Left Behind (NCLB) in 2001. By linking changes in standardized test scores to changes in school funding, NCLB attempted to promote high academic standards and ensure school accountability for increasing student achievement. Instead of improving test scores, however, NCLB produced harsh penalties for many schools and a culture in which teachers spent extensive amounts of time on test preparation rather than on non-standardized test topics, such as science or social studies.⁷ After NCLB failed to decrease the gap, the Obama administration attempted to do so in 2009 through Race to the Top (RTTT), a competitive federal grant program in which states received funding based off of the rigor and quality of their proposed innovations for state education reform.⁸ While some sources suggest that RTTT has improved student achievement through

⁴ Waxman, Padron, and Arnold, "Effective Instructional Practices for Students Placed at Risk of Academic Failure."

⁵ Flores, "Examining Disparities in Mathematics Education."; Akiba, LeTendre, and Scribner, "Teacher Quality, Opportunity Gap, and National Achievement in 46 Countries."

⁶ Flores, "Examining Disparities in Mathematics Education."

⁷ Noguera, "THE ACHIEVEMENT GAP."

⁸ McGuinn, "Stimulating Reform."

measures such as enhanced teacher and principal effectiveness and turning around low-performing schools, it has failed to substantially improve the landscape of student achievement.⁹ Indeed, despite numerous educational reforms, the opportunity gap remains an immense problem within American schools.

Thus far, however, federal and state reform efforts have failed to consider the role that self-efficacy beliefs play in exacerbating the opportunity gap and limiting student achievement. A plethora of research shows that self-efficacy expectations - that is, an individual's beliefs regarding their abilities to accomplish goals - play an important part in influencing engagement, motivation, and achievement. A student with a strong sense of self-efficacy would, for instance, expect to do well on their upcoming math test and likely accomplish this goal, whereas a student with a weak sense of self-efficacy would not expect to do well and likely perform poorly. Indeed, self-efficacy is such an influential variable impacting academic achievement that it is a stronger predictor of student performance than prior achievement or ability in a subject.

Mastery learning experience - that is, success in accomplishing a learning objective - is the most important determinant of whether an individual's self-efficacy beliefs increase or decrease in a given domain. The presence of mastery experience increases self-efficacy by prompting individuals to recognize their personal growth and feel competent, while an absence of mastery experience decreases self-efficacy by prompting individuals to feel incompetent as a result of not achieving their goal.

Furthermore, self-efficacy beliefs are self-reinforcing in nature, as positive or negative self-efficacy beliefs act as indicators of personal competence for future learning activities. Individuals with positive self-efficacy beliefs will feel competent enough to engage in learning

⁹ Schaffhauser and 11/10/16, "Race to the Top Funding Impact on Student Outcomes 'Not Clear' -."; Miller and Hanna, "Four Years Later, Are Race to the Top States on Track?"

activities, thereby increasing their likelihood of attaining mastery and developing heightened self-efficacy for future learning. Individuals with negative self-efficacy beliefs, however, will avoid engaging in learning activities because they feel incompetent. Lack of engagement results in an absence of mastery experience, which promotes additional feelings of incompetence and limits individuals with negative self-efficacy beliefs by maintaining poor self-efficacy for future learning.

Negative self-efficacy beliefs therefore exacerbate the opportunity gap, fueling poor performance of lower-achieving students through decreased engagement and likelihood of attaining mastery. Vice versa, the opportunity gap helps create a vicious cycle of negative self-efficacy beliefs for lower-achieving students, as an accumulated lack of mastery experience fuels poor self-efficacy for future learning tasks. Positive self-efficacy beliefs, however, could be utilized as a means to increase student achievement and ultimately diminish the opportunity gap. Indeed, teachers can set up their classrooms to cultivate student self-efficacy, primarily through the implementation of mastery learning.

Mastery learning is an instructional strategy grounded in the belief that most students can master content if they are provided with high-quality instruction and increased opportunities for learning. Mastery learning involves several key components, including establishing performance benchmarks situated on a learning spectrum towards mastery, utilizing performance benchmarks to inform frequent assessment of student understanding, and employing knowledge from assessment to improve student learning via feedback, scaffolding, and “correctives,” which are alternative teaching methods from initial instruction. These principles ensure that students have additional learning opportunities to try and attain mastery by engaging with various elements of high-quality instruction.

By increasing the likelihood that students will attain mastery, mastery learning is an ideal classroom model to cultivate student self-efficacy. Indeed, teachers can increase student self-efficacy by promoting mastery experiences in the following ways: facilitating student engagement with moderately challenging goals, delivering frequent, task-specific feedback, promoting student cognitive appraisal of performance, and revamping traditional classroom structures that promote social comparison amongst students with differential learning rates.

Additionally, by serving as an ideal classroom model for promoting self-efficacy, mastery learning explains several ways in which federal and state reform efforts have failed to close the opportunity gap. Mastery learning enhances student achievement by pairing rigorous performance benchmarks with frequent assessment, whereas NCLB established rigorous performance benchmarks alongside infrequent, standardized assessments. Although standardized assessments are indeed a method of measuring student understanding, they occur too infrequently and too late in the year for teachers to use assessment information to effectively provide feedback and scaffold instruction to accommodate each student's learning needs. As a result, rigorous performance benchmarks and summative, standardized assessments cannot effectively increase student achievement.

Mastery learning also highlights a key failure of federal and state efforts that attempted to close the opportunity gap in that NCLB and RTTT did not provide students with additional opportunities to learn through correctives. Pairing increased time for learning with high-quality instruction significantly increases the likelihood that lower-achieving students can succeed, as these students often have slower learning rates and cannot attain mastery within the typical window of instruction. Fixed amounts of time for learning, however, are the norm within

traditional classroom structures, so reform efforts which do not utilize alternative classroom models cannot effectively help lower-achieving students with slower learning rates succeed.

Indeed, widespread implementation of mastery learning could be quite effective in diminishing our nation's opportunity gap, as it would promote self-efficacy and achievement for many students. Mastery learning would not, however, be sufficient to promote self-efficacy for all students. Indeed, experiences of trauma - that is, adverse or life threatening conditions which create enduring negative effects on an individual's physical, mental, emotional, social, or spiritual well-being - inhibit student learning and self-efficacy development. From experiencing sexual assault to living in poverty, students can endure a range of trauma which - when experienced chronically - can create learned helplessness and impede them in their ability to cultivate self-efficacy. Trauma experiences of abuse and neglect in particular limit self-efficacy by damaging student-teacher trust.

Trauma-affected students may therefore require additional classroom modifications in order to effectively cultivate self-efficacy. Trauma-informed teaching can be utilized as a way for teachers to understand the impact of trauma and modify classroom environments to accommodate the needs of trauma-affected students. Indeed, trauma-informed teaching can help teachers respond appropriately to student manifestations of trauma and ultimately promote self-efficacy for trauma-affected students, primarily through rebuilding student-teacher trust.

While trauma-informed teaching is an effective method for helping teachers respond appropriately to a variety of student trauma experiences, it is not sufficient for educating teachers about a unique type of trauma: racial trauma. Minority students experience racial trauma - that is, lasting physical, mental, and emotional harm caused by racial harassment or discrimination - most pressingly in schools. Racial trauma disempowers minority students in several ways, such

as by causing them to feel internally devalued in comparison to their white peers. This in turn limits minority students in their ability to develop self-efficacy, as they may not feel competent enough to engage in learning activities and progress towards attaining mastery.

Anti-racist education - an instructional framework that helps student become aware of and expose racial inequality within institutional power structures - can act as a remedy for student experiences of racial trauma within the classroom. Indeed, teachers can utilize anti-racist principles and practices to ultimately empower minority students in their ability to cultivate self-efficacy, primarily by repairing feelings of internalized devaluation. Given that minority students are disproportionately impacted by our nation's opportunity gap, anti-racist education is an especially valuable classroom tool for helping minority students cultivate self-efficacy and increase their achievement.

In short, promoting self-efficacy within the classroom could be a highly effective method of increasing student achievement and ultimately diminishing the opportunity gap. While implementing mastery learning within classrooms would be sufficient to promote self-efficacy for many students, it would not be sufficient to promote self-efficacy for students who are affected by trauma and/or are students of color. Indeed, so long as our nation's opportunity gap is based on socioeconomic status and racial divides, increasing the self-efficacy and academic achievement of minority students and/or students who are living in poverty will require additional classroom modifications. The simultaneous implementation of mastery learning, trauma-informed teaching, and anti-racist education is therefore needed to promote self-efficacy and academic achievement for *all* students.

Research Questions

- In what ways can teachers effectively cultivate self-efficacy in order to promote optimal student motivation, engagement, and achievement within the classroom?
- In what ways can teachers effectively cultivate self-efficacy for all students while acknowledging trauma experiences and race as key factors impacting student motivation, engagement, and achievement?

Methodology

The integration of literature from self-efficacy, mastery learning, trauma-informed teaching, and anti-racist education (ARE) is utilized to create a theoretical framework for teachers to effectively promote self-efficacy for all students. In the following section, I describe what self-efficacy is and why it is such an important variable impacting student achievement. I then explain how current classroom conditions are detrimental to the promotion of self-efficacy and how the implementation of mastery learning can act as a remedy. Next, I explore trauma as an environmental barrier and describe how trauma-informed teaching can help teachers cultivate self-efficacy for trauma-affected students. Lastly, I analyze how minority students are uniquely limited in their ability to cultivate self-efficacy through experiences of racial trauma. My findings conclude with an explanation of how teachers can implement ARE to begin a process of racial healing and ultimately empower minority students through increased self-efficacy. See Figures 1 & 2 for a visual guide detailing how the development of self-efficacy is limited and how it can be effectively promoted using this framework.

**Classroom & Environmental Barriers to Promoting
Self-Efficacy**

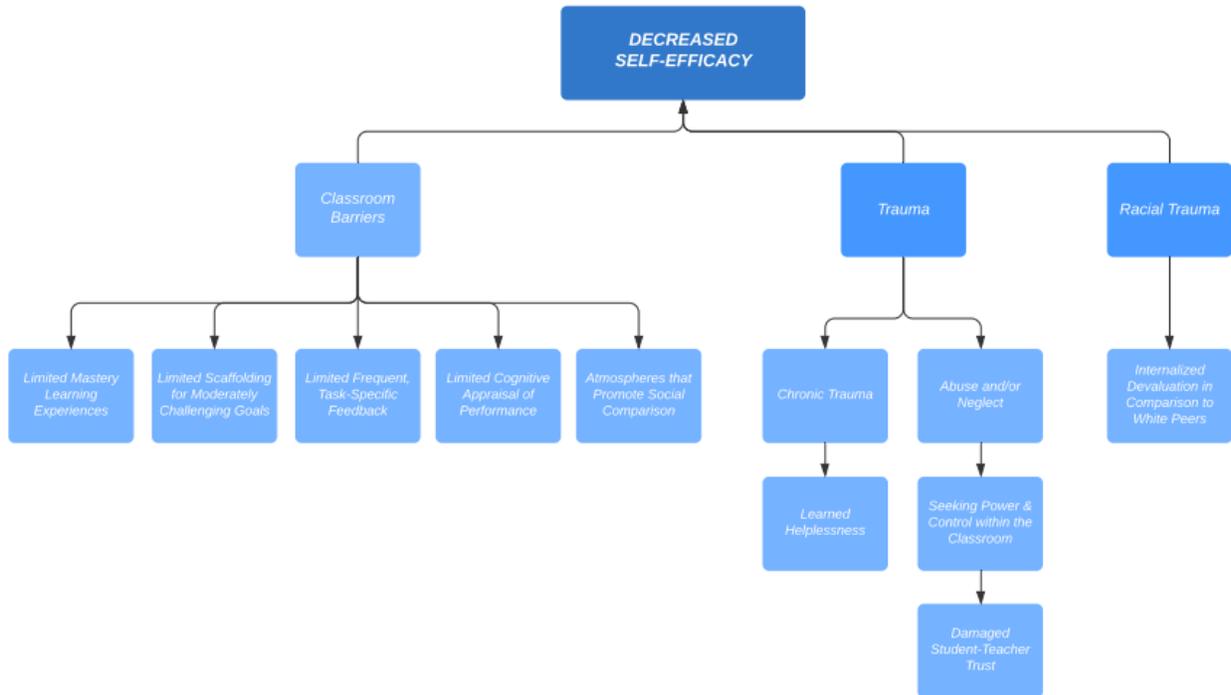


Fig. 1 - Classroom & Environmental Barriers to Promoting Self-Efficacy

Effectively Teaching for Self-Efficacy

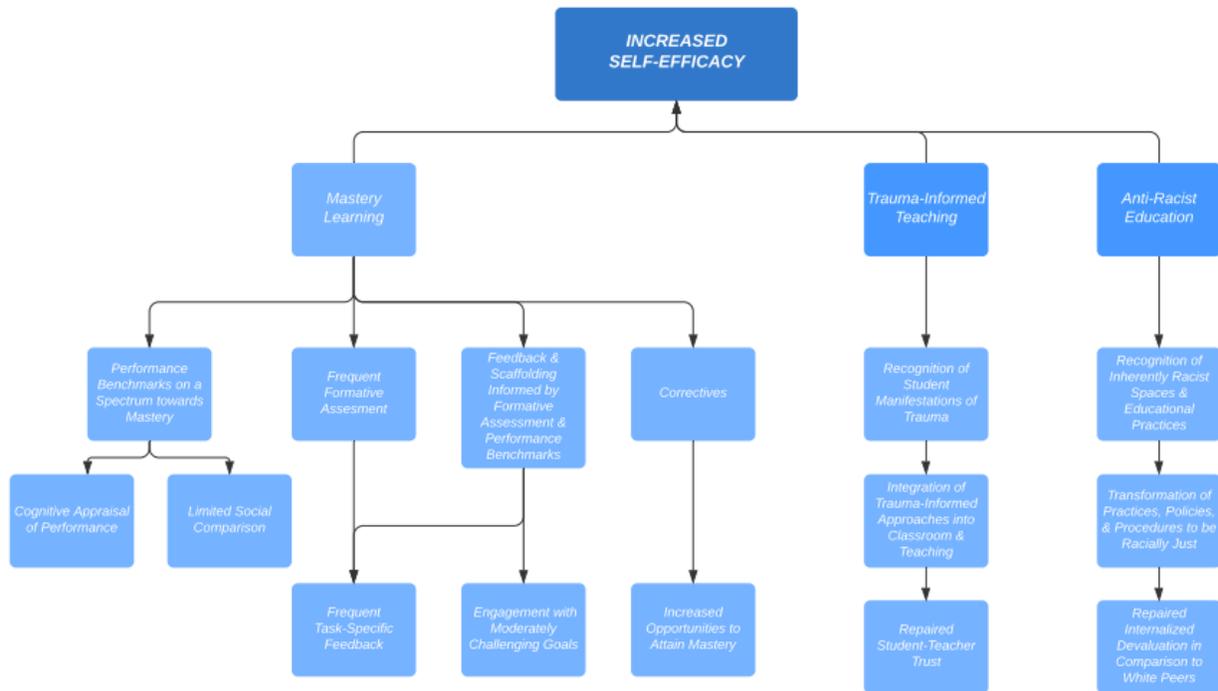


Fig. 2 - Effectively Teaching for Self-Efficacy

Findings & Analysis

Self-Efficacy as a Predictor of Academic Achievement

There has been considerable research regarding how to increase academic achievement. Given that student ability does not fully explain achievement, academic self-regulation and motivation emerged as key research variables.¹⁰ Self-efficacy, defined by Fall (1994) as “an individual's belief about personal ability to take action to meet needs,” is an important concept within motivation and achievement literature, as self-efficacy is a stronger predictor of student performance than prior achievement or ability.¹¹ Indeed, self-efficacy beliefs often mediate the

¹⁰ Schunk, “Commentary on Self-Regulation in School Contexts.”

¹¹ Fall, “SELF-EFFICACY: AN ADDITIONAL DIMENSION IN PLAY THERAPY.”; Cassidy, “Resilience Building in Students.”

influence of prior achievement or ability on performance, and 51% of the variation in student achievement is attributed to varying degrees of student self-efficacy.¹²

Highly self-efficacious individuals are more likely to set challenging goals and apply cognitive and metacognitive strategies to achieve those goals.¹³ They have greater persistence and regain confidence more quickly after failures or setbacks.¹⁴ Indeed, Schunk states that “once a strong sense of efficacy is developed, a failure may not have much impact.”¹⁵ Highly self-efficacious individuals are also more likely to become deeply engaged in activities, exhibit higher well-being, and to heavily self-regulate, defined as “the degree to which students are metacognitively, motivationally, and behaviorally proactive regulators of their own learning process.”¹⁶ Self-efficacy is a self-regulated learning process, because it equips individuals with the power to change their cognition, behavior, and ultimately shape their environment.¹⁷

The Mechanism: How Self-Efficacy Expectations Influence Achievement

Self-efficacy beliefs start to affect an individual’s performance before they even begin a learning activity.¹⁸ Indeed, the pre-performance phase within the domain of achievement consists of creating self-efficacy expectations while anticipating the task ahead. Within the performance phase, individuals are engaged in an activity and receive feedback, while the post-performance

¹² Karp, “Teacher Expectations and the Mediation Effects of Trust on Eighth Grade Adolescent Academic Self-Efficacy and Achievement.”; Pajares and Schunk, “Self-Beliefs and School Success: Self-Efficacy, Self-Concept, and School Achievement.”

¹³ Zimmerman, Bandura, and Martinez-Pons, “Self-Motivation for Academic Attainment.”

¹⁴ Pajares and Schunk, “Self-Beliefs and School Success: Self-Efficacy, Self-Concept, and School Achievement.”

¹⁵ Schunk, “Self-Efficacy and Academic Motivation.”

¹⁶ Pajares and Schunk, “Self-Beliefs and School Success: Self-Efficacy, Self-Concept, and School Achievement.”; Caprara et al., “Looking for Adolescents’ Well-Being.”; Zimmerman, Bandura, and Martinez-Pons, “Self-Motivation for Academic Attainment.”

¹⁷ Schunk, “Goal Setting and Self-Efficacy During Self-Regulated Learning.”

¹⁸ Pajares and Schunk, “Self-Beliefs and School Success: Self-Efficacy, Self-Concept, and School Achievement.”; Schunk, “Self-Efficacy and Classroom Learning.”

phase consists of responding to feedback (e.g., good vs. bad mood after receiving a grade on an exam).¹⁹

The relationship between these three phases explains why self-efficacy is a self-reinforcing mechanism (see Fig. 3). Indeed, reactions to feedback within the post-performance phase strongly influence the pre-performance phase via self-efficacy expectations for future learning. If an individual attributes negative performance feedback to their lack of intelligence, for example, they will perceive themselves as incompetent and establish poor self-efficacy beliefs for future learning activities within that domain.²⁰ These beliefs will subsequently impact their behavior, as people generally engage in activities in which they feel capable and avoid activities in which they do not.²¹ Lack of engagement with future learning activities will consequently result in an absence of mastery experience, which exacerbates an individual's negative self-efficacy beliefs and sustains poor self-efficacy and achievement for future learning.

The self-reinforcing nature of self-efficacy can therefore be an extremely vicious or gratifying cycle, depending on whether one's self-efficacy beliefs are positive or negative. Indeed, individuals who interpret performance feedback as indicating personal competence will develop a strong sense of self-efficacy, subsequently increasing their likelihood of mastery experience and reinforcing positive self-efficacy beliefs for future learning. The powerful, self-reinforcing nature of self-efficacy also explains why it is a stronger predictor of student performance than prior achievement or ability, as individuals inherently interpret the results of their actions as indicators of personal competence for future action.²²

¹⁹ Kogut, "Adult Attachment Styles, Self-Efficacy, and Causal Attributional Style for Achievement-Related Failures."

²⁰ Kogut.

²¹ Pajares and Schunk, "Self-Beliefs and School Success: Self-Efficacy, Self-Concept, and School Achievement."

²² Urdan and Pajares, *Self-Efficacy Beliefs of Adolescents*.

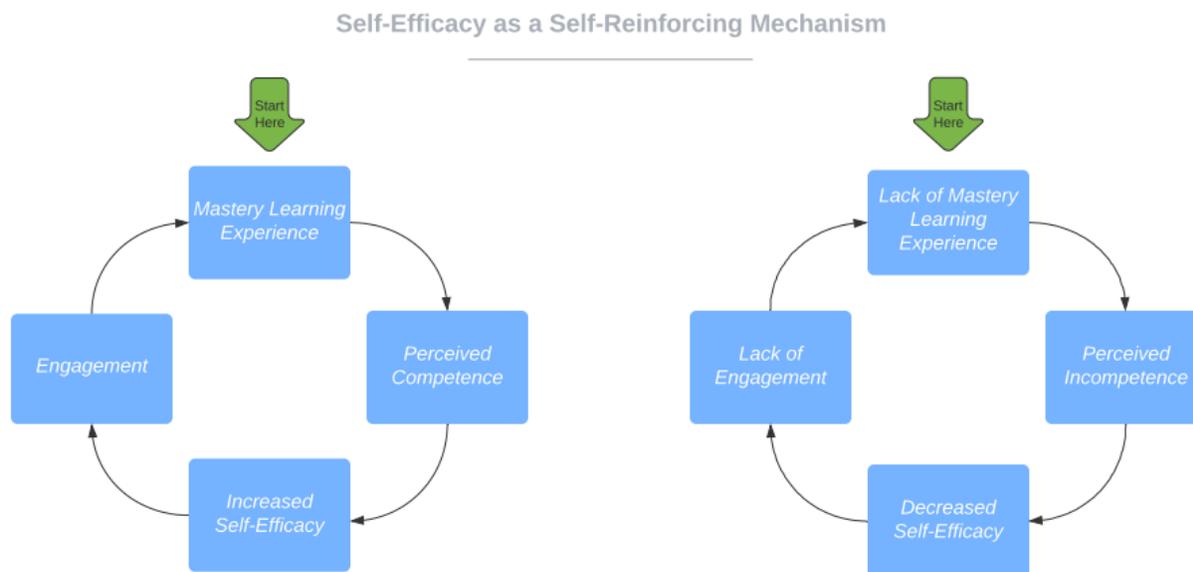


Fig. 3 - Self-Efficacy as a Self-Reinforcing Mechanism

Promoting Self-Efficacy within the Classroom

Self-efficacy is a task and context-specific state-like variable that can be learned.²³ Teachers can help students build self-efficacy in many ways, such as by providing immediate, frequent, task-specific feedback, promoting effort and perseverance as a way to overcome obstacles, explicitly teaching needed learning strategies, identifying self-handicapping, emphasizing student recording of accomplishments, capitalizing on student choice and interest, having students set moderately challenging proximal goals, promoting cognitive appraisal of performance, and stressing functional attributions for success and failure - such as effort and use of learning strategies.²⁴

The research further demonstrates that the most influential variable impacting self-efficacy is the presence or absence of mastery learning experiences. Mastery learning experience

²³ Stajkovic, "Development of a Core Confidence-Higher Order Construct."

²⁴ Urdan and Pajares, *Self-Efficacy Beliefs of Adolescents*.; Margolis and McCabe, "Self-Efficacy."; Siegle and McCoach, "Increasing Student Mathematics Self-Efficacy Through Teacher Training."; Margolis and McCabe, "Improving Self-Efficacy and Motivation."

- that is, success in achieving a given learning objective - increases self-efficacy by promoting self-recognition of skill acquisition and perceived competence. On the other hand, an absence of mastery learning experience can decrease self-efficacy by prompting one to perceive their performance as a failure and regard themselves as incompetent.²⁵ Environmental factors, such as atmospheres of social comparison and teacher cues, can also influence self-efficacy by serving as indicators of an individual's competence.²⁶ Indeed, such factors communicate how well an individual is learning and inform their self-efficacy beliefs for future learning experiences.²⁷

The Impact of Social Comparison on Self-Efficacy

Classroom environments which endorse social comparison are especially detrimental to the self-efficacy beliefs of lower-achieving students. Indeed, lower-achieving students have delicate self-efficacy beliefs as a result of limited mastery experiences, and school practices that stress “standardized, normative assessments, involve ability grouping and lock-step instruction, use competitive grading practices, and encourage students to compare their achievement with that of their peers” can cause them to feel inadequate in comparison to higher-achieving students.²⁸ In essence, these educational practices exacerbate the pre-existing poor self-efficacy beliefs of lower-achieving students by making them feel as though they lack the skills and ability to succeed.²⁹

Vicarious Experience & Self-Efficacy

²⁵ Milner, “A Case Study of an Experienced English Teacher’s Self-Efficacy and Persistence through ‘Crisis’ Situations.”

²⁶ Margolis and McCabe, “Self-Efficacy.”; Schunk, D. H. (1991). Self-efficacy and academic motivation. *Educational psychologist*, 26(3-4), 207-231.

²⁷ Schunk, “Self-Efficacy and Education and Instruction.”

²⁸ Pajares and Schunk, “Self-Beliefs and School Success: Self-Efficacy, Self-Concept, and School Achievement.”

²⁹ Schunk, “Self-Efficacy and Classroom Learning.”

Beyond educational practices that promote social comparison, individuals receive social comparative information through the second-most reliable source of self-efficacy: vicarious experience, defined as observing the “successes and failures of others who serve as models.”³⁰ For the purposes of this framework, I will operationalize observing models succeed as “positive vicarious experience” and observing models fail as “negative vicarious experience.” When an individual perceives themselves as similar to a model in terms of ability, positive or negative vicarious experience can respectively increase or decrease their self-efficacy.³¹ This is complicated by the fact that similarity to another individual in terms of sex, ethnicity, or socioeconomic status is often perceived as an indicator of personal capability.³²

Some researchers highlight vicarious experience as a way of positively influencing self-efficacy beliefs, as observing similar others accomplish a task can make individuals vicariously feel as though they too can succeed.³³ However, given the present opportunity gap within the United States, the use of vicarious experience as a source of self-efficacy may be highly destructive for minority students in particular. Indeed, minority students disproportionately suffer from the opportunity gap and may therefore be more likely to endure negative vicarious experience through observing fellow minority students fail. As a result, minority students may be especially vulnerable to developing decreased self-efficacy.

Classroom Barriers to Promoting Self-Efficacy

³⁰ Pajares and Schunk, “Self-Beliefs and School Success: Self-Efficacy, Self-Concept, and School Achievement.”; Tschannen-Moran and McMaster, “Sources of Self-Efficacy.”

³¹ Schunk, “Self-Efficacy and Classroom Learning.”; Bandura, “Self-Efficacy.”

³² Schunk, “Self-Efficacy and Classroom Learning.”

³³ Schunk, “Self-Efficacy and Classroom Learning.”; Margolis and McCabe, “Improving Self-Efficacy and Motivation.”; Pajares and Schunk, “Self-Beliefs and School Success: Self-Efficacy, Self-Concept, and School Achievement.”

Given the importance of self-efficacy as a predictor of academic achievement, classrooms should be designed to promote self-efficacy. Indeed, self-efficacy and instructional design, defined as “a systems approach to develop the most effective instruction for learners to have a meaningful learning experience,” are closely tied to student achievement because elements of instructional design “are inseparable from learner motivation.”³⁴ However, the instructional design of most classrooms is not conducive to increasing self-efficacy. Indeed, within many classroom environments, students experience limited mastery, limited scaffolding that facilitates their pursuit of moderately challenging goals, limited frequent, task-specific feedback, limited cognitive appraisal of their own performance, and atmospheres that promote social comparison.

I. Limited Mastery Experiences

The instructional design of many classrooms allows a great number of students to avoid actively engaging with classroom material, let alone attain mastery. Many questions posed to students are based on recall, which creates opportunities for most students to become disengaged while a few students provide the correct answers.³⁵ Recall questions also limit classroom discussion, given that once a question is answered, teachers usually move on.³⁶ Learning environments for students at-risk of academic failure - disproportionately comprised of minority students - are particularly disengaging.³⁷ Indeed, lecture, drill-and-practice, and remediation are often emphasized in these classrooms, situating a large percentage of minority students as the least engaged, challenged, and motivated to learn in school.³⁸ Classroom environments

³⁴ Stiggins, “Assessment Crisis.”

³⁵ Lee, Menkart, and Okazawa-Rey, *Beyond Heroes and Holidays*.; Black and Wiliam, “Inside the Black Box: Raising Standards through Classroom Assessment.”

³⁶ Lee, Menkart, and Okazawa-Rey, *Beyond Heroes and Holidays*.

³⁷ Dicintio and Gee, “Control Is the Key.”; Waxman, Gray, and Padrón, “Resiliency Among Students At Risk of Academic Failure.”

³⁸ Waxman, Gray, and Padrón, “Resiliency Among Students At Risk of Academic Failure.”; Dicintio and Gee, “Control Is the Key.”

conducive to disengagement therefore limit students in their ability to cultivate self-efficacy, as many students are not even engaging with learning material, let alone attaining mastery.

II. Limited Scaffolding for Moderately Challenging Goals

Within many classrooms, students are also limited in their ability to pursue moderately challenging goals. The goal of any classroom instruction should be to close the gap between a student's current state of learning and the desired learning goal. The way in which teachers approach closing this gap, however, can greatly influence student motivation and engagement. If teachers assign students goals that are too challenging for their current skill level, for example, students may perceive the desired learning goal as unreachable and experience a sense of failure and anxiety. On the other hand, if teachers assign students goals that are not challenging enough, students may feel bored and not exert a great deal of effort into attaining the desired learning goal.³⁹

The ideal way for teachers to decrease the gap between a student's current state of learning and the desired learning goal is by assigning students moderately challenging goals. Whereas unchallenging or overly challenging goals are mismatched with an individual's skill set, moderately challenging goals are "balanced with the person's capacity to act" and are therefore optimally engaging.⁴⁰ Naturally, what constitutes a "moderately challenging goal" for each student will vary a great deal. Teachers can determine this by utilizing assessment data to discover a student's current skill level and subsequently scaffolding instruction up or down to fit a student's personalized learning needs.⁴¹

³⁹ Heritage, "Formative Assessment."

⁴⁰ Whitson and Consoli, "Flow Theory and Student Engagement."

⁴¹ Heritage, "Formative Assessment."

Not all teachers, however, facilitate optimal student engagement through the pursuit of moderately challenging goals. Assessment data containing feedback about student performance, for example, is ineffectively utilized within many classrooms to inform successive work.⁴² Teachers are therefore not effectively utilizing assessments as tools for scaffolding and optimal advancement of student learning through moderately challenging goals. Given that self-efficacy is promoted by engagement with moderately challenging goals, self-efficacy development is likely also limited. Indeed, when individuals tackle moderately challenging goals, they stretch themselves to the upper limits of what they are capable of. This helps them discover their abilities and thereby increase self-efficacy for future learning experiences.⁴³

III. Limited Frequent, Task-Specific Feedback

Research also shows that students do not receive adequate task-specific feedback. The use of student grades as feedback is overemphasized, for example, while task-specific feedback including information regarding learning strategies is underemphasized.⁴⁴ A study by Hyland and Hyland (2006) also revealed that almost half of teacher feedback was praise.⁴⁵ Although praise can be beneficial to students when highlighting growth, process, and effort, it can also undermine revisions and confuse students when delivered prematurely.⁴⁶ By emphasizing task-specific feedback, teachers can both praise students for specific things that they are doing well and provide concrete next steps for students to improve their learning. Task-specific feedback is not

⁴² Black and Wiliam, "Inside the Black Box: Raising Standards through Classroom Assessment."

⁴³ Ghani and Deshpande, "Task Characteristics and the Experience of Optimal Flow in Human—Computer Interaction."

⁴⁴ Ibid.

⁴⁵ Sutton, Hornsey, and Douglas, "Feedback."

⁴⁶ Brunzell, Stokes, and Waters, "Trauma-Informed Positive Education."; Hattie and Gan, "Instruction Based on Feedback."

emphasized enough in many classrooms, however, so students receive limited feedback about how to effectively progress towards mastery and increase their self-efficacy.

IV. Limited Cognitive Appraisal of Performance

Students are also not effectively engaging in cognitive appraisal of their own performance. Many students, for example, do not possess a clear understanding of the learning goals they should strive to achieve. As a result, they are limited in their ability to self-assess and metacognitively reflect on their thinking.⁴⁷ This process of cognitively appraising one's performance is essential for self-efficacy, as students who successfully complete a difficult task may not develop increased self-efficacy if they do not realize the skills they have mastered.⁴⁸

V. Social Comparison within Traditional Classroom Structures

Lower-achieving students are particularly limited in their ability to cultivate self-efficacy as a result of operating within traditional classroom structures that promote social comparison. Indeed, within traditional classroom structures, students with faster learning rates are rewarded through enhanced skill acquisition, higher grades, and greater potential to pursue higher education. Students with slower learning rates, however, suffer due to their lack of ability to master initial learning material within allotted time for instruction. As future learning tasks increasingly depend on mastery of initial learning material, these students continuously struggle.⁴⁹ The self-efficacy beliefs of lower-achieving students are therefore not only damaged by an accrued lack of mastery experiences, but also by feelings of inadequacy compared to higher-achieving students who master learning material more quickly.

⁴⁷ Black and Wiliam, "Inside the Black Box: Raising Standards through Classroom Assessment."

⁴⁸ Siegle and McCoach, "Increasing Student Mathematics Self-Efficacy Through Teacher Training."

⁴⁹ Block, *Schools, Society, and Mastery Learning*.

Teachers often reinforce these circumstances, expecting one third of students to learn well, one third of students to learn less well, and one third of students to just get by.⁵⁰ Regardless of whether teachers consciously or unconsciously express their expectations, students are highly sensitive to teacher cues, which often manifest as differential student treatment within the classroom.⁵¹ This matter is further complicated by issues of race, as research shows that teachers have lower expectations for African American and Latinx students in particular.⁵² .

Lower-achieving students are therefore at an extreme disadvantage for cultivating self-efficacy within traditional classroom structures, as they cannot help but feel inferior when comparing their abilities with that of higher-achieving peers. These feelings of inadequacy are exacerbated by typical teacher expectations, which reinforce the poor self-efficacy beliefs of lower-achieving students.

Minority students in particular, however, may be especially at risk for developing a poor sense of self-efficacy. Beyond encountering these general challenges with traditional classroom structures, minority students are disproportionately impacted by our nation's opportunity gap and may therefore also be the most susceptible to negative vicarious experience through observation of fellow minority student failures. These factors, compounded by the low teacher expectations that African American & Latinx students often face, may impede academic achievement and self-efficacy development for many minority students.

As negative self-efficacy beliefs are reinforced over time, they can act as powerful mindsets that are difficult to change.⁵³ Indeed, research shows that one success after numerous

⁵⁰ Airasian, Bloom, and Carroll, *MASTERY LEARNING*.

⁵¹ Karp, "Teacher Expectations and the Mediation Effects of Trust on Eighth Grade Adolescent Academic Self-Efficacy and Achievement."

⁵² Flores, "Examining Disparities in Mathematics Education."

⁵³ Urdan and Pajares, *SelfEfficacy Beliefs of Adolescents*.

failures may not increase self-efficacy a great deal, and that youth who perceive themselves as failures at a particular task may even deny or alter evidence that disproves their beliefs.⁵⁴ Furthermore, the impact of negative self-efficacy beliefs goes beyond the classroom, as these beliefs often influence what life paths an individual chooses and whether they experience success or failure on them.⁵⁵ In order to cultivate feelings of student competence for academic achievement and future life endeavors, it is therefore of the utmost importance to minimize social comparison within classrooms and promote high teacher expectations for all students. Thus, if teachers are to effectively enhance self-efficacy, traditional classroom environments that promote social comparison and reinforce differential teacher expectations of student achievement must give way to alternative classroom models.

An Alternative to Traditional Classroom Structures: Implementing Mastery Learning

Mastery learning is an instructional strategy and educational philosophy much more conducive to the promotion of self-efficacy than traditional learning environments. Mastery learning is an instructional method that posits that any student can master a given topic if classroom instruction is systematically approached, students receive assistance in areas that they do not understand, students are given enough time to learn, and clear mastery criteria and subcriteria are established.⁵⁶ Research shows that mastery learning not only benefits students by increasing achievement and retention of content, but also by improving confidence, attendance, classroom engagement, and attitudes towards learning.⁵⁷

⁵⁴ Schunk, "Self-Efficacy and Classroom Learning."; Urdan and Pajares, *Self-Efficacy Beliefs of Adolescents*.

⁵⁵ Pajares and Schunk, "Self-Beliefs and School Success: Self-Efficacy, Self-Concept, and School Achievement."

⁵⁶ Block, "Making School Learning Activities More Playlike."

⁵⁷ Davis and Sorrell, "Mastery Learning in Public Schools."; Guskey, "Closing Achievement Gaps."

Benjamin Bloom created mastery learning after noticing that all students were taught the same way within traditional classroom instruction, yet they demonstrated varying degrees of achievement.⁵⁸ Whereas traditional classrooms hold instruction time constant and allow mastery to vary, mastery learning holds mastery constant and allows instruction time to vary so that each student has the opportunity to achieve mastery through multiple avenues before proceeding to the next unit.⁵⁹ Time alone, however, cannot guarantee student mastery, as the foundation of this instructional strategy is high-quality teaching. Indeed, mastery learning essentially demands that teachers increase the variety and quality of their instructional approaches as needed so that all students can attain mastery.⁶⁰ The phases of mastery learning can be divided into defining mastery, planning, orienting students to mastery criteria, teaching, assessing, and providing feedback.⁶¹

I. Defining Mastery

Defining mastery necessitates establishing learning criteria that constitute mastery. These criteria act as the desired learning outcome for a given unit. Once criteria have been established, teachers typically create a summative examination that establishes a certain grade as mastery (typically between 85-95%).⁶²

II. Planning for Mastery

A great deal of preparation occurs within the planning phase, as teachers spend a tremendous amount of time and effort outside of class formulating plans of action to address in-class difficulties. In having these preplans ready before actual instruction begins, teachers are

⁵⁸ Guskey, "Closing Achievement Gaps."

⁵⁹ Davis and Sorrell, "Mastery Learning in Public Schools."

⁶⁰ Guskey, "Closing Achievement Gaps."

⁶¹ Block, Eftthim, and Burns, *Building Effective Mastery Learning Schools.*; Wiliam, *Embedded Formative Assessment.*

⁶² Block, Eftthim, and Burns, *Building Effective Mastery Learning Schools.*

better prepared to solve comprehension issues in the moment so that these issues do not result in later problems.⁶³ Teachers also spend a great deal of time preparing for instruction by designing correctives and enrichments. The former reteaches learning material in alternative methods from original instruction, while the latter supplements original instruction by going more in depth. Enrichments are intended for students who reach mastery of learning material, while correctives are intended for students still working to achieve the desired learning outcomes.⁶⁴

Teachers also proactively articulate unit subgoals and performance benchmarks on a learning spectrum towards mastery.⁶⁵ This allows them to design corresponding “formative assessments” that are directly linked to performance criteria. Defined as the use of assessment data to “identify a student’s current level of learning and to adapt lessons to help the student reach the desired learning goal,” formative assessment is a crucial component of mastery learning that helps teachers provide criterion-specific feedback and progress student learning toward mastery.⁶⁶

III. Orienting Students to Mastery Criteria

Teachers orient students to mastery criteria by informing them what they are expected to learn and how they will learn it.⁶⁷ After initially orienting students to the desired learning goals, teachers can continually engage students by instructing them to assess their work against mastery criteria, elaborate on why they gave themselves the score they did, and utilize mastery criteria within peer-editing.⁶⁸ Research shows that discussion of what constitutes mastery criteria can

⁶³ Block, Eftim, and Burns.

⁶⁴ Block, Eftim, and Burns.

⁶⁵ Heritage, “Formative Assessment.”

⁶⁶ Heritage, “Formative Assessment.”; Guskey, “Closing Achievement Gaps.”

⁶⁷ Block, Eftim, and Burns, *Building Effective Mastery Learning Schools*.

⁶⁸ William, *Embedded Formative Assessment*.

influence the academic achievement of low-achieving students in particular, so teachers should try to and engage these students with mastery criteria a great deal.⁶⁹

IV. Teaching & Assessing for Mastery

Although the method and amount of time each student spends learning varies within this framework, mastery learning is designed to utilize existing school resources and accommodate teachers who have a fixed amount of time they can spend teaching a given unit.⁷⁰ With preplans of correctives and enrichments ready, teachers measure student understanding using these three types of formative assessment: 1) on-the-fly assessment, which occurs spontaneously during instruction 2) planned-for interaction, in which teachers preemptively decide how they will assess student understanding during the lesson 3) curriculum-embedded, in which assessment is utilized at key points during the curriculum to elicit feedback about student progress (usually occurs every 10-14 days after initial instruction).⁷¹ In each scenario, teachers utilize formative assessment to determine how student understanding diverges from performance benchmarks.⁷²

Teachers then use this knowledge to inform feedback and scaffolding, as well as to determine what type of corrective might help students achieve the desired learning goal.⁷³ Given that student learning needs vary, the nature of each corrective varies. Audio-visual methods or academic games may be particularly useful for students who need high-interest explanations, whereas workbooks may be more useful for students who need drill and reinforcement.⁷⁴

Correctives can also consist of peer tutoring. Interaction with peers can potentially increase student aptitude, because students may have to navigate conflicting perspectives of a

⁶⁹ William.

⁷⁰ Block, Eftim, and Burns, *Building Effective Mastery Learning Schools.*;

⁷¹ Heritage. Formative assessment: What do teachers need to know and do?; Block, Eftim, and Burns.

⁷² Block, Eftim, and Burns.

⁷³ Heritage, "Formative Assessment."

⁷⁴ Airasian, Bloom, and Carroll, *MASTERY LEARNING.*

problem.⁷⁵ One study even found evidence that peer tutoring was almost as impactful as one-on-one instruction from a teacher. This outcome may result from the fact that students feel shy about interjecting during a teacher's explanation and asking for clarification, whereas they are more apt to ask peers to slow down or repeat themselves.⁷⁶ If students do not attain mastery during the allotted in-class time through correctives such as peer tutoring, they are expected to use a combination of out-of-class and/or out-of-school time to progress towards the desired learning goal.⁷⁷

V. Providing Feedback for Mastery

Teachers gain feedback about student understanding via frequent use of formative assessment. This information not only helps teachers determine what correctives a student may need, but also helps them provide feedback and address common misconceptions while students are engaged in correctives. Good feedback consists of 1) providing information about the task's current state 2) scaffolding that explains how to improve.⁷⁸ When providing feedback regarding a student essay, for example, a teacher could inform a student that 1) the main idea of a certain paragraph is not supported and 2) they can fix this by providing more textual evidence. Good feedback should also remain focused so that students do not feel overwhelmed. Teachers should begin by choosing one or two aspects that need improvement and providing specific scaffolding for how to improve each. Lastly, good feedback should directly correspond to mastery criteria and cause students to think.⁷⁹

Utilizing Mastery Learning to Promote Self-Efficacy

⁷⁵ Torrance and Pryor, *Investigating Formative Assessment*.

⁷⁶ William, *Embedded Formative Assessment*.

⁷⁷ Block, "Making School Learning Activities More Playlike."

⁷⁸ William, *Embedded Formative Assessment*.

⁷⁹ William.

By promoting mastery through increased opportunities for students to experience high-quality instruction, mastery learning can act as a remedy for classroom barriers that limit students in their ability to cultivate self-efficacy. Indeed, teachers can promote self-efficacy development by encouraging mastery in the following ways: facilitating student engagement with moderately challenging goals, delivering frequent, task-specific feedback, promoting student cognitive appraisal of their performance, and reworking traditional classroom structures that encourage social comparison amongst students with differential learning rates.

I. Scaffolding for Moderately Challenging Goals

By referencing performance benchmarks and seeking continual feedback via formative assessment about student understanding, teachers can scale up or scale down desired learning goals to match each student's needs. These components of mastery learning not only prevent student feelings of boredom or frustration, but also optimally engage students through their pursuit of moderately challenging goals.⁸⁰ Moderately challenging goals promote self-efficacy, as students feel competent enough that they are not overwhelmed, yet they are still pushing themselves to the upper limits of their abilities. This subsequently increases self-efficacy beliefs for future learning.⁸¹

II. Delivering Frequent, Task-Specific Feedback

The use of formative assessment as a “continuous flow of information about student achievement” ensures that students receive feedback often.⁸² Formative assessment also helps teachers deliver good feedback, which aids student learning via task-specific scaffolding.⁸³

⁸⁰ Heritage.

⁸¹ Ghani and Deshpande, “Task Characteristics and the Experience of Optimal Flow in Human—Computer Interaction.”

⁸² Stiggins, “Assessment Crisis.”; Heritage, “Formative Assessment.”;

⁸³ William, *Embedded Formative Assessment*.

Mastery learning therefore facilitates the delivery of frequent, task-specific feedback. When students receive frequent feedback, more opportunities arise for them to compare their progress to prior work and cultivate a sense of self-efficacy. Indeed, information about improved performance prompts students to recognize their accomplishments and advancement towards mastery criteria.⁸⁴ Additionally, task-specific feedback promotes self-efficacy by helping students determine exactly what they must do to reach their next performance benchmark and continue their progression towards attaining mastery.

III. Promoting Cognitive Appraisal of Performance

By orienting students to mastery criteria and performance benchmarks before teaching, teachers clearly inform students of the various subgoals they are to achieve before attaining mastery. Knowledge of these goals helps students cognitively appraisal their performance, as they can continually refer to these benchmarks when attempting to assess their progress. This in turn promotes self-efficacy, because when students reach a new performance benchmark, they can recognize their advancement along the learning spectrum towards mastery as increased skill acquisition and a successful mastery experience in and of itself.

IV. Reworking Traditional Classroom Structures

Two core principles of mastery learning are that 1) the degree to which students learn classroom material depends on the rate at which they learn 2) student learning operates as a function of how much time they need to spend learning compared to how much time they actually spend.⁸⁵ Assuming a normal distribution of student intelligence, these assumptions explain why only a handful of students typically achieve mastery within most classrooms. Yet these assumptions also presume that most students can attain mastery given certain instructional

⁸⁴ Schunk, "Self-Efficacy and Classroom Learning."; Margolis and McCabe, "Self-Efficacy."

⁸⁵ Block, Eftim, and Burns, *Building Effective Mastery Learning Schools*.

modifications - specifically, additional opportunities for student learning and enhanced quality of instruction.⁸⁶

Mastery learning revamps traditional classroom structures by modifying teaching and learning in these very ways. Indeed, through the implementation of correctives embedded within a framework of high-quality instruction, mastery learning increases opportunities for students with slower learning rates to attain mastery and develop self-efficacy.⁸⁷

Mastery learning also promotes self-efficacy for lower-achieving students by reworking traditional classroom structures that promote social comparison. Indeed, the prioritization of performance benchmarks within mastery learning empowers lower-achieving students to compare their work to past work instead of to the work of their higher-achieving peers. This eliminates feelings of inadequacy for lower-achieving students and promotes their development of positive self-efficacy beliefs. Yet even if one were able to create almost perfect classrooms that promote self-efficacy utilizing mastery learning, barriers towards increasing self-efficacy for all students would still exist due to student experiences of trauma.

Environmental Barriers to Promoting Self-Efficacy: The Impact of Trauma

The experience of trauma is a major environmental barrier that interrupts a student's ability to learn and cultivate self-efficacy within the classroom. The Substance Abuse and Mental Health Services Administration defines trauma as the result from an "event, series of events, or set of circumstances that is experienced by an individual as physically or emotionally harmful or life threatening and that has lasting adverse effects on the individual's functioning and mental, physical, social, emotional, or spiritual well-being."⁸⁸ A variety of experiences can create

⁸⁶ Block, Eftim, and Burns.

⁸⁷ Block, Eftim, and Burns.

⁸⁸ Administration, *National Registry of Evidence-Based Programs and Practices*.

feelings of trauma, including natural disasters, terrorism, sexual assault and abuse, homicides or suicides, community violence, physical abuse and neglect, warfare, domestic violence, bullying, and poverty.⁸⁹ Indeed, although types of trauma vary a great deal, “a violation of a sense of safety in the world and with others” is at the core of all traumatic experiences.⁹⁰ Whereas developmentally appropriate stress helps children build resilience and coping skills, traumatic stress is specifically characterized by the feelings of horror and helplessness it creates.⁹¹

Trauma experiences severely limit students in their ability to learn and cultivate self-efficacy. Predominantly low-income students of color living in adverse family environments, for example, are more likely to suffer long-term effects of toxic stress, defined as a “strong, frequent, or prolonged activation of the body’s stress response system.”⁹² This ultimately results in a hindered ability to self-regulate emotions and cognitions.⁹³ Indeed, the implications of adverse childhood experiences (ACEs) are severe, with students who have experienced ACEs being 2.5 times more likely to drop out of school, fail their classes, be placed into special education, and/or be suspended or expelled.⁹⁴ Trauma-affected students are also at risk for experiencing social and emotional problems, difficulty creating and sustaining relationships, impaired memory, lower IQ scores, high levels of externalizing symptoms (e.g., classroom disruption, aggression, hyperactivity, defiance), and high levels of internalizing symptoms (e.g., sadness, depression, anxiety, withdrawn, low self-esteem).⁹⁵ If effects of trauma are not

⁸⁹ Administration.; Collins et al., “Understanding the Impact of Trauma and Urban Poverty on Family Systems.”

⁹⁰ Dombo and Sabatino, *Creating Trauma-Informed Schools*.

⁹¹ Walkley and Cox, “Building Trauma-Informed Schools and Communities.”

⁹² Tough, “Helping Children Succeed – What Works and Why.”; Dotson Davis, “Implications of Trauma-Sensitive Practices at the Middle Level.”

⁹³ Tough, “Helping Children Succeed – What Works and Why.”

⁹⁴ Brunzell, Stokes, and Waters, “TRAUMA-INFORMED FLEXIBLE LEARNING.”

⁹⁵ Brunzell, Stokes, and Waters.; Dombo and Sabatino, *Creating Trauma-Informed Schools*.

addressed early on, more prolonged symptoms may develop in the form of post-traumatic stress disorder (PTSD).⁹⁶

Given the inability of schools to prevent trauma within students' home and/or community environments, one may conclude that teachers are limited in their ability to alleviate the effects of student trauma. However, the school may be the most stable environment for trauma-affected students.⁹⁷ Research also shows that creating a safe, supportive environment where students feel validated and successful can be just as effective as other evidence-based trauma interventions.⁹⁸ Furthermore, given that schools are often the primary location for children to receive mental health services, schools not only can but *should* be utilized as a place to address students' complex developmental needs.⁹⁹

The Relationship Between Trauma & Self-Efficacy

Trauma experienced chronically is especially detrimental to the cultivation of self-efficacy. Research shows that chronic trauma produces recurrent feelings of loss of personal control. These emotions can eventually result in learned helplessness, a state in which individuals fail "to appreciate the potential efficacy of his or her own actions to influence daily life in adaptive ways."¹⁰⁰ Given this definition, it is not surprising that learned helplessness is counterproductive to the promotion of self-efficacy.¹⁰¹

Beyond experiences of chronic trauma, two types of trauma - abuse and neglect - are particularly destructive to self-efficacy. Experiences of abuse and neglect often lead individuals

⁹⁶ Alvarez, Milner, and Delale-O'Connor, "Race, Trauma, and Education."

⁹⁷ Brunzell, Stokes, and Waters, "Trauma-Informed Positive Education."

⁹⁸ Cavanaugh, "Trauma-Informed Classrooms and Schools."

⁹⁹ Cavanaugh.

¹⁰⁰ Flannery and Harvey, "Psychological Trauma and Learned Helplessness."

¹⁰¹ Relich, Debus, and Walker, "The Mediating Role of Attribution and Self-Efficacy Variables for Treatment Effects on Achievement Outcomes."

to try to restore a sense of safety by seeking power and control.¹⁰² Within the classroom, this need may manifest as aggressive student behavior, such as verbally assaulting or mistreating another student. If teachers do not understand the underlying causes of this behavior, they will likely react with “anger, punishment, suspicion, and distance.”¹⁰³ Not only does such a reaction re-traumatize the student through the experience of another adult abusing his/her power and neglecting the student’s needs, but it also creates feelings of student distrust. This can ultimately result in a damaged, disconnected, student-teacher relationship.¹⁰⁴

This dynamic is extremely detrimental to the promotion of self-efficacy. Indeed, research shows that student trust in a teacher is a strong predictor of academic self-efficacy, defined as “students’ beliefs that they have control over their performance in a specific subject.”¹⁰⁵ Furthermore, lack of student trust in a teacher negatively impacts the effectiveness of teacher expectation behaviors on student academic self-efficacy.¹⁰⁶ If teachers expected all students to achieve mastery, for example, these high expectations would only positively impact the self-efficacy of students who trust their teacher. Without trust, therefore, implementation of high expectations within the framework of mastery learning would likely be quite ineffective in promoting student self-efficacy.

Implementing Trauma-Informed Approaches

¹⁰² Morgan et al., “Relational Ways of Being an Educator.”; Dombo and Sabatino, *Creating Trauma-Informed Schools*.

¹⁰³ Dombo and Sabatino, *Creating Trauma-Informed Schools*.

¹⁰⁴ Dombo and Sabatino.;

¹⁰⁵ Karp, “Teacher Expectations and the Mediation Effects of Trust on Eighth Grade Adolescent Academic Self-Efficacy and Achievement.”; McMahon, Wernsman, and Rose, “The Relation of Classroom Environment and School Belonging to Academic Self-Efficacy among Urban Fourth-and Fifth-Grade Students.”

¹⁰⁶ Karp, “Teacher Expectations and the Mediation Effects of Trust on Eighth Grade Adolescent Academic Self-Efficacy and Achievement.”

Through the use of trauma-informed approaches, trauma-informed teaching can help teachers promote student self-efficacy by recognizing and understanding student manifestations of trauma within the classroom. Carello & Butler (2015) define a trauma-informed approach as an instrument for understanding “the ways in which violence, victimization, and other traumatic experiences may have impacted the lives of the individuals involved” and applying “that understanding to the design of systems...so they accommodate trauma survivors’ needs.”¹⁰⁷ Indeed, a primary guiding principle for trauma-informed organizations is to apply one’s knowledge about the impact of trauma on development and behavior. With regard to trauma-affected students seeking control through aggressive classroom behavior, for example, a trauma-informed approach could involve teachers recognizing the re-traumatizing impact of many disciplinary actions and attempting to implement behavioral intervention strategies as an alternative.¹⁰⁸

There is no “one-size-fits-all” trauma-informed approach within the domain of trauma-informed teaching, as types of trauma and student experiences of trauma both vary a great deal. A teacher peering over a student’s shoulder to review their work may be traumatizing to a student who has been a victim of assault, for example, whereas standard shifts in the classroom environment - such as turning the lights off before displaying a video - may be traumatizing for a student with excessive symptoms of hyperarousal.¹⁰⁹

Recurring themes within the literature of trauma-informed teaching include the following goals for trauma-informed classrooms: 1) repair regulatory abilities 2) repair relational capacities

¹⁰⁷ Carello and Butler, “Practicing What We Teach.”

¹⁰⁸ Dombo and Sabatino, *Creating Trauma-Informed Schools*.

¹⁰⁹ Carello and Butler, “Practicing What We Teach.”

3) prioritize affirmation and empowerment.¹¹⁰ It is unclear whether these three trauma-informed approaches would be sufficient to help students who have experienced chronic trauma and are operating in states of learned helplessness. Indeed, it is possible that these students may need more intensive trauma-informed care - such as frequent sessions with a trained mental health professional - before they can begin to cultivate positive self-efficacy beliefs. In this case, trauma-informed teaching could promote self-efficacy for these students by making teachers cognizant of learned helplessness behavior and initiating student referrals for professional help. Regarding students who have suffered from abuse and/or neglect, however, the following approaches would likely enhance their ability to cultivate self-efficacy, primarily by rebuilding trust between students and teachers.

I. Repairing Regulatory Abilities

Activities aimed at improving self-regulation help students self-identify their readiness for learning via awareness of their stress response. Teachers can, for example, implement tools such as self-regulation rubrics so that students can learn to proactively identify where they are on a ready-to-learn scale. Teachers should exhibit “unconditional positive regard” for student responses, welcoming their readiness to learn no matter what. Other activities may involve a teacher sitting down with a student to reflect on relevant stressors/triggers, teaching them about how stress negatively impacts the body, and brainstorming coping strategies. Learning about a student’s triggers in this manner is helpful for teachers in creating necessary classroom accommodations.¹¹¹

¹¹⁰ Brunzell, Stokes, and Waters, “Trauma-Informed Positive Education.”; Dombo and Sabatino, *Creating Trauma-Informed Schools.*; Duto, *The Vulnerable Heart of Literacy.*

¹¹¹ Brunzell, Stokes, and Waters, “TRAUMA-INFORMED FLEXIBLE LEARNING.”

Cultivating student awareness regarding their stress response could also involve the creation of individualized student safety plans where, alongside a teacher, students outline (a) when they feel stressed (b) what triggers the stress (c) words or actions that the student will share with the teacher when they feel stressed (d) words or actions that the teacher can share with the student to de-escalate stress. The co-creation of this plan alongside a teacher not only strengthens student capacity for self-regulation through building self-awareness of stress, but also promotes trust and connection between the student and teacher.¹¹² This is especially important for cultivating the self-efficacy of students who have been victims of abuse and/or neglect.

II. Repairing Relational Capacities

Connection between trauma-affected students and teachers is key, as trauma-affected youth often suffer from disrupted attachments and an inability to cultivate and maintain strong social relations. Indeed, if broken attachments pervade a trauma-affected student's life, student-teacher relationships can serve as a platform to build healthy attachment principles.¹¹³ Keeping this in mind, teachers should address student-teacher conflicts carefully. With regard to a teacher addressing student aggression as a manifestation of trauma, for example, teachers should respond with curiosity. They can say something along the lines of, "I noticed that you (insert problematic behavior). I'm wondering if you noticed that too, and what you think that's about?" This neutral observation refrains from enacting disciplinary action that may further traumatize the student. It shows that the teacher cares about the student's emotions, while simultaneously avoiding judgement of the student's behavior and damaging the student-teacher relationship.¹¹⁴

III. Prioritizing Affirmation & Empowerment

¹¹² Brunzell, Stokes, and Waters, "TRAUMA-INFORMED FLEXIBLE LEARNING."

¹¹³ Brunzell, Stokes, and Waters, "Trauma-Informed Positive Education.";

¹¹⁴ Dombo and Sabatino, *Creating Trauma-Informed Schools*.

Trauma-informed teaching also states that teachers should promote structures of affirmation and empowerment within curriculum and classroom routine.¹¹⁵ Indeed, since many trauma-affected students have been powerless, schools can be used as a place to validate and empower them.¹¹⁶ If students ever choose to open up and talk about their trauma, for example, teachers can help students view their behavior as an adaptive survival technique, replacing shame and guilt with strength and resilience.¹¹⁷

Empowerment can also be prioritized through the promotion of self-efficacy. In this way, trauma-informed teaching and self-efficacy have a unique relationship; trauma-informed teaching is promoted through the empowerment that students experience when cultivating self-efficacy, while self-efficacy is promoted through repairing trust between trauma-affected students and teachers. In essence, they exert a mutual influence on one other and should be promoted in tandem in order to respectively be most effective. While repairing student regulation, repairing relationships, and encouraging student empowerment can help teachers recognize and address the impact of student trauma, abiding by these principles may not be enough to promote self-efficacy for all trauma-affected students. Indeed, beyond and in addition to the aforementioned types of trauma, minority students often experience racial trauma.

Environmental Barriers to Promoting Self-Efficacy: The Impact of Racial Trauma

Racial trauma is defined as “the physiological, psychological, and emotional damage resulting from the stressors of racial harassment or discrimination.”¹¹⁸ Although minority students may experience racial trauma within society at large, they are especially likely to

¹¹⁵ Dombo and Sabatino.; Duto, *The Vulnerable Heart of Literacy*.

¹¹⁶ Dombo and Sabatino, *Creating Trauma-Informed Schools.*; Cavanaugh, “Trauma-Informed Classrooms and Schools.”

¹¹⁷ Dombo and Sabatino, *Creating Trauma-Informed Schools*.

¹¹⁸ Ponds, “The Trauma of Racism.”

experience racial trauma at school. Indeed, “the consequences of centuries of historical domination, violence, & global economic exploitation continue to be experienced today” as modern-day racism, which “pervades contemporary life most pressingly in schools.”¹¹⁹ Racial trauma is created, for example, when teachers or peers convey microaggressions, defined as “the everyday verbal or non-verbal slights, snubs, or insults (whether intentional or unintentional) which communicate hostile, derogatory, or negative messages to targeted persons.”¹²⁰

While microaggressions are typically expressed by individuals who have good intentions and are unaware that they have said anything to offend a socially devalued group, they can have profound negative impacts. Within the classroom, this would occur if a teacher compliments an Asian American boy born and raised within the U.S. for speaking “good English.” Although the teacher’s intent is positive, the boy can’t help but remember that he is a racial minority and perceive that he is an outsider.¹²¹

Microaggressions are therefore active representations of an individual’s marginality in society. Even if teachers do not deliver microaggressions themselves, their failure to penalize students who express microaggressions perpetuates racial harassment and does nothing to stop similar incidents from occurring in the future.¹²² Low teacher expectations that devalue or fail to recognize the skillsets of students of color are also a form of racial trauma.¹²³ While microaggressions and low teacher expectations can be categorized as individualized forms of racial trauma, racial trauma can also occur at an institutional level. Cultural invisibility and/or negative portrayals of certain races within school curriculums, for example, lead students of

¹¹⁹ Motha, *Race, Empire, and English Language Teaching*.

¹²⁰ Ponds.

¹²¹ Sue, *Microaggressions and Marginality*.

¹²² Alvarez, Milner, and Delale-O’Connor, “Race, Trauma, and Education.”

¹²³ Lee, Menkart, and Okazawa-Rey, *Beyond Heroes and Holidays*.

color to feel that their race and/or experiences are unimportant.¹²⁴ Indeed, the Eurocentric nature of most school curriculums promotes a racial hierarchy of white supremacy, consequently causing minority students to feel inferior in comparison to their white peers.¹²⁵

The Relationship Between Racial Trauma & Self-Efficacy

The negative impact of racial trauma is similar to that of non-racial trauma in that students experience detriments in psychological well-being, likelihood of future success, and academic and social development.¹²⁶ However, the effects of racial trauma are especially adverse given that students of color are especially at risk for developing a distorted sense of self worth, internalized devaluation in comparison to their white peers, and an internalized voicelessness.¹²⁷

The internalized devaluation created through racial trauma therefore severely limits minority students in their cultivation of self-efficacy. Indeed, individuals tend to engage in activities in which they feel competent and avoid those in which they do not.¹²⁸ When operating in states of internalized devaluation, minority students are therefore less likely to engage in various classroom activities, let alone attain mastery.

Despite the powerful influence of racial trauma on minority students, it is not typically addressed by teachers or within conventional approaches to dealing with trauma.¹²⁹ Indeed, teachers often do not recognize the connection between experiences of racial trauma and student “problem behaviors” such as aggression, depression, inattention, or withdrawal.¹³⁰ They may

¹²⁴ Alvarez, Milner, and Delale-O’Connor, “Race, Trauma, and Education.”

¹²⁵ Dei, “The Challenges of Anti-Racist Education in Canada.”; Alvarez, Milner, and Delale-O’Connor, “Race, Trauma, and Education.”

¹²⁶ Alvarez, Milner, and Delale-O’Connor, “Race, Trauma, and Education.”

¹²⁷ Hardy, “Healing the Hidden Wounds of Racial Trauma.”

¹²⁸ Pajares and Schunk, “Self-Beliefs and School Success: Self-Efficacy, Self-Concept, and School Achievement.”

¹²⁹ Alvarez, Milner, and Delale-O’Connor, “Race, Trauma, and Education.”; Hardy, “Healing the Hidden Wounds of Racial Trauma.”

¹³⁰ Alvarez, Milner, and Delale-O’Connor, “Race, Trauma, and Education.”; Cavanaugh, “Trauma-Informed Classrooms and Schools.”

even address these behaviors with disciplinary action and/or harsh zero tolerance policies, further limiting minority students in their ability to achieve.¹³¹ In order to rectify any damage caused by racial trauma, teachers should utilize their role as the classroom authority to prioritize education about racial issues and begin a process of racial healing.

Implementing Anti-Racist Education (ARE)

Anti-racist education (ARE) is needed in order to eradicate experiences of racial trauma within the classroom and effectively promote self-efficacy for minority students. Defined by Dei (1993) as a kind of political education in which students become conscious of and question the dominance of institutional power structures that contradict a culture of supposed equality, ARE analyzes how racism and classism are often used together as a way to marginalize minority individuals living within the U.S. It invites students to reflect upon injustices experienced, especially those students whose intersecting identities situate them as especially disadvantaged.¹³² The primary goal of ARE is to recognize spaces and educational practices that are inherently racist, such as the use of ethnocentric curriculums that highlight the experiences of historically dominant cultures and distort or withhold experiences of others. The secondary goal of ARE is to inspire action, transforming these practices, policies, and procedures to be racially just.¹³³

ARE scholarship adopts the critical race theory tenet of counterstorytelling, defined as “a method of telling a story that aims to cast doubt on the validity of premises, myths, and grand narratives that are generally accepted as truth by many white people in society.”¹³⁴ An example of such a myth is the widespread belief that societal rules apply to everyone equally and

¹³¹ Drakeford, “Racial Disproportionality in School Disciplinary Practices.”

¹³² Dei, “The Challenges of Anti-Racist Education in Canada.”

¹³³ Husband, *But I Don't See Color*.

¹³⁴ Husband.

individuals who work hard will achieve what they seek.¹³⁵ ARE also adopts tenets from critical whiteness theory, such as analyses of white privilege and how whiteness perpetuates racial oppression.¹³⁶

I. Using Literature to Talk About Racial Trauma

Although ARE could be integrated within classroom settings in a variety of ways, an example of an ARE approach is using literature to talk about racial trauma. Indeed, literature is cited as a useful platform for both facilitating human connection and investigating the impact of oppression through close analysis of personal histories.¹³⁷ Within the realm of literature, racial storytelling through the use of personal narratives could be used as a way to encourage having conversations about the significance of race, as well as name racial oppression.¹³⁸ Initiating conversations about the role of race in society is significant for racially oppressed students, as it helps them begin to understand how their lives have been affected by racial oppression, offers external validation regarding their life experiences, and helps them begin a healing process from the effects of racial trauma.¹³⁹

Inviting minority students to share personal histories of racial trauma experiences can both empower them to find their voice and act as a gateway for broader class discussion regarding racial oppression. Some sample critical thinking questions are as follows: “What similarities and differences do you notice in everyone’s experiences? What are some of the major forces - in families, communities, society, historical time period - that shaped each person’s experiences? How did oppression, discrimination and prejudice affect each participant’s lives? If

¹³⁵ Lee, Menkart, and Okazawa-Rey, *Beyond Heroes and Holidays*.

¹³⁶ Husband, *But I Don’t See Color*.

¹³⁷ Dutro, *The Vulnerable Heart of Literacy*.

¹³⁸ Dutro.; Hardy, “Healing the Hidden Wounds of Racial Trauma.”

¹³⁹ Hardy, “Healing the Hidden Wounds of Racial Trauma.”

they were not noticeably affected, why weren't they? What does it mean to be a person of color within the U.S.? What does it mean to be a white person within the U.S.?" These conversations not only validate racial oppression as something worth speaking and writing about, but could also serve as a catalyst for community activism.¹⁴⁰

Discussions of racial oppression will likely be difficult and uncomfortable, however, so teachers must prioritize creating environments conducive to trust and respect.¹⁴¹ In order for students to feel comfortable sharing such personal information, teachers must also create classroom environments that promote vulnerability. One way to do this is through teacher modelling of personal experiences of sadness or trauma. For example, when deciding which writing samples to share with students, teachers can selectively choose personal narratives that talk about adversity (e.g., how a teacher felt when his/her grandfather died). In doing so, teachers set a precedent that writing about adversity is acceptable and even valued. Such modelling acts as an implicit invitation for students to share painful personal experiences, although of course not all students will choose to do so.¹⁴²

II. Curriculum Modifications

Another ARE approach is uprooting Eurocentric histories and knowledge bases by emphasizing experiences and histories of people of color.¹⁴³ Indeed, by prioritizing cultural diversity within their curriculums, teachers began to remedy the internalized devaluation felt by minority students, as well as promote positive student perceptions towards other racial groups.¹⁴⁴ Integrating parental expertise into curriculums is an effective way to promote cultural

¹⁴⁰ Lee, Menkart, and Okazawa-Rey, *Beyond Heroes and Holidays*.

¹⁴¹ Dei, "The Challenges of Anti-Racist Education in Canada."

¹⁴² Dutro, *The Vulnerable Heart of Literacy*.

¹⁴³ Husband, *But I Don't See Color*.

¹⁴⁴ Lee, Menkart, and Okazawa-Rey, *Beyond Heroes and Holidays*.

diversity.¹⁴⁵ Teachers may ask parents, for example, to share photos or household artifacts in order to enrich their lesson plans. This could also involve more active parental participation, such as reading books in non-English languages or sharing stories about family members and/or cultural family experiences related to social justice.¹⁴⁶

Conclusion

In conclusion, self-efficacy is an important variable impacting student achievement that plays a key role in maintaining and exacerbating the opportunity gap. Indeed, lower-achieving students suffer from decreased self-efficacy as a result of limited mastery experiences. This fuels their poor engagement and decreased likelihood of attaining mastery in future learning tasks. The self-reinforcing cycle of self-efficacy and mastery can therefore be a vicious downward spiral, as an accumulated lack of self-efficacy exacerbates poor performance for lower-achieving students (and vice versa, with an accumulated lack of mastery for lower-achieving students exacerbating their poor self-efficacy beliefs).

The self-reinforcing cycle of self-efficacy and mastery can also, however, act as a positive upward spiral, increasing student achievement and ultimately diminishing the opportunity gap. The framework of mastery learning effectively promotes student mastery and self-efficacy within the classroom and is therefore a highly effective method of enhancing student performance. Mastery learning would not be sufficient, however, in enhancing self-efficacy and performance for all students. Environmental barriers such as chronic trauma, trauma of abuse and/or neglect, and racial trauma severely limit trauma-affected and/or minority students in their ability to cultivate self-efficacy. The simultaneous implementation of mastery

¹⁴⁵ Kailin, "Anti-Racist Staff Development for Teachers."

¹⁴⁶ Derman-Sparks, *Anti-Bias Curriculum*.

learning, trauma-informed teaching, and anti-racist education is therefore needed in order to effectively cultivate self-efficacy for all students.

It is important to note that minority students in particular are *especially* limited in their ability to cultivate self-efficacy, as they experience racial trauma most pressingly in schools and are more likely to experience the chronic trauma of living in poverty. They are also more likely to be negatively impacted by the opportunity gap and have poor academic achievement, making them especially vulnerable to a downward spiral of poor self-efficacy beliefs and lack of mastery. Thus, promoting self-efficacy through the simultaneous implementation of mastery learning, trauma-informed teaching, and anti-racist education could both increase self-efficacy for all students and increase self-efficacy for the students who need it the most.

This framework has far-reaching implications, as increased self-efficacy and achievement can increase student opportunities for social and economic mobility as well. In essence, this framework can assist teachers in combating inequity and cultivating student motivation, engagement, and achievement, empowering all students to thrive both within the classroom and beyond.

Limitations

This framework, however, is largely theoretical. Although teachers should hypothetically be able to promote self-efficacy for all students by utilizing this framework within their classrooms, implementation would likely be far more difficult. First, implementation of mastery learning heavily relies on effective use of formative assessment, yet most teacher preparation programs do not include a component of formative assessment literacy. Even if teachers were trained in how to use this tool, administrative evaluation of teachers' use of formative assessment would be limited, as in 2002 “almost no states require(d) competence in assessment as a

condition to be licensed as a principal or school administrator at any level.”¹⁴⁷ In order to reap the benefit of formative assessment and promote self-efficacy, teacher preparation programs must therefore prioritize formative assessment literacy for pre-service teachers, and schools must do the same through professional development for inservice teachers and administrators.

Furthermore, the widespread use of summative assessments within schools limits teacher ability to implement formative assessment. Summative assessments measure what a student has learned at the end of a unit.¹⁴⁸ Unlike formative assessment, summative assessments therefore occur too infrequently for teachers to modify their instructional design to accommodate what students do not understand.¹⁴⁹ Largely perpetuated by America’s culture of high-stakes standardized tests, summative assessments have become the norm.¹⁵⁰ In some cases, teachers are forced to allocate most of their teaching time towards preparing for standardized tests instead of gathering reliable information regarding student progress.¹⁵¹ Many U.S. teachers therefore face systemic and cultural barriers towards implementing mastery learning and formative assessment.

With regard to the implementation of trauma-informed teaching, trauma-informed approaches are typically consolidated within an entire organizational structure.¹⁵² In essence, it is more favorable for entire schools to adopt trauma-informed approaches as opposed to individual teachers operating in isolation. Indeed, school-wide implementation benefits students by promoting safety and consistent use of trauma-informed approaches, both of which are key pillars of trauma-informed teaching.¹⁵³ School-wide implementation involves a great deal,

¹⁴⁷ Stiggins, “Assessment Crisis.”

¹⁴⁸ OECD, *Formative Assessment*.

¹⁴⁹ Heritage, “Formative Assessment.”

¹⁵⁰ Sadler, “Formative Assessment and the Design of Instructional Systems.”

¹⁵¹ Stiggins, “Assessment Crisis.”

¹⁵² Cavanaugh, “Trauma-Informed Classrooms and Schools.”

¹⁵³ Crosby, “An Ecological Perspective on Emerging Trauma-Informed Teaching Practices.”; Cavanaugh, “Trauma-Informed Classrooms and Schools.”

including “buy-in from administrators, disciplinary policies that are sensitive to students, staff professional development, and strong relationships between school staff and mental health professionals.”¹⁵⁴ It also includes integration of trauma-informed principles into a school’s mission.¹⁵⁵ Although teachers may successfully implement trauma-informed approaches within their individual classrooms, trauma-informed teaching serves trauma-affected students best through school-wide implementation.

With regard to the implementation of ARE, this framework assumes that teachers openly acknowledge the prevalence of racial prejudice in today’s society. However, given that a majority of teachers are white, it is possible that some teachers maintain a colorblind perspective, defined as “erasure of the relevance of these group identities and claim(s) that racial categories no longer carry meaning nor produce material consequences as they did in the past.”¹⁵⁶ The colorblind perspective - which is often used by white individuals to process feelings of privilege and guilt - results in inadequate learning experiences for minority students.¹⁵⁷ Indeed, this allows teachers to ignore the unique needs of minority students and conceal the prevalence of racial oppression within today’s classrooms and broader social institutions.¹⁵⁸ Before having teachers implement ARE into their classrooms, therefore, it is possible that teachers may need to undergo extensive ARE and anti-bias training themselves.

Finally, although this framework would in theory effectively cultivate self-efficacy and achievement for all students, it requires empirical validation going forward. Indeed, multiple longitudinal research studies are needed to determine whether simultaneously implementing

¹⁵⁴ Crosby, “An Ecological Perspective on Emerging Trauma-Informed Teaching Practices.”

¹⁵⁵ Cavanaugh, “Trauma-Informed Classrooms and Schools.”

¹⁵⁶ Kailin, “Anti-Racist Staff Development for Teachers.”; Motha, *Race, Empire, and English Language Teaching*.

¹⁵⁷ Motha, *Race, Empire, and English Language Teaching*.

¹⁵⁸ Husband, *But I Don’t See Color*.

mastery learning, trauma-informed teaching, and anti-racist education would increase student self-efficacy, motivation, engagement, and achievement compared to a control.

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