EXECUTIVE DYSFUNCTION AND DISENGAGEMENT

Whenever I get the opportunity to speak to educators, I start with a simple question. Before I pose the question, I encourage the audience to take out two pieces of blank paper from the packet they received before my talk. I would like you to take a moment to do the same:

*"What has the greatest impact on student learning and achievement?"*

Go with your "lizard brain" here and don't overthink your responses; just write anything that comes to mind. This is a "no-stakes" activity. There are no wrong answers and you will not be graded on this assignment!●

Your Response:

Once you have recorded everything you can think of, in the circle below, write any ideas that can be influenced by a teacher from "within" the classroom inside the circle. Those that cannot meaningfully be addressed from within the class, record on the outside of the circle.
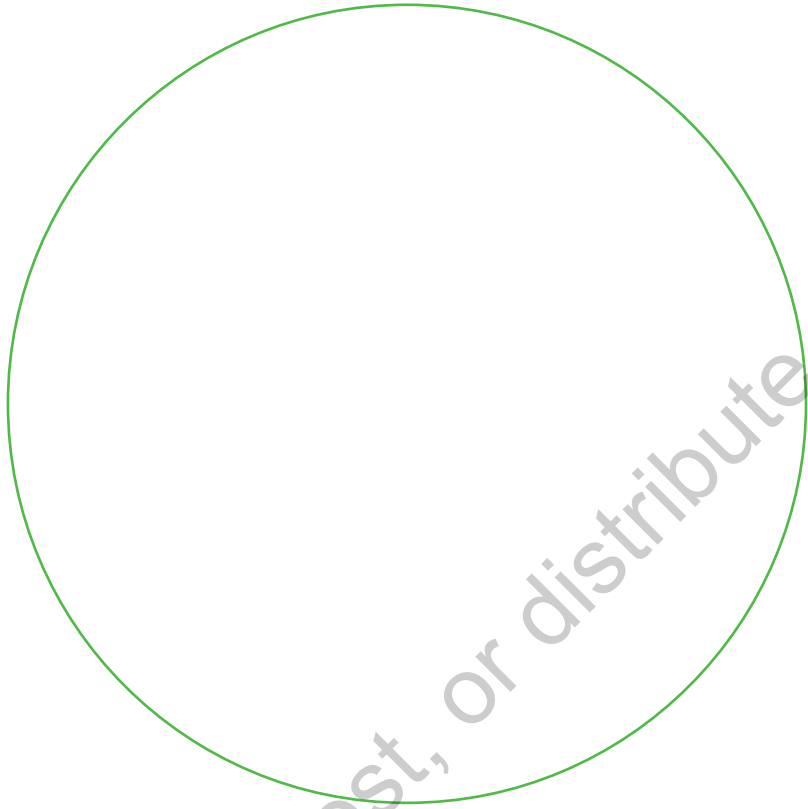
What do you notice?

You may have listed things like:

- Relationships with students
- Consistent learning routines
- Organization
- Teaching academic habits like notetaking/study skills
- Family engagement
- Smiling
- Greeting students

Here is a list of phrases that usually don't make the inside of the circle:

- Standardized testing or assessments

- Content standards, curriculum, or textbooks

- Technology (outside of specific assistive technologies)

Think about that for a moment.

This exercise is meant to help teachers get laser focused on what they can do from within their sphere of influence to establish a more sustainable teaching practice. Too often, teachers find themselves overextended. One of the major culprits is that teachers are working to help solve problems that might be better addressed by a counselor, administrator, parent, after-school program, or maybe just taken care of at another time, not during class time.

While a significant amount of resources are allocated for testing, curriculum, and technology, and each, of course, has its purpose and merit in education, in and of themselves, these factors do not serve to establish the foundation *for* learning and overall student success.

Instead, it is executive functioning skills that build a strong foundation for learning! As students hone their executive functions, they are far more likely to score better on assessments, dive deeper into the curriculum, and wield technology to further their learning.

Executive functions, which promote a sense of agency and dexterity in students, should be addressed daily, in every classroom. They create the foundation upon which learning occurs. Yet, historically, developing these skills has been left up to chance.

When executive functioning skills are overlooked, or when students never get the opportunity to practice them in the first place, they are less likely to succeed academically, as well as in life after their K-12 schooling (Meltzer, 2010).

We cannot afford to leave this up to chance any longer.

Struggling With "Studentness"

Challenges with executive functioning, or executive dysfunction, if detected at all, typically first become apparent in the early elementary grades (Kusnyer & Stanberry, 2013). Detection can be difficult because there are no simple tests to measure a student's executive functioning level.

If left unaddressed, students struggling with executive dysfunction slowly fall further behind their classmates (Cooper-Khan & Dietzel, 2008). Mark Katz explains, "With training and practice, children can learn to master memory, organizational, and other strategies that will serve to make them more independent learners and also help to level their academic playing field" (Katz, 2011).

Sadly, the opposite is also true. If developing executive functions makes for more independent learners, then it is likely that those who have weak executive functions will be less independent and less able to focus and engage (Gathercole et al., 2004). The reason for this is a lack of "studentness," all the "things" students need to be able to do to successfully engage in their learning—such as executive functions.

Learners who lack a sense of studentness are unclear from the start on how to engage in the learning process with agency. Over time, this dynamic becomes the norm for these students. Often, they experience their learning passively, as if the process is unfolding around them without their active involvement.

Many of these students spend more of their mental calories just trying to keep up with their classmates, which results in fatigue their peers are not experiencing.

In the classroom, this manifests as disinterest or disengagement—but that is not the root cause. One root cause of disengagement is often executive dysfunction. If students lack the skills to engage, be independent, and experience success, if they are unable to join in with the learning community, they are far more likely to give up or opt-out.

Students who are exhibiting off-task or distracting behaviors are doing so because they lack the agency to jump into the process. These students are not *actually* disinterested. Rather, they are secretly or privately confused and perplexed by how to change things for the better.

The good news is that with training and practice students can improve their executive functioning skills (Katz, 2011). By explicitly teaching these skills, we unlock students' potential and give them the opportunity to authentically engage in their learning.

There are several reasons why challenges with executive functioning is so commonplace; let's unpack them.

Problematic Transitions and Increased Expectations

As students progress through their K-12 journey, schoolwork gets more challenging and complex. At the same time, students are experiencing greater pressure and expectations from teachers to become more independent learners. However, this increased expectation is seldom articulated or forewarned.

For example, when a student transitions to their last grade of elementary school, typically 5th or 6th grade, their world shifts on its axis. Seemingly overnight, everyone is talking about middle school. Students might think, "*Wait, but I am still in 5th grade at my elementary school! I don't have to go to middle school for an entire year!*"

Now all students hear is that they better be prepared. There will be lockers, "big" kids, and students no longer have the comfort of being with one teacher all day who really knows them and loves them. They will have to figure out how to navigate seven *different* classes, with *different* expectations, *different* teachers, *different* routines, and *different* content. Leading up to this last year of elementary school, a student's only worry was to get used to a new teacher and classroom each school year.

This is a seismic shift that is rarely addressed and for most students (read: all), this is scary!

The data tell the story of these quantum leaps that are fraught with problems for most students. It is common when making the transition from elementary school to middle school, as well as the 9th grade transition to high school, for many learners to experience a decrease in motivation, engagement, and grades (Eccles et al., 1993; Roderick et al., 2013; West et al., 2016). Data like these are startling as these drops are not the result of a student's challenges in a specific subject area or discipline. Something broader is at play here: a lack of preparedness to engage in the rigors of the next step of their education journey. This is where executive functions can set students up for success and bridge these transitions!

Lack of Explicit Modeling

Developing executive functioning skills has largely been left up to chance in the past because they actually are not *taught*, in the traditional sense. As mentioned in the Introduction, executive functions are best learned when students see them modeled and are given daily opportunities to practice them in a no-stakes environment. This is why curricula that promise to teach students these skills and habits typically fall flat. Only complicating the issue is that teachers don't have the time to fit these topics into their lessons; they already have content and standards to teach and not enough time to adequately accomplish that task. Therefore, many schools opt to embed this work into support or advisory classes which students often perceive as not a "real" class.

The way to avoid these pitfalls is to embed modeling and student practice of executive functions directly into the learning routine of any (ideally all) class(es). By doing so, teachers can rest assured that their students will develop the skills and habits they need to succeed, regardless of what they are learning, while making certain that they do not lose instruction time. We'll talk through how to do this in the chapters ahead.

Stress From Chaos Outside of School

For many students, life outside of school is chaotic and unpredictable. It makes sense then, that some of these students might exhibit similar behaviors at school; it's all they know. My friend Jaz Ampaw-Farr refers to these young people as "chaos navigators"—young people who have grown accustomed to life without consistency or predictability.

If you are like me, you can list a number of "chaotic" things students have shared with you that they live with and which impact their schooling. I know students who have faced routine hunger, poor nutrition, and drive-by shootings (where the understood directive was to grab your younger siblings and get in the bathtub). Other students I have known navigated violence, poverty, homelessness, loneliness, isolation, high levels of stress, post-traumatic stress disorder, anxiety, and loss. The list goes on and on.

Young people with these lived experiences have grown accustomed to existing in a constant, low-level state of "fight-or-flight."

Kind of like dealing with a nagging stress that won't subside—it is just always there, so you get used to it. Our stress response, which evolved to save our lives if we were faced with danger, was meant to happen in short bursts, not in a sustained fashion over time. When this occurs, the stress interrupts the development of executive functioning skills. Paul Tough in *How Children Succeed* states, "It wasn't poverty itself that was compromising the executive function abilities of the poor kids. It was the stress that went along with it" (Tough, 2012).

From my experience, we can replace "poverty" with any of the other systemic causes: lack of safety, hunger, experiencing homelessness, uncertainty related to the pandemic, etc. If we follow Tough's logic, it is not the systemic cause that is actually interrupting the development of executive functions; it is the stress manifesting as a result of the root cause. The good news for teachers is that even though we may not be able to solve the root cause, as many of these experiences are beyond our sphere of influence, from within our classrooms we certainly can influence resulting stress! It is possible for teachers to create safe spaces (classrooms) that offer a reprieve from the stress students might be experiencing outside of school.

This truly is a primary goal, not just for our chaos navigators, but for all students. We must meet Maslow's hierarchy of needs before Bloom's, shown in Figures 1.1 and 1.2.
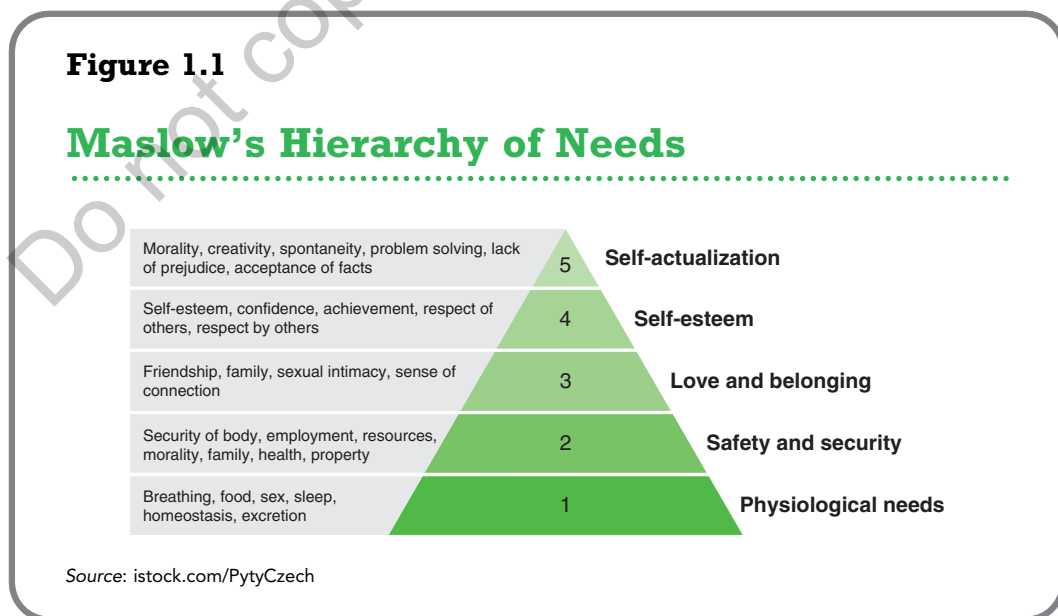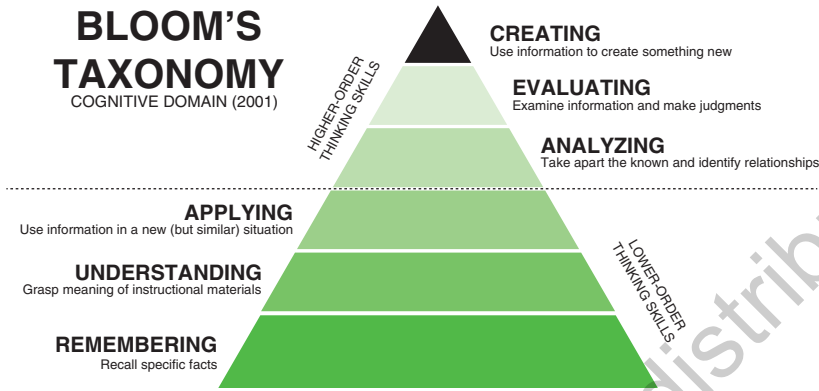
Figure 1.1

Maslow's Hierarchy of Needs

Description	Level	Name
Morality, creativity, spontaneity, problem solving, lack of prejudice, acceptance of facts	5	**Self-actualization**
Self-esteem, confidence, achievement, respect of others, respect by others	4	**Self-esteem**
Friendship, family, sexual intimacy, sense of connection	3	**Love and belonging**
Security of body, employment, resources, morality, family, health, property	2	**Safety and security**
Breathing, food, sex, sleep, homeostasis, excretion	1	**Physiological needs**

Source: istock.com/PytyCzech

Figure 1.2

Bloom's Taxonomy

BLOOM'S TAXONOMY
COGNITIVE DOMAIN (2001)

HIGHER-ORDER THINKING SKILLS

CREATING
Use information to create something new

EVALUATING
Examine information and make judgments

ANALYZING
Take apart the known and identify relationships

APPLYING
Use information in a new (but similar) situation

LOWER-ORDER THINKING SKILLS

UNDERSTANDING
Grasp meaning of instructional materials

REMEMBERING
Recall specific facts

Source: istock.com/Chavapong Prateep Na Thalang

While most teachers are prepared to focus on teaching the skills outlined in Bloom's Taxonomy, Maslow's Hierarchy of Needs shows us that until students' physiological and safety and security needs are met, they will not be able to attend to that level of higher-order skill development.

When teachers first tend to the designing and creating of safer learning spaces, a few things happen:

1. Students want to be at school.

2. Students are more engaged.

3. Students are happier.

When students consistently find themselves in a predictable learning environment, they can let their guard down to engage.

When students feel safe, they are more likely to take the risks inherent to learning (Ritchhart, 2015). No one said it better than Deborah Meier: "Learning happens fastest when the students trust the setting so much that they aren't afraid to take risks, make mistakes, or do something dumb. Learning works best, in fact, when the very idea that it is risky has not even occurred to kids" (Meier, 2002).

If we can give students a reprieve from the chaos outside of school, we have the opportunity to engage them in a very effective way. A

predictable routine, one that is consistently implemented, helps create a dependable learning environment. It may seem subtle, but for chaos navigators, this predictability is experienced as so much more than a fresh breath of air; it serves to reduce stress for kids (Denton & Kriete, 2000). It is a glimpse into how life can be lived outside of chaos and will pay dividends for the rest of their lives.

A byproduct of a predictable routine is that student grades and test scores will improve as well (though this is a lesser outcome than creating safety and developing executive functions) (Krashen, 1981). This is because when students consistently find themselves in a predictable learning environment, they can let their guard down to engage—their "affective filter" is lowered. They feel safe. That is why Paul Tough says that, "if we can improve a child's environment in the specific ways that lead to better executive functioning, we can increase his prospects for success in a particularly efficient way" (Tough, 2012).

A comprehensive approach to teaching, one that includes research-based content teaching strategies, equitable and fair assessments, and appropriate use of technology, but also deliberately integrates executive function skill development, is likely to yield the best educational outcomes for all students.

Together with teachers from a large, urban, public high school, we reviewed 9th grade standardized test scores in the summer before year 2 of our multi-year collaboration. During year 1, the 9th grade team implemented a shared predictable learning routine and portfolios, which taken together serve to give students daily practice with executive functioning skills. At the end of that first year, all students, including those in every subgroup, had made significant gains on the state standardized tests which assess ELA (English Language Arts) and Mathematics. We discussed the gains with the 9th grade team and asked them what they believed caused the improvement in test scores. Without hesitation, they shared that it was their focus on teaching executive functions—noting that it was the only intervention or change to their collective teaching approach that was made the previous school year.

Their students' results were the opposite of what is common following the 9th grade transition to high school. Regardless of the grade level, content area, or setting—rural, suburban, and urban, when students get practice with these skills and habits, their success rates improve. It is fascinating that executive functions can have such a positive impact on test and course performance, yet they are content and grade-level agnostic factors. ●

Let's make clear the distinction between *what* and *how* we learn. One is not more important than the other, but there is an order of operations we must follow. **What** we are learning is **secondary**; the task of developing as a learner (*the how)* is **primary**. When we lay the foundation for learning, students are free to build whatever they choose on that foundation because they are more independent learners.

Lack of Family Engagement

It goes without saying that students with more engaged families are more successful. We don't need a study to tell us this (although there are numerous meta-analyses on the topic, including Cooper et al., 2006; Henderson & Mapp, 2002; Hill & Tyson, 2009; Robinson & Harris, 2005). What we do know is that family engagement is a variable that positively impacts a student's ability to succeed regardless of the "type" of family: race, socioeconomic level, age, family makeup, to name a few. This is what families want, too. Linda Darling-Hammond explains, "…what parents most need and most want are closer connections to the learning process for their individual child" (Darling-Hammond, 1997). Teaching executive functions provides teachers and schools with a unique and effective way to engage families as it is not predicated on content or curriculum understanding, and families appreciate that fact.

Even with strong agreement around the impact of family and parent involvement, most schools need help developing plans to build community partnerships (Epstein & Associates, 2002). It is not enough to simply expect or assume families will feel comfortable participating with and engaging in the larger school community. There are many valid reasons why some family members may have a more difficult time consistently engaging with the school community, but in most cases, the lack of family or parental participation is usually a result of either the school's lack of effort to include families or the invitation is not inclusive (Henderson et al., 2007), and in no way reflects a family's actual desire to partner with their child's school (Shirley & Clark, 2009). While this may not be intentional on the part of schools, well intentioned events and activities may fall flat if they are not designed in a culturally relevant way.

Language barriers are certainly not the only hurdle to engaging families, but one school's example of striving for inclusivity was to host family events in their multi-purpose room. The space was equipped with headphones for anyone who needed translation assistance, which allowed all families to more comfortably participate in the event. Schools experience increased family participation if their efforts to include them are relevant to the communities they serve.

Jonathan Kozol stresses this point by quoting *The Wall Street Journal*, "Big budgets don't boost achievement…It's parental influence that counts." He goes on to quote, "It is even possible to argue that schools themselves don't matter much, at least compared with parental influence" (Kozol, 1991). We will come back to the topic of engaging families in Chapter 9.

Even students with families that are less connected to the school community, those who are going at it alone, are far more likely to succeed if they develop their executive functioning skills over time! Regardless of a school's proactivity around family participation, teachers have to be clear about their spheres of influence and where they can have the greatest impact. In the search for the one change that will bring the greatest return for **all** students we find executive functions!

The Inequity of Low Expectations

In the effort to "catch students up," we must guard ourselves against lowering our expectations. A friend shared a story he heard from a keynote speaker at a conference he had attended. The presenter was describing her experience giving birth to her fourth child, who was born with down syndrome. Her previous children had not been born with the condition and she described how different the experience was in terms of the expectations the nursing staff had of her baby. The first came when she was trying to breastfeed her newborn. A nurse explained that her baby most likely won't latch as well as other newborns. Over the course of her few days in the hospital, she experienced many similar "exceptions" she would likely have to make.

This mother challenged her audience to avoid the "soft bigotry of low expectations."

Although this story is about her and her newborn infant's experience, I believe her words ring true for educators of all grades as well. Students who experience poverty, rural students, students of color, girls, LGBTQ youth, and other student groups from a marginalized background, experience lower expectations than their white and more affluent peers (Jerald, 2001). We also know that the view teachers adopt of their students directly influences their students' ability to succeed. Likewise, as Dweck so eloquently stated, "For twenty years, my research has shown that the view you adopt for yourself profoundly affects the way you lead your life. It can determine whether you become the person you want to be and whether you accomplish the things you value" (Dweck, 2006).

If we lower our expectations of students, they will achieve less—in the classroom and in life (Gershenson & Papageorge, 2018). There has never been a more critical time to believe in our students' ability. If we lower our expectations, we encourage the self-fulfilling prophecy that individuals can't succeed. In doing so, we run the risk of reinforcing a self-view that students may carry with themselves moving forward, potentially for the rest of their lives.

Our charge is to maintain high expectations while we simultaneously address the issues arising from missed or interrupted schooling during the pandemic as well as other influences inhibiting success. Teachers need to make sure they are giving students the means of meeting their high expectations. Just maintaining expectations without specifically scaffolding is a recipe for failure.

The COVID-19 Pandemic

The pandemic has obviously left an indelible mark on every facet of society, and education was not excluded. Fortunately, it has not all been bad news, and we will certainly be learning from this experience for many years to come.

What we do know is that the years of the pandemic have forced many students, perhaps all young people, to face a new kind of chaos and trauma—resulting in stress. The consistency of school vanished overnight. The classroom was replaced with the dining room or the living room, and for some rural students who struggled to have a stable internet connection, a coffee shop or public library (Dvorak, 2020).

Students trying to engage, were often in cramped quarters, next to siblings, with an overtaxed WIFI. Not to mention while we were wiping our groceries with bleach, there was an invisible illness haphazardly killing people of all ages around the globe. Before the pandemic, classmates and teachers alike did not enter (or get to see) the inside of a student's home on a daily basis. They did not hear the sounds inside their home. Sadly, one result of the pandemic is that many students, at a minimum, fell behind, while others faced the widening of existing achievement and equity gaps.

During this time, we worked with schools who served their students three meals a day—breakfast, lunch, and dinner. In fact, one district shared with us that they spent most of the first few months of the spring of 2020 not teaching but literally delivering food to the community they serve because if the students were not coming to school, they could not eat. It goes without saying that this uncertainty of Maslow's basic needs has a profound impact on a young person's ability to engage, focus, and learn, because of the underlying stress it creates. If a student is hungry or tired, or scared, or can't connect to WIFI, how can they possibly focus their attention on what they are being taught?

As we know, the success of distance learning was often predicated on a variety of factors, most outside of teachers' or schools' control.

Yet there were families who did not miss an educational beat during the pandemic, raising huge equity concerns. Families with a parent at home, one who was not also trying to work from home, were able to support their children throughout the school day. They could engage their children in extended learning or extracurricular activities after school. Families with more than one computer and ample connectivity were less likely to struggle logging on to attend school. Compare the experience of these students to those who huddle on a sidewalk outside of a café in search of a WIFI signal.

Following the years of COVID-19, it is unfair to expect the same from all students. The same is true of our expectations of teachers. The pandemic has only widened existing achievement and equity gaps, and teachers must address these iniquities as we ease back to "normal" school. At the same time, teachers will need grace and support in this process as

they will simultaneously be responsible for staying on pace while teaching the content of their class(es).

The obvious is worth stating: Communities that experienced a higher degree of interrupted schooling have greater challenges to address.

Children who have been impacted by interrupted schooling are likely to face lifelong implications. But the truly incredible news is that teachers literally have the ability to reverse the influence of these factors in students' lives if we commit to helping our students develop executive functions. It's a big responsibility but also an honor!

Researchers from Stanford found that "...executive functioning in our brain plays a key role in protecting against risk factors that worsen symptoms of depression and anxiety during stressful, uncertain times." They go on to suggest that, "It's possible that such a targeted intervention (executive function training) would reduce the chances of experiencing psychopathologies like depression and anxiety in the face of stress, like a pandemic..." (Stanford News, 2022).

Even though the trauma from the pandemic may weaken or stall the development of executive functions, when strengthened, these skills and habits help improve students' emotional well-being.

I believe this is our "Call to Action" for any educator on the planet who cares deeply about students and their future success in school and life. Students are not fulfilling their potential *not* because they are incapable, and *not* because of their socio-economic status or even because they lived through a pandemic. Students are being left behind in school because of disparities in executive functions.

We Can't Afford Executive Dysfunction Any Longer

The costs associated with underdeveloped or weak executive functioning skills are high, long-lasting, and wide-reaching.

For younger students, a narrative develops that they "aren't good at school." For students who are already facing enormous challenges outside of school, they cannot afford to negotiate this

narrative. It is difficult to motivate students who are gripped by low self-efficacy. There is real shame, confusion, and fear in this student experience.

Students who grow up "good" at English and math—they can spell and read well at a young age and generally can do arithmetic early on—hear an entirely different narrative. These students are told that they are "smart" and that they *can* achieve.

If you hear anything enough times, you begin to believe it.

We must note the lack of fairness here. Based entirely on one's lived experience, some students are more likely to develop or "pick up" some of these skills as they move through life. Others, with different life experiences, will not. As educators, we shoulder the responsibility of leveling the playing field, so all students have the opportunity to succeed. Robert Belfanz in *Putting Middle Grades Students on The Graduation Path* explains how we address this inequity: "In moving to college and career readiness for all, we must now teach some skills formerly learned by students on their own. All students need lessons and modeling of study and work skills like time and task management, note taking, and assignment completion strategies…" (Belfanz, 2009).

There is a cost for teachers, too. Many teachers spend more time managing, coaxing, and disciplining student behavior than actually teaching. This not only keeps teachers from doing what they are hired to do, it also prevents them from engaging in what they love to do and what brings them energy: teaching.

Interestingly, what appears on the surface to be behavioral issues causing classroom distractions and management concerns, are actually behaviors manifesting from dysregulation. When students lack the skills and habits that are the hallmarks of successful learners, they are more likely to demonstrate off-task behavior. Ross Greene explains that "Lagging skills are the why of challenging behavior" (Greene, 2008). Behaviors that teachers are left to manage.

Even if teachers recognize that most classroom management issues result because students lack the foundation for learning, what are they to do about it? As we discussed previously, often teachers lack the class time and expertise to teach executive functioning skills. This is far beyond frustrating for teachers, it is paralyzing. No wonder attrition rates are so high

for teachers like Amelia in the first three years of entering the profession!

But for those who are reading this book, I want you to know that there *is* an answer, a path forward, and you can do it!

Helping students develop executive function skills and habits will create a seismic shift in their lives and therefore the world.

So, let's get to it. Turn the page for an introduction to the six executive functions that play a significant role in building the foundation for learning and academic success!

Reflection Questions

1. What has had the greatest impact on student learning and achievement in your classroom?

2. What are the areas in your practice that are less sustainable than others? How will you adjust those areas to protect yourself against burnout?

3. How can you bring about more clarity to your classroom or lessons to help reduce the cognitive load for your students?

4. What differences have you noticed in your students, post-pandemic? How can you use executive functioning skills to address some of those areas of concern?

5. What stresses, on an individual basis, are your students navigating outside of school?

6. What's the difference between Maslow's hierarchy of needs and Bloom's Taxonomy? Why would it be more important to meet Maslow's needs before Bloom's? How can you accomplish this in your classroom?

7. How can you increase the engagement of your students' families?