Cultivating Resilience: A Plan to Build Resilience in a Low-Income, American Public School

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Abstract
This paper describes both the theoretical underpinnings and an action plan for building resilience as requested by teachers in a diverse, low-income public high school in Patterson, New Jersey, United States. The authors define and describe widely agreed upon protective factors of resilience, and further operationalize the components into a set of activities for both teachers and students to engage toward increasing resilience. A three-stage learning process is presented for teachers to learn and embed the constructs in their own lives, as well as share with the students. A detailed “learning journey” is appended to describe in detail the specific evidence-based activities intended to target a critical subset of three protective factors: connection, optimism, and self-efficacy. A measurement plan is also provided to assess growth in both students and faculty.

Keywords
resilience, protective factors, optimism, connection, relationships, self-efficacy, teachers, training, students
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Resilience in a Low-Income, American Public School

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University of Pennsylvania

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Abstract

This paper describes both the theoretical underpinnings and an action plan for building resilience as requested by teachers in a diverse, low-income public high school in Patterson, New Jersey, United States. The authors define and describe widely agreed upon protective factors of resilience, and further operationalize the components into a set of activities for both teachers and students to engage toward increasing resilience. A three-stage learning process is presented for teachers to learn and embed the constructs in their own lives, as well as share with the students. A detailed “learning journey” is appended to describe in detail the specific evidence-based activities intended to target a critical subset of three protective factors: connection, optimism, and self-efficacy. A measurement plan is also provided to assess growth in both students and faculty.

Keywords: resilience, protective factors, optimism, connection, relationships, self-efficacy, teachers, training, students.
Cultivating Resilience: A Plan to Build Resilience at a Low-Income, American Public School

In January of 2018, students from the Master of Applied Positive Psychology (MAPP) program at the University of Pennsylvania partnered with JFK STEM Academy to build a strategic plan for increasing student and faculty resilience. This paper includes a situation analysis, literature review, application plan, and appendices of an implementation plan and relevant activities.

JFK STEM Academy in Patterson, New Jersey, was established in 1995 as a specialty school within John F. Kennedy High School. At that time, JFK STEM Academy was an accelerated honors program for students, grades 9 through 12, interested in science, technology, engineering, and mathematics. In order to enroll in JFK STEM Academy, students needed to apply, interview, and meet GPA requirements. JFK STEM Academy became a very successful academic program whose alumni continued on to medical, technological, and other highly regarded professions (D. Hoffman, personal communication, January 22, 2018).

In 2010, in order to meet state mandated requirements, John F. Kennedy High School was divided into three academies, in addition to JFK STEM Academy: the School of Architecture and Construction Trades, the School of Education and Training, and the School of Business, Marketing, Technology, and Finance (“Paterson public schools: Preparing all children for college and career”, 2018). Together, these four academies now create a large comprehensive high school named the JFK Educational Complex in the Paterson Public School District.

The Paterson Public School District is comprised of 56 urban schools, enrolling 25,000 students per year in grades K through 12 (“Paterson public schools: Preparing all children for college and career,” 2018). The district has been state-managed by the New Jersey Department of Education since 1991 and is one of New Jersey's most diverse school districts, with more than
40 languages spoken in its classrooms and nearly 50% of students speaking a primary language other than English (“Paterson public schools: Preparing all children for college and career,” 2018). Eighth graders in the Paterson Public School District are given the opportunity to choose which specialty school they would like to pursue (D. Hoffman, personal communication, January 22, 2018).

With the merger, school selection is based on preference and it is no longer necessary to meet a minimum GPA requirement or apply to get into JFK STEM Academy, for this reason, the school has grown from approximately 200 students to approximately 670 students per year. Due to JFK STEM Academy’s reputation for rigor and excellence, parents often choose to enroll their students because of the academic opportunities, rather than their child’s interest in the STEM curriculum or career pathways. This creates challenges because some students may not be as invested in the curriculum. While there is a percentage of students who are interested in the curriculum and are thriving in the STEM classes, the majority of students appear to be lacking intrinsic motivation and resilience (D. Hoffman, personal communication, January 22, 2018). For example, when assignments and tests become too difficult, students often leave them incomplete. The majority of the student population at JFK STEM Academy comes from a low socioeconomic status and is comprised of racial minorities. As many of these students reside in low income households, they often have responsibilities at home that trump schoolwork. For instance, the students may be responsible for taking care of younger siblings, helping with housework, and holding part-time jobs, which, while being signs of resilience and perseverance, tend to result in chronic absenteeism and low test results (D. Hoffman, personal communication, January 22, 2018). JFK STEM Academy provides monthly opportunities for parents to be involved in their
children’s academic progress; however, parental involvement unfortunately remains minimal (D. Hoffman, personal communication, January 22, 2018).

Out of the four schools at the JFK Educational Complex, JFK STEM Academy has the largest student body, but the least amount of physical space. The technology is outdated and purchasing budgets are minimal. The teachers are overworked and underpaid, but are described as committed and willing. They are known to go above and beyond for the good of the students, even when they are feeling negative towards the school district (D. Hoffman, personal communication, January 22, 2018). One reason for this positive staff culture and community is the leadership team (D. Hoffman, personal communication, January 22, 2018). Standing Principal, Dr. Dante Petretti, is supportive of using positive psychology as a common language and culture within JFK STEM Academy to promote resilience and well-being among their student body and faculty. Professional learning communities (PLC) have been established for the teachers as a tool to promote professional growth through continuing education, brainstorming sessions, staff meetings, etc. PLCs range in topics and areas of focus, meet once a week, and attendance is voluntary. Dr. Dante Petretti and biology teacher, Danielle Hoffman, MAPP, started a PLC focused on positive professional development that includes trainings on positive psychology theories and strategies, such as the PERMA model of well-being and character strengths. This particular PLC meets every three weeks and hosts about 30 teachers.

Patterson Public School District and JFK STEM Academy strive to create healthy opportunities for their students to be successful academically and personally. In 2009, the district developed a five-year strategic plan known as Bright Futures in hopes of transforming itself into a high performing urban school district (“Paterson Public Schools”, 2018). After implementing this initial strategic plan, Patterson Public School District developed a follow-up plan for 2014-
2019, also known as Brighter Futures, which focuses on the same top priorities. These priorities are (1) effective academic programs, (2) creating and maintaining healthy school cultures, (3) family and community engagement, and (4) efficient and responsive operations (Paterson Public Schools, 2018). In 2018, one of the school-wide goals for students, faculty, and staff is to develop resilience (D. Hoffman, personal communication, January 22, 2018). For assistance in obtaining this goal, JFK STEM Academy reached out to the MAPP program at the University of Pennsylvania to help develop a professional development curriculum on resilience for teachers and students. At the time, JFK STEM Academy was incorporating simple interventions for building resilience. These interventions were led by the teachers of core classes who would take turns coming up with and implementing one resilience initiative each month (D. Hoffman, personal communication, January 22, 2018). For example, in January, the English teachers asked their students to each identify a positive focus word that they could use as a mantra that month. In February, the History teachers will be doing a different initiative with their students in each grade. JFK STEM Academy does not currently have a uniform working definition of resilience and has not begun to measure their resilience, but their goal is to create a positive change in the school culture and create a common language around positive psychology (D. Hoffman, personal communication, January 22, 2018).

JFK STEM Academy would like to create this positive shift and common language with a specific focus on improving the resilience of their students. Once positive psychology and positive education have been introduced, the next step will be to train staff in the theory, research, and practice, perhaps using the aware, explore, apply model (Niemiec, 2017) as a framework for teaching each well-being domain of PERMA, which stands for positive affect, engagement, relationships, meaning, and achievement (Seligman, 2011). Well-being has been
taught successfully with significant impacts on student well-being and attainment (Adler, 2016). The same impact on student well-being and attainment is true when teaching resilience protective factors, which will be discussed in the literature review section of this paper (Masten et al, 2009).

Although JFK STEM Academy’s main concern is the resilience of their students, it is important for staff to understand the importance of looking after their own well-being as well. Many people are familiar with the safety announcements when traveling on airplanes that instruct adults to put on their own oxygen mask on before tending to their children. This is a helpful metaphor for the well-being of teachers and students because it is important for teachers to tend to their own well-being first, in order to help their students. Additionally, practicing first-hand with the well-being and resilience components will better equip teachers to bring them to the students. With this in mind, it would also be wise to identify some lead champions in the school who could run working groups and lead key initiatives. For change to become more than just rhetoric, it is important for senior leadership to prioritize positive education and support initiatives carried out by staff. The existing Positive Education PLC may offer one venue to identify and train the leaders.

**Literature Review**

This literature review will describe well-studied concepts of resilience, which scientists have researched for decades (Masten, Cutuli, Herbers & Reed, 2009) and that may prove useful for students and teachers at JFK STEM Academy. In the literature of resilience, we consider that it is important for JFK STEM Academy to focus on the protective factors associated with resilience. These protective factors are biology, self-awareness, self-regulation, mental agility, optimism, self-efficacy, connection and positive institutions (K. Reivich, personal
communication, February 11, 2018). With biological factors, we will briefly explain the literature but not focus too deeply on it, as it is not totally within the control of the school; for positive institutions, we will be providing information on exemplary existing models of positive education. We will include information on resilience and wellbeing measurements in our conclusion.

Resilience

Although definitions of resilience have differed over time from invincible and invulnerable (Werner & Smith, 1982) to “ordinary magic” (Masten, 2001), most researchers and practitioners have settled on the language of bouncing back or moving forward on a trajectory having been knocked off one’s path by a minor or major adversity (K. Reivich, personal communication, February 11, 2018). Resilience researchers have repeatedly found recurring protective factors that correlate strongly with resilience and that could be ubiquitous across cultures (Masten et al, 2009). People who are more resilient are more likely to thrive both psychologically and in terms of their learning and have better relationships and connections (Bernard, 2004). Throughout the rest of this literature review, we will delve deeper into each protective factor summarized above.

Biology

As with other personality traits and competencies, there are biological aspects to resilience, where it has been shown to have a high genetic determinability (Waaktaar and Torgersen, 2011). Whilst heritability does not mean it cannot be changed through intentional action (Lyubomirsky, 2007), it is important to note that different people’s bodies react differently to stress and that there is a genetic component to it (K. Reivich, personal communication, February 11, 2018). It is important for the teachers to have this context about the biological
protective factor associated with resilience, but we will focus more on other protective factors, that will be more informative as to potential strategies to use as teachers and with students.

**Self-Regulation**

Self-regulation is the uniquely human ability to intercept and direct thoughts, feelings, impulses, and behavior (Baumeister, Gailliot, DeWall, & Oaten, 2006). Humans are far more advanced in self-regulation than other animals, suggesting that this trait was evolutionarily advantageous to the human species. The ability to self-regulate allows people to adapt to social standards and participate in cultural groups (Baumeister et al., 2006). In contrast, failing to self-regulate is at the core of most personal and social problems that trouble humans in modern society (Baumeister, Heathertorn, & Tice, 1994). Self-regulation relies on a limited resource to control behavior and when this resource is reduced, people reach a state called ego depletion where efforts to self-regulate are less successful. Through specific exercises, people can build their capacity to self-regulate, making them less susceptible to ego depletion. Some exercises include tracking food consumption, regulating posture, adhering to a physical activity program, managing money, and adhering to a study program (Baumeister et al., 2006). Self-regulation is an important ability that helps people produce positive change, and improving self-regulation in one realm translates to other areas, making it a valuable tool.

**Connection**

In order to flourish, humans need high quality interactions with other people. Social support in the form of one-on-one relationships is one of the biggest environmental contributors to well-being (Meyers, 2000). Our relationships impact well-being from birth. For example, in 1945, Rene Spitz compared the mortality rate between children in an orphanage and children in a nursery. Spitz found that children who received no contact literally died from a lack of love
(Smith, 2017). These babies did not have a central person in their lives with whom they could develop a lasting and intimate connection and, as a result, their well-being suffered.

Research supports the link between close relationships and physical health (Gable & Gosnell, 2011). Some studies have linked social isolation with substantial increase in mortality risk, as well as poorer functioning cardiovascular, immune, and endocrine systems; in contrast, positive close relationships are associated with happiness and satisfaction with life (Gable & Gosnell, 2011). One reason for this may be that people tend to mimic their friends, including their health habits, for better or for worse. If a person’s best friend is very active, it nearly triples his or her chances of engaging in high levels of physical activity. If a person’s friend becomes obese, it increases his or her odds of becoming obese by 57% (Rath & Harter, 2010).

Connection and close relationships also affect emotional well-being. A longitudinal study found that people’s chance of being happy increases by 15% if a direct connection in their social network is happy (Fowler & Christakis, 2008). Thus, having direct and regular social contact with another person with high well-being increases the chance of being happy. Furthermore, positive relationships serve as a buffer during tough times, which improves cardiovascular functioning and decreases stress levels (Rath & Harter, 2010).

Connection and relationships also affect well-being by influencing levels of engagement and meaning. In surveys, people list their close relationships as the most important source of meaning and research shows that people who are lonely and isolated feel like their lives are less meaningful (Smith, 2017). Those who have a best friend at work are seven times as likely to be engaged in their work, are better at engaging their clients and customers, produce higher quality work, are less likely to be injured on the job, and have higher well-being (Rath & Harter, 2010). In contrast, those without a best friend at work have only a one in twelve chance of being
engaged (Rath & Harter, 2010). In addition to helping while at work, connections at work have a significant impact on people’s lives outside of work (Dutton, 2003). People spend a significant portion of time at work (or at school), so both their work and personal lives feel more meaningful when strong work relationships make them feel they belong (Smith, 2017). The benefit of connection at work is relevant to teachers and students. Teachers can benefit from high quality connection with their fellow teachers, school staff and administration, and students. Students can benefit from quality connections with their teachers, classmates, school staff and administration.

**Self-Efficacy**

Self-efficacy is the belief of being able to achieve goals with one’s current set of skills (Maddux, 2009). When people have high self-efficacy, they are more able to adjust to adversity, respond to surrounding environments in an appropriate manner, and use self-regulation to form beliefs and behaviors about anticipated experiences. High self-efficacy allows people to make more intentional goal selections and promotes the accomplishment of these intentional goals (Schunk & DiBenedetto, 2014). Self-efficacy helps to improve one’s ability to self-regulate by prioritizing choices when setting goals and by providing confidence in one’s abilities to reach said goals (Maddux, 2009). Successful attempts at learning will help encourage self-efficacy and, related, how people feel about their attempts is also relevant to the process (Schunk & DiBenedetto, 2014). For instance, negative emotions are apparent when someone experiences failure and, conversely, positive emotions are experienced after an accomplishment. When people see themselves succeeding, they are more likely to feel competent (Maddux, 2009).

For these reasons, building self-efficacy in a supportive and intentional way is highly beneficial when working with adolescents (Tsang, Hui, & Law, 2013), and may lead to increased intrinsic motivation for academics (Schunk & DiBenedetto, 2014). Positive self-efficacy within
adolescents is one of the most predictive factors of future academic and personal success within individuals and collective groups, such as in a classroom or home (Tsang, Hui, & Law, 2013). Building self-efficacy within students can be implemented in a variety of ways including: skill development, positive validation, leadership and responsibility opportunities, and relationship cultivation (Tsang, Hui, & Law, 2013). With an intentional approach to increasing self-efficacy, adolescents can learn and build on the skills they need to succeed in the classroom and beyond.

**Mental Agility**

Adolescents’ prefrontal cortex, which is responsible for regulating emotions, making rational decisions, and gaining cognitive control, continues to develop into young-adulthood (Fuhrmann, Knoll, & Blakemore, 2015). While stressors can inhibit brain health, implementing mindfulness and thought-training skills can promote brain development and aid in resilience towards future stressors (Romeo, 2017). The balance between healthy and unhealthy amounts of stress depends on how one perceives and reacts to stressors (Romeo, 2017). In the brain, unhealthy stress inhibits new brain cells from forming in the hippocampus, which leads to learning and memory impairments and can prohibit communication between the frontal and parietal lobes, thereby impacting attention. Luckily, once unhealthy stress is managed and controlled, brain function will improve (Fuhrmann, Knoll, & Blakemore, 2015).

**Mindfulness** is a nonjudgmental awareness of the present moment that can increase one’s attention, emotional regulation, body awareness, and self-perspective (Holzen et al., 2011). Strengthening attention and improving alertness increases regulation of thoughts and emotions, and body awareness, thereby creating a healthier and more positive self-perspective (Holzen et al., 2011). Practicing mindfulness is linked with a reduction in the previously mentioned negative effects stress can have on the brain, an increase in communication between frontal and parietal
lobes, and an increase in attention and memory (Holzen et al., 2011). Studies done on mindfulness and brain development, which show that mindfulness meditation can decrease stress-producing cortisol in saliva, increase the amount and density of white matter in the brain, and promote growth in nerve fibers and myelination (Hurley, 2013). Increasing students’ abilities to cope with stressors through thought training and mindfulness will aid healthy brain development and resilience.

**Optimism**

Within positive psychology, optimism is defined as an expectation or anticipation that the future will be one that is desirable to the individual, and very importantly that the individual can have an influence on that future outcome. By increasing optimism, people can strengthen protective factors for building resilience. Two aspects of optimism are an individual’s explanatory style and how an individual can identify and dispute negative thoughts.

The explanatory style view of optimism is the habitual way we have of explaining the problems we experience (Reivich & Shatté, 2002). We use three dimensions to explain why a particular good or bad event happens: *permanence* (sometimes vs always/never), *pervasiveness* (specific vs global) and *personalization* (internal vs external) (Seligman, 1990). For example, if a person has an explanatory style that tends to consider bad events as internal, non-changeable, and global, they have a pessimistic explanatory style because they view bad experiences as their fault, that will not change in the future, and not specific to that particular event. In contrast, a person with an optimistic explanatory style will explain negative events as external, changeable and specific. The optimistic person does not blame herself, believes there is room for change, and thinks the bad experience should not be generalized because it was specific to that particular
event. Importantly, while individuals are predisposed to particular styles, strategies exist to modify one’s default style and thus bolster optimism.

Gillham, Reivich, Jaycox, and Seligman (1995) created an intervention program using strategies from cognitive–behavioral therapy to teach children to be more optimistic. This program is the ABC model. This model suggests that different people feel and respond differently to the same event because of their beliefs about the event. In the model, the A stands for the activating event or adversity, the B stands for beliefs and thoughts about the event, and the C stands for the consequence, which includes our emotions and behaviors (Seligman, 1990). Our aim would be that students identify how their thoughts and beliefs effect their emotions and behaviors (Reivich & Shatté, 2002). Seligman, Reivich, Jaycox, and Gillham, (1995) found that when children become aware of this thinking process, it can have a positive impact on those who struggle with anxiety and depression because the first step is to become aware of the beliefs that are causing the negative reaction.

Self-Awareness

Self-awareness refers to an accurate assessment of personal feelings, preferences, resources, and intuitions (Conoley & Conoley, 2009). We believe that self-awareness is an important component for building resilience as it stresses the importance of being aware of our thoughts, beliefs, sensations, emotions, and behaviors (Reivich & Shatté, 2002). Self-awareness can be a very useful tool for both teachers and students to gain insight and perspective into daily experiences that we do not often acknowledge – for example, the importance of self-care (Souers, & Hall, 2016), how we embody our emotions, and how we feel physically and psychologically about the events we experience. We can increase awareness of our emotional life by paying attention to our body’s response to emotional stimuli. The more self-aware we are, the
easier it is for us to manage the needs of others (Souers, & Hall, 2016). Importantly, if we learn to be more aware of our emotions, we will be able to regulate them better. Moreover, self-awareness can assist us to build other aspects of resilience including improved coping, social skills, and problem-solving skills. One technique to increase our self-awareness is through the practice of mindfulness, as described above within “Mental Agility.” Jon Kabat-Zinn’s (Coholic, 2011) explanation of mindfulness shows what we need to be self-aware. He states that mindfulness is about examining who we are, questioning our view of the world and our place in it, and appreciating the wholeness of each of life’s moments. Self-awareness helps us because by paying attention to our perceptions, emotions, and cognitions in each moment, we can change the perspective of ourselves, which serves as a protective factor of resilience.

**Positive Institutions**

One of the protective factors of resilience is positive institutions. Those who suffer from an adversity or trauma are more likely to recover if they are supported by an enabling institution that has systems in place to support and build resilience. For many students, school is the most stable and enabling institution to which they belong. As Brunzell, Waters, and Stokes (2015) highlight, the most predictable part of many students’ lives is attending school. They point out that for those students who have experienced trauma, but cannot access therapy, due to adversities that they face, schools can be both academic and healing institutions (Brunzell, Waters, & Stokes, 2015). They propose an education model that focuses on psychological growth for trauma affected students and advocate for using proven positive psychology interventions to increase student wellbeing (Brunzell, Waters, & Stokes, 2015).

The umbrella term for positive psychology interventions in the school environment is positive education. Several leading institutions around the world have developed frameworks for
a whole school approach to positive education, including Geelong Grammar School (GGS), which was a pioneer in the field (Seligman & Adler, 2018). The Institute for Positive Education, based at GGS, is the first training institute of its kind dedicated to positive education. The institute’s framework of: Learn it, live it, embed it, teach it (Hoare, Bott, & Robinson, 2017) is well established and effective, with the University of Melbourne having recently completed a 3-year longitudinal study of the effectiveness and impact (Seligman & Adler, 2018) showing positive effects on student wellbeing. Staff training in positive education is paramount at GGS and a condition of employment is that all new and existing teachers take part in a 3-day immersive retreat so that there is a common knowledge and language shared across the school (Seligman & Adler, 2018). Building Resilience is an Australian program that takes a multidimensional whole school and community approach to building resilience (Cahil et al., 2015). The building resilience model of partner, lead, teach, support, and refer, helps schools to create enabling learning environments for students inside and outside of the school gates. There is a clear focus on building connections inside and outside of school, which is supported by research that shows the single most important protective factor in a young person’s resilience is their sense of belonging at school and in the family (Resnik, 1997).

Our aim for working with JFK STEM Academy is to provide the school with a definition of resilience and a foundation of knowledge and interventions for the teachers to use with their students. By focusing on the protective factors of resilience, teachers and students will learn the skills necessary to become more successful in the classroom. These successes will need to be measured to ensure quality and effective services that lead to resilience. Measures to note are the EPOCH measurement of adolescent wellbeing (Kern, Waters, Adler, & White, 2015), the Brief Resilience Scale (Smith et al., 2008), and the Academic Resilience Scale (Cassidy, 2016).
Appendix B describes these and other relevant measures of resilience and well-being for staff and students.

**Application Plan**

From insights gained from the situation analysis and the literature review, our cohort has put together an application plan focusing on three key protective factors; connection, optimism and self-efficacy, that we believe to be the most impactful for students and staff at JFK STEM Academy and their primacy is supported through the research we have provided. We have also included an outline for a learning journey (see appendix A for outline) consisting of professional development workshops for the staff to take part in, during their professional learning communities (PLCs) and through their Google classroom-learning platform. Our main objectives behind the application plan are to:

1. Equip teaching staff at JFK STEM Academy with empirical research and evidence-based strategies for developing resilience in themselves in order for the staff to feel confident in teaching the strategies to their students.

2. Encourage staff to develop a shared language around resilience: in particular, around the three protective factors of connection, optimism, and self-efficacy. Also, to identify the best ways to translate to the student population.

3. Provide the leadership team with process and outcome based measurement suggestions to measure the impact of the proposed learning journey (see appendix B).

Our overall aim with this plan is to up-skill the teaching staff around the theory and practices of resilience and for the teaching staff to take that knowledge and strategies and embed it into their own teaching practice. This might be done through explicit teaching of the skills or by weaving the skills into the existing curriculum and fabric of the school. We believe that once staff have
developed their own confidence on the topic of resilience, they are best placed to disseminate to the student body.

**Connection**

Our connections with others have an impact on our well-being, physical, and psychological health. People who report having more social ties also report greater well-being than those with fewer ties, even when no stressors are present (Cohen & Wills, 1985). When stressors are present, supportive connections can also serve as a buffer during stressful events and protect us from their negative effects, as long as our interpersonal resources are perceived to be available (Cohen & Wills, 1985). There is good evidence that social support can directly reduce the number of stressors in our lives and equip us to handle them better (Gable & Gosnell, 2011). Social support is also generally associated with an increased sense of self-efficacy and personal goal fulfillment (Gable & Gosnell, 2011).

**High Quality Connections**

In addition to the quantity of connections, the quality of connections with others is one of the most powerful variables that influences the well-being, energy, and vitality of individuals and organizations (Dutton, 2003). Building high quality connections is key in transforming the work experience and performance of organizational members. High-quality connections (HQCs) are characterized by mutual positive regard, trust, and active engagement between both parties (Dutton, 2003). While corrosive connections sap energy and make it more difficult for employees to do their work, HQCs make people feel more engaged, open, competent, and alive. HQCs facilitate physical and psychological health, greater well-being, more positive emotions, and greater vitality (Dutton, 2003). HQCs also enable individuals to engage more fully in their work tasks and the willingness and capacity to learn. At JFK STEM Academy, teachers, staff and
administrators are encouraged to develop their social ties and build HQCs with one another and their students. Organizational routines provide opportunities to create HQCs. For example, during on-boarding, new staff could be asked to make a positive introduction where they introduce themselves at a time that they were at their best. A buddy system could also be set up in order to help new staff feel welcomed and supported. Before starting staff meetings, there could be an opportunity for staff to recognize other staff members, not only helping to create a culture of strength spotting, but also cultivating a positive emotions and a culture of recognition. Celebrating, training, and off-boarding are other examples of organizational routines that can be modified to facilitate greater quantity and quality of connection. Research-based practices such as active-constructive responding (ACR) & HQC exercises exist to bolster connection, and those will be further considered in the next section as well as in the appendix.

**Active-Constructive Responding**

Positive events occur more often than negative events, and research shows that people often turn to others to share good news, a process called *capitalization* (Gable & Reis, 2010). Langston (1994) calls this process capitalization because it is behavior that makes the most of, or capitalizes upon, positive events. We can improve the quality of our connections by the way we respond to good news or capitalization interactions.

Capitalization interactions are important opportunities for individuals to create closeness and intimacy with others (Gable & Gosnell, 2011). There are four types of responses to good news: active constructive (e.g. responding supportively and enthusiastically), passive-constructive (e.g. silently supportive), active-destructive (e.g. pointing out potential problems), or passive-destructive (e.g. ignoring or failing to respond) (Gable, Reis, Impett, & Asher, 2004). When we respond in an active-constructive manner, we are excited or enthusiastic about the
positive event and actively involved in the interaction. We ask questions, elaborate and reflect on the implications and meaning of the event to the discloser; often expressing interest, happiness, and pride (Gable & Gosnell, 2011). During this exchange, both the discloser and the responder benefit (Gable & Reise, 2010). Active-constructive responses are positively correlated with commitment, satisfaction, intimacy, and trust. In contrast, passive-constructive, active-destructive, and passive-destructive responses are negatively correlated with these measures (Gable et. al., 2004). At JFK STEM Academy, teachers, staff and administrators are encouraged to practice and reinforce active-constructive responses with each other and students (see Appendix A, Item 3).

**Optimism**

Optimism is not an unrealistic belief that everything is and will be good. Negative emotions are important and some life events are just not good. However, optimism is about focusing on what we can control and how we choose to think about an event and respond to it. Optimism is associated with greater success in school, work (Schulman, 1995), and athletics (Rettew & Reivich, 1995). People who are more optimistic tend to be healthier (e.g., with better immune function) (Goldsmith, 2010) and live longer. Optimistic people are less likely to suffer from anxiety or depression (Mineka, Pury & Luten, 1995) and optimism leads to stronger interpersonal relationships (Suttie, 2012) and greater marital satisfaction. Optimistic people are happier, more resilient, perform better under pressure, and are seen as better leaders (Master, Best, & Garmezy, 1990). Optimism is an important protective factor of resilience; therefore, we believe is important to be included in the PLCs. We will focus on explanatory styles, ABCs, and identifying and avoiding thinking traps.
Explanatory Style

The explanatory style view of optimism is the habitual way we have of explaining the events we experience (Reivich & Shatté, 2002). We use three dimensions to explain why a particular good or bad event happens: permanence (sometimes vs always/never), pervasiveness (specific vs global), and personalization (internal vs external) (Seligman, 1990). Seligman (2011) suggests pessimistic people believe adverse experiences will last a long time, will play a negative role in other aspects of their lives, and is their own fault. In contrast, optimistic people think about misfortunes as temporary setbacks and their causes are confined. Optimists believe defeat is not their fault. Instead, it was due to circumstances, bad luck, or other people brought it about. We believe it is important that teachers and students recognize in which domains they are optimistic and in which domains they tend to be more pessimistic. Developing an awareness of their tendency towards optimism or pessimism in certain domains is the first step towards creating change in themselves and their students (see Appendix D for some tools).

ABCs

While environmental factors can negatively us, we do have control over how we react and respond to those factors. Gillham, Reivich, Jaycox, and Seligman (1995) created an intervention program using strategies from Cognitive Behavioral Therapy to teach children to be more optimistic. This program is the ABC model. This model suggests that different people feel and respond differently to the same event because of their beliefs about the event. In the model, the “A” stands for the activating event or adversity, the “B” stands for beliefs and thoughts about the event, and the “C” stands for the consequence, which includes our emotions and behaviors (Seligman, 1990). Our aim would be that students and teachers identify how their thoughts and beliefs affect their emotions and behaviors (Reivich & Shatté, 2002). Seligman, Reivich, Jaycox,
and Gillham, (1995) found that when we become aware of this thinking process, it can have a positive impact on decreasing anxiety and depression (See Appendix E).

**Thinking Traps**

Finally, we need to recognize and dispute our thinking traps. A thinking trap is a common belief that we have when faced with a major or minor adversity, that leads to unfavorable consequences. For example, if a colleague does not say hello in the corridor, I might jump to conclusions that I have done something wrong and jumping to conclusions like that without weighing up the evidence is a type of thinking trap (Reivich & Shatté, 2002). Thinking traps can happen without us even noticing them. If we become aware of the thinking traps that are causing the negative reaction, we can do something about it. Therefore, we first need to identify our common thinking traps. Next, we need to get off automatic pilot and challenge our belief or thoughts. We can do this by slowing down to create a new alternative for the trap. We can also ask questions that could dispute the beliefs that are leading to the trap. With a new belief, we create a new consequence. Appendix F has a table of some of the possible thinking traps and interventions to create awareness and a new alternative belief.

**Growth Mindset**

The mindset that students have about their abilities directly influences their academic achievement, grades, and test scores (Blackwell, Trzesniewski, & Dweck, 2007; Good, Aronson, & Inzlicht, 2003). Students with a fixed mindset believe their intelligence, talents and basic abilities are fixed traits, and their goal is to look smart. Whereas, students with growth mindset understand that they can develop their talents and abilities with effort and persistence. They do not necessarily think everyone can do the same or do everything, but they believe they can get smarter and better if they work hard. Moreover, individuals with a fixed mindset fear failure,
while individuals with a growth mindset accept failure as an opportunity to learn and improve their abilities. We believe this can have a significant implication for education. For example, according to Dweck (2007), when we give praise to students for how intelligent they are, we might actually be encouraging them to develop a fixed mindset, which might limit their learning potential but if we praise them for the process and hard work, growth can happen. An important finding for JFK STEM Academy is that students who belong to a disadvantaged or stereotyped group will benefit even more by developing a growth mindset (Blackwell et al., 2007; Good et al., 2003; Aronson, Fried, & Good, 2002). Developing a growth mindset is as equally applicable and important to staff and teacher performance as it is to students. Research shows that students perform better in school when they and their teachers believe that intelligence can be grown (Dweck, 2007).

School leaders should consider the effect growth mindset could have on their staff, teachers and students. Gerstein (2014) states several ways of applying a growth mindset to teacher professional development: first is through modeling, by encouraging teachers to see themselves as learners and capable of improving and, most importantly, by modeling and embodying what it means to live with a growth mindset. Moreover, schools can provide opportunities for teachers to try new things and make mistakes. This can seem intimidating for teachers, but it is essential for developing a growth mindset by having the willingness to try new approaches and care about the process rather than if the idea will be successful or a failure. After creating space for new ideas, it is important for teachers to reflect upon their new ideas and consider what they have learned from the process. Finally, giving teachers formative feedback rather than summative and inviting them to participate in the process supports growth. This way,
the feedback can be more meaningful and applicable to the teacher’s daily practice (Gerstein 2014).

Unfortunately developing a growth mindset among students, teachers, and staff is not an immediate process, it will require an effort from the schooling community. However, significant benefits can arise from leveraging these ideas. In one study, students with a growth mindset were more motivated to learn and exert effort and outperformed those with a fixed mindset in math (gap continued to increase over a two-year period). Students with both mindsets had entered the seventh grade with similar past achievements, but the students with a growth mindset improved their math grades more (Blackwell, Trzesniewski and Dweck, 2007).

Finally, acquiring a growth mindset is likely to encourage students and teachers to develop feelings of empowerment; students could begin to see how they could do something to positively influence their community and their own learning. Please look at Appendix G for suggestions of growth mindset interventions and a couple of links to both how to show students growth mindset and how to use it in your PLC.

**Self-Efficacy**

Self-efficacy is the belief that one can achieve goals with one’s current skills (Maddux & Kleiman, 2017). When people have high self-efficacy, they can adjust to adversity, respond appropriately to their environment, and use self-regulation to form beliefs and behaviors about anticipated experiences (Maddux, 2009). Strengthening self-efficacy in an academic setting is useful for building resilience. We recommend building resilience at JFK STEM Academy through self-efficacy with goal setting, performance feedback, character strengths, and hope.
Goal Setting

Locke (1996) argues that task performance depends on goal selection and motivation. Brown and Ryan (2015) suggest that intrinsic motivation is the strongest type of motivation for creating self-efficacy, which is important for goal accomplishment and resilience. Competence, autonomy, and relatedness are key contributors to motivation (Brown & Ryan, 2015), and can be strengthened by SMART goals and WOOP goals. SMART goals are composed of specific, measurable, achievable, realistic, and timely factors used to navigate concrete goal planning (Latham, 2003). WOOP is an evidenced-based goal-setting platform for middle and high school aged students (Oettingen, 2014). Schools that used WOOP strategies saw significant increases in school performance and attendance. Results also showed significant gains in stress-reduction, engagement, and aspects of executive functioning (Oettingen, 2014). Feeling ownership over the goals promotes self-efficacy and intrinsic motivation in both strategies (See appendix H).

Performance Feedback

Strengthening goal creation/completion with feedback and skill development helps teachers and students evolve their goals, self-efficacy, and resilience (Locke, 1996). Goals are modified by feedback and adjusted to fit increasing competency (Locke, 1996). This style of practice promotes self-regulation and self-efficacy, which allows for more challenging goals and resilience formation (Locke, 1996). Feedback can be given in SMART and WOOP formats as these approaches actually have feedback built in through measurable outcome components. Students and teachers can evaluate the goal progress, overcome obstacles, and adapt accordingly (Oettingen, 2014). Witnessing goal progression and accomplishment will aid teachers and students in creating intrinsic motivation, self-efficacy, and resilience (Locke, 1996).
Character Strengths

Character strengths are used to describe a person’s best attributes and can be measured with the VIA Character Strengths Survey (Niemiec, 2017). Character strengths can be used to develop self-efficacy and resilience by building healthy patterns and coping mechanisms (Freidlin, Littman-Ovadia, & Niemiec, 2017). Niemiec (2017) suggests building signature strengths in three parts. First, Aware: Becoming aware of character strengths in order to know oneself and others better. Second, Explore: Assessing the initial reaction of one’s strengths. Understanding when strengths are used and which are taken for granted. Reflecting on behaviors to mobilize strengths to prioritize time and energy for a flourishing life. Third, Apply: Creating action items and goals for optimal use of strengths. Learning how to build strengths to compensate for areas of growth. Utilizing a healthy balance of strengths can increase life satisfaction and flourishing (Freidlin, Littman-Ovadia, & Niemiec, 2017). Appendix C provides an outline for a training session on character strengths.

Hope

A key contributor to motivation is hope. Increasing hope with goals and interventions can have lasting effects on physical and mental health, including increased self-confidence, meaning, strength and resilience, and stress-relief (Magyar-Moe & Lopez, 2015). Magyar-Moe and Lopez (2015) define hope theory as an individual’s ability to set clear goals, develop a clear pathway to reach them and develop a sense of agency to take the first step and keep going. It is further explained as the ability to stay motivated while setting, understanding, and creating strategies for reaching meaningful goals (Magyar-Moe & Lopez, 2015). They believe hope can be highlighted in four ways: hope finding, bonding, enhancing, and reminding. Hope finding is identifying the baseline of hope an individual possesses and creating goals and strategies to expand this
baseline. Hope bonding is the ability to connect with someone for collaboration and support in setting goals, evaluating feedback, and maintaining skills necessary for strengthening hope. Hope enhancing is learning and practicing the specific strategies used to reach the goals. Hope reminding is the ability to self-regulate one’s hope strengthening process, including how to initiate and maintain strategies, identify and overcome barriers, and monitor progress (Magyar-Moe & Lopez, 2015). The agency and pathways of hope theory are essential strategies to goal accomplishment, especially when focusing on difficult or long-term goals. One activity recommended for building hope through goal completion is the “My best possible self” exercise, which requires the individual to imagine themselves in the future having achieved their goal, looking back on strategies and activities they took to get there (see appendix H).

Conclusion

We have aimed to provide the JFK STEM Academy with a definition of resilience and a foundation of knowledge and interventions for the teachers to use themselves and adapt to use with their students. By focusing on the protective factors of resilience, teachers and students will learn the skills necessary to become more successful in the classroom and in life. These successes will need to be measured and reviewed to ensure quality and effectiveness in building resilience. Appendix B outlines relevant summative and formative assessment measurements for JFK STEM Academy to consider. It is our hope that the teachers and students of JFK STEM Academy will embark on this learning journey to create a culture of resilience at the school that pervades beyond the school gates and positively impacts the wellbeing of the school and the local community.
References


**Appendix A**

**A Resilience Learning Journey for JFK STEM Academy**

<table>
<thead>
<tr>
<th>Learning Journey Platform:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below is an outline and suggested content for a learning journey focused on resilience for the staff of JFK STEM Academy. The learning journey has been divided into 6 main topics, with discrete sub sections for some of the themes with more content appropriate for JFK STEM Academy.</td>
</tr>
<tr>
<td>We wanted to provide a learning journey that can be adapted to work in a traditional group workshop setting, perhaps delivered during PLCs and to have the flexibility for teaching staff to learn at their own pace individually through accessing workshop slides and further research through JFK STEM Academy’s Google classroom.</td>
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<table>
<thead>
<tr>
<th>Phases:</th>
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<tbody>
<tr>
<td>The intention is that teachers at JFK STEM Academy are empowered to create their own materials for use with their colleagues and with their students and share those resources and ideas in Google classroom.</td>
</tr>
<tr>
<td>The first phase of this learning journey is focused on the teachers themselves and how they can develop more resilience and wellbeing as individuals, at work and at home. The second phase will focus on embedding the learnings in the curriculum so that the students also benefit.</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Format:</th>
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<tbody>
<tr>
<td>Each topic within the learning journey is broken down into 3 components: Aware, Explore, Apply (Niemic, 2017).</td>
</tr>
<tr>
<td>Aware – Introduction to the topic, theory and research</td>
</tr>
<tr>
<td>Explore – Experiential learning and exercises in coaching pairs or small groups</td>
</tr>
<tr>
<td>Apply – Taking the learnings home and committing to applying/experimenting with them.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Assessment:</th>
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<tbody>
<tr>
<td>We strongly encourage taking baseline measurements before the learning journey commences and to continue taking these measurements termly, throughout the school year. A separate measurement recommendation accompanies this learning journey. As well as outcome measurement metrics, we also recommend more formative process measurements in our accompanying measurement plan to celebrate learnings and milestones along the learning journey. These will come mostly in the form of environmental artefacts, like display boards.</td>
</tr>
<tr>
<td>Topic Overview</td>
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<td>--------------------------------</td>
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</tbody>
</table>
| 1. Introduction to Positive Psychology | **Aware:**  
- Provide staff with a background on positive psychology and some of the associated research, how it differs from traditional psychology, and why it is important in a school setting.  
- Explain PERMA model of wellbeing.  
- Introduce Positive Emotions. | **Outcome:**  
- An understanding of an asset based approach to wellbeing  
- A basic understanding of positive psychology and the PERMA model of wellbeing  
- An understanding of the negativity bias and how positive emotions can be cultivated to compensate |
|                                | **Explore:**  
- Positive artefacts – talk about an object that induces positive emotions  
- Experience positive emotions through “3 good things” or “what went well” | **Outcome:**  
- Experience strategies that can be used individually, at home and at work  
- Explore ways to embed some of the activities into existing staff meetings. |
|                                | **Apply:**  
- How might you apply some of what you’ve learnt to yourself  
- How might you introduce one new thing you’ve learnt at home and at work | **Outcome:**  
- Stick positive artefacts up around your classroom/work-space  
- Start your next departmental meeting with, “what went well” |
| 2. Introduction to Resilience  | **Aware:**  
- Explain the research and theory behind resilience  
- Explain the research behind the protective factors of resilience | **Outcome:**  
- Understand the most commonly used definitions of resilience and why it’s important  
- Understand the protective factors of resilience |
|                                | **Explore:**  
- Protective Factors “At my Best” coaching exercise  
- In pairs, tell a story about when you were at you best. Partner coaches you to discover what protective factors you were using and what you would like to work on. | **Outcome:**  
- Understand which protective factors come more naturally to you than others  
- Explore ways to develop these protective factors further |
|                                | **Apply:**                                                                 |                                                                         |
### 3. Protective Factor 1 - Connection

**Aware**
- Explain the research behind connection as a protective factor and how a sense of belonging is key to building resilience
- Explain the research behind good quality social relationships being the largest predictor of overall wellbeing

**Explore**
- High Quality Connection (HQC) activities. Ice breaker activity. Go and find out one interesting fact about someone you do not know in the room and then introduce that person through his or her interesting fact.
- Active Constructive Responding (ACR) activities. Do a role-play acting out the different ways of responding to good news.
- In small groups, review your response style.

**Apply**
- Bring HQC strategies into working practices
- Use ACR at home or at work

### 4. Protective Factor 2 - Optimism

**Aware**
- Explain the research behind optimism as a protective factor

- Are there protective factors you would like to develop as a school, staff, and department? We have suggested 3 – Connection, Optimism and Self-efficacy
- How might you as a school develop positive institution protective factor

- An understanding that high quality connections can transform one’s experience at work and in life
- The quality of our social relationships is one of the biggest predictors of our happiness
- Social support can reduce stressors in our lives and increase resilience

- Make a connection with someone you don’t know or find something new out about somebody you already know
- Reflect on your default responding style when good news is shared with you.
- Assess what you can do to become more active constructive in your responses.

- Take part in positive introductions in small groups
- Make an ACR phone call

- An understanding of the research behind optimism and an emphasis on flexible
**CULTIVATING RESILIENCE**

<table>
<thead>
<tr>
<th>- Explain the research behind growth mindset and how it relates to optimism and mental agility</th>
<th>optimism rather than unrealistic optimism - An understanding that mindsets work on a continuum and be changed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explore</strong></td>
<td>- An understanding of your preferred explanatory style, personal, permanent, pervasive - An understanding of strategies that can help to change thinking and behaviors - An understanding of strategies that can help to change thinking and behaviors - An understanding of strategies that can help to change thinking and behaviors</td>
</tr>
<tr>
<td>- Explanatory style of pessimism and optimism. See appendix D for resource. - Activating event, thought, Consequence ABCs/ATCs activity. See appendix E for resource. - Thinking Traps activity. See appendix F for resource. - Real time resilience - Fixed and Growth Mindset quiz. See appendix G for resource.</td>
<td>- An understanding of your preferred explanatory style, personal, permanent, pervasive - An understanding of strategies that can help to change thinking and behaviors - An understanding of your own mindsets towards work and home life</td>
</tr>
<tr>
<td><strong>Apply</strong></td>
<td>- Develop your own personal mental cue and critical question when you notice yourself in a thinking trap - Practice strategies to change your thinking - Set a goal for something you can’t do yet, but think you can achieve with effort and practice</td>
</tr>
<tr>
<td>- Team up with a colleague to work through an ATC and related thinking trap example - Practice real time resilience at home or at work - Develop a growth mindset in an area you would like to develop</td>
<td></td>
</tr>
<tr>
<td><strong>5. Protective Factor 3 – Self-Efficacy</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Aware</strong></td>
<td>- An understanding of self-efficacy as a protective factor and how it is related to optimism and that each protective factor is tied to others - An understanding of the importance of goal setting in relation to developing self-efficacy</td>
</tr>
<tr>
<td>- Explain self-efficacy as a protective factor and how protective factors are related to each other - Goal setting is one way of developing stronger self-efficacy, which requires good self-awareness which can be developed through gaining a better understanding of strengths and hope</td>
<td></td>
</tr>
<tr>
<td><strong>Explore</strong></td>
<td>- Character Strengths and strengths spotting or strengths 360 activity</td>
</tr>
</tbody>
</table>
(staff workshop included as a model. See Appendix C)
- Goal setting and performance feedback. Practice setting SMART/WOOP goals and identify an accountability buddy. See appendix H for resource.
- Hope – using above tools to peer coach each other

<table>
<thead>
<tr>
<th>Apply</th>
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<tbody>
<tr>
<td>- Start your department meetings with strength spotting</td>
</tr>
<tr>
<td>- Set yourself a goal you’d like to achieve related to your own wellbeing</td>
</tr>
<tr>
<td>- Pair up with a peer coach and accountability buddy</td>
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</tbody>
</table>

### 6. Bringing learning to life

- Identify staff wellbeing champions who are committed to taking the learning forwards
- Staff teams self-organize around learning topics that they are passionate about
- Use the PLC sessions as a source for champions to lead further work.

- A better understanding of own and others’ strengths and how that relates to self-efficacy
- An understanding of goal setting strategies and accountability
- An understanding of the power of peer coaching

- Develop ideas and resources for taking the strategies learnt into the school culture
- Start testing out interventions with students
- Champions to produce further materials and workshops for targeting remaining components of resilience not already covered in the learning journey (e.g. Self awareness and mental agility through mindfulness)
Appendix B

Measurement

When carrying out any intervention, it is important to take baseline and continuous measurements to assess starting point, progress, and impact. We refer to these below as outcome measurements and provide summative assessment options with the number of items for each measurement, so that appropriate fit for JFK STEM Academy can be considered. We have recommended measurements that we believe will support JFK STEM Academy in developing more resilient teachers and eventually students. We have also included process measurement recommendations and formative assessment suggestions. These are tangible, formative ways of measuring progress and celebrating milestones and achievements. The leadership team at JFK STEM Academy know their staff and students better than we do and may have identified other metrics that they wish to measure also.

Outcome metrics for teachers

- The PERMA Profiler - A questionnaire that measures the flourishing of adults under 5 domains - positive emotions, engagement, relationships, meaning and accomplishment. There are 23 items on this scale.

Useful resource: [http://www.peggykern.org/questionnaires.html](http://www.peggykern.org/questionnaires.html)

- Resilience scale for adults (RSA) - authored by Friborg et al. (2003). The scale measures personal competence, social competence, social support, family coherence and personal structure, which aligns well with the protective factors of resilience that we have chosen to focus on. There are 37 items on the scale.
Useful resource:

https://www.researchgate.net/publication/261096803_Validation_of_a_scale_to_measure_resilience_in_adults

- Beck anxiety and depression inventory – While it is important to measure wellbeing, it is also important to measure ill-being and the Beck anxiety and depression inventory are the most commonly used measurement in this domain. There are 21 items on this scale on each scale.


- Happiness at work - As the first phase of the learning journey is primarily focused on the teaching staff; we thought it would be useful to measure levels of happiness in relation to work. This will also cover employee engagement.

Useful resource - https://www.happinessatworksurvey.com/

- Sick days - take baseline measures using school data and compare to post intervention data
- Job/classroom performance - Using school data, take baseline measures of job performance and compare to post intervention.
- Growth Mindset measure - the link below is a survey for students, but could be adapted for adults.

Useful resource - https://survey.perts.net/share/toi

Outcome metrics for students:
• Epoch measure for adolescents - the measure consists of five positive characteristics of flourishing for adolescents - engagement, perseverance, optimism, connection, happiness.

There are 20 items on this scale.

*Useful information* -

• Academic resilience scale (ARS 30) - the scale measures resilience in an academic context against three main factors: perseverance, reflective and adaptive help-seeking, negative affect and emotional response. There are 30 items on this scale.

*Useful information* - https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5114237/

**Process enhancers and metrics for teachers**

This is not an exhaustive list, but we wanted to provide some ideas for formative measurement that could be taken along the learning journey.

• Strength spotting in staff meetings to develop self-efficacy and improve relationships
  
  o Measurement of this could be to send out a survey to staff at the end of each term including a question on whether or not they have had their strengths spotted in a department meeting and how it made them feel for both qualitative and quantitative data. Alternatively, if the staff survey is a little onerous, when a strength is spotted, the spotter could write the strength down on a post-it along with the name of the person, which could then be tracked.

• Shout out display boards to encourage high quality connections and positive emotions (see example at end of Appendix B).
Measurement of this could be how many new comments are added each week. If it starts to decrease week by week, that is a sign that it might not be working and may need the wellbeing champions to model it.

- Growth mindset award - termly awards for staff who have achieved a growth mindset goal
  - Measurement of this would be how many awards are given out each term.
  - Staff absences rate could also be a measure.

- Lunch and learn sessions hosted by peer coaching/accountability buddies around topics they are working on.
  - Measurement of this would be how many lunch and learns are offered and how many staff attend.

**Process enhancer and metric ideas for students:**

- Strength spotting each other in class.
  - Less reports of bullying
  - Shout out boards for students

- Growth mindset awards
  - Increases in the number of students who complete tests
Example of a shout out display board

(Photo from Townley Grammar school in the UK where Yvonne delivered a series of workshops)
Appendix C

Example of Suggested Training Session Format (could be replicated for other topics)

This workshop outline correlates to topic 5 of the learning journey in the explore section.

1. Ask teachers to take the VIA and bring the results to the meeting.
   - Go online to: www.viacharacter.org
   - Then choose:
     - Register to get started
     - After completing the survey, choose the free option and download your results so you can print them out.

2. The day of the meeting start by explaining that in the coming months, they will be learning a more of positive psychology and that we would like to take a whole school approach. In this approach, we would first like to start with them (teachers) as their well-being permeates to the students.

3. Then show them the video “The Science of Character”
   https://www.youtube.com/watch?v=U3nT2KDAGOc

4. After the video, explain the difference and importance of focusing on everything that can go wrong with us (DSM) and creating a language of strengths.

5. AWARE: Then facilitator (Danielle) can talk about signature strengths and how they are natural, essential and energizing to us and make them look at theirs

6. Explain how the character strengths were identified, that Seligman and Peterson (2008) did extensive research in many countries and ended up dividing them into 6 core virtues
and 24 strengths. Use the VIA strengths handout, received from Ryan Niemic with all the strengths together in one page. (pasted below)

7. Ask them if their Signature Strengths resonate with them, listen to a couple of people comment on that

8. EXPLORE: Have them choose a strength and find a group with that same strength to start a discussion, if there are not enough people they can gather by virtue.
   - If time allows they can share a story when they were at their best and spot their strengths
   - The facilitator (Danielle) can ask a couple of volunteers to share their story at their best and ask about the strengths they found and how did they feel

9. APPLY: Danielle can explain how strengths are like a muscle and that the more we use them the more they will help in our well-being

   Commitments: Using one top strength in a new way during one week.
The VIA Classification of 24 Character Strengths

ViaCharacter.org

WISDOM
- Creativity
  - Originality
  - Adaptability
  - Ingenuity

CURiosity
- Curiosity
  - interest
  - Novelty-Seeking
  - Exploration
  - Openness

JUDGMENT
- Judgment
  - Critical Thinking
  - Thinking Things Through
  - Open-mindedness

LOVE OF LEARNING
- Learning
  - Mastering New Skills & Topics
  - Systematically Adding to Knowledge

PERSPECTIVE
- Perspective
  - Wisdom
  - Providing Wise Counsel
  - Taking the Big Picture View

COURAGE
- Bravery
  - Valor
  - Not Shrinking from Fear
  - Speaking Up for What’s Right

PERSISTENCE
- Perseverance
  - Persistence
  - Industry
  - Finishing What One Starts

HONESTY
- Honesty
  - Authenticity
  - Integrity

ZEST
- Vitality
  - Enthusiasm
  - Vigor
  - Energy
  - Feeling Alive

SOCIAL INTELLIGENCE
- Social Intelligence
  - Aware of the Motives/Feelings of Self/Others
  - Knowing what Makes Other People Tick

LOVE
- Both Loving and Being Loved
  - Valuing Close Relations with Others

KINDNESS
- Generosity
  - Nurturance
  - Care & Compassion
  - Altruism
  - “Niceness”

LOVE
- Both Loving and Being Loved
  - Valuing Close Relations with Others

TEAMWORK
- Citizenship
  - Social Responsibility
  - Loyalty

FAIRNESS
- Fairness
  - Just
  - Not Letting Feelings Bias Decisions About Others

LEADERSHIP
- Leadership
  - Organizing Group Activities
  - Encouraging a Group to Get Things Done

TEMPERANCE
- Temperance
  - Mercy
  - Accepting Others’ Shortcomings
  - Giving People a Second Chance

HUMILITY
- Humility
  - Modesty
  - Letting One’s Accomplishments Speak for Themselves

PRUDENCE
- Prudence
  - Careful
  - Cautious
  - Not Taking Undue Risks

SELF-REGULATION
- Self-Regulation
  - Self-Control
  - Disciplined
  - Managing Impulses & Emotions

APPRECIATION OF BEAUTy & Excellence
- Appreciation of Beauty & Excellence
  - Awe
  - Wonder
  - Elevation

GRATITUDE
- Gratitude
  - Thankful for the Good
  - Expressing Thanks
  - Feeling Blessed

HUMOR
- Humor
  - Playfulness
  - Bringing Smiles to Others
  - Lighthearted

SPIRITUALITY
- Spirituality
  - Religiousness
  - Faith
  - Purpose
  - Meaning

Appendix D

Explanatory Style

This workshop outline correlates to topic 4 of the learning journey in the explore section.

Examples of pessimistic and optimistic explanatory responses:
CULTIVATING RESILIENCE

Personal

**Question 1. You are walking down the hallway, and your colleague doesn’t say hi to you**

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. She/He must be mad at me because of something I did last week</td>
<td></td>
</tr>
<tr>
<td>B. She/He must be having a bad day</td>
<td></td>
</tr>
</tbody>
</table>

*Code:* This question gives us insight into “Personal” or me vs. not me.

A = me – you attribute the event to something you did personally without considering the external factors

B = not me – you are able to take the interaction into context and realize that there are many other factors that could be at play

Permanent

**Question 2. You answer a question in a meeting, and everyone ignores you**

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. “I always say the wrong thing.”</td>
<td></td>
</tr>
<tr>
<td>B. “I might have read the situation wrong” or “no one had an immediate response to my thoughts.”</td>
<td></td>
</tr>
</tbody>
</table>

*Code:* This question gives insight into the “Permanence” or always vs. not always

A = always – you think that one bad event will last forever, that because of one wrong answer you will always have the wrong answers

B = not always – you realize that one wrong answer doesn’t mean they will always be wrong, this event is isolated and will not last forever

Pervasive

**Question 3. You don’t get the promotion you applied for**

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. I am worthless</td>
<td></td>
</tr>
<tr>
<td>B. There was a lot of great competition this year; I will have to try harder next time — maybe this job isn’t suited for my strengths</td>
<td></td>
</tr>
</tbody>
</table>

*Code:* This question gives insight into the “Pervasive” or everything vs. not everything domain.

A = everything – you feel that if you are not promoted that you are entirely worthless in every domain of their life, not just this particular job

B = not everything – you realize that just because you didn’t get this promotion that means maybe you aren’t right for this job, but that doesn’t mean you aren’t good at other things

Appendix E

CBT Exercise - The ABCD Method: Be reflective, not reactive!

This resource correlates to topic 4 of the learning journey in the explore section.

**Activating Event** – (What happened? What is stressing me out?)

1) 

2) 

3) 

4) 

**Belief** – (What is my negative self-talk? What distorted or irrational thinking style am I using? What negative belief am I clinging to? What interpretations am I making?)

1) 

2) 

3) 

4)
Consequence – (What am I feeling? What is my behavior as a result of my beliefs?

1) ____________________________________________________________

2) ____________________________________________________________

3) ____________________________________________________________

4) ____________________________________________________________

Dispute – (Counter-thought. What realistic and grounding statement can I use instead? Is there an alternative way of thinking here that is reality based?)

1) ____________________________________________________________

2) ____________________________________________________________

3) ____________________________________________________________

4) ____________________________________________________________
Appendix F

This resource correlates to topic 4 of the learning journey in the explore section.

### 7 Thinking Traps

<table>
<thead>
<tr>
<th>Name of Thinking Trap</th>
<th>Explanation</th>
<th>Consequence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jumping to conclusions</td>
<td>Believing one is certain of the meaning of a situation despite little or no evidence to support it</td>
<td>People stop seeking for more information and make false assumptions and actions. They become impulsive in their responses (because they stopped collecting data and jumped to action)</td>
</tr>
<tr>
<td>Tunnel Vision</td>
<td>Focusing on the less significant details in a situation, while screening out the more important aspects (jumping to a conclusion about saliency. One element of your work becomes the most prominent aspect, everything else recedes)</td>
<td>Perfectionism is common with people who have tunnel vision. They can't take feedback (because you only hear contradictory information). You can't see the good, unwilling to take in any other information.</td>
</tr>
<tr>
<td>Overgeneralizing</td>
<td>Settling on global beliefs about one's general lack of worth or ability on the basis of a single situation</td>
<td>De-motivating, stereotyping, lower self-efficacy (belief that you can change your circumstances), anger, shame, embarrassment</td>
</tr>
<tr>
<td>Magnifying &amp; Minimizing</td>
<td>Errors in evaluating events in which the negative aspects of a situation are magnified and the positive aspects of a situation are minimized (negativity bias)</td>
<td>Decreases in self-efficacy, embarrassment, sadness</td>
</tr>
<tr>
<td>Personalizing</td>
<td>The tendency to automatically attribute the cause of an adversity to one's personal characteristics or actions</td>
<td>Guilt, shame, embarrassment, lack of self-esteem, sadness</td>
</tr>
<tr>
<td>Externalizing</td>
<td>The tendency to automatically attribute the cause of an adversity to other people or to circumstances</td>
<td>Anger towards others, victim mentality (blaming others and not taking any of the blame)</td>
</tr>
<tr>
<td>Mind Reading</td>
<td>Assuming that you know what the other person is thinking or expecting another person to know what you are thinking</td>
<td>Communication issues, assumptions, stop collecting data, relationship dissatisfaction</td>
</tr>
</tbody>
</table>
Appendix G

Growth Mindset

This resource correlates to topic 4 of the learning journey in the explore section.

**EMBRACE THE POWER OF “YET”**

How to do it: Write down a list with three things you are good at and three things you are bad at:

I am good at…

1. ______________________________
2. ______________________________
3. ______________________________

I am not good at…

1. ______________________________
2. ______________________________
3. ______________________________

We often have ideas that we are good at some things and bad at other things, and this cannot be changed. However, research shows that through hard work and perseverance, we can become more musically talented, artistic, and intelligent.

Consider the following people:

1. Albert Einstein could not speak until he was in 4th grade. His teachers labeled him “educationally subnormal.”

2. The same music teacher told George Harrison and Paul McCartney (two of the Beatles) that they possessed no special musical talent and that they should probably give up on music.

3. Steve Jobs (CEO of Apple - launched products that transformed the way we see and interact with technology) dropped out of college and was fired from Apple.
Imagine if these people had listened to the people who told them they were bad at something. If they had given up or believed that their abilities were limited, we would have missed out on some of the greatest minds of our time.

Your challenge: By saying “I am not good at” something we are limiting our potential to change. Instead, put the work “yet” after each of the things you are not good at. This way, you are allowing yourself to change the things you are not good at right now.

Including the word yet changes our mindset about our own beliefs and potential.

I am not good at:

1. _________________________________ YET
2. _________________________________ YET
3. _________________________________ YET

Now, pick one of the things you are not good at YET and practice this thing every day for one week. Notice how you improve. How does this make you feel?

More resources for growth mindset:

https://www.mindsetkit.org/


https://www.thinglink.com/scene/549674394805338114
Appendix H

SMART and WOOP Goals

This resource correlates to topic 5 of the learning journey in the explore section.

1. Here are some useful links with resources to explore SMART and WOOP goal setting.

SMART Goal setting:
https://www.smartsheet.com/blog/essential-guide-writing-smart-goals

WOOP Goal setting:
https://www.characterlab.org/woop/

2. Here is a useful resource for the best possible self exercise:
https://ggia.berkeley.edu/practice/best_possible_self