EXPLORING TRAUMA-INFORMED EDUCATION IN THE US: INITIAL FINDINGS AND REFLECTIONS

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Banksia Gardens Community Services

WPI

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We acknowledge the Nipmuc people as the original caretakers of the land in Central Massachusetts where WPI has its home, and the Wurundjeri people as the original custodians of the land on which we at the Melbourne Project Center work. We pay my respects to the Native Peoples, their culture, and their Elders past, present and future.

ABSTRACT

Children who have experienced trauma often disengage from school. Our goal was to determine how organizations in the US are approaching this problem so that we could identify best practices and expert advice to share this information with the NCESE, a recent collaboration that was formed to help address the problem of disengagement from school. After conducting a significant literature review on trauma and how it impacts education, we identified 25 organizations, including schools, training organizations, and collaborations and reviewed their websites. We secured follow up interviews with nine of these organizations. We identified common goals, the frameworks and theories that they base their work off of, and their initiatives. We also obtained information on their biggest challenges and their methods of assessing the impact. This report documents those finding to assist the NCESE in their mission to identify best practices. In addition we created two deliverables: a compendium profiling each of the nine organizations, and an interactive map with all the trauma-informed organizations we identified, their locations, and their key features. This map can be updated in the future and is a resource that can be integrated into the NCESE's website.

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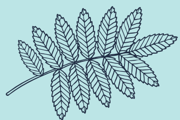
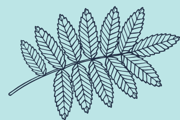
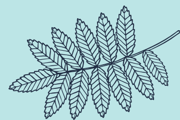
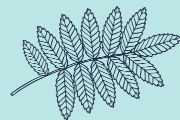
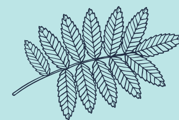
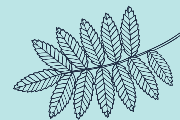
     

Introduction

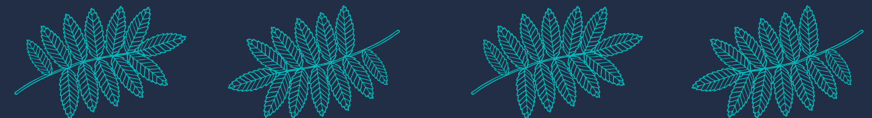
Approximately one-half to two-thirds of students experience some form of trauma in their childhood (McInerney & McKlindon, 2015). Oftentimes the trauma children experience leads to difficulties with regulating emotions, mental illness, and a myriad of other challenges that present learning obstacles in a typical classroom setting (ibid.). According to The National Child Traumatic Stress Network (2020), trauma can stem from bullying, community violence, low socioeconomic status, an unstable home environment, and many other circumstances. Trauma frequently causes children to develop complex needs that often go unmet in traditional classroom settings, which sometimes results in these students disengaging from school.

Trauma-informed educational approaches are critical to reducing disengagement. However, teachers do not always have access to professional development opportunities in this area or opportunities to collaborate with successful trauma-informed organizations.

In order to target this issue in the Hume region of Australia, Banksia Gardens Community Services has joined forces with 15 primary schools, one secondary school, and the Victorian Department of Education and Training. Their new collaborative, a collective impact group known as the Northern Centre for Excellence in School Engagement (NCESE), is developing and implementing both preventative and interventional school and community programs that help teachers and other adults support students with special needs. Specifically, the NCESE wants to provide professional development for teachers and also those running after and before school programs in the Hume region to help them better engage and educate students with traumatic backgrounds. The NCESE needs assistance in two major areas, however; first, they wish to obtain background on other organizations that have implemented trauma-informed programs to help them identify common and successful models, and second, the NCESE wants to expand its network by connecting with these organizations.

Trauma-informed teaching is still a relatively new field. There are many different paths that organizations and schools take, and finding meaningful ways to assess these strategies is difficult to do as well. Although organizations that train teachers in trauma-informed teaching strategies do exist in other countries, the NCESE's initiative of implementing such a curriculum across the Hume region may be the first of its kind for Australia. As such, the NCESE is facing the tough challenge of creating a curriculum in an area of study where there is no single defined standard, nor is there local support from similar successful initiatives.

Our goal in this project was to provide these resources as well as to help the NCESE expand their network. To accomplish this, we first investigated the relationship between trauma, socioeconomic status, and learning. We then identified and mapped potential partner organizations involved in trauma informed education, and we interviewed a handful of the most promising organizations to identify how they carry out professional development, as well as the strategies and methods they emphasize for classroom use.



Background

In this section, we provide the preliminary background needed to begin our work. We explored relevant information on trauma and student disengagement, teacher education in Australia, and Banksia Gardens.

What is Trauma?

It is estimated that one in four children experience a traumatic event before the age of 16 (Rumsey and Milson, 2017). Trauma is defined as any experience which causes a significant amount of stress (Rumsey and Milson, 2017). The impact of trauma is not consistent because every person reacts to and deals with events differently. Some events that cause trauma include domestic violence, neglect, serious illness, sexual, physical, and/or verbal abuse.

Although the traumatic experience can not be erased, people can learn to cope with the effects. However, if a traumatized child never learns to cope with their traumatic experience, then the symptoms can carry into adulthood. Common symptoms of trauma include physical and mental fatigue, anxiety, fear, sadness, guilt, shock/disbelief, difficulty concentrating, withdrawing from others, and becoming easily agitated (Robinson, 2020). The 'fight, flight, or freeze' response is common in children dealing with present stress who have experienced childhood trauma (Flannery, 2019).

Trauma has a serious effect on long term wellbeing. The Center for Disease Control and Prevention's (CDC) Adverse Childhood Experiences (ACE) study showed a significant link between children who experience trauma and later development of chronic diseases (Stevens, 2012). The CDC assigned an "ACE" score to each of the 17,000 members of the Kaiser Permanente health maintenance organization based on the number of traumatic events an individual had experienced (Stevens, 2012). 66% of the participants had a traumatic experience, and 87% of those who did had two or more (Stevens, 2012). High ACE scores indicated a higher likelihood the child would have chronic diseases in the future (Stevens, 2012), for example see Figure 1 (Stevens, 2012).

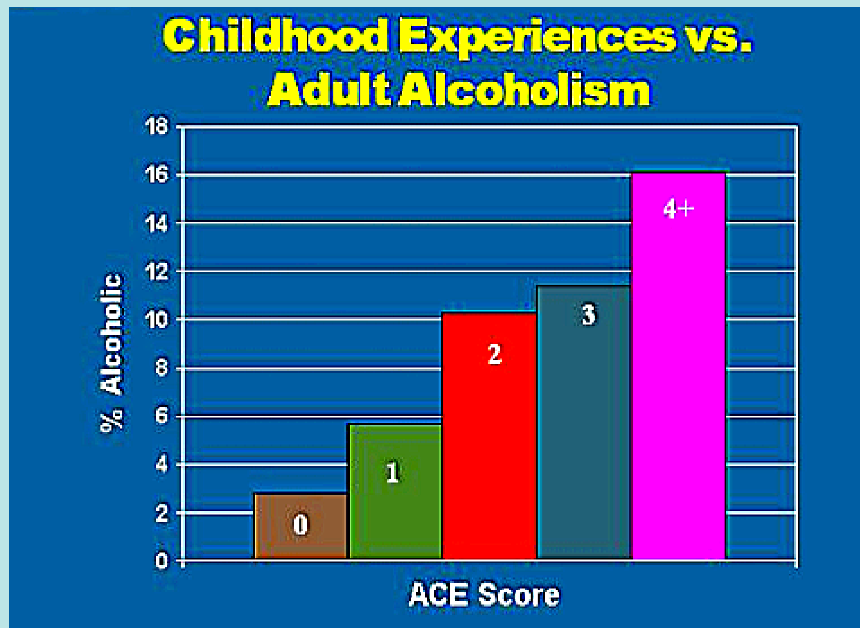
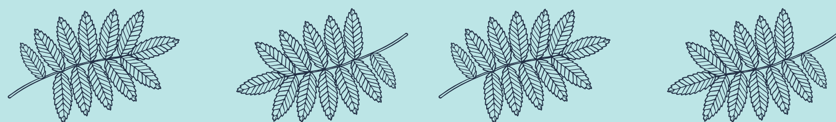


Figure 1: Likelihood of being an alcholic vs ACE score

If untreated, emotional trauma can result in Post-Traumatic Stress Disorder (PTSD). PTSD is when someone's nervous system gets "stuck" and they are unable to process and deal with their emotions (Robinson, 2020). Traumatic memories can be sparked by "triggers". A trigger can be anything that reminds the person of a past traumatic event. A trigger may be a specific sound or a certain object associated with the initial event (Trauma-informed care in behavioral health services, 2014). Exercising, socializing, self-regulating the nervous system, and taking care of one's health can all help with recovery from trauma (Robinson, 2020). Exercise can repair the nervous system and help take the mind off past events. Socializing and connecting with others is crucial for expressing and releasing emotions, as opposed to isolation, which can make someone feel even more helpless. Mindful breathing can also help relieve anxiety and is an effective mind recalibration technique. Also, trauma-related energy can be released by focusing on sensations rather than thoughts and memories (Robinson, 2020). Lastly, physical health is a huge factor in how someone feels and reacts. Adequate sleep, eating well, and avoiding alcohol and drugs can help in overcoming hardships (Robinson, 2020).



Trauma and Socioeconomic Status

Students with a low socioeconomic status may be more vulnerable to having traumatic experiences than students with a higher socioeconomic status. Trauma-inducing environments involving domestic abuse, stress, and neglect are significantly more prevalent in low-income communities than in high-income communities (Mock and Arai, 2011). Across the board, studies show that lower socioeconomic status is associated with high levels of emotional and behavioral difficulties, aggression, and higher rates of depression and anxiety (Mock and Arai, 2011). Low socioeconomic standing is correlated with weaker academic performance and less school engagement (American Psychological Association, 2010). Low-income students are also five times less likely to graduate than middle-income students and six times less likely than high-income students (American Psychological Association, 2010). Experiencing trauma is certainly not limited to just those with low socioeconomic status. However, a study completed by psychologists at the University of Waterloo found that higher socioeconomic status was actually a preventative measure with regards to developing complex educational needs resulting from early adversity (Mock and Arai, 2011), and that high-income traumatized students are much more likely to succeed on average than their low-income counterparts. Many of the schools involved in the NSECE are located in disadvantaged neighborhoods where children may be exposed to more trauma and are susceptible to educational challenges.

Trauma and Student Disengagement

Research has shown that trauma can lead to physiological symptoms, learning challenges, and lack of engagement. Students who suffer from trauma often have a difficult time feeling safe and controlling stress and anxiety, skills that are critical to succeeding in a traditional classroom setting (Rumsey and Milson, 2017). They can also struggle in building relationships and staying engaged in class. If the trauma a child experiences is repetitive, it can alter the development of the student's brain, causing significant long-term effects and resulting in lower academic success rates (Rumsey and Milson, 2017). Studies have also shown that students are more likely to drop out if they are displaying low academic achievement, learning challenges, emotional disturbance, and/or disengagement, all of which are symptoms that can be linked to trauma. A study conducted by Michelle Porche, Lisa Fortuna, Julia Lin, and Margarita Alegria in 2011 showed that students who had experienced childhood trauma had a dropout rate of 19.79% while students who had not experienced trauma had a dropout rate of 12.97% .

Consequences of Student Disengagement

A comprehensive study performed in the United States assessed a large population of 21 to 24-year-olds who dropped out before completing high school, along with the reasons they cited for doing so (McDermott, Donlan, and Zaff, 2019). The largest category, encompassing more than half of the individuals in the study, was school disengagement and a dislike for the school environment. Students gave reasons such as boredom, disciplinary issues, mental health, bad grades, and school environment — such as disliking means of disciplinary action or feeling that attending school was not teaching them anything worthwhile (McDermott, Donlan, and Zaff, 2019). Although teachers do not entirely have control of external factors such as poverty, health, and family situation, all of which contribute to dropping out, they can try to improve engagement and make the classroom environment more supportive.

The benefits of completing secondary school, whether in Australia or elsewhere in the world, are very clear. A study by researchers Lamb and Huo (2017) organized the benefits of year twelve completion in three major categories: outcomes, social impacts, and fiscal impacts, as seen in Figure 2.

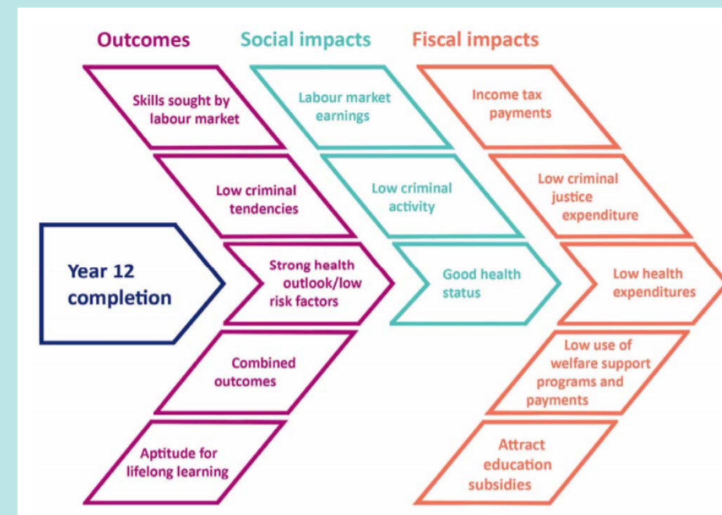


Figure 2: Benefits of Completing Secondary School (Lamb and Huo, 2017)

In contrast, dropping out of school entails a myriad of lifelong consequences . Having a high school diploma is now a prerequisite for most employment. Additionally, school completion is a required foundation for accessing higher-level training and university (Clarke, 2020). A study performed in 2017 by researchers from Victoria University found that nearly a quarter of Australian high school students were dropping out before completing year 12 (Lamb and Huo, 2017). Even more alarming, this study found that on average, only 37% who dropout of high school were able to re-engage in the job market or education. This is likely because one in three employers reject applicants without a high school degree, and one in two employers reject those who have not gone beyond year 11 (Lamb and Huo, 2017).

Beyond job prospects, dropping out can have other measurable consequences: adverse effects on physical health, increased incarceration rates, and social costs (John, Walsh, Raczek, et al., 2018). Although dropping out does not necessarily lead to incarceration, a peer-reviewed study examining US inmates found that "approximately [...] 60% of jail inmates did not obtain their regular high-school degree" (Sweeten, Bushway, and Paternoster, 2009).

The social costs of dropping out are harder to measure as they cover an extremely wide array of areas, but generally, some of the most common costs can be reduced relationship prospects, difficulty finding housing, unstable personal relationships, and decreased civic engagement (Lamb and Huo, 2017). Overall, the costs of student disengagement go far beyond fewer job prospects and can create lifelong consequences for those that leave school early. Moving forward, it is critical that the Australian government makes steps towards reducing student disengagement to increase secondary school completion; this will better not only the lives of the students, but the entire community.

A Flexible Framework for Helping Students who have Experienced Trauma

A trauma-sensitive framework was created by the Trauma and Learning Policy Initiative to guide educators working with traumatized students. The framework is composed of six elements, seen in Figure 3.

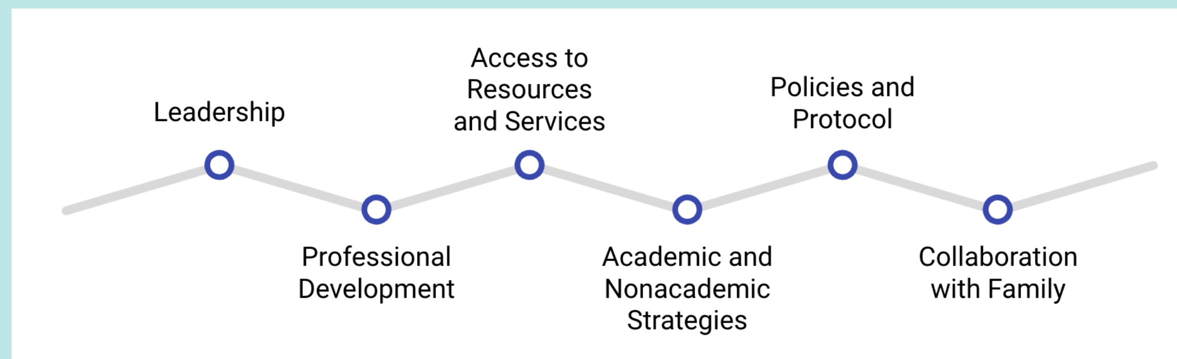
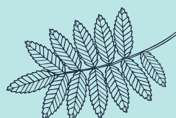
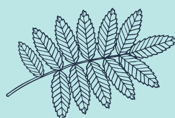
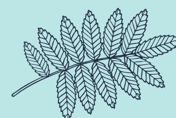
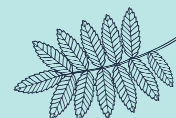
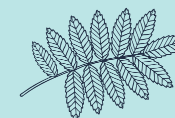


Figure 3: The six elements of the flexible trauma-informed framework

The framework outlines a strong foundation to address trauma through different means, but allows room for flexibility so each district can adopt a plan that best fits their community. The six elements are the following:

1. The first element is leadership. The education of the staff is highly important. The members who lead professional education should be carefully chosen based on their experience with dealing with students from a variety of backgrounds, including backgrounds involving trauma.
2. The second element is professional development. Professional development courses should include material on what trauma is, the impact it has on the students, and techniques for strengthening relationships between the educators and the students. The staff should practice procedures for dealing with their students, especially when they are overwhelmed with stress and anxiety.
3. The third element includes access to resources and services such as counseling and therapy, trauma-informed education, and emotional workshops. Both students and educators should be aware and have access to mental health and other services outside of the school.
4. The fourth element is academic and nonacademic strategies. Educators should analyze each student holistically and work on improving both academic and non-academic skills. Non-academic skills include emotional and social skills, which indirectly play a role in the student's academic success. The educators should also focus on creating a consistent and predictable curriculum so the students feel comfortable.
5. The fifth element is policies and protocols. Administrators should make policies and protocols for working with traumatized students effectively. These include discipline policies, communication procedures, and safety plans.
6. The sixth element is collaboration with families. Students spend the majority of their time either in school or with their families. The family can provide better support at home if the school communicates how the student is performing and if there are any issues.

Parts of the above framework are operationalized in common trauma-informed teaching methods, which are explained in what follows.

General Approaches to Trauma-Informed Learning

There are three main approaches for developing a trauma-informed classroom. These approaches are shown in Figure 4.

Figure 4: The three main approaches in developing a trauma-informed classroom.

The first approach is changing the physical classroom. Trauma-informed learning environments should be welcoming. Highlands Elementary School, located in Newark, DE, for example, has classrooms with yoga mats and bolsters, natural light filters, flexible seats that allow for small movements, and cool-down corners for students who need a break, equipped with headphones, books, and toys (Flannery, 2019). These classroom additions help the students feel more comfortable.

The second approach is teaching students techniques to control their emotions. When Highland elementary kindergarteners are frustrated, they are taught to tuck their heads against their chests and take deep breaths. They then state their problem and how they feel about it (Flannery, 2019), which helps them to better express and communicate their feelings — a step critical to helping students overcome past trauma. El Dorado Elementary School, located in San Francisco, CA, is a high-needs school for minorities and students who are frequently exposed to violence. Students there are provided a safe corner where they can go for a break. The students are also provided counseling for emotional guidance if needed (Rumsey and Milson, 2017).

The third approach is educating teachers on how to handle students who have experienced trauma. Baker Elementary School, located in Brockton, MA, for example, focuses on educating teachers about trauma and how it manifests as complex needs (Rumsey and Milson, 2017). The teachers also implement non-academic activities to make a more welcoming and fun environment (Rumsey and Milson, 2017). After implementing these strategies, disciplinary referrals in the school went down by 75% (Rumsey and Milson, 2017). Bemiss Elementary School, located in Spokane, WA, also focuses on educating the teachers on the impact of adverse childhood experiences. A large emphasis is placed on changing the teachers' view on their students and not simply labeling students as 'difficult' or 'troubled' (Rumsey and Milson, 2017). After seven years of these practices, there was a 20% decrease in disciplinary referrals and a 30% decrease in suspensions each year for the past two years (Rumsey and Milson, 2017). El Dorado Elementary School's staff are not told how to do their jobs, instead, they were taught what trauma was and how it alters a student's brain (Stevens, 2014). They then brainstormed as a group different approaches and

techniques for helping students who have experienced trauma (Stevens, 2014). The teachers also work closely with the student's therapist to develop a plan unique for each student (Stevens, 2014). If a student started to lose control, the staff member simply gives them a five-minute pass to the Wellness Center, a room with comfortable seating, headphones, and toys (Stevens, 2014). There was a 74% decrease in disciplinary referrals and an 89% decrease in suspensions after implementing this approach (Rumsey and Milson, 2017). All three of these schools first focused on changing the teachers' views of their students as simply willful troublemakers to children who suffer physical and mental effects based on trauma. Every single aforementioned school cited a significant decrease in the number of disciplinary referrals and suspensions after implementing these strategies.

Teacher Training in Australia

We looked into teacher education programs at two Australian universities to see if their curriculum includes trauma informed teaching. We researched the Bachelor of Education degree that takes four years to complete at the University of Southern Queensland (2020). In this program, students specialize in a subject such as math, English, science, or language. Independent of specialty, they must take general teaching courses including Thinking and Acting like a Teacher, where students observe teachers and begin to develop their own teaching skills (University of Southern Queensland, 2020). Another course, Childhood Development, includes learning about the social-emotional development of children and exceptionalities in development, such as the impact of trauma and behavioral difficulties (University of Southern Queensland, 2020). Educating Learners with Special Needs Across Contexts is another course all students must take to receive a degree. This course covers the characteristics of learners who have special needs, such as behavioral problems, mental health considerations, and disabilities, and it overviews different teaching approaches that may be successful with these students (University of Southern Queensland, 2020).

The second university we researched was the University of Melbourne, which has a two-year master's program in teaching. In the first year, students must take courses in Educational Foundations, Clinical Practice, Clinical Teaching Practice, and Diverse and Inclusive Classrooms (University of Melbourne, 2020). In Educational Foundations students learn about the curriculum, the sociological constructs of children, and education; clinical practice is where students learn different ways to teach and support different students (University of Melbourne, 2020). In the second year, all students must take the Clinical Practitioner course, which builds on the Clinical Practice course taken in the first year. This course focuses on making an inclusive classroom and adjusting teaching to meet the needs of learners (University of Melbourne). It is important to note that both the two-year master program and the four-year bachelor's program at the different universities include mandatory classes that address

child development and relevant topics. This suggests that teachers may have some general knowledge of trauma and how it might impact learning and teaching, but that more in-depth professional development could be provided by groups like the NCESE and Banksia to expand on this foundation.

Although each state determines the certification requirements for teachers, the national government of Australia has created suggestions for the state to follow. For example, the Australian Institute for Teaching and School Leadership created seven standards as seen in Figure 5 (Australian Institute for Teaching and School Leadership, 2017)

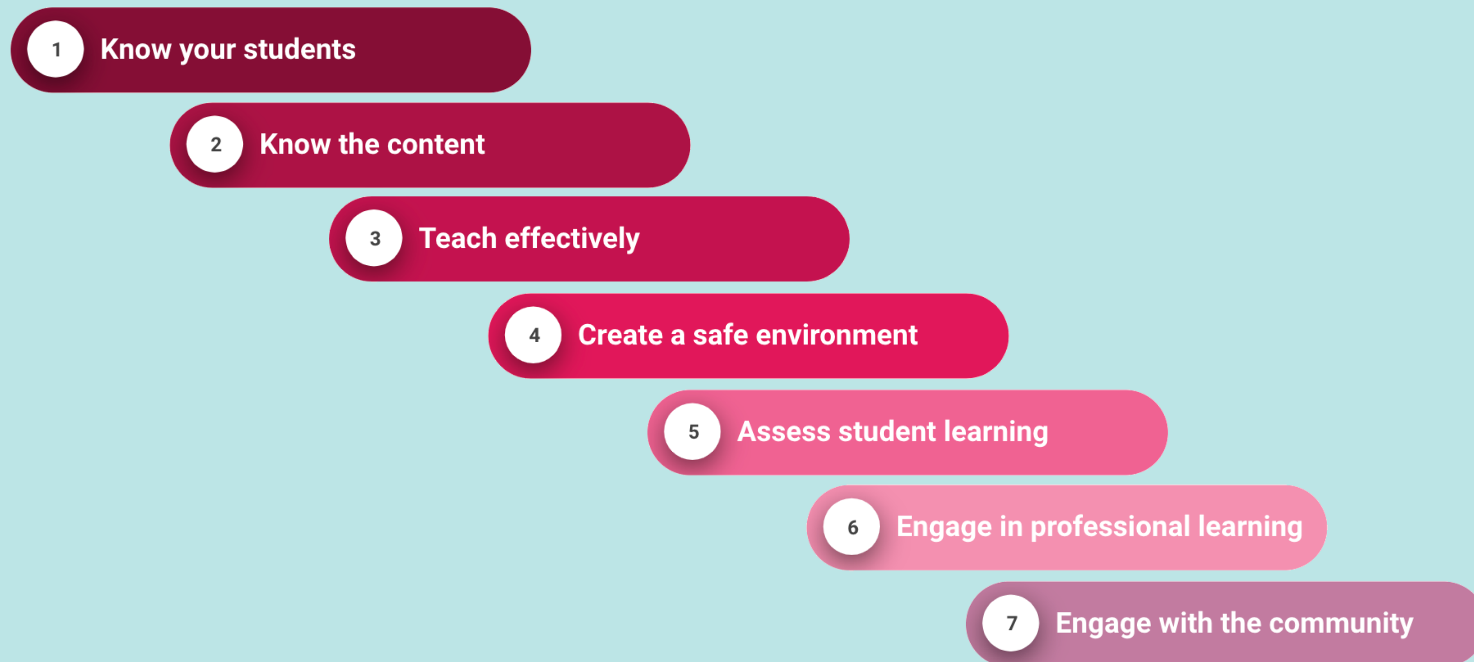


Figure 5: The seven teaching standards in Australia

Throughout all four career stages laid out by the Australian government, these standards remain the same, however, the specifics to achieve the standards evolve and grow as the career stage changes, with an emphasis on professional growth throughout the stages. The first standard is important because oftentimes students who have complex needs stemming from trauma require non-traditional teaching methods, which falls under this standard. The third standard, having an effective teaching plan, is also of interest to us. If a teacher does not know the best way to teach different types of students they cannot make an effective plan. A trauma-informed classroom must be a safe space for all of its students, which aligns with the fourth standard. The sixth standard, which is professional development, is the way that the NCESE and Banksia will provide teacher training in trauma-informed education.

Professional Development in Victoria

In order to renew a teaching license in Victoria, teachers must complete at least 20 hours of professional development every year (Victorian Institute of Education, 2020). The two main ways teachers can complete it are formal professional development, which includes seminars and conferences, courses, or professional development led by the school, the other is informal professional development, which includes professional reading of journals and books, collegiate meetings, and participating in education panels (Victorian Institute of Education, 2020). The teacher must document evidence of their professional development. For formal professional development, evidence can include certificates of participation, the provider's signature, verification of attendance, or a transcript of results (Victorian Institute of Education, 2020). The informal professional development can be evidenced by a log of activities, notes, and reflections on what the teacher has learned and how it supports students, minutes of meetings, and colleague's signature (Victorian Institute of Education, 2020). The Victorian state government offers different courses in professional development for teachers. These courses include online classes, such as learning more about best practice inclusive teaching or lessons from remote and flexible learning (Victorian State Government, 2019). In-person classes are split up by terms and include courses such as Inclusive Classrooms or Child Safety (Victorian State Government, 2019). We did not find any courses geared towards trauma specifically; however, the courses focused on inclusive classrooms are of interest because they may contain some information about trauma-informed classrooms.

Banksia Gardens Community Services and The Northern Centre

Banksia Gardens Community Services is a non-profit community services organization. Their mission statement is "transforming lives, strengthening communities, reducing disadvantage" (2020, About Us). Banksia runs programs ranging from community lunches and a community garden to technology courses for the elderly to a homework group for youth, to just to name a few (Banksia Gardens Community Services, 2020).

Banksia is located in Hume, a disadvantaged community within the metropolitan Melbourne area of Victoria where many students struggle with school. According to the Melbourne Institute of Applied Economics and Social Research, the national poverty line for a two-person household in the second quarter of 2019 was $708.41 per week (2019). The data displayed in Figure 6, from the Australian Bureau of Statistics (2019), shows the percentage of people living below the poverty line in Hume is five percent greater than the poverty rates reported for both the state and the country as a whole. Moreover, less than a quarter of students graduate with a High School Certificate or higher, a far lower rate than either the state or the country. Percentage-wise, Hume also has five percent more households with no internet access compared to the percentages of both Victoria and Australia. When looked at together, it is apparent that these variables must be related, even if it is a complex relationship. For example, it is extremely difficult to do assigned school work online if there is a lack of internet, putting students at a higher risk for low grades, which is often cited as a reason for dropping out of school. Additionally, dropping out of school early could lead to having a more difficult time finding jobs which could

lead to poverty, which continues perpetuates the low socioeconomic status for many of these individuals.

One of Banksia's youth projects is ProjectREAL, which stands for Re-engagement in Education and Learning. Planning for ProjectREAL began in 2015 as a result of witnessing the school disengagement that often occurred with children who experienced early adversity. The goal of this project was to "address exclusion from primary school experienced by students aged 9-12 whose behaviors were found to be extremely challenging, mostly as a result of previous experiences of trauma, abuse or neglect" (Banksia Gardens Community Services, 2020, ProjectREAL). ProjectREAL opened to students in 2017, and since then has had over 450 teachers take part in professional development related to ProjectREAL, some even completed Banskia's Trauma-Informed Positive Education training (Banksia Gardens Community Services, 2020). In addition to the typical school curriculum, ProjectREAL focuses on trauma-informed practice, including emotional learning, trust-building, and physical wellbeing.

		Hume	Victoria	Australia
1	Graduated from Year 12 or higher	24.7%	40.2%	37.7%
2	Household income is less than $650 per week	25.3%	20.3%	20.0%
3	Households without Internet access	19.1%	13.6%	14.2%

Figure 6: Hume graduation rates, income, and internet access as compared to Victoria and Australia (Australian Bureau of Statistics, 2019).

Although ProjectREAL has helped immensely with re-engaging students that have faced disciplinary issues in school, the Hume region still lacks a program that is prevention-oriented rather than just interventional. Based on the success of ProjectREAL, an ambitious but logical extension developed, known as the Northern Centre for Excellence in School Engagement (NCESE). The NCESE is a formal collective of BGCS, 15 primary schools, 1 secondary school, and the Victorian Department of Education and Training. This initiative wants to make the principles and methods that drive ProjectREAL both scalable and accessible to teachers and schools in the region in order to educate teachers on making their classrooms more supportive overall for all students.

Teachers frequently find it difficult to determine on their own what the best way to create a more trauma-informed classroom is and how to adapt their own teaching styles. This is because currently, the area of trauma-informed education lacks a consistent set of practices that have been extensively studied and proven to be successful across the board. This is not to say that a gold standard does not exist, but rather that the area of trauma-informed education can be hard to study and measure, as it deals with children who have faced a wide variety of emotional

trauma with complex needs that can manifest in a wide spectrum of ways. More long term study is needed to truly capture the engagement and success of the children who are educated in a trauma-informed curriculum. Regardless, there are organizations across the globe already doing some of this work, and understanding who they are and what they do can give the NCESE more information to draw on when designing the best strategies to implement for their specific schools, age levels, or districts.

Overall, the partnership between the NCESE and Banksia working towards creating this trauma-informed curriculum is a perfect storm of sorts, as it will enable Banksia to share some of their current programs and practices as they already have a background in education and re-engaging students. Additionally, since the NCESE is a collection of 16 schools within the region of Hume and the Victorian Department of Education, it provides the reach necessary to have a significant impact across schools in the region.

The need for teacher training in trauma-informed learning in the Hume region is clear, and Banksia and the NCESE are working toward that end. Our group identified successful training and school organizations that have done this work elsewhere, documenting their professional development strategies and best teaching practices for the NCESE. In initiating contact with these groups, we laid the groundwork for the NCESE's future collaborations with these organizations. In what follows, we describe how we obtain information from these organizations and what we learned.

Methods and Results

The goal of our project was to assist NCESE and BGCS as they develop their trauma-informed education program. To meet this goal, we compiled background information on trauma-informed organizations, and we identified possible partner organizations.

In this chapter, we describe the methods for our research and how we used the results to produce two deliverables: a compendium focused on the information we learned about organizations we interviewed and a network map of potential partner organizations and schools. An overview of each objective and its respective methods appears in Figure 7.

Objective #1: Trauma and Its Impacts

We examined peer-reviewed studies on trauma and how complex educational needs result from it. Our findings were reported in the Background chapter. These findings aided us in the development of interview questions and provided a groundwork for understanding trauma-informed organizations and their strategies.

Figure 7: Our objectives and methods

Objective #2: Identifing Organizations

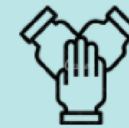
Organizations were identified by a sample of convenience. We located organizations through web searches and literature reviews, and those that Banksia referred to us. We categorized these as follows: individual schools that train their staff, independent non-school organizations that train schools, and collaborations — combinations of schools and outside organizations who help traumatized children in all parts of life.

We were able to identify over 25 different organizations across the United States. A complete chart of these organizations is given in Table 1.

Table 1: Completed List of Organizations we Identified

- Highland Elementary School
- Baker Elementary School
- Bemiss Elementary School
- El Dorado Elementary School
- Belthlehem Elementary School
- Lincoln High School
- Mastery Charter Network

- National Association of School Psychologists
- National Organization for Treating Trauma
- National Center for School Crisis and Bereavement
- Harvard Center on the Developing Child
- Community Resilience Initiative
- University of Buffalo
- National Center on Safe Supportive Learning Environments
- Lesley Institute for Trauma Sensitivity
- Trauma Sensitive Schools Online Professional Development
- Trauma and Learning Policy



- Partnership for Resilience
- National Education Association
- CBHM Boston
- Alive and Well Communities
- Massachusetts Department of Elementary and Secondary Education
- UCSF HEARTS
- National Child Traumatic Stress Network

We developed short fact sheets on each organization, which can be found in Supplemental Materials A[1]. These short fact sheets summed up: contact information, how the organization originated, what educational framework they use, whether and how they carry out professional development, how they recruit schools, what training they offer, how they get funding, and more. We created these fact sheets to give our sponsors a complete picture about each organization from the materials they have published online. An example appears below in Figure 8.

We reached out to each of these organizations by email and phone, explaining the mission of our project, requesting interviews, and offering to share our final deliverables, to spark interest in future partnerships.

Community Resilience Initiative

- Location: Walla Walla, WA
- Established: 2017
- Overview: Community Resilience Initiative promotes resilience and the education of protective factors, keeps kids connected to school, and works with community leaders to integrate ACE and resilience education in schools to help students and parents.
- Resources:
    - Trauma-Informed Trainings
    - Annual Conference
    - Presentations/Consultations/Webinars
    - Blog/News/Videos

Figure 8: Example Fact Sheet

1: Supplemental Materials for this project can be found at https://wp.wpi.edu/melbourne/projects/, using the title of this project in the search bar

Objective #3: Learning Common Strategies and Approaches

In order to identify common approaches these organizations take, we first reviewed all 25 of their websites for the information listed in Figure 9. The complete data sheets for our website review are included in Supplemental Materials B. We then reached out to every organization and offered interviews to the six that were interested in participating as well as to three additional experts in the field who they recommended. The participants and their affiliations includes:

1. Marissa Del Rosario, Trauma Learning and Policy Initiative
2. Jennifer Brinkmann, Alive and Well Communities
3. Theresa Barila, Community Resilience Initiative
4. Emily Taylor, Massachusetts Department of Education
5. Chrys Demetry, Worcester Polytechnic Institute
6. Seral Fehmi, Project REAL
7. Jim Sporleder, former Principal of Lincoln High School Walla Walla, Washington
8. Jamie Shea, teacher at Belmont High School, Massachusetts
9. Patricia Jennings, Professor of Education at University of Virginia

Collective Impact:
What is the agenda/mission- what is it addressing trauma, disengagment, mental health, a mix?
How is trauma-informed education visible in your organization? What approaches are they using?
How did you decide? What is the evidence base for their approach
How do they report their evidence?
How do they deliver professional development? How does it get into schools?
How do they set the agenda and which parts do they concentrate on?
How do they educate new teachers?
What is the infrastructure needed in schoolls?
How do they get their funding and how do they demonstrate to their funder that they are doing their job?
Structure of Program for Schools/Teachers
Would you discuss whether - and if so how many - you have done of the following? Adjustments to the physical space, teaching students emotional literacy, policy changes for students with trauma, teacher training, outside resouces, collaboraton with parents/caretakers?
How did you decide which methods to focus on?

Lessons Learned
What is the biggest challenge your organziation has faced?- with respect to TIE (internally or externally)
What advice would you give to others implemementing trauma-informed training programs in the classroom?
Would you be interested in speaking with Banksia further?
Structure of Programs for Teaching Organziations
How do you recruit teachers and schools to work with?- how do you promote the work? how do schools find out about you?
What kind of incentives or motivators drive teachers to take the training programs?
How do you deliver professional development training? Workshops? Apprenticeships? In-school or externally? How often do you meet? How long is the training? What topics are covered? How often do people participate? Is the training one-off ?
Can you explain any post-training assessment of the teachers and their work in the classroom?
Do you monitor and see which teachers actually implmeent what they learn? If so, how do you monitor it?
History of Organzations
Would you be willing to share the story of how the organization came to be? Who was invovled? What were the intial goals and where did they come from?

Figure 9: Research questions organized by category

Speaking with these organizations, we realized that it would be helpful to increase the scope of our interviews to include the perspective of psychologists familiar with childhood trauma and its effects, as well as government representatives familiar with legislation that allows for funding of trauma-informed school programs.

We also consulted any studies or articles about the work of these organizations prior to the interview, which were conducted and recorded either over zoom or telephone. A preamble was presented before the interviews to obtain informed consent, and can be found in Supplemental Materials C. Additionally, the notes from the interviews were put into a spreadsheet and can be found in Supplemental Materials D.

Common Practice, Challenges, and Insights from the Interviews and Websites

A number of common practices, challenges, and insights emerged in our websites and interviews, which we summarize below.

General Mission

Every organization we researched had a unique mission statement guiding what they do. Figure 10 summarizes the types of goals that emerged across these mission statements.

Figure 10: Common goals of organizations

Some of the organizations identified higher level goals such as improving the life outcomes of students who have experienced trauma. This includes reducing the likelihood that students will go to prison, be unemployed, or generally have a lower quality of life. For example, the Mastery Charter Network focuses on academic and personal skills, but they do so in order to help students to be truly prepared for postsecondary success and able to pursue their dreams (Mastery Charter Network, 2020). Oftentimes there are better opportunities for those who achieve postsecondary success, which improves life outcomes. Similarly, the Harvard Center on the Developing Child's aims to achieve better outcomes for children who have faced adversity (2020). Although both these organizations have different focuses for their work, they both have the goal of better life outcomes.

Others more narrowly define their mission as reforming schools and school environments. For example, CBHM Boston's mission focuses on positive school climate, including academic, social, and emotional success for all students (Boston Public Schools Behavioral Services, 2020). This implies a focus on a larger cultural shift in the field of education. The first school that the Community Resilience Initiative worked with was Lincoln High School. Lincoln's original goal before undertaking trauma-informed work was to decrease student discipline rates (Stevens, 2019), which it achieved by reforming the way staff approach discipline. Compared to other schools' mission statements Lincoln High School's goal was more measurable.

Some even focus more specifically on just the academic success of traumatized students. For example, the TLPI's mission is to ensure that children who have been traumatized can succeed in school (2018). When TLPI started as the Massachusetts Advocates for Children, they noticed a pattern in students who were suspended or expelled which led them to their mission of helping traumatized students succeed in school (2018) . Highlands Elementary School has the goal of "[reducing] the impact of traumatic experiences and [helping] all children learn" in school (Flannery, 2019). It was interesting how some schools focus on the academic success of traumatized students while they are enrolled in school, whereas others name broader goals that focus on the quality of life of traumatized students after they finish school; however, both aspects are important and influence each other.

Finally some align their mission not with concrete outcomes but with achieving the basic principle of justice. The National Education Association focuses on justice, specifically equal opportunities for all students. Their mission is to advocate for education professionals to fulfill the promise of public education

to prepare every student to succeed in a diverse and interdependent world (2020). This is different because it does not focus specifically on outcomes, but rather living up to the value that all students no matter what their experiences should be treated equally and have equal opportunities to succeed.

Some organizations have a mission geared towards making a safe and supportive environment, which would raise the standards of care for traumatized students. The National Child Traumatic Stress Network's mission is to raise the standard of care and improve access to services for traumatized students, their families and communities throughout the US (2020). Similarly, Lesley University's LIFTS program mission focused on creating a safe and supportive classroom where all children can thrive (2020).

Many of these organizations, however, seemed to recognize the interconnectedness of these aims. For example UCSF Hearts' mission is about reforming schools' environments and responses to trauma in order to promote healing, social justice, and school success (University of California San Francisco, 2020). In addition to creating a healthy environment in schools, the mission statement also focuses on school success and social justice, demonstrating that many of these mission statements have elements that span several of these categories.

"9 times out of 10 how the kid is acting in class isn't about you as a teacher." - Jamie Shea

Change Process

Implementing a trauma-informed education program can be thought of as a process, rather than a destination, so we asked about how they initiated change and the steps they took to implement it. Although we spoke to several different organizations, the general processes they used to introduce trauma-informed programs to schools was often similar.

TLPI and Alive and Well Communities representatives both cited the importance of beginning with staff education, specifically, teaching them on the effects of trauma convincing them of the need for a trauma-sensitive learning environment. After the initial kick-off training, both organizations allow schools and staff to reflect on what they have learned and to identify themselves the issues they would like to target in their specific schools. The means by which they do this differ slightly between the organizations- Alive and Well uses 12 indicators as part of the Missouri Model, and then asks the schools pick which of the twelve they would like to focus on first so they can identify short and long term goals. In contrast, TLPI has teachers complete a three question survey after the training in which they reflect on what they learned and identify what they think the urgencies and barriers within the school are. Regardless, both organizations try to involve the entire staff with the change process and allow the schools the freedom to adapt their approach to their unique needs. Additionally, regardless of the organization it was frequently suggested to start small, and pick a few goals to focus on in the short term, rather than trying to tackle everything at once.

After the initial training both have schools form a steering committee that is responsible for coming up with an action plan and deciding on what further professional development might be needed. This approach is common with several training organizations and collaborations, since typically, the organizations do not have enough staff to always have someone present at the schools they are working with. Additionally, forming internal steering committees gives schools ownership over the process rather than imposing goals and strategies on them, whilst still being able to offer outside assistance when needed. Although, both TLPI and Alive and Well noted that they do still have staff give direction to these steering committees and sometimes attend steering committee meetings. As they move through the process, the training organizations sometimes help schools decide on the types of professional development that they want to administer to staff. This typically entails getting coaching from experts on the topic that can help teachers learn how to adapt their own practices. The organizations also encourage schools to decide on what metrics they would like to track when evaluating their transition, and these metrics are often dictated by the urgencies that were identified during the process. A common element of the change process is allowing staff to reflect on their progress formatively and adapt their practices if necessary. This allows for schools to evaluate and decide if they are ready to address other urgencies within the school. As Jennifer Brinkman from Alive and Well Communities mentioned in her interview, "there's a lot of areas within a school that need to be improved, but you can't try to tackle them all at once" Several of these organizations emphasize that schools should reflect on the transition process in a formative way rather than measuring specific outcomes. We will discuss this more about assessment practices later.

Initiatives

All the organizations aim to help traumatized students but the way they undertake the work varies. For example, some organizations conduct primary **research**, like the Harvard Center on the Developing Child. The Center's current research focuses on the brain and how toxic stress can affect brain development (2020). They hope the research will bring awareness to the problem and bring about change. Other organizations partake in research as well, although research is not their main focus., The TLPI also conducts and disseminates research and currently has five working papers on the impact of domestic violence on education, family law, and more (2018). The University of Buffalo receives funding and grants for research projects that focus on trauma treatment and intervention and the evaluation of trauma-informed programs (School of Social Work, 2020). Although these organizations all do research in some way, the research they're doing is very diverse.

In addition to partaking in research, many organizations **disseminate research and educational materials** to raise awareness and educate the public on these topics. For example, the Harvard Center has papers and videos available to the public on their resources webpage, such as "Building Adult

Capabilities to Improve Child Outcomes: A Theory of Change" or "Stress and Resilience: How Toxic Stress Affects Us, and What We Can Do About It" as seen in Figure 11 (2020). The National Child Traumatic Stress Network provides resources on childhood trauma in addition to intervention strategies (2020). Similarly, the Partnership for Resilience partners with universities to disseminate their cutting-edge research (2018). By providing free resources organizations are enabling the public to begin to understand the importance of this work.

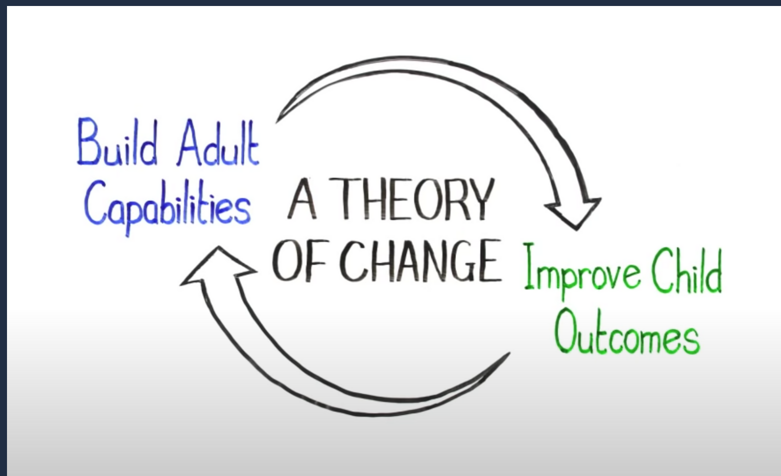


Figure 11: The Harvard Center's "Building Adult Capabilities" Video

Some of these organizations are also working to **change public policy**. For example, The TLPI advocated for the Safe and Supportive Schools Act in Massachusetts, and in 2014 it was passed (2018). This act allows schools to apply for funding to become more "safe and supportive", which aligns with trauma-informed teaching. Partnership for Resilience is also working to change public policy to align better with their mission (2018).

Some organizations also provide schools and districts with **intervention strategies**. Community Resilience Initiative provides phone consultations on how to start this work with schools and school districts. how to start this work with schools and school districts. In addition to these consultations, Community Resilience Initiative provides webinars on trauma-informed teaching methods (2017). The National Organization for Treating Trauma offers online training. Currently their training focuses on COVID and how it will make trauma more prevalent in students and what to do in response (2020). The National Center for School Crisis and Bereavement provides training and technical assistance for schools recovering from crises (2020). The Partnership for Resilience provides resources and hosts annual conferences on this work. The National Center on Safe Supportive Learning Environments also has a training package with guides on how to create trauma-sensitive schools (2020).

In addition to other resources, some organizations provide a **learning community** for educators. TLPI has a learning community that includes a discussion forum, a blog, and more video resources (2018). We also found that the Harvard Center on the Developing Child has multiple learning communities geared towards different purposes (2020). Although a learning community was unique to only a few organizations, we thought the learning community was an effective element because it provides a support network where educators can learn from one another.

Frameworks

Finding or building the right trauma-sensitive framework for a school is critical to its success. There were a variety of educational frameworks that we found throughout our research and interviews; three commonly mentioned frameworks were KISS (Knowledge, Insight, Strategies, and Structures) developed by Community Resilience Initiative, the Missouri Model, developed by psychologists in the state of Missouri, and the Flexible Framework, developed by the Trauma Learning and Policy Initiative. We also found other frameworks, such as the ARC framework, the Comprehensive Behavioral Health Model (CBHM), the HEARTS Multi-Tiered System of Supports (MTSS), and more, however we chose to focus mainly on these three.

Each framework emphasizes several elements critical to the success of a trauma-informed program. KISS (Figure 12) has four main elements: knowledge refers to making sure that the teaching staff understands the basic elements of trauma and its impacts (e.g., learning about the ACE study and the neurobiology and psychology associated with trauma). Insight refers to the need for teachers to reflect on their learning and connectedness to it. Strategies means taking what they learn about trauma and implementing trauma-informed strategies within the classroom. Structures refers to altering the disciplinary structures within a school, especially how disciplinary infractions or behavioral problems are handled (e.g., they learn ways to hold students accountable, rather than just punish them).

Figure 12: The KISS framework

The Missouri Model emphasizes four major steps to a trauma-informed program, shown in Figure 13: Becoming Trauma Aware, Trauma Sensitive, Trauma Responsive, and Trauma Informed. In contrast to KISS, an important element of the Missouri Model is constant formative assessment and continuous improvement, mentioned in step four.

In addition to these two models, we frequently heard about the Flexible Framework, composed of six major elements, described in the previous chapter: Leadership, Professional Development, Access to Resources and Services, Academic and Non Academic Strategies, Policies and Protocols, and Collaboration with the Family.

THE FOLLOWING MISSOURI MODEL STAGES HAVE BEEN ADAPTED TO THE SCHOOL ENVIRONMENT.

1 - TRAUMA AWARENESS: School staff have been informed about trauma, including historical and community trauma, are able to comfortably speak to its impacts, and have begun to consider how to translate that information into changes within the school.

2 - TRAUMA SENSITIVE: Schools have started to explore the principles of trauma-informed care (safety, trustworthiness, choice, collaboration, and empowerment) and how they apply to existing practices. Schools designate core leaders to guide the change process. Leadership shows a high level of buy-in. Schools have shared with their community and stakeholders that they have begun this journey and worked with them to develop a shared vision of accountability.

3 - TRAUMA RESPONSIVE: Schools have begun to change existing practices and policies and implement new ones to better support staff and students. Schools are starting to integrate a trauma-informed approach throughout all existing programs in a school (i.e. Character Education, Restorative Practices, RTI, PBIS, MTSS, etc.). Individual staff members are beginning to clearly demonstrate changes in their action and behaviors. Community and stakeholders become increasingly involved and integrated into the process.

4 - TRAUMA INFORMED: Schools begin to see results from the changes they have implemented. A core team continues to look for new opportunities to improve. All staff within the building are bought in and demonstrating practices that reflect the needs of students. Data, including data intentionally disaggregated by race and other demographic factors, is used to drive decision making. Schools are working closely and responsively with parents and community members to meet the ongoing needs of a school. This stage is not one that is meant to ever be "completed." Because school environments, resources, and needs are always changing, there must always be a focused effort on addressing these changes through a trauma-informed lens. Trauma informed is a process, not a destination.

Figure 13: The Missouri Model

Despite these frameworks being developed independently by separate organizations, there are similar elements that span each framework. The first commonality is beginning the process by educating staff about trauma and its effects. Not only through the frameworks but also throughout the interviews we conducted, it was commonly agreed that this was a critical first step in order to engage teachers and leadership staff.

The second common element across the frameworks was the inclusion of providing staff with specific strategies that they can implement in their practices. These strategies could include elements such as ways to adapt the physical classroom, mindfulness training to help teachers better respond to students in times of stress, disciplinary methods for leadership staff that are rehabilitative rather than punitive, and more. These frameworks seem general enough to allow for flexibility; these strategies can vary depending on the particular emergencies that the staff is facing at the time. Additionally, these strategies can be taught through a variety of methods, whether it be through online training from external organizations, in-person professional development training, or even members of a school staff sitting down together to share ideas and educate each other on what may work best.

A third element in each of these frameworks is the necessity of changing systemic structures within the school. This step is critical because even if every teacher is doing their part to be more trauma-sensitive, if a school's disciplinary policies, for example, are still punitive and traumatizing, it will remain hard for schools to make real progress. As one of our interviewees, Patricia Jennings, explained, the zero-tolerance disciplinary policies that are commonplace in many schools throughout the country are frequently extremely damaging to children, especially those with a traumatic history. A former principal of an alternative high school in Washington, Jim Sporleder, told us he started adapting his disciplinary policies from being consequence-focused and punishing to more communication-based and rehabilitative, and that the effects were drastic. Reports of in-school fights went down 75%, GPA's and attendance rates went up, and behavior overall improved across the board—something he attributes to changes in disciplinary practice.

The last step that was common to every framework was the element of flexibility. It was clear that no framework provided an exact path for schools to follow in order to implement their own trauma-sensitive programs, but rather provides a set of guidelines that allows schools to decide what will work best for them. Although these frameworks start with direct assistance from the training organization, the exact steps of implementation are left to the school level— often directed by steering committees or 'trauma teams' formed by and for the school. Schools identify on their own what is most urgent and what issues need to be addressed first. Since implementing a trauma-sensitive framework is an ongoing process of change, it's

important for schools to decide when and how to tackle the different elements of change, rather than trying to solve every problem at once.

These frameworks have been used frequently and widely throughout schools in the United States. The Missouri Model has been implemented in 44 schools and 11 school districts within just the last year, the Flexible Framework has been used for over ten years , and the KISS framework was developed based on successful practices that were used at Lincoln High School in Washington over 8 years. Overall, the inclusion of these four elements in a trauma-sensitive framework could help promote success and promising outcomes.

Evidence Base

Throughout our reading and conversations with these experts, we encountered cited evidence that supports the effects of trauma and need for trauma-informed learning.. We heard less frequently about evidence supporting the success of specific strategies that schools are using. Evidence supporting the problems resulting from trauma is well documented; neuroscience, sociology, and behavioral studies related to trauma and learning, such as the ACE study, all support the known effects of trauma and what general responses work well with traumatized brains. For example, protective factors have been researched thoroughly and are recognized formally by the CDC as a way to lessen the effects of trauma (Risk and Protective Factors 2020). However, the evidence for the success of specific strategies used in schools seems not

Adverse Childhood Experiences (ACEs)
Preventing early trauma to improve adult health

Counting the costs of lost opportunity in Australian education

Childhood Experiences vs. Adult Alcoholism

Teaching with Awareness: The Hidden Effects of Trauma on Learning

to be nearly as well documented. In what follows, we discuss some (but not all) organizations and schools we spoke with indicated that they frequently track metrics such as academic scores, absences, and suspension rates pre and post intervention; however, these are not rigorous controlled studies, and most of the other evidence they use to support the success of their trauma-informed programs is purely anecdotal, especially that referring to attitudinal changes in teachers and students. Although this does not necessarily mean that the programs are not successful nor does it mean that the anecdotal evidence is not valuable, but it means that drawing larger conclusions regarding the success of different strategies is more difficult. Surprisingly, there were very few schools that had published data, and of those that did, the data was frequently sparse and contained simple pre and post comparisons of qualitative metrics, such as GPA.

Lack of rigorous assessment in schools could be because many of the schools that implement these strategies are in disadvantaged communities and struggle with resources. Additionally, many schools

may not be interested in formally studying the strategies they implement as long as they feel they are progressing and seeing success in their own program. Another aspect that may be exacerbating the problem is that there is no standard agreement on what would actually constitute success, and goals differ from school to school; many of these goals are broad and overarching, such as achieving social justice, and would be quite difficult to measure. Overall, it is clear there is a need for further discussion on what constitutes success at different levels and the best way to measure that success. It seems that more rigorous and formal studies of the topics are needed.

"A classroom that's better for students to learn in is better for teachers to teach in."
- Patricia Jennings

Measuring Success

Our initial research showed measuring the success of schools that implement trauma-informed programs is a challenge for many schools and programs. When we interviewed several organizations and schools, a question we asked everyone was how they chose to measure success. What we found was that generally, there was not a set list of quantitative or qualitative measures that are used across different schools, and schools would choose how to measure their own success. In our interview with the TLPI, one of the reasons Marissa Del Rosario noted for this was that they treat implementing a trauma-informed program as a process, rather than a destination. As a result, schools very infrequently have a designated measure of 'success', but rather look for continuous improvement.

Another reason for the lack of a consistent set of measures was that many programs, such as TLPI and Alive and Well Communities, allow schools to identify what urges they want to address before implementing their programs, which in turn determines what their specific indicators for success will be. This allows the staff to think about what they expect to get out of a trauma-informed program and determine specific areas of improvement, rather than trying to improve and change everything at once. Examples of these urgencies given were things such as high rates of disciplinary referrals, low test scores, or even things such as high rates of suicides within the student community. Additionally, identifying urgencies helps decide what type of training teachers will receive, and allows teachers and staff to play a more active role in the program development process, rather than having predetermined programs or sets of steps handed to them from an external organization.

However, both Alive and Well Communities and CRI did note in interviews that they had a slightly more formal evaluation process. Alive and Well provides schools with a self-assessment tool intended to give schools an idea of where they are in their journey, rather than to provide outcome data. Additionally, Alive and Well uses the ARTIC (Attitudes Related to Trauma-Informed Care) evaluation for teachers and

staff, which is a psychometrically valid survey for measuring attitudes towards trauma-informed care. The ARTIC was co-developed by Dr. Courtney Baker of Tulane University and the Traumatic Stress Institute and is a psychometrically-valid measure of professional and paraprofessional attitudes towards trauma-informed care, and has been used by more than 25,000 professionals since its development (Baker, Brown, Wikcox, Overstreet, Arora, 2016). CRI didn't have specific surveys for staff, they have participated in two national evaluations of their strategies, as well as have had their trauma training certified as 'evidence based', according to Theresa Barila, their founder. In addition to these evaluations, they have also published papers of their findings in national journals.

We did hear anecdotal evidence. Seral noted that teachers "feel different" after beginning these programs. Barila from CRI said that after training many teachers reported feeling more mindful and aware of their own biases in the classroom and felt closer with their students than before. Additionally, TLPI explained how many teachers start to rethink practices that had been deeply ingrained in their teaching and to evaluate whether or not they are really trauma-supportive. For example, she discussed how at one school, a teacher brought up to the rest of the staff that the typical traffic light system they had used in classrooms, where green is for good behavior and red is for bad behavior. She noted that it could actually embarrass and retraumatize some students as it perpetuates that notion that there are 'good kids' and 'bad kids'. Although there was some initial pushback, the staff agreed to adapt the system from a punitive way of measuring the classroom, to a way of letting students signal different zones of their emotions. Changing to the zones of emotions allowed students to think more about their emotional state, as well as recognize that they would only be able to learn in the green state, promoting mindfulness.

Although the organizations and schools we interviewed had a variety of ways that they qualitatively measure success, there were a few quantitative measures that were consistently mentioned. Every organization mentioned pre and post measures that looked at grade-point averages (GPA), standardized testing scores, graduation rates, the number and types of disciplinary referrals, or attendance rates, information that could reflect academic progress and reduction of aggressive behaviors. Every organization we interviewed noted significant improvement in these categories after the implementation of trauma-informed programs (Figure 14), but

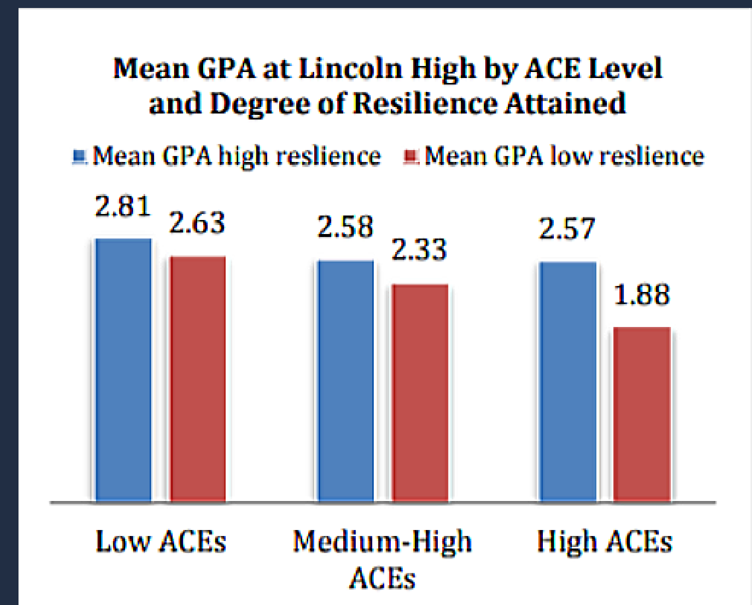


Figure 14: Lincoln High GPA, before and after (Longhi, Motulsky, Friel, 2015)

many factors, not just trauma-informed interventions, might affect these outcomes. For example, Jim Sporleder, the principle of Lincoln High School, noted that fights went down 75% in the first year after beginning a trauma-informed program.

Overall, even though the quantitative and qualitative measures may differ between organizations and schools, everyone noted that it was important to consider both types of measures when trying to determine if the trauma-sensitive strategies are improving the school environment.

ACE and Protective Factors

Throughout our research, the ACE study came up frequently, mentioned by websites, referred to in articles regarding the effects of trauma, and discussed by organizations that we interviewed, who often use it to introduce educators to the effects of trauma. As discussed in a later section, the ACE study is effective in convincing educators of the necessity of trauma-informed strategies because it highlights the long-term effects of trauma.

However, in our interview with Theresa Barila from Community Resilience Initiative (CRI), she emphasized that you can't just examine a student's ACE score; you also have to look at their resilience score. As she said, "a kid with an ACE score of 2 might be a wreck but one with a score of 10 might be totally fine." In this case, resilience scores refer to protective factors and risk factors and that have been studied and documented in efforts to explain why children with similar traumatic histories can experience dramatically different outcomes. These protective factors not only have the potential to lessen the negative effects of trauma, but also lessen the probability of a child being abused or maltreated in the first place (Risk and Protective Factors 2020). A list of these risk and protective factors is shown in Figure 15. Although some of these protective factors cannot be changed within

Figure 15: Protective Factors

the school environment, such as financial stability, many of the other protective factors are components of trauma-informed learning. Caring adult relationships, social support networks, and non-family adult role models are all elements that are stressed and applied throughout trauma-informed learning programs, and eventually can lead to increased academic achievement as well. The inclusion of these elements in trauma-sensitive education programs demonstrates that these programs not only help to support students but protect them as well. The emphasis on these protective factors and resilience was an element that was unique to our interview with CRI. Barila stated that these factors are important to keep in mind, since children don't live their lives only in risk, but rather as a combination of risk and protective factors.

Additionally, she stressed the importance of showing children that resilience is a skill that can be built, because "the worst thing you can do is to tell a kid they don't have resilience and aren't worth it." Focusing on protective factors and resilience is important and effective for showing not only teachers, but students as well, that there is more to a child than the trauma they have experienced and members of the community have the ability to improve outcomes for children. In our website research, we did find that several other organizations also provide resources on and emphasize resilience, such as the Harvard Center on the Developing Child, Partnership for Resilience, and UCSF HEARTS.

"A kid with an ACE score of 2 might be a wreck, but one with a score of 10 might be totally fine."
- Theresa Barila

Strategies within Schools

The schools we looked into had many different strategies for becoming more trauma-sensitive. Some of the strategies we've seen throughout the schools focused on emotions. For example the teachers at Lincoln High School, Baker Elementary School, and Bethlehem Elementary School are taught that they can only effectively teach students who are in a stable emotional state (Sparks, 2019; Stevens, 2019; Trauma and Learning Policy Initiative, 2019). This is because when students are in fight or flight mode, they are not physically able to learn because their brains are focused on the perceived threat that their brains will not remember any material being taught to them. In order to help students get to a stable emotional state, El Dorado Elementary School, Highlands Elementary School, and Bethlehem Elementary School all have break corners equipped with toys, headphones, books, beanbags, and blankets (Flannery, 2019; Sparks, 2019; Stevens, 2014). These corners are a place where the students can calm down until they feel safe and are ready to learn. Another example of a trauma-sensitive strategy is El Dorado Elementary School's "Super Me's", which are pictures of students wearing capes in the main hallway. A child from each grade is chosen to receive a prize and have their picture go up on the wall

"If we're going to to punish kids, we're creating a 'me-against-you' relationship."
- Jim Sporleder

(Stevens, 2014). These strategies make the students feel wanted and safe, and they are important in creating a successful trauma-informed school.

In addition to changing the classroom space or instituting practices to help students regulate emotions, some of these schools provide therapists for the children. Bethlehem Elementary School partners with the county mental health agency to bring private therapists into the school three times a week (Sparks, 2019). Similarly, El Dorado Elementary School had therapists work with their staff to try and make a more safe and supportive learning environment (Stevens, 2014). Therapists have a better understanding of the best way to interact with these children, so by training teachers, they are helping the teachers find the best way to interact with the students. In addition to the therapists, El Dorado Elementary School has a Wellness Center (Stevens, 2014). Lincoln High School also has one that teaches students resilience skills such as creating social connections, providing support in times of need, and teaching social and emotional competence (Stevens, 2019). Both the therapists and the wellness centers support students' mental health; however, physical health is also important. For example both Baker Elementary School and Bethlehem Elementary School provide meals and snacks to the students (Sparks, 2019; Trauma and Learning Policy Initiative, 2019). It is difficult to learn when hungry, so by providing food the schools are helping the students get into the ideal mindset to learn.

Schools we looked into also try to develop a sense of community and family within the school to help students feel safe in school and in life (Flannery, 2019; Sparks, 2019; Stevens, 2019; 2014; 2013; Trauma and Learning Policy Initiative, 2019). Many of these students lack support with their family so the school becomes their support. For example, Baker Elementary School believes that every student should have at least one staff member that they are close with and feel comfortable with (Trauma and Learning Policy Initiative, 2019). As mentioned previously, research has shown that having a caring relationship with one adult figure in life is a protective factor.

Another strategy some schools use is to teach resilience. For example, Lincoln High School's wellness center grows resilience within the students (Stevens, 2019). Bemiss Elementary School joined the Resilience in School Environment (RISE) initiative, which works with schools and districts to better integrate social and emotional well-being into school life (Stevens 2013). Bethlehem Elementary School is part of New Hampshire's Project GROW (Generating Resilience, Outcomes, and Wellness), which is a statewide network of trauma-sensitive schools focused on building resilience (Sparks, 2019). As talked about previously, resilience is just as important as ACEs and if schools can teach children how to be resilient, the schools are improving the children's chance of success later in life.

Some schools also focus on discipline. For example, Highlands Elementary School does not suspend students because they never want to tell students who have been neglected elsewhere that they are not welcome (Flannery, 2019). Additionally, some of these children do not have safe home environments, so making them stay at home would be worse for their health. This does not mean that students are not held accountable; it just means that accountability measures do not include suspension. One school developed a system to identify the location and time of disciplinary referrals (Stevens, 2014). This system helped the staff identify hot spots - where and when students were having the most trouble. This allowed the staff to begin to see patterns in disciplinary referrals and address the problem. By altering the disciplinary strategies, the schools were able to make the children feel safer (Stevens, 2014).

Some schools also try making the classes more fun to engage students more. For example, Highlands Elementary School found that five minutes of fun and 55 minutes of learning was more effective in teaching students than 60 minutes of ineffective learning (Flannery, 2019). One fun activity students there participate in is a five minute dance party (Flannery, 2019). This allows the children time to move around and let some energy out so when they go back to learning they can be more focused. Baker Elementary School also incorporates non-academic activities into the curriculum (Trauma and Learning Policy Initiative, 2019). This allows for students to not be as intimidated by learning because it is associated with fun activities as well.

Teacher Awareness within Schools

It is well acknowledged that students have problems stemming from outside of school. As seen in Figure 16, many students at Lincoln High School face challenges outside of their academic life. Yet, teachers who are not from the community may not completely understand the details of these problems and how they affect their students.

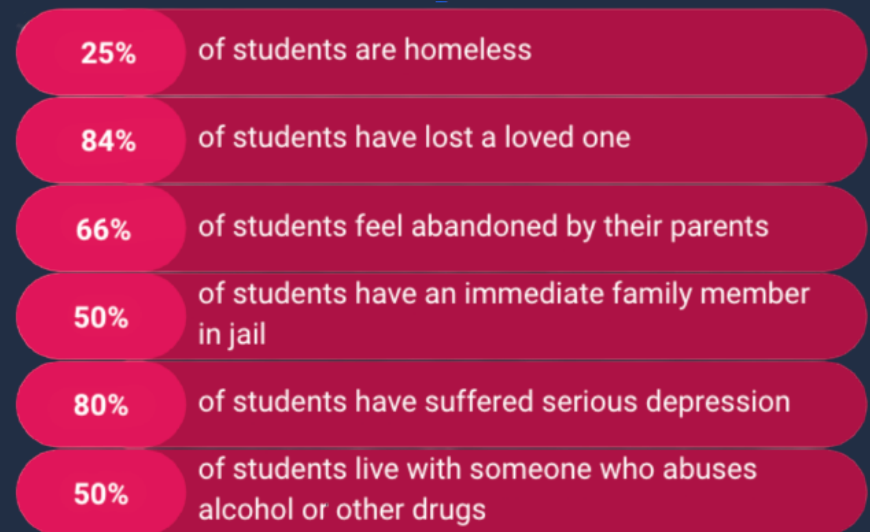


Figure 16: Challenges of Lincoln High School Students (Stevens, 2019)

One example of this is that Bethlehem Elementary School has pairs of teachers meet with parents for about half an hour to begin to understand the other parts of the students' lives (Sparks, 2019). By getting a glimpse into the students' home lives, teachers are able to understand where students' emotions and actions are coming from.

“In the States, our push for test results and teaching to the test is part of our problem.”
- Jennifer Brinkman

School’s also focus on mindfulness of both students and teachers. Both Bethlehem and Highlands Elementary Schools teach mindfulness to their students and staff (Flannery, 2019; Sparks 2019). By teaching both students and staff, they are teaching students to not act out as much, and they are also teaching staff to not overreact to students acting out.

In terms of discipline, all of the schools we looked into teach the staff to focus on why the student is doing what they are doing instead of focusing on what they are doing (Flannery, 2019; Sparks, 2019; Stevens, 2019; 2014; 2013; Trauma and Learning Policy Initiative, 2019). By focusing on why students are acting in a certain way, teachers can potentially address the root cause of the bad behavior and make lasting changes. According to Erik Gordon, an educator at Lincoln High School, the hardest challenge is “trying to figure out how much of their behavior is from a choice and how much is outside their control. It’s a drag when you believe it’s outside their control, because all of the easy disciplinary action doesn’t work” (Stevens, 2019). This is why it is important for educators to understand the why of a child’s behavior, so that they can react in a way that will be beneficial to the child’s growth.

Professional Development within Schools

Oftentimes schools bring in outside resources to help with trauma-informed professional development. For example, Bemiss Elementary School had a Washington State University’s Area Health Education Center give the educators a one day kickoff training, and after that, they recieve an hour of staff training a month throughout the school year (Stevens, 2013). Other schools consult online resources, for example, the publications posted on TLPI’s website (Stevens, 2014; Trauma and Learning Policy Initiative, 2019). El Dorado Elementary School actually used a program Healthy Environments and Response to Trauma in Schools (HEARTS), developed by the University of California San Francisco. They based their program on the book Helping Traumatized Children Learn and the flexible framework, both of which the Trauma and Learning Policy Initiative published (Stevens, 2014). External organizations help guide schools in becoming trauma-informed by providing these kinds of resources or partnering with the school.

Schools also participate in workshops based on specific themes, such as how to de-escalate situations. For example, both Bemiss Elementary School and El Dorado Elementary School use analogies to help the staff understand (Stevens 2013, 2014). Staff communication and teamwork is essential for the successful implementation of trauma-sensitive programs. These analogies and workshops teach educators how to detect trauma behaviors in students and de-escalate through more measured responses. Unlike Bemiss and El Dorado, Lincoln High School

does not focus on the disciplinary problems during their monthly staff meetings. Instead they focus on each student that seems to be having problems and try to focus on why these problems are occurring. They end with the development of a plan to help the student. Every school is unique, with unique goals, unique communities, and unique needs, this leads to a solution that is unique to every school.

Mindfulness in the PreK – 5 Classroom

HELPING STUDENTS STRESS LESS AND LEARN MORE

Patricia A. Jennings

Supporting Teachers

Throughout our research, a common mention was that although trauma-informed education programs can be extremely beneficial for children, they can also be very hard on teachers. Jim Sporleder explained that it can be hard for teachers to recognize their practices may not be as compassionate and empathetic as they thought, and it can be difficult for teachers to acknowledge their own bias towards certain students. He also explained how a student telling a teacher to "f-off," makes it incredibly difficult for the teacher to stay regulated in that moment and react appropriately. He noted how teachers can be taught to take the time to cool down, and then bring the child back in to explain how they would have reacted better. He noted this step was critical in showing students that there is not a double standard between staff and students, and would often allow them to start a new conversation about whatever triggered the behavior in the first place.

This notion of needing teachers to be more mindful so that they can react appropriately in stressful situations was common across much of our research. Patricia Jennings, a Professor of Education at the University of Virginia, headed the team that developed the CARE program for teachers. CARE stands for Cultivating Awareness and Resilience in Education and is described as "a mindfulness-based professional development program shown to significantly improve teacher well-being, classroom interactions and student engagement in the largest randomized controlled trial of a mindfulness-based intervention designed specifically to address teacher occupational stress" (Patricia A. Jennings 2020). In her interview, she noted that the CARE program could be very helpful for it can alleviate some of the stress as well as promote mindfulness, which can benefit both teachers and students, as less stressed teachers create a more effective classroom environment. Also, CARE helps teachers understand they can play an important role in helping students recover from trauma by being a positive adult role model. Lastly, Jennings stressed that mindfulness helps when teachers have to respond to behavioral issues; when a student does something

"you don't automatically assume they're bad, but instead you can think about what that kid really needs."

CARE training requires a large time commitment for teachers and may not be a realistic option for many schools, given the amount of time and money needed to put educators through the program. As a result, we asked Jennings if she thought a smaller scale professional development program could still be effective. She noted that this is something they are still trying to study, and that the current COVID environment is allowing them to explore options with more remote and shorter training. In the meantime, she mentioned that she has published books on this type of work so that teachers can begin to educate themselves.

Funding

Funding is a reason often cited for why schools feel unable to implement trauma-informed programs. However, some grant programs run by states allow schools and districts to apply for funding. For example, the Safe and Supportive Schools Act is a government-funded program run by the state of Massachusetts that provides assistance to schools wanting to implement trauma-informed education programs but lack the funds to do so. This assistance can be through a few different forms: first, the Massachusetts Department of Education (DOE) website provides a variety of resources and information on different strategies and readings on becoming a safe and supportive school. The second component is a grant program run by the DOE that allows schools and school districts to apply for monetary amounts anywhere between five and twenty thousand dollars a year to help support their transition to trauma-informed learning. This grant program was of particular interest to us, as it demonstrates that the benefits and necessity of trauma-informed learning practices are understood and supported, not only at the school and district level but at the government level as well.

We interviewed Emily Taylor, a representative from the DOE who works on the Safe and Supportive Schools program. She explained that any school or district in Massachusetts is eligible to apply, but grant applications must include action plans and explain how well their school goals align with the six standards set forth by the program, shown in Figure 17. In order for schools to better understand and reflect on how these standards apply to their school or school district, the DOE also provides the "Safe and Supportive Schools Frameworks and Assessment Tool." This tool was developed by the Massachusetts Department of Elementary and Secondary Education (Department), in consultation with the Safe and Supportive Schools Commission and others in the field (Safe and Supportive Schools Self-Reflection Tool n.d).

Additionally, in the past year, the SaSS program added racial equity to its list of priorities and Taylor noted that if an applicant was unwilling to address the aspect of racial equity in their action plans, they "could be implementing things that may actually be harmful" and may not be really ready for the transition.

However, Taylor also explained that just because a school may not receive a grant, it does not mean that they are unable to implement trauma-informed programs. These grants are only for several thousand dollars and are not enough to turn an entire school around in a year. Instead, she noted that “when they say money is the factor blocking them from doing the work... that’s a cop-out… they need to think more broadly”, and schools need to either reallocate funds they already have or look for ways to make schools supportive that do not require money. For example, rewriting a school handbook or changing disciplinary norms does not require any actual funding, but could make a huge difference for a school.Schools also may use some of the free online resources from trauma-informed organizations we have found in our research.

Figure 17: Standards of the SaSS

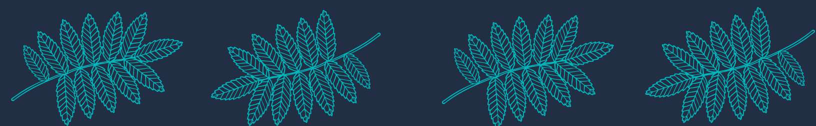
Challenges

In every interview we conducted we asked what the biggest obstacle in completing this work was. The largest challenge identified across the board was a shift in mindset. Teachers are often taught to think with a “law and order” mindset when they are learning how to teach; unfortunately, this leads to children being disciplined for their trauma response, which breaks the trust in the student-teacher relationship. Instead of responding punitively to children acting out, our interviews pointed out that teachers should respond with empathy and compassion, which leads to discussion and change. This is the biggest challenge because most teachers have been using traditional disciplinary actions for a long time. Additionally, some teachers view this shift as “going soft” and letting the children “get away” with unacceptable actions. During interviews, it was made clear that taking a break before discussing the situation with the child and not focusing on the consequences is a better approach. It builds relationships and trust, and then holds the child accountable. This is beneficial for the child because it allows them time to calm down, which includes their sympathetic nervous

system (they leave the flight, fight, or freeze mode), so that they can actually think about what occurred and can learn from it. This approach is more effective because as Sporleder states, “it creates a ‘me with you’ attitude as opposed to a ‘me against you’ attitude”.

Two of the educators we interviewed said that one of the hardest things to realize is that when the children are acting out, it is not about you as the teacher, but rather something else in their life. One of the educators we interviewed said that “I was the trigger guy. If you ever told me to f off you better put your seatbelt on. So when I transitioned I was able to drop my mirror and let the f you go by and lean into what caused that.” He realized it was not about him personally.

Another challenge our interviewees pointed out is the systemic structures in place around teaching. For example, they explained that teachers in the United States have to teach to a standardized core and are then evaluated by standardized tests that their students take. Teaching to the test means that teachers have less time to develop relationships and social-emotional learning, which isn’t included in the core. The academic curricula set forth and the emotional curricula that children must learn are separate entities; teaching emotional literacy is often overlooked, and even if teachers want to emphasize it, they often do not have time in their schedule for it.



“I was the trigger guy. If you ever told me to 'f off 'you better put your seatbelt on. So when I transitioned I was able to drop my mirror and let the f you go by and lean into what caused that.”
- Jim Sporleder

Overcoming the Challenges

Interviewees discussed three main strategies that are effective in shifting the mindset of the teachers. The first strategy is to educate the teacher about the biology and psychology of the developing brain, including the fight or flight response and what it entails. In doing so educators learn that when the sympathetic nervous system of a child is activated they neurologically are not able to learn. Sporleder explained that by understanding this, educators are able to begin to see how some type of responses can make these situations worse and how there is a need for change. The second strategy is having the administration engaged. Barilla said that if the administration is involved they provide the support and encouragement needed to implement the mindshift change. The third strategy is to show how the standard of life will improve for the staff, not just the children. As Brinkman stated, toxic stress and trauma affect teachers’ lives as well as students. Focusing on how the teachers will be less stressed and how the community will be a better place helps teachers shift

their mindset. For example, by being more mindful and teaching more of the emotional curricula, the quality of the relationships between students and teachers will grow, which will decrease the stress in the teachers' lives.

Website Elements

Although websites do not always reflect everything an organization does, we found some common elements, as seen in Figure 18. As NCESE builds its online presence it may want to consider including these. The organization's agenda/mission, their story, a framework that their work is based on, evidence that supports and explains the

	Agenda/Mission	Their Story / Why They do it	Framework	Evidence	Basic Information About Trauma	Accessible Professional Development Tools	Provide Contact Information	Learning Community
Project Real	✓	✓	✓	✗	✓	✗	✓	✗
National Education Association	✓	✓	—	—	✓	✓	✓	✗
Trauma and Learning Policy Initiative	✓	✓	✓	✓	✓	✓	✓	✓
Community Resilience Initiative	✓	✓	✓	✓	✓	✓	✓	✗
Alive and Well Communities	✓	✓	✓	✓	✓	✓	✓	✗
Partnership for Resilience	✓	✓	✗	✗	✓	✗	✓	✗
Lesley Institute for Trauma Sensitive	✓	✓	—	—	—	—	✓	✗
UCSF HEARTS	✓	✓	✓	✓	✓	✓	✓	✗
National Child Traumatic Stress Network	✓	✓	✓	✓	✓	✓	✓	✗
CBHM (Comprehensive Behavior Health Model) Boston	✓	✓	✓	✓	✓	✓	✓	✗
National Center for School Crisis and Bereavement	✓	✓	✗	✗	✓	✓	✓	✗
University of Buffalo (The Institute of Trauma-Informed Care)	✓	✓	✓	✓	✓	✓	✓	✗
Harvard Center on the Developing Child	✓	✓	✓	✓	✓	✓	✓	✗
National Organization for Treating Trauma, LLC	✓	✓	✗	✗	✓	✓	✓	✗
National Center on Safe Supportive Learning Environments	✓	✓	✗	✗	✓	✓	✓	✗
Trauma Sensitive Schools Online (TSS) Online Professional Development	✓	✓	✗	✗	✓	✓	✓	✗
National Associations of School Psychologists	✓	✓	✗	✗	✓	✗	✓	✗
Massachusetts Department of Elementary and Secondary Education	✓	✓	✗	✗	✓	✗	✓	✗

✓	: Has topic
✗	: Does not have topic
—	: Refers to other organization

Figure 18: Website Attributes

framework, basic information about trauma, accessible public professional development tools, and their contact information were common attributes across the websites.

Organizations' websites often include a mission statement and their story. The website also includes basic information about trauma to spark interest and educate the public on the importance of the topic. A framework that they base their work off of and evidence that supports the framework is also included to display a clear action plan. Public professional development tools are also included. These tools can either be free for more accessibility or paid for additional funding. Lastly, providing the organization's contact information is essential when growing a network. The organization's network and support system can passively grow by creating a strong online presence and providing helpful resources to the public.

Final Deliverables: Compendium and Map

Compendium

We created a compendium of notes about each organization we interviewed in case the NCESE decides to reach out to them in the future. The table of contents is in Figure 19 and an example is in Figure 20.

Table of Contents 1

Interview Contacts and Interview Notes 2
- **Trauma Learning and Policy Initiative**, Marissa Del Rosario 2
- **Alive and Well Communities,** Jennifer Brinkman 6
- **Community Resilience Initiative,** Theresa Barila 10
- **Lincoln High School,** Jim Sporleder 15
- **Patricia Jennings,** Professor of Education at the University of Virginia 24
- **Massachusetts Department of Education,** Emily Taylor 28
- **Belmont High School**, Jamie Shea 32
- **Worcester Polytechnic Institute,** Chrys Demetry 36
- **Other Contacts** 39

Figure 19: Table of Contents of the Compendium

Trauma Learning and Policy Initiative, *Marissa Del Rosario*

Website: https://traumasensitiveschools.org/
Email:
Phone:
Interested in Following up: Yes
Topics of Interest: Trauma-Informed Public Policy, Education Reform, Coalition Building, Research and Report Writing, Individual Case Representation (for students who's traumatic experiences are interfering with their disabilities)

Background:

Marissa is the Trauma-Sensitive schools specialist for TLPI, as well as a Licensed Clinical Social Worker and has her Master's Degree in Social Work with a focus in Political Social Work. She began as an elementary school teacher in an urban area (New Orleans, LA) and had a particular interest in overcoming barriers to success for children. She then became a social worker and worked for 19 years in urban and rural school districts, focused on trying to remove barriers for students. At TLPI, her position works on the policy and school level, trying to remove structural barriers and help introduce trauma-sensitive strategies into school.

Organization Highlights:

- TLPI was established in 2004 but has roots that go back several years before that with MAC (Massachusetts Advocates for Children) and Lesley University
- TLPI was responsible for developing the Flexible Framework for trauma.
- Partners with Harvard Law School students to help advocate for laws, policies, and funding streams that will help enable schools to implement trauma-sensitive policies.
- Has published two volumes of *Helping Traumatized Students Learn*; books geared towards educating about trauma and its effects on neurobiology and learning, as well as how trauma-sensitive classrooms can help students.
- TLPI operates an online learning community that allows educators from schools they have worked in to communicate and share ideas, as well as offer advice.

Figure 20: Example of what is in the compendium

Map

We also created an interactive map of organizations in Microsoft Powerpoint that can be integrated and updated on a future website or that can be downloaded and printed. We also created a short How-To document explaining how to update the map that can be found in Supplemental Materials E.

The map includes the locations, names, and contact information of each organization we researched. In contrast to the compendium, this map includes organizations and schools beyond those we interviewed so our sponsors will have sufficient options for partners in their network. This map also includes the organization's relevant links, sources, and publications, if any. Images of the map can be seen if Figures 21-23.

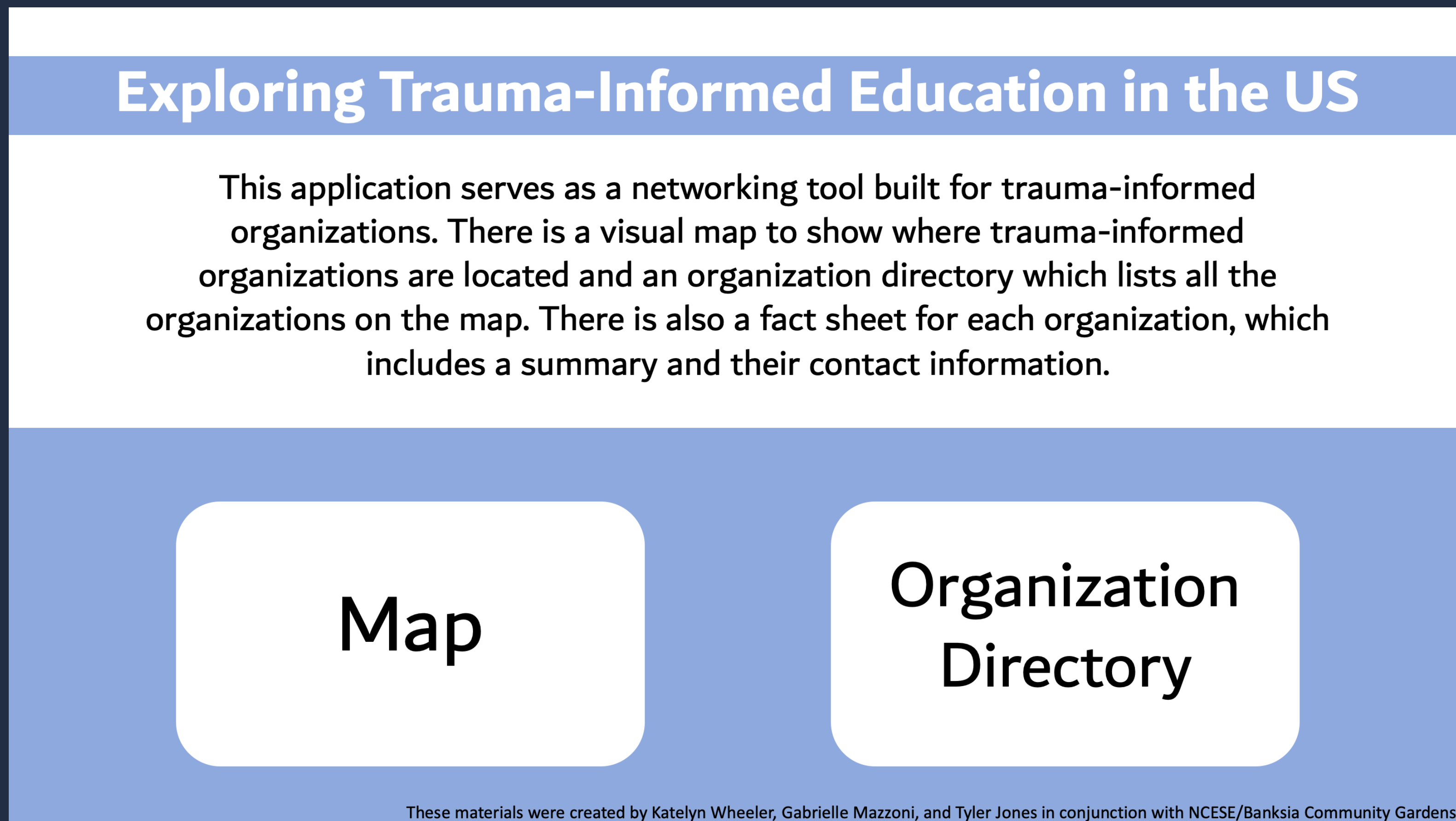
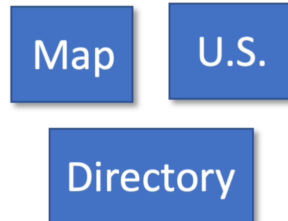


Figure 21: Cover page of the map

Figure 22: Map of organizations in the US



National Child Traumatic Stress Network

- **Location:** Los Angeles, CA
- **Established:** 2000
- **Overview:** The National Child Traumatic Stress Network was created by congress as part of the Children's Health Act. The network's goal is to improve the care of every student and move scientific gains into practice across the U.S.
- **Resources:**
  - What is Trauma
  - Training
  - Trauma-Informed Care
  - All NCTSN Resources

Figure 23: Example organization info sheet in the map with hyperlinks

Conclusion

Overall, we were able to identify over 25 organizations and schools within the United States that specialize in trauma-informed education. Although the COVID environment at times made it difficult to reach these groups for interviews, we successfully made contact with ten of these organizations, and several of them expressed interest in connecting with Banksia Gardens and the NCESE in the future. Zoom also provided a unique opportunity to connect with organizations and experts all across the country and to invite a wide variety of personnel to our presentation, allowing them to meet (albeit virtually) for the first time.

Although we were able to interview more organizations than we had initially set out to, we did not get to interview as many schools as we had planned. During the COVID outbreak, schools were extremely busy trying to adapt to their new teaching environment and often did not have the time to speak to us. In the future, getting to interview teachers and other representatives from trauma-informed schools would likely give a better picture of specific changes in school culture and the teaching strategies that are used, which was an area of interest for our work.

The scope and topics we intended to research in this project changed and broadened as the project evolved. For example, we initially wanted to explore specific professional development resources and strategies, but we realized there was a plethora of data to be reported on in other categories, such as evidence base, evaluation, challenges, and more. Rather than an in-depth look at any one of the many themes we reported on, this work provides a more exploratory look across a variety of topics and organizations. As such, future work might involve diving deeper into a few of the topics that are most of interest to Banksia and the NCESE.

We also limited our interview period to thirty minutes, as we thought participants would be more willing to participate with less of a time commitment. As a result, we found we were not always able to ask all of the questions that we wanted, and would have liked to be able to ask questions about more specific topics, such as funding, what their professional development teaches, formal assessment data (if any), inquire about specific schools they work with, and more. Under different circumstances, longer interviews or additional follow up interviews would have been helpful and would likely allow time for these topics.

Some findings stood out above the rest: first that there is a lack of data showing the effectiveness of particular trauma-informed strategies, and this was often because the measures of success are different for every school, as well as that formal assessment is often not made a priority for schools, so long as they feel there is an improvement. As such, we recommend that Banksia and the NCESE think about the specific impacts they want to have and investigate, as well as quantitative

and qualitative ways to assess those impacts. Figuring out what assessment tools would be best to evaluate different impact goals could also be a potential follow-up project in the future.

Additionally, there were three challenges mentioned frequently throughout interviews: shifting teachers' mindset, the need for systemic structural change in schools, and needing to give teachers the time and curricular freedom to teach emotional learning. Although some interviewees noted ways they have found to mitigate these challenges, there is no single clear solution thus far. Solutions to overcoming these challenges could also be a viable follow-up project in the future.

Throughout the past 14 weeks, we launched a large exploratory look at trauma-informed education in the United States Mapping them and identifying approaches and insights of those working in this area. Although we hope this work will be very helpful to Banksia and the NCESE, there are still areas where the project could be expanded on in the future as we noted above. Also, the methodology we used might be taken further, for example, using the Delphi Technique (Hsu and Stanford, 2007) to collect and build on responses, starting conversations not just with but between experts in the field. This could be a first step to bringing the organizations that we started to network with together in a more formal way, building a community that could have a collective impact.

"It's amazing to see a kid find out that there's someone they're meant to be, rather than just someone defined by their trauma."
- Jim Sporleder

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My name is Gaby Mazzoni and I'm from Belmont, MA. I'm a junior at WPI graduating in the class of 2022 with a Bachelor of Science in Chemical Engineering and a minor in biochemistry. Outside of class, I am involved with Exploradreams, the WPI Cheerleading team, and the International Society of Pharmaceutical Engineers. My favorite part of IQP has been learning about all the organizations that do this amazing work.

My name is Kate Wheeler and I'm from Mechanicville, NY. I'm a Junior at WPI and will be graduating in 2022 with a double major in Robotics Engineering and Mechanical Engineering. Outside of class, I am involved with Audiophiles A Capella, the Rockets Dance Team, Rho Beta Epsilon, and am a student assistant in the Robotics Department. My favorite part of IQP has been getting to work on a project that has the potential to change the lives of students.

An authorship page can be found in Supplemental Materials F.