



ThriveK12

School Climate & Wellbeing Surveys
2022-23 Technical Manual

EmpowerK12
August 2023

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Overview of the Technical Manual

This guide offers insights into the ThriveK12 surveys by EmpowerK12, which assess student and educator perceptions of school climate and their holistic wellbeing. It delves into the research-based constructs gauged by the surveys, delineates the variety of questions posed, and elucidates how these elements converge into two composite scores. The manual also provides data about the 2022-23 pilot study, highlighting the reliability and credibility of the findings. It further details the methodology for crafting the finalized survey version. We present an abridged rundown of key insights and outcomes upfront, with comprehensive details unfolding in the subsequent sections.

- ThriveK12 surveys assess student and educator perceptions with two item types: Likert scale items, which are asset-based in framing; open response items that request additional detail from respondents to gain deeper understanding and provide an avenue for respondents to provide supportive feedback.
- Schools administer the comprehensive surveys once in the fall and spring. School users receive access to real-time aggregate school and district level reports on survey completion during the window and an interactive dashboard of survey result data for their school(s) as well as comparison of their results with schools that are similar in grade levels and student demographics served.
- The Wellbeing Survey results indicate that the constructs are slightly different than the hypothesized constructs of Physical Wellbeing, Emotional Wellbeing, Social Wellbeing, and Academic Wellbeing.
- Two scores generated by the comprehensive survey for each educator and student participant, a holistic Wellbeing index score and School Climate sub score, demonstrate statistically significant positive correlations with student attendance and academic growth.
- Planned additional development of the ThriveK12 school climate and wellbeing survey suite includes a family or caregiver comprehensive survey as well as a series of dynamic “vibe checks” that can serve as efficient progress monitoring tools to track school climate and wellbeing improvement over short interval periods.

Student and Educator Framework Overview

ThriveK12 Surveys and Vibe Checks Goals

EmpowerK12's ThriveK12 suite of school climate and wellbeing monitoring includes two comprehensive surveys conducted in early fall and early spring and a series of multimodal “vibe checks” that serve as efficient progress monitoring tools to track school climate and wellbeing improvement over short interval periods.

Our surveys utilize learnings from the latest brain science research that definitively establishes the connection between trauma and chronic stress on the brain's ability to learn as well as what we learned from focus groups of DC educators and parents about school climate. Identifying sources of physical, social, emotional, and academic stress and assessing their impact on students and educators is critical to a rapid post-pandemic educational recovery.

About the Conceptual Framework

We provide an overview of the latest research about school climate and student and educator wellbeing that underpins the development of survey construction. Then, we summarize findings from focus groups EmpowerK12 conducted with educators and families about school climate and wellbeing to further enhance the framework.

Research on social-emotional learning, holistic wellbeing, and brain science along with on-the-ground insights from educator focus groups guide the design of our school climate surveys. For both the student and educator framework described later in this Technical Manual, we start by identifying the major domains of holistic wellbeing and school climate, and within each domain, we list key indicators along with guidance on how to assess them, including frequency, possible item stems, and assessment methodology.

Research Foundation for School Climate & Wellbeing

What is Social Emotional Learning (SEL)?

Social-emotional learning (SEL) is how individuals grow and develop healthy identities. It is a process that allows students to acquire and apply the knowledge, skills, and attitudes to establish these healthy identities. A student needs to manage emotions and achieve personal and collective goals. Part of this process allows them to feel and show empathy for others, establish, and maintain supportive relationships, and make responsible and caring decisions. These skills and developmental milestones are vital for success in school and later life. (CASTLE, 2022)

Why do we need wellbeing survey data collection?

Social, emotional, and behavioral (SEB) screening and data collection are increasingly recognized as a foundational component of school and district-based support. Schools strive to develop a systematic approach to meeting the SEB health of all students. With limited resources, there is a need for responsive, efficient, and effective systems and data to improve outcomes (Romer et al., 2020).

What are the most pressing needs?

Mental health among children and adolescents is one of the most neglected issues in the nation and was evident throughout the pandemic as isolated children went without the resources needed to cope with these mental health issues. COVID underscored long-standing health, economic, and social inequities (Gonzales et al., 2021). However, little is known about other experiences, such as financial and food insecurity and abuse by a parent, as well as the risk behaviors such as alcohol and drug use among youths across the United States during the pandemic (CDCa, 2022).

The pandemic exacerbated vulnerability among minority populations leading to a stressful life event that has posed concern and uncertainty about individuals' health, future, and disruption to their social life. Stressful life events increase mental health problems in adolescents and young adults (Zeytinoglu et al., 2021). It is essential to address students' challenging environments and increase access to responsive services, especially for minority and transgender youth (Clark et al., 2022).

Moreover, a great deal of empirical evidence demonstrates the link between children's emotional and behavioral health with academic achievement in school. Equally important, mental health problems lead to inequitable student discipline. This inequitable school discipline leads to dropping out of school, suicide ideology, unemployment, prison, and a lower quality of life.

What are the adverse student conditions associated with trauma and chronic stress?

Trauma

Trauma is an emotional response. It includes physical, emotional, and life-threatening harm, which can include terrible events such as illness, death, assault, abuse, school shootings, and war, and can cause short and long-term negative responses. “Attention to childhood trauma and the need for trauma-informed care has contributed to the emerging discourse in schools related to teaching practices, school climate, and the delivery of trauma-related in-service and preservice teacher education” (Thomas et al., 2019, pg. 422).

- **Psychological trauma** includes experiences or events that are perceived as harmful, create intense distress, and affect an individual’s overall wellbeing (Substance Abuse and Mental Health Services Administration [SAMHSA, 2014])
- **Complex trauma** is the result of consistent or repeated traumatic exposure over time (Thomas et al., 2019)
- **Trauma’s impact:** research shows that trauma in childhood is associated with impediments in school performance, and traumatic stress impedes social, emotional, and cognitive brain development (Thomas et al., 2019).



Bullying

Bullying is the systematic abuse of power. It is defined as aggressive behavior or intentional harm-doing that is repeatedly conducted by peers and involves an imbalance of power, either actual or perceived, between the victim and the bully. Bullying can take the form:

- **Direct bullying** which includes physical and verbal acts of aggression such as hitting, stealing, or name-calling
- **Indirect bullying** characterized by social exclusion (e.g., you cannot play with us, you are not invited, etc.) and rumor spreading
- **Cyberbullying** when someone tries to upset and harm a person using electronic means (e.g., mobile phones, text messages, instant messaging, blogs, websites (e.g., Facebook, YouTube) or emails) (Wolke, 2015)

Impact of racial/ethnic discrimination

Racial/ethnic discrimination is mistreating someone based on race or ethnicity and can be a stressor that leads to low self-esteem and low school achievement and attainment. It is disproportionately experienced by Black children and a social product of racism that can be experienced in multiple facets of life and may underlie significant racial health disparities across the lifespan for many

minorities and associated with poor health outcomes, especially preadolescent suicide ideation (Albright, et al., 2022). Racial/ethnic discrimination highly correlated with other environmental factors, including poverty, trauma, family conflict, and body weight (Albright, et al., 2022).

Anxiety Disorders

Anxiety disorders include features of excessive fear and anxiety and related behavioral disturbances. Fear is the emotional response to real or perceived imminent threat, whereas anxiety is the anticipation of a future threat (APA, 2022).

Learning disorder and ADHD

Learning disorder (LD) means that a child has difficulty in one or more areas of learning even when overall intelligence or motivation is a component. Children with learning disorders may feel frustrated that they cannot master a subject despite trying hard and may act out, act helpless, or withdraw (CDC 2022).

- Research has shown that 50% of students with behavior problems have a learning disability, based on commonly used, operational definitions of LD. These findings indicate that special education students newly classified with behavior issues must be screened seriously and carefully for the presence of any learning disability (Glassberg, 1999).
- ADHD (Attention-deficit/hyperactivity disorder) - one of the most common neurodevelopmental disorders of childhood. Children with ADHD may have trouble paying attention, controlling impulsive behaviors (may act without thinking about what the result will be), or be overly active (CDC, 2022). Dr. Ackerman (2019) describes the relationship of ADHD to suicide ideation:
 - ADHD is highly correlated with suicide ideation and depression and anxiety symptoms.
 - Youth with ADHD are at an increased risk of suicide due to higher levels of impulsivity with ADHD are more likely to act in risky or dangerous ways and spend less time considering the impact and permanence of a suicide attempt.
 - Youth with ADHD often have difficulties paying attention to social cues and following instructions which can contribute to academic and social struggles, increasing stress and conflict with others. Youth may experience increased feelings of failure, rejection, loneliness, and hopelessness about the future which can increase the risk for depression and thoughts of suicide.
 - Youth with ADHD are at greater risk of abusing drugs and alcohol. Substance use can significantly increase the risk of acting on suicidal thoughts by decreasing inhibition and fear the youth might have about attempting suicide.

Suicide

Suicide is an attempt to cause self-harm with the intent to die. Suicide has been an upward trend in the United States, doubling between 2007 and 2017. In 2019 suicide was the second leading cause of death among adolescents 13-17, and the fifth leading cause of death in preadolescents, ages 6-12 years. Black American children are disproportionately affected in the younger age group, dying by suicide at a rate double their white counterparts. (Albright et al., 2022).

Potential contributors:

- Disproportionate exposure to violence;
- Earlier onset of puberty;
- Diminished access to health care;
- Non-dominant sexual orientation - In particular Transgender youth face considerable health and wellbeing disparities. (Clark et al., 2022); and
- Black children disproportionately experience racial/ethnic discrimination. Racial discrimination can manifest as health disparities across the lifespan for many minorities and is associated with poor health outcomes, especially preadolescent suicide ideation.

Mental health disorders

Mental health disorders or illnesses are health conditions causing changes in emotion, thinking, or behavior. These changes are associated with distress and/or problems functioning in social, work, or family activities and can cause serious degradation in the way children typically learn, behave, or manage their emotions (CDC b, 2022)

- Overall, 1 in 6 students have symptoms to meet the criteria for one or more [childhood mental disorders](#). (CDC b, 2022)
- [Anxiety disorders](#) were the most commonly reported mental disorders, followed by [oppositional defiant disorder \(ODD\)](#) and [attention-deficit/hyperactivity disorder \(ADHD\)](#) (CDC b, 2022)
- Based on the screen done by teachers, between 1 in 6 and 1 in 3 students were at elevated risk for a mental disorder. Teachers identified a higher percentage of boys, non-Hispanic Black students, and students receiving free or reduced-price lunch as high risk for mental disorders than their peers. Still, there were no demographic differences in the percentage of students who met the criteria for a mental disorder based on parent reports (CDC b, 2022).

Substance abuse and substance disorders

Substance-related disorders result from the use of ten separate classes of drugs: alcohol, caffeine, cannabis, hallucinogens, inhalants, opioids, sedatives, hypnotics, or anxiolytics; stimulants, tobacco, and other or unknown substances (APA, 2022).

- Substance-use disorders are patterns of symptoms resulting from the use of a substance that you continue to take, despite experiencing problems as a result (Harteny, 2020).
- Substance-induced disorders, including intoxication, withdrawal, and other substance/medication-induced mental disorders, are detailed alongside substance use disorders (Harteny, 2020).

Comprehensive Survey and Vibe Check Administration

Educators and school leaders distribute ThriveK12 surveys via an online platform that is device agnostic to maximize accessibility, reduce data entry errors, and allow for monthly or multi-year comparisons. Mobile and tablet devices are the most convenient and accessible for most survey completers the surveys target (Korick, 2022). We consider survey timing and length to be especially important, balancing minimal time with maximum breadth to increase respondent engagement and capturing all elements of the wellbeing and school climate framework. We follow research-based guidance that includes:

- “Minimize the influence of external factors by avoiding state assessment windows, extended school breaks, and the first and last two weeks of the school year.
- Comprehensive survey windows should be open for 4-6 weeks.
- If possible, align survey windows with staff development days (to reach staff) and parent events at school (to reach parents).” (Korick, 2022, para 3).

Student School Climate & Wellbeing Framework

The major domains of student wellbeing include emotional, social, physical, and academic. Research suggests significant overlapping bidirectional causation among the four domains, so our suite of wellbeing assessments treat them as equivalent in terms of importance. Within each domain, the conceptual framework includes sample asset-framed items piloted in Spring 2023.

Construct	Construct Definition	Sample Items
<p>Physical Wellbeing</p>	<p>Students' housing security, safety in their community, safety at school, exposure to violence in their community, exposure to violence at school, food security, health, body image, diet and water intake, and physical movement or exercise.</p>	<p>I eat healthy meals every day.</p> <p>When I need things for school, my family can buy them for me.</p> <p>When I travel from my school into my community, I feel safe.</p> <p>I get enough sleep every day.</p> <p>When I think about the house I live in, I feel happy.</p> <p>Students at my school want to keep me safe.</p>
<p>Mental Wellbeing</p> <p>"An emotional reaction designed to express a positive effect, such as happiness when one attains a goal, relief when a danger has been avoided, or contentment when one is satisfied with the present state of affairs."</p> <p>(American Psychology Association, 2022)</p>	<p>Students' feelings of happiness, access to support, ability to deal with stress, and any recent loss of a loved one.</p>	<p>I feel happy most days.</p> <p>I know what to do if I am feeling stressed.</p> <p>My intelligence is something that I can grow.</p> <p>I can always change if I work hard enough.</p> <p>I manage stress by staying calm and focused.</p> <p>I manage stress by taking a break or pause.</p> <p>I manage stress by seeking help from a teacher or counselor.</p> <p>I manage stress by talking to a friend or family member.</p> <p>I manage stress by engaging in physical activity or sports.</p>

<p>Social Wellbeing</p> <p>How frequently do students feel challenging emotions (sadness, loneliness, anger)</p> <p><i>(Panorama, 2022)</i></p>	<p>Students' relationships with adults from school, their relationships with friends from school, and feeling of belonging at school.</p>	<p>I often get a chance to see my friends outside of school.</p> <p>There are adults at my school who I can ask for help.</p> <p>Who do you prefer to go to for help?</p> <p>I have a friend at school that I trust.</p> <p>Students at my school are kind.</p> <p>I feel like I belong at my school.</p> <p>I do activities with people who care about me every day.</p> <p>I know and feel loved by my teachers.</p>
<p>School Climate & Academic Wellbeing</p>	<p>Students' confidence in being successful at school, the excitement of their teachers and peers at school, access to tutoring in/out of school, attendance in school, motivation to make effort in school, preparedness to make effort in school, attention and focus when learning, and growth mindset.</p>	<p>I respect and trust my teachers.</p> <p>I am having a successful school year.</p> <p>It is important to me that I do well in my classes.</p> <p>My teachers are excited to teach me.</p> <p>My teachers make learning fun.</p> <p>I know about different career paths available to me after high school.</p> <p>I am learning the skills to succeed in any career I want.</p> <p>It is important to me that I come to class prepared.</p> <p>During a typical 5-day school week, it is important that I attend school every day of the week.</p> <p>I am proud of the grades I earn in school.</p> <p>I am inspired by my teachers.</p>

Educator School Climate & Wellbeing Framework

Educators, like other working Americans, are increasingly experiencing loneliness after living and maneuvering through a global pandemic. According to a survey conducted by Cigna, this is the most common mental and social-emotional health concern now (Cigna, 2020). Unfortunately, with the environment that most educators work in, they are also experiencing increased burnout due to the many hats they must wear and demoralization due to a lack of appreciation. Research shows that teachers who experience burnout are more likely to leave the profession as 40% of them experience this (McMains, 2021). It is important that schools and leadership alike work together to create systems that let educators work in as much of a stress-free environment as possible. To make this happen, emphasis on mindfulness and wellbeing is crucial. Just like students, teachers need tools they can use to cope with the triggers they may face daily. However, it will not be beneficial if school leaders do not recognize this among their staff and even among themselves.

Recently, social-emotional learning or SEL has become popular in the field of education. However, research confirms that before teachers can present this type of learning to their students, they themselves must be competent in their own social-emotional skills, and 46% of teachers report daily stress levels consistent with nurses and doctors (Reichl, 2017). Not only does stress impact the learning of their students and their own social-emotional skills, but also their overall health including physical and mental health leading to factors such as demoralization, anxiety/depression, and loneliness. This framework specifies the most prevalent indicators that educators face in the domains of mental, social, emotional, and physical wellbeing. Furthermore, this framework can improve working environments for educators by gathering feedback from staff through questionnaires or surveys based on the questions provided below. While it is not the ultimate solution to the problem, it is a starting point.

Construct	Construct Definition	Sample Items
Physical Wellbeing	Educators' health, diet and water intake, and physical movement or exercise.	I get enough sleep during the school week. I eat well at school and at home. I find time for fitness and exercise.

<p>Mental Wellbeing</p> <p>“An emotional reaction designed to express a positive effect, such as happiness when one attains a goal, relief when a danger has been avoided, or contentment when one is satisfied with the present state of affairs.”</p> <p>(American Psychology Association, 2022)</p>	<p>Educators’ confidence in their ability to handle work stress and maintain a healthy work-life balance, positive feelings about their personal life, and their sense of students’ success.</p>	<p>Over the last two weeks, I have felt cheerful and in good spirits while at home and in my personal life.</p> <p>I can handle work stress most days.</p> <p>I utilize strategies to improve my own self-care and wellbeing every day.</p> <p>I maintain a healthy work-life balance during the school week.</p> <p>I maintain a healthy work-life balance during weekends and over school breaks and holidays.</p> <p>I feel motivated to take steps to improve my practice every week.</p> <p>Our students' overall non-academic wellbeing is positive and headed in the right direction.</p> <p>Our students' academic trajectory is positive and headed in the right direction.</p> <p>Our students are on a path to gain the skills and knowledge to succeed in any career they want.</p>
<p>Social Wellbeing</p>	<p>Educators’ relationships with colleagues from school, feeling of belonging at school, and their relationships with students, parents, and caregivers.</p>	<p>My colleagues at school understand me as a person.</p> <p>I have a colleague or friend at school I trust.</p> <p>I feel like I belong at my school.</p> <p>My school leadership cares about my wellbeing and safety.</p>

School Climate & Professional Wellbeing

Educators' confidence in being successful at work, access to tools and time to improve, the quality of professional communication from leadership, and feeling of having a voice in work decisions.

Over the last two weeks, I have felt cheerful and in good spirits while at work.

My school leadership provides frequent and clear communication about school policies and practices.

I have a voice in decision-making processes at my school.

I have enough autonomy in my work to be effective.

My work is recognized and appreciated by my peers and leadership.

I have the tools I need to continuously improve my practice.

I have the time I need to reflect and craft a plan to continuously improve my practice.

I feel well-equipped to support students with any trauma, grief, or stress they experience.

ThriveK12 Survey Item Development

Initial Item Development and Focus Groups

Each seasonal administration of ThriveK12 begins with an engagement process of key stakeholders to ensure survey content remains relevant and focused.

Focus Groups

In fall 2022, EmpowerK12 with our partners from the Center for Health and Health Care in Schools at The George Washington University conducted two focus groups, educators and parents/caregivers, to better understand their perceptions of wellbeing and school climate. Recruitment for the focus groups concentrated on those serving or living in historically disadvantaged communities in the District of Columbia. All participants identified as people of color, including seven parents or caregivers and five educators. The following is a summary of the key themes.

Student Wellbeing Insights:

- Child wellbeing encompasses a comprehensive support system for children, addressing their physical, mental, social, and nutritional needs.
- Wellbeing is not solely about happiness; occasionally, children may face challenging situations, acknowledging that productive struggle is beneficial.
- True wellbeing equips children with the necessary resources and skills for their journey to adulthood, including decision-making.

Feedback on Student Survey:

- Respondents found the surveys beneficial in fostering students' self-reflection and enhancing their understanding of mental health. This is crucial as students often source mental health information from social media, which can be misleading.
- One respondent said students voiced concerns regarding the confidentiality of responses and felt the survey was lengthy. Others raised concerns about the possibility of students rushing through the survey without contemplation.
- Educators highlighted the absence of a summarized overview of the survey outcomes. They emphasized the utility of a platform where educators could collectively review and discuss the results. In the past, survey results were presented at an annual celebration, which allowed for feedback and collaborative strategy planning.
- One respondent noted their district's growing interest in incorporating quick screeners into their routine practices, aiming to monitor students' Social-Emotional Learning (SEL) progression and guide SEL instruction. Integrating this within the wellbeing initiative could be explored.

Educator Wellbeing Insights:

- Educator wellbeing parallels the desired conditions for students, but the strategies for adults can be more self-initiated provided the necessary resources are accessible.
- Key facets of wellbeing include respect, autonomy in teaching, establishing clear boundaries, and maintaining work-life balance.

Feedback on Educator Wellbeing Survey:

- Educators deemed the survey to be concise and engaging with detailed, yet non-exhaustive questions, and they recommended incorporating an open-ended section to provide additional feedback.
- A toolkit offering interventions to address identified challenges would be beneficial.
- Analyzing the performance of individual schools based on survey outcomes is suggested.
- Three schools share summarized data and implement related activities, but there's uncertainty about the connection between findings and actions, emphasizing a need for accountability.

Recommendations for Enhancing Wellbeing Surveys:

- Support schools with information about the survey's significance, how subsequent use of gathered data can boost participation and authenticity, and highlighting the survey's benefits and potential improvements resulting from feedback can motivate participation.
- Provide schools with ways to share aggregate results to reduce feelings of isolation and promote a sense of community. Sharing findings can also serve as an incentive for future survey participation, instilling trust that feedback will lead to actionable change.
- Implementing a pre-and-post survey approach, elucidating the survey's rationale, and sharing post-survey insights can significantly enhance the effectiveness and response rate of future surveys.

Item Selection and Revision Process

EK12 item writers refined the survey items based on the focus groups, which Assessment for Good and Creative Research Solutions content experts reviewed items for the following characteristics:

- Clarity of wording of the items.
 - For instance, changing *My school is a place where I belong, or I feel like I belong at my school.*
- Specificity of items.
 - For instance, the following item was double-barreled, asking two questions but only allowing one answer. The item *kids at my school are kind and want to keep me safe* changed to *Students at my school are kind* and *Students at my school want to want to keep me safe.*
- Developmental considerations for how appropriate the items would be for different age groups (e.g., elementary students vs. middle school students).

- For instance, two items *I know about the different career paths available to me after high school* and *I am on a path to gain the skills and knowledge to succeed in any career I want* were changed to *I know about different career paths available to me.* and *I am learning the skills to succeed in any career* and were only asked of middle school students since educators at the design session considered more developmentally appropriate to ask about career preparation in middle school rather than in elementary school.
- Appropriate response options for the items.
 - For instance, educators recommended eliminating the “other” category as an option for the demographic question about race/ethnicity since students may feel sensitive to feeling like an “other” and instead recommended more options. In spring 2023, we included the new federal recommended categories and the ability to add a custom response to an open-ended box.

ThriveK12 Spring 2023 Survey Results

Spring 2023 Participants

A total of 490 students from seven schools participated in the survey. Out of these, 277 (57%) identified as Black or African American, 97 (20%) identified as Hispanic, and 116 (24%) identified as neither Black or African American or Hispanic. A total of 145 (30%) of the students were in elementary school while 345 (70%) of the students were in middle school.

A total of 114 educators participated in the Spring 2023 survey, 62 (54%) of whom were teachers. Out of the remaining educators, 8 (7%) identified as school leaders, 10 (9%) identified as specialists, 11 (10%) identified as paraprofessionals, and 14 (12%) identified as other staff. A total of 57 educators (50%) identified as Black or African American, 6 (5%) identified as Hispanic, and 51 educators (45%) identified as not Black, African American, or Hispanic.

Survey Validation Measures

For the student sample, we split the overall sample into two randomly selected groups. The first group of 112 students was used to conduct an Exploratory Factor Analysis (EFA) of the assessment, while the second group of 345 students was used to conduct a Confirmatory Factor Analysis (CFA) of the assessment based on the findings of the EFA. After the CFA, we conducted invariance testing using the Alignment Method to evaluate whether the measure operated the same way in different populations: by race, by gender, and by whether the student was in elementary school or middle school.¹

The teacher sample was not large enough to split the sample into two groups for validation purposes. We conducted a CFA using the original four hypothesized factors (professional wellbeing, physical wellbeing, emotional wellbeing, and social wellbeing). We revised the measure based on modification indices.

Survey Results: Exploratory Factor Analysis

The EFA found that the wellbeing measure consisted of two factors as indicated by the Skree Plot of Eigenvalues and from fit statistics [RMSEA .084 (90% CI .072, .095) CFI .77, TLI .748]. Based on the results from the EFA, we conducted a CFA. In that process, eight items were removed from the confirmatory factor analysis in the process of ensuring an important level of reliability and model fit [Final CFA Model- RMSEA .074 (90% CI .062, .086) CFI .888, TLI .863]. The table below shows the items we removed, organized by original hypothesized construct, and the reasons why the item was removed.

¹ Asparouhov, T., Muth'en, B.O., 2022. Multiple Group Alignment for Exploratory and Structural Equation Models. Retrieved from. <https://www.statmodel.com/download/alignment.pdf>. Asparouhov, T., Muth'en, B., Mo

Hypothesized Construct	Item Removed	Reason Removed
Mental Wellbeing	I feel happy most days.	Low loading & cross-loading
	I know what to do if I am feeling stressed.	Low loading
Social Wellbeing	I often get a chance to see my friends outside of school.	Low loading
	I respect and trust my teachers.	Cross-loading
Physical Wellbeing	I get enough sleep every day.	Low loading & cross-loading
	When I need things for school, my family can buy them for me	Low loading
	When I think about the house I live in, I feel happy.	Low loading and does not conceptually make sense in academic self-efficacy
	When I travel from my school into my community, I feel safe.	Cross-loading and does not conceptually make sense in academic-self-efficacy
Academic Wellbeing	My teachers make learning fun.	Low loading & cross-loading
	I am inspired by my teachers	Cross-loadings

For the teacher survey, using modification indices and the correlation matrix, we found that a three-factor solution worked the best [RMSEA .054 (90% CI: .000, .089) CFI .972, TLI .963]. In iterating on the model, we removed eight items. The table below shows the removed items by the original hypothesized construct and the reason for item removal.

Hypothesized Construct	Item Removed	Reason Removed
Mental Wellbeing	I am able to maintain a healthy work-life balance during weekends and over school	Cross loadings
	I am able to handle work stress.	Cross loadings
	I feel motivated to take steps to improve my practice every week.	Cross loadings
	Over the last two weeks, I have felt cheerful and in good spirits while at home	Cross loadings
Physical Wellbeing	I eat well at school and at home.	Cross loadings

Professional Wellbeing	I feel well-equipped to support students with any trauma, grief, or stress they	Cross-loadings
	I have the tools I need to continuously improve my practice.	Cross-loadings
	My work is recognized and appreciated by my peers and leadership.	Cross loadings

Survey Results: Confirmatory Factor Analysis

The item loadings, means, and correlations for the student CFA are included below. Based on the items remaining, we labeled the first factor academic self-efficacy and the second factor school social support. The correlation between academic self-efficacy and school social support was .67. We found that there was no measurement non-invariance in item loadings or thresholds by race, gender, or whether the students were in elementary school or middle school. This suggests that the factor has a similar structure and meaning in these groups.

Factor	Item	Standardized Loading	Standard Error
School Social Support	I feel like I belong at my school.	0.633	0.041
	I have a friend at school that I trust.	0.395	0.052
	I know and feel loved by my teachers.	0.6	0.044
	Students at my school are kind.	0.581	0.046
	Students at my school want to keep me safe.	0.654	0.043
	There are adults at my school who I can ask for help.	0.541	0.047
Academic Self-Efficacy	During a typical 5-day school week, it is important that I attend school every day	0.595	0.041
	I am having a successful school year	0.662	0.038
	I am proud of the grades I earn in school.	0.634	0.04
	I can always change if I work hard enough.	0.637	0.039
	It is important to me that I come to class prepared.	0.413	0.05
	It is important to me that I do well in my classes.	0.594	0.042
	My intelligence is something that I can grow.	0.594	0.042

The item loadings, means, and correlations for the teacher CFA are included below. Based on the items remaining, we labeled the first factor self-care, the second factor Social Wellbeing, and the third factor Professional Wellbeing. The correlation between Self-Care and Social Wellbeing was .205, the correlation of Self-Care with Professional Wellbeing was .284, and the correlation of Social Wellbeing and Professional Wellbeing was .489.

Factor	Item	Standardized Loading	Standard Error
Self-Care	I am able to find time for fitness and exercise.	0.648	0.071
	I am able to maintain a healthy work-life balance during the school week.	0.762	0.062
	I get enough sleep during the school week.	0.586	0.076
	I utilize strategies to improve my own self-care and wellbeing every day.	0.765	0.059
Social Wellbeing	I feel like I belong at my school.	0.893	0.044
	I have a colleague or friend at school I trust.	0.627	0.068
	My colleagues at school understand me as a person.	0.779	0.053
Professional Wellbeing	I have a voice in decision-making processes at my school or LEA ² .	0.63	0.062
	I have enough autonomy in my work to be effective.	0.574	0.069
	My school or LEA leadership care about my wellbeing and safety.	0.831	0.039
	My school or LEA leadership provide frequent and clear communication about school	0.928	0.03

Cronbach’s Alphas for the final versions of the student survey are $\alpha = .80$ for Academic Self-Efficacy and $\alpha = .74$ for School Social Support. Cronbach’s Alphas for the final versions of the teacher survey are $\alpha = .77$ for Self-Care, $\alpha = .82$ for Social Wellbeing, and $\alpha = .82$ for Professional Wellbeing

² LEA stands for Local Education Agency, an organization that operates one or more publicly funded schools, more commonly known as a school district. Within Washington, DC, there are 71 LEAs including the District of Columbia Public Schools (DCPS) and 70 District of Columbia public charter schools as of the 2021-2022 school year (Office of the State Superintendent of Education, n.d.). Although the term “LEA” is most commonly used in DC, for simplicity we refer to “districts” or “schools” throughout this technical manual.

Survey Results: Relationships with Student Academic Outcomes

Participating schools in the spring survey shared student academic growth from fall-to-spring in math and reading using a nationally normed assessment, the NWEA Measures of Academic Progress. Based on the analyzed sample of 497 students and 110 educators, we find that educator wellbeing index scores ($p=0.06$) and new school climate sub score ($p=0.09$) are statistically significantly correlated with fall-to-spring student growth in math and reading on a nationally normed assessment, NWEA MAP. Previous ThriveK12 research with larger sample sizes in Spring 2022 found similar statistically significant correlations between student wellbeing index scores and academic growth ($p<0.05$).

Recommendations

The Wellbeing Survey results indicate that the constructs are slightly different than the hypothesized constructs (e.g., Physical Wellbeing, Emotional Wellbeing, Social Wellbeing, and Academic Wellbeing). The difference between the hypothesized constructs and the factors found in the validation results were mostly due to cross-loadings across hypothesized factors. This indicates that eight of the items were not able to provide information to differentiate between the factors, and we retained items that provided differential information. The retained items indicated two constructs for students (academic self-efficacy and school social support) and three constructs for teachers (self-care, professional wellbeing, and social wellbeing).

It is notable that there are no items from the originally hypothesized physical wellbeing construct. However, due to the nature of the items, it is possible that physical wellbeing is not a latent construct, but an index. In an index, the items influence the construct measured (e.g., a household wealth is determined by the assets owned by household members) instead of a scale, where the link between items and the construct are more causal (e.g., if you are depressed, you will exhibit certain symptoms). Based on these results, we recommend the following activities to further validate the student and educator wellbeing surveys.

- Conduct further qualitative research to understand whether the constructs that were found in the validation process are relevant and make conceptual sense to key stakeholders.
- Conduct further quantitative research to further validate the constructs found in the results, particularly in teachers because there was not a large enough sample for a separate EFA and CFA for the teacher survey items.
- Conduct a Principal Components Analysis on the physical wellbeing items to understand whether to weigh all the physical wellbeing items the same in an index score, or to assign differential weights depending on the relative importance of an item to physical wellbeing.

Acknowledgements

EK12 thanks the guidance and support of psychometricians at Mathematica Policy Research and Creative Research Solutions in the analysis of spring data and for their contributions to this technical manual. We also thank staff at the George Washington University's Center for Health and Health Care in Schools for facilitating focus groups of DC educators, students, and families/caregivers during the design and implementation of the ThriveK12 surveys.

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