THE POSSIBLE ZONE

Measuring Possible:

A Plan to Evaluate The Possible Zone's Entrepreneurial Ecosystem Model for Positive Youth Development

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Introduction

For more than a decade, TPZ has served the youth of greater Boston through authentic entrepreneurship and hands-on experiences in our in-house enterprises. TPZ took a big step to extend our reach and increase the magnitude of our impact, as we launched the next generation of TPZ programming and opened our state-of-the-art Innovation Center in April 2022.

TPZ has rebuilt our program from the ground up — combining previous lessons learned, input from stakeholders, evidence from multidisciplinary research, and guidance from field-leading experts and advisors — all with an aim of developing a new Theory of Change (TOC) on which our next generation program was built. As it has since its inception, TPZ remains dedicated to our mission — to advance economic equity by ensuring young people develop the entrepreneurial spirit, skills, and networks to launch successful careers.

Effectively using data to learn, improve, and grow is a hallmark of any successful company, and is especially important among nonprofits that perpetually strive for sustainability. Accordingly, rigorous program evaluation is one of several strategies TPZ has prioritized to support our efforts to achieve our mission. Led by our Research & Evaluation (R&E) team, TPZ has developed a five-year evaluation plan in alignment with our TOC.

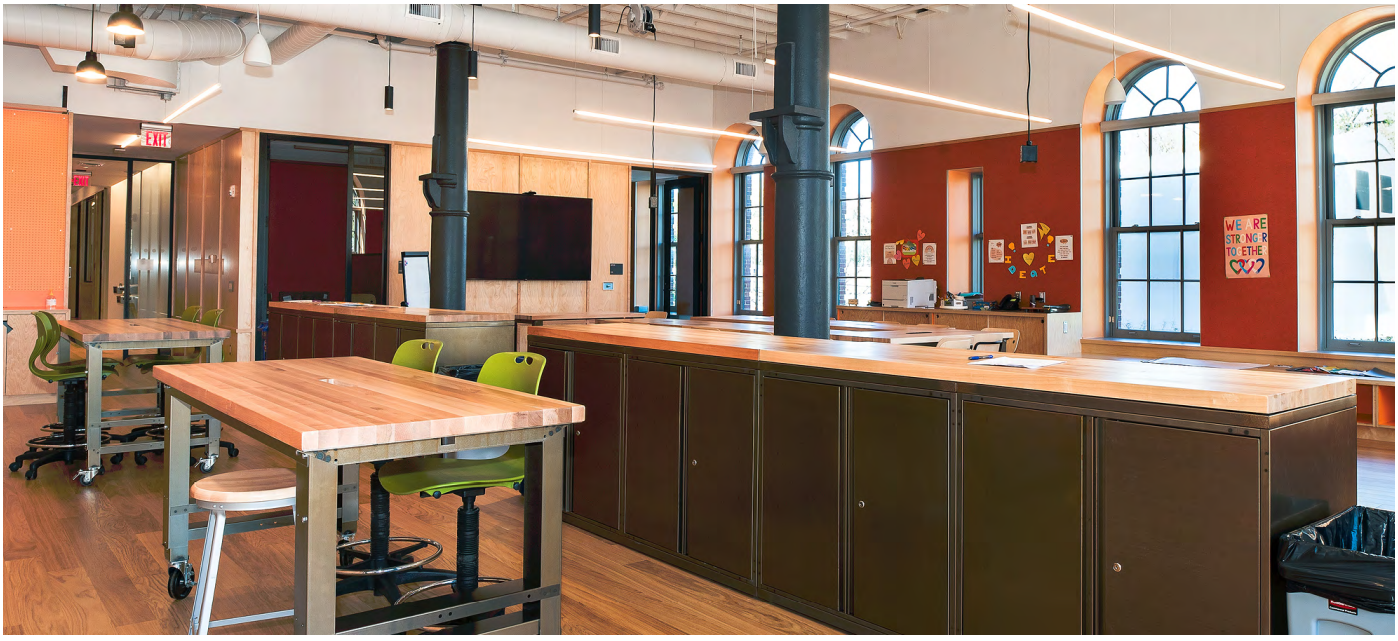
EVALUATION PURPOSE

TPZ prioritized investment in research and evaluation, and is executing our five-year evaluation plan, in order to achieve three crucial and overarching purposes: 1) continuously improve to maximize benefits to students; 2) test and communicate about our program and impact; and 3) emerge as local and national thought leaders.

Continuous Improvement. TPZ uses evaluation data to continuously improve our daily practices, learning environments, organizational culture, and students' learning. A commitment to rigorous continuous improvement helps TPZ ensure that our resources and efforts are used efficiently, by identifying what is working and should be continued, and finding opportunities for improvement as early as possible. A field of applied research has emerged around rigorous continuous improvement — known as Improvement Science — and its methods have been shown across industries (e.g., health care, education, manufacturing, etc.) to be strongly related to positive outcomes when used effectively. Their effective use has also been shown to be one of the biggest predictors of success among youth development organizations and other nonprofits. TPZ is building our organizational muscles for continuous improvement, so that we are optimally equipped to meet the needs of our students and help them to realize their full potential.

Test and Communicate. Findings from TPZ program evaluation work are essential for confirming or iterating on the theories that guide our program, influencing both our long-term program model improvement and our thought leadership as we share what we learn over time. Findings are also crucial for communicating a track record and body of evidence to various stakeholders, including new students, families, and potential ecosystem partners, as well as for supporting the sustainability of the organization by communicating evidence to funders and donors. While TPZ uses improvement science methods to continuously improve our ongoing practice, and that will certainly be part of what we communicate, we also utilize summative research to test our theory (i.e., our theory of change — TOC) and evaluate our impact. To these ends, we have mapped metrics and corresponding assessments/measures to the elements of our logic model (i.e., a visualization of our TOC), and analyses will subsequently test the assumptions and hypotheses — including how our program activities and Entrepreneurial Culture promote Entrepreneurial Spirit, and also lead to positive long-term outcomes. TPZ will collaborate with an external evaluation partner to maximize our level of rigor and ensure the objectivity and credibility of our evaluation findings.

Thought Leadership. With our new TOC in place, TPZ will also identify and seize opportunities to emerge as thought leaders in areas central to our Theory of Change and organizational strengths, such as Social Emotional Learning (SEL), Developmental Relationships, Career Readiness, Positive Identity Development, Experiential and Work-based Learning, Equitable Learning & Career Pathways (especially STEAM focused), and Youth Development Ecosystems.



EVALUATION PLAN OVERVIEW

TPZ's evaluation plan will include two phases, a Formative phase and a Summative phase. Through these phases, TPZ will test key hypotheses and assumptions of our TOC, including those related to improvement in student outcomes and key programmatic levers for realizing our intended impact. We will identify and document key program improvements that are made, both during the formative phase and as a result of ongoing continuous improvement, and we will be equipped with actionable findings from our summative phase to inform improvements in our overall program model. These actionable findings will also provide key learnings for how to extend our reach, operate at a larger scale, and offer initial conclusions for how TPZ might prepare to launch in new cities (including additional questions to be answered).

TWO YEARS TO IMPROVE

Formative Research Phase

- Program quality, process indicators, short-term outcomes, and leading indicators
- Drive continuous improvement
- Internal research team to execute
- Improvement science methods to maintain rigor
- Date & learnings shared with key stakeholders
- Measures and focus guided by TOC

THREE YEARS TO PROVE

Summative Research

- Test assumptions of TOC, mechanisms of impact, implications for scaling-up
- External Evaluator to execute, report annually
- Program evaluation best practices ensure rigor
- Focused-on long-term outcomes, link with program quality, implementation, and short-term outcomes
- Continuous improvement work continues (led by internal team), as part of TPZ standard practice

The Formative Evaluation phase will be at least two years in duration, starting in the Spring of 2022, will be collaboratively conducted by TPZ's R&E and other internal teams, and will focus on rapid testing and iteratively improving our new program model and implementation. Continuous-improvement focused evaluation activities will continue beyond the formative phase, as part of the organization's routine continuous improvement practice led by the R&E team (see more details of activities in the Formative Evaluation activities section). TPZ's research and program teams will reflect collaboratively on data compiled by the research team each quarter, and summary data will also be made available by the R&E team through a "TPZ by the Numbers" overview that will be produced and shared each quarter. A comprehensive Impact & Learning Report will be produced annually and used in an organization-wide continuous improvement retreat. Based on opportunities for improvement identified during data reflections, TPZ also plans to regularly implement 90-day improvement cycles, according to a rigorous improvement science framework developed by the Carnegie Foundation for the Advancement of Teaching.

The Summative Evaluation phase will be approximately three years in duration, during which TPZ will partner with an external evaluator to conduct independent research on our program model. At that point, we anticipate our program will have achieved a relative "steady state" upon completion of the formative phase. Partnering with an external evaluator allows findings and conclusions to be independently drawn, which is crucial for the credibility of our evaluation among external stakeholders. This summative phase is likely to be the first of many summative evaluations we conduct, as part of our commitment to learning whether we are making a difference in the lives of those we serve, improving our program model, and contributing to thought leadership in the field.

Theory of Change & Program Being Evaluated

The largest portion of wealth in the US is held by increasingly few people, and Americans' ability to move up the economic ladder (i.e., economic mobility) has plummeted for nearly a century. An inequitable economic cycle is at work. This cycle is experienced by all under-resourced communities and is disproportionately felt by communities of color. The cycle itself transcends race and other demographic factors and operates through entrenched systems of inequitable opportunity, access, and power, but the consequences of our nation's history of racial discrimination result in many youth of color facing compounding adversity when they live in under-resourced communities.

Emerging research helps us understand the complex and dynamic interactions of environment, biology, epigenetics, and relationships that influence neurological, cognitive, and social development, as well as the conditions under which each is either hampered or accelerated. This research illuminates opportunities to optimize learning and development for all young people and offers chances to disrupt cycles of inequity. TPZ's new TOC and program model are built on a foundation of these opportunities, and they manifest in our framework for Entrepreneurial Culture & Spirit.

FRAMEWORK FOR ENTREPRENEURIAL CULTURE AND SPIRIT©

Based on decades of research across disciplines, entrepreneurship remains at the heart of TPZ's new TOC and program model. Our new Entrepreneurial Culture & Spirit framework is characterized by a mutually reinforcing relationship between its two central concepts — Entrepreneurial Culture and Entrepreneurial Spirit — and serves as a guiding force behind everything we do. TPZ's Entrepreneurial Culture represents how students, staff, and other stakeholders experience TPZ, and as such drives decision-making, guides training and improvement, and even informs hiring and partnerships. Entrepreneurial Spirit is cultivated by Entrepreneurial Culture and represents the knowledge, skills, and mindsets we hope to cultivate with students — those shown by research to be linked with long-term academic and career success.

ADVANCING ECONOMIC EQUITY THROUGH AN ECOSYSTEM OF ENTREPRENEURSHIP, OPPORTUNITY, & RELATIONSHIPS

THE POSSIBLE ZONE

INPUTS

Students' Strengths and Assets: Experiences, skills, knowledge, mindsets, talents, supports
Stakeholders: Staff, volunteers, alumni, family, community
Curriculum: Evidence-based Eship, Advisory, WBL, and Deep Dive curriculum and/or course structures
Training: Leadership development, professional learning, culturally responsive, community and culture
Space and Equipment: Innovation Center, makerspace, CAD/Adobe software, digital fabrication tools
Partners: Schools, local businesses, complementary organizations, industry/corporate
Financial Support: Foundation and corporate giving, government grants, TPZ enterprise revenue

ENTREPRENEURIAL CULTURE

INSPIRE — Inspire students to dream without limits by reinforcing their worth and potential.

Program Levers
- Student-centered spaces
- Physical/emotional safety
- Culturally-responsive design/practice
- Student leadership, alumni presence
- Supportive staff & advisors
- Volunteers that inspire, relate, & challenge
- Developmental relationships

IGNITE — Ignite passion and creativity through authentic and collaborative learning, spaces equipped for innovation.

Program Levers
- Access to state-of-the-art technology and facilities
- Authentic Eship instruction & experiences that foster SEL
- Immersive STEAM Deep Dives
- Meaning-making & guidance through Advisory

THRIVE — Thrive within strong and mutually supportive networks; belonging in a professional communities

Program Levers
- Work-based Learning that fosters relationships & career-readiness
- College & career advising
- Alumni leadership & role modeling
- Post-secondary programming & alumni support

ENTREPRENEURIAL SPIRIT

I COULD — Defining what is possible for themselves. "I COULD do whatever I dream."

Skills, Mindsets, & Assets
- Interest sparked by access
- Positive self-concept
- Growth mindset
- Sense of belonging at TPZ

IGNITE — Finding insights in failures, gaining confidence to achieve. "I CAN overcome. I CAN succeed."

Skills, Mindsets, & Assets
- Communication & teamwork
- Problem-solving & design thinking
- Self-efficacy & STEAM interest
- Tech agency
- Business & Eship concepts
- Emerging social & professional network

I AM — Having clear aspirations, confidence in their path. "I AM a learner. I AM a success. I AM leading the way."

Skills, Mindsets, & Assets
- Fortified self-efficacy & resilience
- Growing & solidifying social capital
- Refined technical skills, aligned with career aspirations
- Sense of belonging in professional settings
- Commitment to inspiring others

IMPACT

UPWARD MOBILITY PROMOTING EQUITY

1. **Economic Success:** Earning in top 20% of income among same-age peers, 10-years after high school graduation.
2. **Power and Autonomy:** Ability to influence one's environment, other people, and your own outcomes; ability to act according to your own decisions. **Indicators:** Agency, Self-Efficacy, & Growth Mindset
3. **Being Valued in Community:** A sense that one belongs and is included among family, friends, coworkers, neighbors, other communities, and society. **Indicators:** Social Capital & Belonging

Figure 1. TPZ's New Logic Model. TPZ's new Entrepreneurial Culture & Spirit framework© is rooted in identity development research (e.g., occupational identity), and represents a mutually reinforcing dynamic between a culture that is conducive to learning and relationship-building, and the entrepreneurial spirit that it cultivates — and by which it is reinforced.

Understanding that students come with many strengths, assets, and life experiences, TPZ's Entrepreneurial Culture aspires to create conditions for learning that meet students wherever they are, in order to optimize opportunities for learning and relationship-building. The result is an experience that promotes a powerful set of knowledge, skills, and assets that foster a potentially transformative mindset with students — Entrepreneurial Spirit[footnote 1].

STUDENTS' TPZ JOURNEY

Students typically first enroll in TPZ programming in 10th grade and remain with TPZ through their senior year, with some participating even beyond high school graduation as part of our new fellowship programs. Prior to enrolling, prospective students have an opportunity to experience a snapshot of TPZ, with our new "Intro to TPZ". Intro to TPZ offers prospective students opportunities to engage in activities reflective of TPZ's curriculum that spark creativity and engagement. Once enrolled, TPZ's student journey includes three cornerstone Entrepreneurship (Eship) experiences (i.e., Discover, Ideate, & Incubate), at least two work-based learning (WBL) experiences (i.e., Immerse: Consultancy & Internship), a Senior Pathways experience for post-secondary planning, and several additional elective opportunities during high school, as well as eligibility for two distinct post-secondary fellowship programs. Starting from day one, students also engage with a TPZ advisor that helps to make meaning of their learning and translate their interests and strengths into post-secondary action plans. Culturally-responsive and gender-equitable STEAM learning is also woven throughout programming and also featured through elective Deep Dive learning opportunities, available throughout students' TPZ experience.

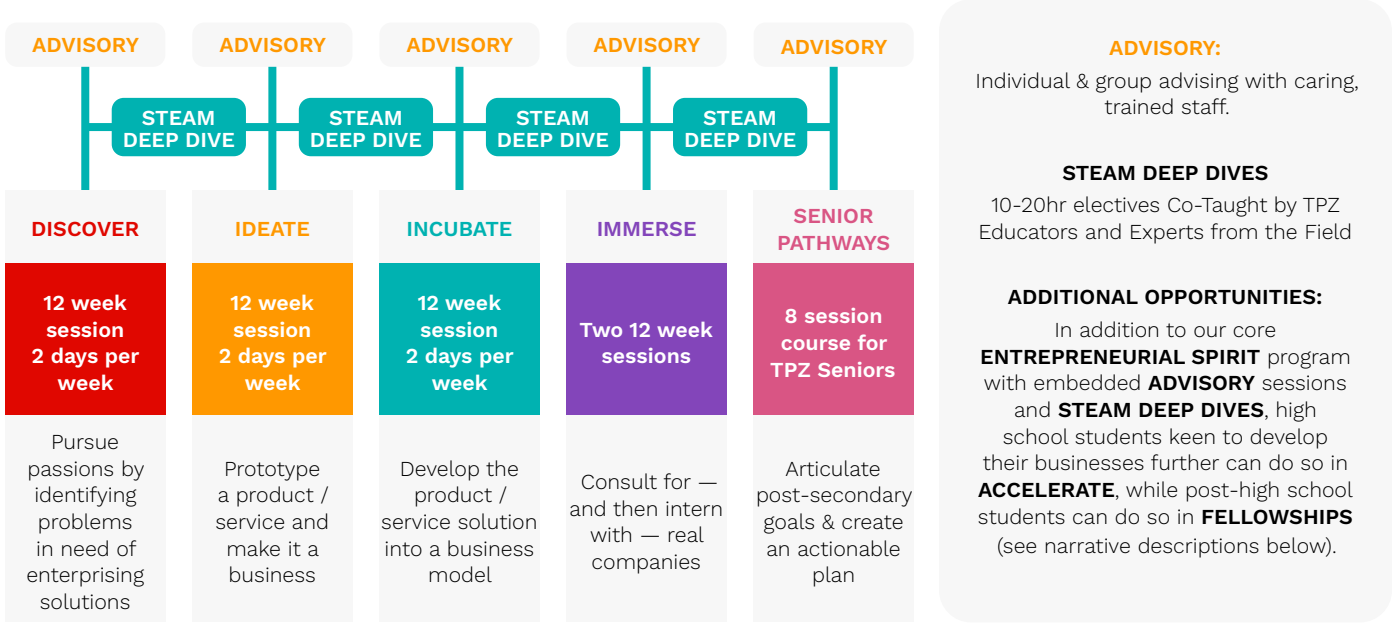


Figure 2. Student Journey through TPZ

MEASURING ELEMENTS OF TPZ'S LOGIC MODEL

The sections that follow describe how TPZ measures the various elements of our logic model, including its Inputs, Entrepreneurial Culture & Spirit, and our Impact. Wherever data indicate need to explore further, the TPZ R&E team will utilize focus groups and interviews to gain a deeper understanding of opportunities for improvement.

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[1] *The skills, mindsets, and assets that contribute to Entrepreneurial Spirit are not the only competencies for which TPZ staff is trained to promote in students. Our educators are also trained in instructional practices that promote those that are foundational to our learning targets, such as the five core competencies identified by the Collaborative for Academic, Social, and Emotional Learning (CASEL). Foundational competencies underpinning the skills, mindsets and assets that contribute to Entrepreneurial Spirit are identified in a set of competency diagrams developed by TPZ. Each of the learning targets within the dimensions of Entrepreneurial Spirit, as well as competencies that are foundational to those learning targets, are defined according to multiple dimensions and articulated through learning progressions in a set of SEL & Career-readiness rubrics.*

INPUTS

Inputs can be thought of as the resources required to execute a TOC. Inputs can include funding, people, raw materials, training, partnerships, and any other kind of resource that is needed. Seven inputs appear in TPZ's new logic model (listed in no particular order).

Students' Strengths & Assets — Experiences, skills, knowledge, mindsets, talents, supports. To understand the strengths, assets, and backgrounds that TPZ students bring to our program, we develop profiles of each student based on data from multiple sources. First, students and families provide basic information during our intake process (i.e., through both forms and interviews). Additionally, TPZ also utilizes Search Institute's Developmental Assets Profile (DAP) survey for each first-term student. The DAP measures young people's internal strengths and external supports and can assess how youth are faring personally, socially, and within the family, school, and community contexts.

Stakeholders: Staff, volunteers, alumni, family, community. To understand the human resources available to support TPZ students and our program, information related to our staff, volunteers, alumni, family engagement, and community involvement are tracked. Data including the number of full-time staff at TPZ, the diversity of staff and how representative they are of the students and communities we serve, the ratio of staff to students, the ratio of executive staff to front-line staff, and the number of staff who choose to volunteer directly in support of the program will be collected. To assess the volunteers that support TPZ, information regarding the companies and organizations they belong to, the number of repeat volunteers, the amount of time volunteers give, the backgrounds and skills of volunteers, as well as volunteer satisfaction and diversity of volunteers may be tracked. Information regarding alumni, family, and community engagement, such as number of alumni and family volunteers and attendance at events, number of community partners to support students and families, and how they interact with our students and their families are collected. Surveys of volunteers, alumni, family members, and community organization experience and satisfaction will be conducted to support TPZ's understanding of their engagement and continuous quality improvement.

Curriculum. TPZ program components are implemented based on culturally-responsive and evidence-based curriculum. Each program component, including Eship, WBL, senior programming, advisory, and STEAM Deep Dives, is explicitly developed to maximize student learning for the students whom we serve, by utilizing best practices for both design and implementation. These best practices are based on research on culturally-responsive and gender-equitable instruction and conditions for learning, as well as on discipline specific research (e.g., best practice for STEAM instruction, Eship instruction, and/or for promoting SEL). Program materials were developed from multi-disciplinary research reviews, in order to ensure integration of best practices, and future changes to curriculum will be collaboratively reviewed by TPZ's Program and R&E teams to ensure sustained alignment with evidence from research.

Training. Leadership development, educator and staff professional learning, training of volunteers, and the development of a culturally responsive community and culture at TPZ are important inputs for our program. TPZ regularly assesses the effectiveness of and satisfaction with professional development opportunities via surveys. Staff progress and growth on Employee Competencies are assessed through self assessment and supervisor assessments as part of TPZ's Performance Management system. The performance management system is a mechanism for tracking the performance of employees consistently and measurably. It allows TPZ to ensure that employees and departments across the organization are working effectively towards achieving the organization's strategic goals. Annual climate surveys of all staff are used to study employees' perceptions and perspectives on the organization.

Space & Equipment. Within the Innovation Center, TPZ will track the visual celebration of students' success, communities, and culture; the accessibility of learning spaces; the safety protocols and structures that are in place for use of the space; and the presence of community — co-location of organizations and business. The availability of maker-space/fab-lab hardware, software, and digital fabrication tools to students, staff, and community members/organizations are recorded. Student feedback through surveys assess the extent to which they have access to all of the space and equipment necessary for the successful execution of our program. Community feedback will be gathered through focus groups and surveys to understand their level of engagement and satisfaction with the space and usage data for community members, family members, etc.

Partners. TPZ tracks the type of partners, their level of engagement, and their satisfaction with their relationship with TPZ. We will also look to maintain a database of local businesses, complementary organizations, and industry/corporate partners, gauging engagement through surveys. The research team will also gather survey data from students on their experiences with each of these partners.

Financial Support. The type, amount, and strength of the relationship with individual donors, foundation, and corporate giving, government grants, and TPZ enterprise revenue are tracked utilizing Salesforce software.

INSPIRE

TPZ strives to INSPIRE students to dream without limits by reinforcing their worth and potential.

Student-centered spaces. TPZ assesses the degree to which our spaces may be student-centered by tracking the amount of time students spend in our facilities outside of formal class periods; asking students via the National Institute on Out-of-School Time's (NIOST) Survey of Academic and Youth Outcomes-Youth Survey (SAYO-Y) about whether they enjoy attending TPZ and feel engaged at TPZ; data from external trained observers using NIOST's Assessment of Program Practices Tool-Observation (APT-O) on the extent that TPZ has a welcoming and inclusive environment, the space is conducive to learning, and positive peer relations; and by tracking the number of changes to our space that occur from student feedback and/or the portion of TPZ surface areas (i.e., walls, floors, and ceilings) that feature representations of TPZ students' potential or success.

Physical/emotional safety. TPZ gauges the extent to which we provide physical and emotional safety by asking students about their sense of psychological safety within our program, including items from the Social Capital Assessment + Learning for Equity (SCALE) survey asking students the degree to which we create a safe space for them to be themselves, respect who they are and their background, and create a safe space to talk about inequities and other systemic issues. The degree to which TPZ provides a supportive social environment will also be assessed via items on the SAYO-Y, such as whether participants are friendly, treat each other with respect, and listen to each other.

Culturally-responsive design/practice. Trained external observations of our educators in session utilizing NIOST's Assessment of Program Practices Tool-Observation (APT-O) are conducted to assess whether interactions with youth are positive and respectful, staff consistently uses a neutral (or positive) tone of voice, staff works to ensure that youth are engaged and progressing with their work, when youth ask for help, staff provides individualized assistance to youth, staff intervenes quickly and facilitate youth-youth conflict resolution. A subscale of Search Institute's Developmental Relationships Survey assesses the extent to which students feel TPZ is committed to diversity, equity, and inclusion. Subscales from the SCALE survey will also be used in this area, including those that assess whether attending TPZ has helped students feel good about themselves, and whether students feel that TPZ staff believe they are capable of achieving their goals, regardless of their background.

Student leadership, alumni presence. TPZ tracks the number of alumni that continue to engage with us and the types of engagement that alumni have with our program as measures of alumni presence. The degree to which student leadership exists within the program is assessed using the SAYO-Y Youth have choice and autonomy scale and Opportunities for leadership and responsibility scale as well as the Share Power Scale of Search Institute's Developmental Relationships Survey.

Supportive staff & advisors. The degree to which students feel staff and advisors at TPZ are supportive of them is assessed using the SAYO-Y Supportive Adults scale — including items on whether there are adults that are interested in youth's thoughts, talk to them, and/or help them with their problems — and the Developmental Relationships Survey, which assesses five domains assess for the presence of supportive (developmental) relationships.

Volunteers that inspire, relate, & challenge. TPZ will gauge how students feel about their interactions with volunteers through the Volunteer Support and Seeking Volunteer Support scales on the SCALE survey; and the Youth Feel Challenged scale of the SAYO-Y. On the SCALE Volunteer Support scale, example items include those that assess whether volunteers help youth with useful information for getting a job, help them feel confident when applying for jobs, help them develop new skills for seeking a job, and help them establish connections with others that will help them. We will also track the diversity of our volunteers, and in particular the degree to which our volunteers reflect our students.

Developmental relationships. Search Institute's extensively researched Developmental Relationships Survey is used to assess developmental relationships — i.e., youths' experience of whether TPZ staff expresses care, provides support, challenges growth, shares power, and expands possibilities in their day-to-day interactions.

IGNITE

TPZ strives to INSPIRE students to dream without limits by reinforcing their worth and potential. We IGNITE passion and creativity through authentic and collaborative learning, spaces equipped for innovation.

Access to state-of-the-art technology and facilities. TPZ measures how students access software, hardware, and spaces at the Innovation Center through meta-data gathered from our systems, learning management system (LMS; i.e., Brightspace), training data, card readers, and logins. Data on students' use of our LMS — Brightspace — will be examined to determine frequency and duration of use of online tools and resources. Our building's digital checkin/checkout system, called SPLAN, will keep track of how frequently and with what duration students enter the building; and various systems connected to our FabLab and/or makerspace equipment (e.g., Fabman — an all-in-one makerspace management solution) will also track the degree to which students use those various kinds of technology over time.

Authentic Eship instruction & experiences that foster SEL. TPZ student participation in Eship instruction and experiences that foster SEL are tracked using attendance and retention data from the SIS/LMS and also measured via structural and process quality feedback gathered from external observers using the APT-O which provide information on three main quality domains; Supportive Social Environment, Program Organization and Structure, and Learning and Skill Building. Data on the number of student ventures will be tracked, as well as revenue from those businesses earned by students.

Immersive STEAM Deep Dives. Student participation and engagement in TPZ STEAM Deep Dives are tracked through attendance records, learning target assessments, surveys, and focus groups. The experience and engagement of Deep Dive external partners are measured via surveys, interviews, and focus groups.

Meaning-making & guidance through Advisory. TPZ assesses the experience provided to students through Advisory by the Helps Youth Academically and Helps Youth Socially scales of the SAYO-Y, the Challenge Growth, Provide Support, and Expand Possibilities scales of the Developmental Relationships Survey, and through students' presentations of learning and e-portfolios.

THRIVE

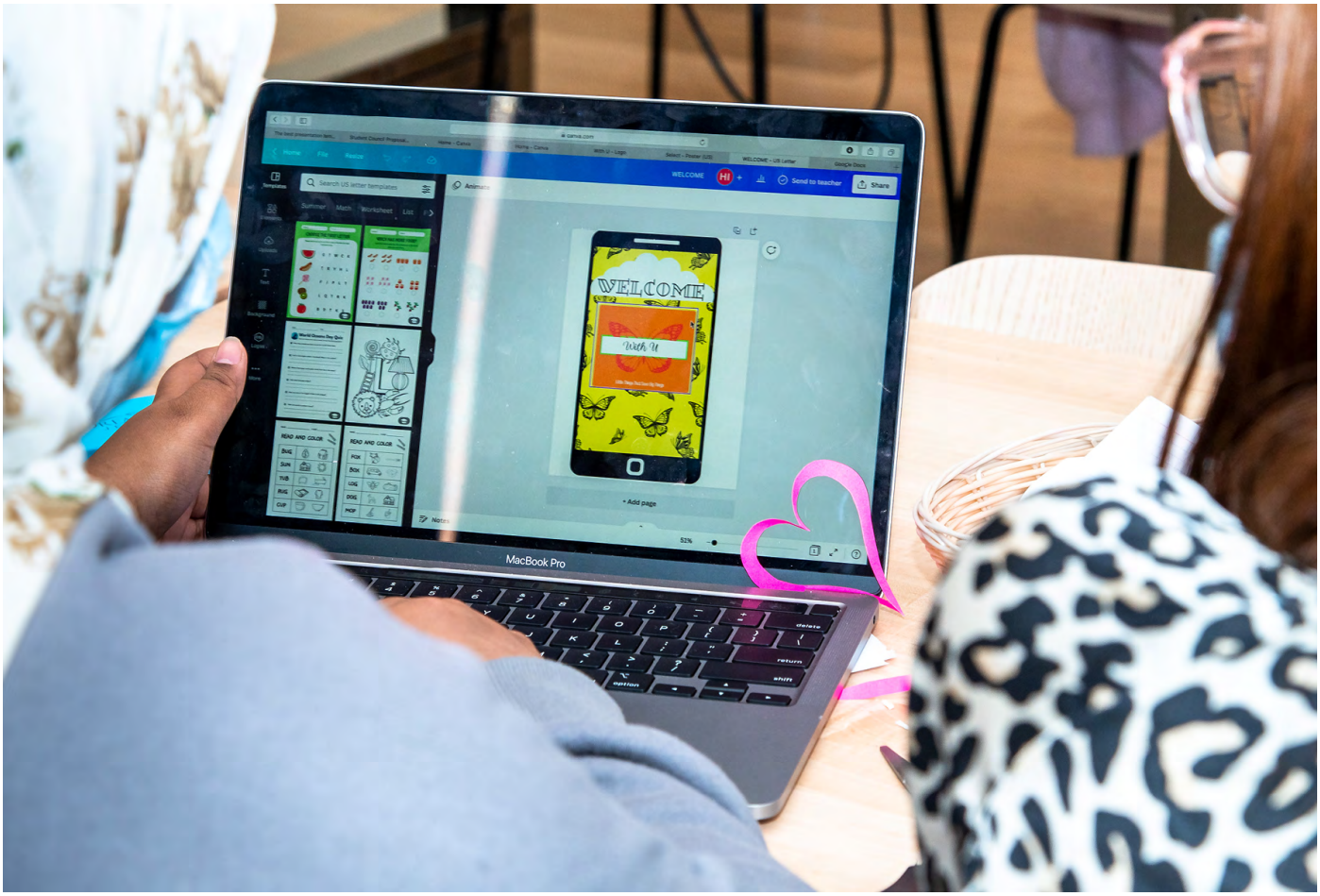
We help students to THRIVE within strong and mutually supportive networks; belonging in professional communities.

Work-based Learning that fosters relationships & career-readiness. TPZ measures students' growth in career readiness skills and expansion of their social networks through work-based learning opportunities by collecting learning target competency data on Communication, Growth Mindset, Self Management, Teamwork, and Tech Agency and students' self reflections; SAYO-Y Supportive Adults Present, Opportunities for Leadership and Responsibility, Sense of Competence Socially, Sense of Competence as a Learner, Problem Solving, Teamwork, and Self Regulation scales; and the Social Capital, Mindsets and Skills for Social Capital Development, Support for Social Capital Development, and Program Outcomes domains of the SCALE Survey; and surveys and interviews/focus groups with employers.

College & career advising. TPZ students' access to and experience with college & career advising is measured through students' presentations of learning and e-portfolios as part of the Advisory program, the Future Planning and Future Expectations scales of the SAYO-Y; Progress Towards Education or Career Goals and Job Seeking Skills scales of the SCALE Survey; and the Provide Support scale of the Developmental Relationships Survey.

Alumni leadership & role modeling. TPZ gauges the extent to which alumni are a source of inspiration and positive modeling for students by tracking the number of alumni guest speakers/volunteers and number of share-outs of alumni successes (internally and externally); alumni identified by current students as part of their social capital in the SCALE Survey; and the Opportunities for Leadership and Responsibility scale of the SAYO-Y.

Post-secondary programming & alumni support. The experiences and satisfaction of alumni and postsecondary fellows with the support they receive at TPZ will be assessed via alumni surveys and the SCALE survey.



I COULD

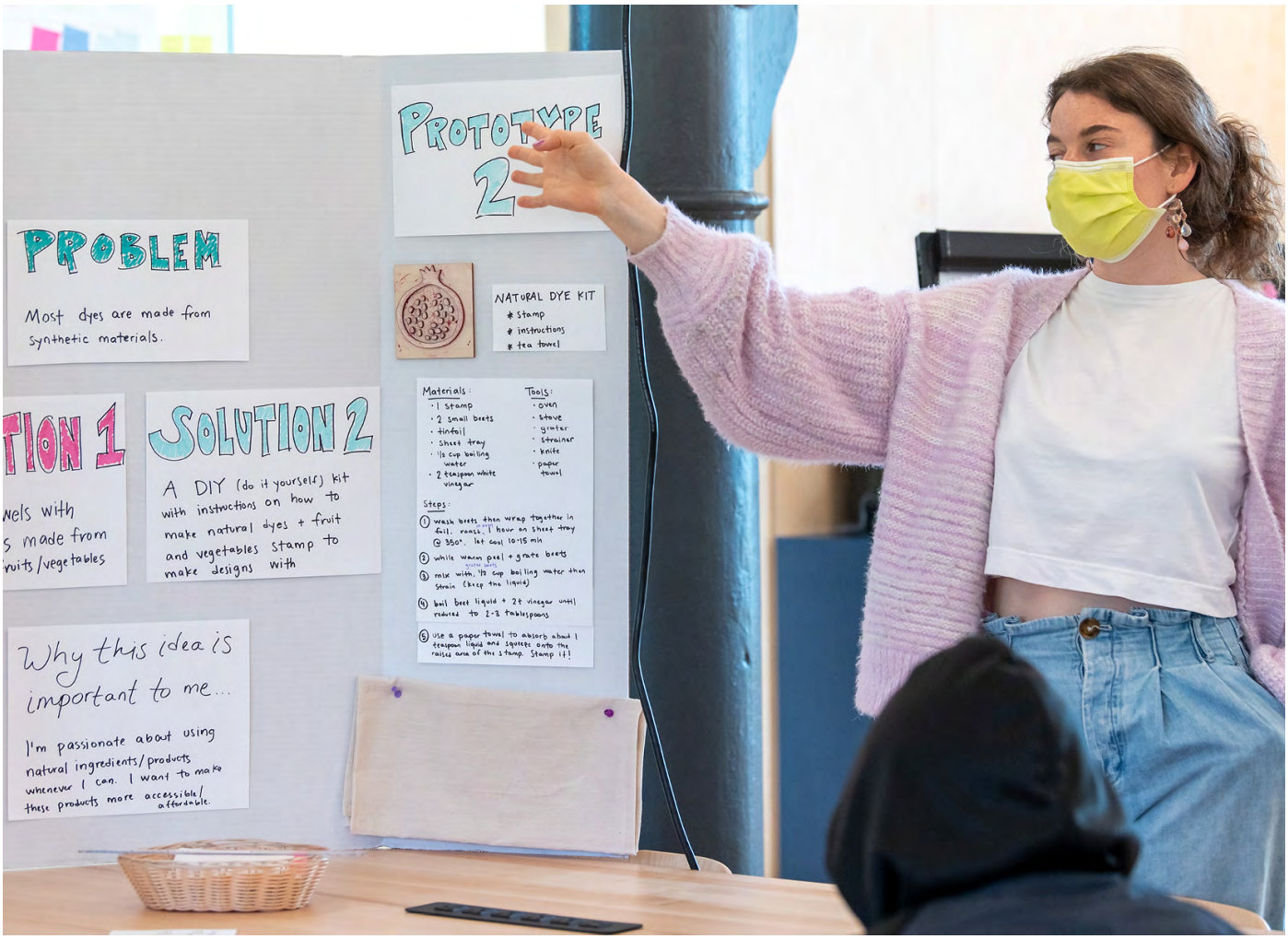
Students define what is possible for themselves. "I COULD do whatever I dream."

Interest sparked by access. TPZ assesses students' increased interest in STEAM via students' use of software, hardware, and spaces at the Innovation Center through meta-data gathered from our systems and their registration in STEAM Deep Dives, including the student information system (SIS) and learning management system (LMS), training data, card readers, and logins. Students' long-term interest in pursuing STEAM learning and careers will also be evaluated using data from their BPS Senior survey, obtained from the district through our data agreement.

Positive self-concept. TPZ measures students' representations and evaluations of themselves and their belief in their potential and a view of an array of options as available through the SCALE Survey Personal Identity, Occupational Identity, and Sense of Purpose scales; SAYO-Y Sense of Competence as a Learner and Future Expectations scales; and Competency Rubric assessments.

Growth mindset. TPZ students' belief that their abilities can grow with effort and intentionality toward improvement, enthusiasm to learn, adapt, and embrace challenge, and a willingness to seek help when needed and available are measured through the Scale Survey Self-Efficacy for Reaching Life Goals, Seeking Volunteer Support, Seeking TPZ Staff Support and Progress Towards Education or Career Goals scales; and SAYO-Y Future Planning-My Actions and Future Planning-Who Have You Talked To.

Sense of belonging at TPZ. TPZ assesses the degree to which students feel a sense of community with TPZ and feel accepted and valued by, as well as connected to, peers and adults at TPZ through SAYO-Y Supportive Social Environment, Youth Enjoy and Feel Engaged, and Supportive Adults Present scales; and SCALE Survey Sense of Program Security, Psychological Safety, and Seeking Volunteer and TPZ Staff Support scales.



I CAN

Finding insights in failures, gaining confidence to achieve. "I CAN overcome. I CAN succeed."

Communication & teamwork. TPZ measures students' ability to clearly exchange information and common understanding with others in a variety of settings and for a variety of purposes and their ability to get along and work cooperatively with a diverse set of peers and adults in order to achieve a shared goal through the SAYO-Y Sense of Competence Socially and Teamwork scale; and SCALE Survey Relationship-Building Skills scale.

Problem-solving & design thinking. TPZ gauges whether students can identify problems - including consequences and root causes; clearly define success; develop and execute a feasible plan; regularly reflect on progress and learning; and translate data into conclusions and actions as well as their design thinking skills such as the prototyping process through the SAYO-Y Problem Solving Scale; and student competency rubric ratings.

Self-efficacy & STEAM interest. Students' belief in their ability to employ effort, knowledge, and skills in order to manage adversity, adapt to changing circumstances, and ultimately complete a task or achieve a goal is measured using Competency Rubric assessments; the SAYO-Y Sense of Competence as a Learner; and the SCALE Self-Efficacy for Reaching Life Goals scale. Students' interest in pursuing a STEAM career may first manifest as increased curiosity for STEAM learning and exploration and subsequently grow for some into desire for mastery and career pursuit and TPZ will measure this interest via Competency Rubric assessments; meta-data of Innovation Center hardware and software including frequency, duration, and sophistication of use of hardware & software (or combinations of them) in the Innovation Center; registration and enrollment in STEAM Deep Dives; and students' self-reported post-secondary plans on the Boston Public Schools (BPS) Senior Survey.

Tech agency. TPZ students' confidence and informed decision making when engaging with technology in an individual and professional/societal context is demonstrated by an individual's informed and responsible use of technology, process-oriented thinking, and use of professional-grade technologies to reach personal and professional goals and is assessed using Competency Rubrics and Meta-data of Innovation Center hardware and software including equipment usage and equipment certification.

Business & Eship concepts. TPZ's Business and Entrepreneurship concepts including Business Communication, Idea Generation, Opportunity Evaluation, Business Responsibility, Customer Experience, Data Literacy, Financial Acumen, and Product/Service Development will be assessed via Competency Rubrics and students' portfolios; WBL reflections; and WBL supervisor reviews. Students have opportunities to demonstrate growth on these skills through work on their projects, daily class activities, pitch panels, and their work products/performance in WBL settings. Competencies were each defined by TPZ curriculum design teams and include multiple dimensions (see Eship competencies and dimensions) — all of which are assessed based on learning targets that are explicitly identified across TPZ lessons. Learning targets are each mapped to both dimensions of Entrepreneurial Spirit and the Eship competencies to which they relate. At the close of each course session, and for two subsequent sessions, students reflect via survey on their own abilities with sessions' respective learning targets.

Emerging social & professional network. TPZ utilizes Competency Rubric assessments and the SCALE Survey, specifically, the scales making up the Social Capital, Mindsets and Skills for Social Capital Development, and Support for Social Capital Development domains to assess students' early network-building and deepening relationships with peers and trusted adults, while also beginning to extend their web of connections to professional contexts outside of TPZ.

I AM

Having clear aspirations, confidence in their path. "I AM a learner. I AM a success. I AM leading the way."

Fortified self-efficacy & resilience. Students' ability to sustain effort to overcome adversity and strengthening belief in their ability to employ effort, knowledge, and skills in order to manage adversity, adapt to changing circumstances, and ultimately complete a task or achieve a goal is measured using Competency Rubric assessments; the SAYO-Y Sense of Competence as a Learner and Future Planning-My Actions scales; and the SCALE Survey's Self-Efficacy for Reaching Life Goals and Self Initiated Social Capital scales.

Growing & solidifying social capital. TPZ assesses the resources that arise from a web of relationships, which students can access and mobilize to help them improve their lives and achieve their goals — i.e., students social capital — through Search Institute's SCALE survey. The SCALE survey assesses four domains: Social Capital, Mindsets and Skills for Social Capital Development, Support for Social Capital Development, and Program Outcomes.

Refined technical skills, aligned with career aspirations. TPZ measures students growing and refining their base of technical skills with emerging depth and breadth, aligned with career aspirations through Business and Eship Competency Rubric assessments; and the SCALE Survey Progress Toward Education or Career Goals and Job-Seeking Skills scales. Growth in these areas will also be reflected in performance-evaluation style assessments used in WBL settings, as well as in the technical badges earned throughout the program, many of which provide students with expanded access to opportunities or use of technology (i.e., equipment or software).

Sense of belonging in professional settings. The extent to which students feel connected, supported, respected, and engaged in professional settings and perceive that colleagues view them as valuable contributors and legitimate members of their professional community is measured via the SCALE Survey Occupational Identity scale; and WBL reflections.

Commitment to inspiring others. TPZ appraises students' sense of responsibility to inspire others by tracking their volunteering with and/or advocating for TPZ; and ratings on the SCALE Survey Commitment to Paying-It-Forward scale.

IMPACT: UPWARD MOBILITY PROMOTING EQUITY

Power and autonomy. TPZ measures students' and alumni's ability to influence their their environment, other people, and their own outcomes and their ability to act according to their own decisions, rather than according to other's decisions using the SCALE Survey Self-Efficacy for Reaching Life Goals, Seeking Volunteer Support, Seeking TPZ Staff Support, Progress Towards Education or Career Goals scales, and Collective Efficacy to Change Systems; and SAYO-Y Future Planning-My Actions and Future Planning-Who Have You Talked To scales.

Being valued in community. TPZ will assess alumni's sense that they belong and are included among family, friends, coworkers, neighbors, other communities, and society, using scales from the Social Capital domain of the SCALE Survey and using the Inclusion of Other in the Self (IOS) Scale. The IOS measure will be used to capture the degree to which alumni feel a sense of connectedness and inclusion in the communities in which they live, as well as the professional communities in which they work.

Economic Success. TPZ captures factors that directly contribute to individuals' and families' material well-being, including family demographic circumstances and other leading indicators of students' future economic success. Specifically, daily school attendance, on-time high school graduation, post-secondary matriculation, and post-secondary degree or credential attainment will be tracked as leading indicators. Questions from the Annual Social and Economic Supplement to the Current Population Survey (March CPS) and The Federal Reserve's Survey of Household Economic Decision Making will be included in alumni surveys to measure income and income sources resources to meet an unexpected expense and debt, and employment and job quality. Specifically, TPZ will track the degree to which students' income 10-years after high school graduation is among the top 20% of similar-aged peers, comparing their self-reported income to publicly available data on local individual income quintiles.

Research Methods & Analysis

TPZ's program evaluation research will employ a longitudinal quasi-experimental design, combining formative and summative evaluation, and will benefit from input from expert evaluation advisors. Evaluation activities will be collaboratively conducted by TPZ's Research & Evaluation (R&E) team and Program team, led by TPZ's Chief Research & Evaluation Officer (Jeremy J. Taylor, Ph.D.) and Chief Learning Officer (Meg Riordan, Ph.D.), respectively.

Dr. Taylor has extensive experience developing and implementing systems for continuous improvement at scale, previously serving as Director of Assessment & Continuous Improvement for CASEL, and also extensively conducted rigorous summative research using complex multivariate statistical modeling to contribute to scholarly research through publication. In addition to leading TPZ program design and delivery, Dr. Riordan also has strong research experience, previously serving as Director of Research for EL Education and leading large-scale, federally funded research on curriculum, practices, and student achievement. TPZ's Director of Evaluation will execute and oversee daily research activities, including data collection, various analyses, and continuous improvement sessions, with support from a TPZ Evaluation Analyst. Drs. Taylor and Riordan will co-design and participate annually in continuous improvement retreats, also participating in quarterly data reflections. Leaders from each of TPZ's program phases (e.g., EShip, WBL, STEAM, and Advisory) will also participate in continuous improvement efforts (see Appendix D for more on Roles & Responsibilities).

Sample. Analytic samples for TPZ's program evaluation will primarily include students recruited from partner high schools within the Boston Public School (BPS) district. TPZ has formal partnerships with six schools to date and has identified up to 11 more for potential partnership. District data show that 95% of students from our partner schools identify as Black or Hispanic and at least 87% are classified as economically disadvantaged. Analytic sample sizes will vary throughout the evaluation process, based on program enrollment and the specific hypothesis being tested. Using repeated measures for most constructs investigated, benefiting from model parsimony supported by propensity score matching (described further below), and having a plan to serve nearly 5,000 students over the next five years, we anticipate sufficient statistical power to detect all but very small effects.

For hypotheses related to how programming influences students' SEL, identity development, and cultivation of social capital, comparison data will not be available, so sample sizes will correspond with the number of students TPZ enrolls up to the time of analysis. By contrast, analyses that test hypotheses related to school attendance, on-time graduation, and post-secondary plans will be conducted with data obtained from BPS and will include a comparison group of non-TPZ students, so those sample sizes will be twice as large.

Propensity Score Matching. Since randomizing participation for a program 3+ years in duration is not feasible, and trying to do so would likely have a negative impact on students' experience and potentially hamper TPZ's future partnership and recruitment efforts, propensity score matching will be used to minimize selection bias and influence of confounding variables[footnote 2]1,4,8,9. For matching, TPZ will obtain data on several demographic and other factors that literature suggests may be a source of bias. Examples include economic disadvantage status, gender, race/ethnicity, special education status, English language status, age, grade, school mobility, and pre-intervention indicators of project outcomes, such as attendance and GPA. These variables will be predictors in logistic regressions that estimate students' probability (i.e., propensity) of participating in TPZ's program, matching each TPZ student with a non-TPZ student with a similar probability. Matching will be conducted in R using the "MatchIt" package with nearest-neighbor 1-to-1 matching, using a standardized difference of d = 0.2 as a cutoff to ensure balanced propensity score matching.

Analyses. A wide range of analytic methods will be used across the Formative and Summative phases of TPZ's evaluation plan, with specific analytic approaches matched with the particular hypotheses they are best suited to test. Both quantitative and qualitative methods will be employed, with quantitative analyses often being used to test hypotheses focused on "whether" or "the degree to which" implementation or learning occurred, and qualitative analyses used to explore "how" and/or "why" things unfolded in particular ways. Quantitative analytic approaches will include, but not necessarily be limited to: bivariate correlations, t-tests, ANOVAs, multivariate regression, hierarchical linear modeling, and/or growth-curve modeling. Thematic analyses of data from stakeholder interviews and/or focus groups will also be regularly employed.

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[2] Powell, M. G., Hull, D. M., & Beaujean, A. A. (2020). Propensity Score Matching for Education Data: Worked Examples. The Journal of Experimental Education, 88(1), 145-164.

RESEARCH QUESTIONS

The research questions outlined below provide a high level overview of the types of questions to be answered in each phase of the evaluation plan (Examples present high-level questions; more detailed list is reflected in Appendix B). There will be a stepwise evolution of how data from each phase will be utilized to describe what is happening in the program (Who is participating in/doing what?), norming program activities (Who is participating in doing/doing what relative to others and over time?), and finally moving to predictive analyses (What is associated with who participates in/does what when and compared to others?). Formative evaluation questions and analyses will eventually give way to continuous quality improvement work that will continue as summative evaluation starts, which we anticipate will be done through a partnership with an external evaluation partner.

Formative evaluation efforts will answer questions about how implementation unfolds, and how it can be continuously improved over time, in order to best achieve our intended outcomes. Formative data will be collected, analyzed, and reported regularly, including process data to understand program implementation quality and progress, and student experience and learning data, using a variety of measurement methods (e.g., survey, administrative, and technology-based student behavior data). Formative evaluation research questions reflect this focus.

FORMATIVE EVALUATION RESEARCH QUESTIONS
▶ What strengths, assets, experiences, and backgrounds do students bring with them as they enroll and participate in TPZ programming?
▶ To what extent is the program implemented with fidelity and quality?
▶ To what extent do students achieve content learning objectives and demonstrate growth in dimensions of Entrepreneurial Spirit as they engage in TPZ's program elements?
▶ What student or program quality factors relate to sustained attendance, engagement, and learning? How does the degree to which students engage and persist in TPZ programming differ by student subgroups (e.g., race, gender, SES, students' school, family factors, individual strengths, etc.)? How does impact on outcomes differ by student subgroups?

Summative evaluation efforts will kick-off after at least two years of Formative efforts, and will answer questions about the theoretical underpinnings of TPZ's new TOC and program model, including the magnitude of intended outcomes realized and the mediating/moderating circumstances in which they were achieved. TPZ plans to engage with an external evaluation partner to conduct this phase of evaluation, to increase credibility of the evaluation by ensuring impartiality and independence. Findings from Summative research may be used broadly for knowledge building in the field, as TPZ looks to establish a position of thought leadership by informing the work of other practitioners and researchers, and even sharing learning with collaborators in the policy space.

SUMMATIVE EVALUATION RESEARCH QUESTIONS

- To what degree and how does TPZ programming cultivate key social and emotional skills and mindsets, occupational identity, and social capital in high school students from underserved communities?
- How do students' social and emotional learning, identity development, and cultivation of social capital during TPZ's program vary between student subgroups (e.g., gender, race, language, or IEP status)? Based on program quality or implementation?
- To what degree and how does TPZ programming impact leading indicators of economic mobility for students we serve, as measured by our three dimensions of mobility?
- How does the link between TPZ participation and indicators of economic mobility vary between student subgroups (e.g., gender, race, language, or IEP status)? Based on program quality and implementation?

DATA COLLECTION

All survey data collection will occur digitally, primarily outside of class time, to minimize disruption to programming and instruction. Data will be collected through a combination of TPZ's LMS and through external organizations with whom we collaborate for measurement. Collection of students' ratings of learning on course learning targets will be collected via survey through TPZ's LMS, as will collection of data for the SCALE survey[12]. Data for Search Institute's *Developmental Relationships* survey and *Developmental Assets Profile* will both be collected through Search Institute's online survey platform[7,10,11], which will provide an overview of data to TPZ and also share-back raw data with TPZ to be integrated into our data systems. Additionally, data from the SAYO-Y and the APT will all be collected through our improvement network partner[2,5,13,14], Boston Afterschool & Beyond (BASB). Like Search Institute, BASB provides an overview of data, through their PRISM dashboard, and will also provide an export of raw data to TPZ upon request (for integration into our data systems).

Timelines for collection of specific data varies based on data type, the various purposes of measurement, and based on efforts to minimize the amount of students' time that is consumed by data collection during any given term. A timeline for data collection — including survey and non-survey data — is presented in our Data Cadence Overview document, with an overview found immediately below.

TPZ MEASUREMENT CADENCE

WINTER TERM (JAN-MAR)	SPRING TERM (MAR-JUNE)	SUMMER TERM (JULY-AUG)	FALL TERM (SEPT-DEC)
CoreCompetency/ Learning Target Data	CoreCompetency/ Learning Target Data	The Survey of Academic and Youth Outcomes: Youth Survey (SAYO-Y)	Core Competency/ Learning Target Data
SCALE Survey (Only students in Discover, exiting Incubate, and annually thereafter)	SCALE Survey (Only students in Discover, exiting Incubate, and annually thereafter)	The Assessment of Program Practices Tool (APT) - External Observation	SCALE Survey (Only students in Discover, exiting Incubate, and annually thereafter)
DAP (New Discover students only)	DAP (New Discover students only)	Data from BPS: School Attendance, On-time Graduation, & Senior Exit Survey	DAP (New Discover students only)
The Survey of Academic and Youth Outcomes: Youth Survey (SAYO-Y)	Developmental Relationships Survey	Student Focus Groups & Student Satisfaction Survey data	Developmental Relationships Survey
The Assessment of Program Practices Tool (APT) -External Observation	WBL Core Competency Reflection Tool (Students on Internship Only)	WBL Core Competency Reflection Tool (Students on Internship Only)	Obtain NSC College Matriculation, Enrollment, & Degree Progress
WBL Core Competency Reflection Tool (Students on Internship Only)			Alumni Survey
Student Focus Groups & Student Satisfaction Survey data			WBL Core Competency Reflection Tool (Students on Internship Only)

NSC = National Student Clearinghouse;
SCALE = Social Capital and Learning for Equity;
DAP = Developmental Assets Profile

DATA USE AND COMMUNICATION

Data from evaluation efforts will be used for a variety of purposes and with a variety of audiences (see Appendix A for audiences and reporting methods), and thus will be shared via a range of formats and timelines. Some examples are offered below for how data will be reported in various time intervals.

REAL-TIME REPORTING

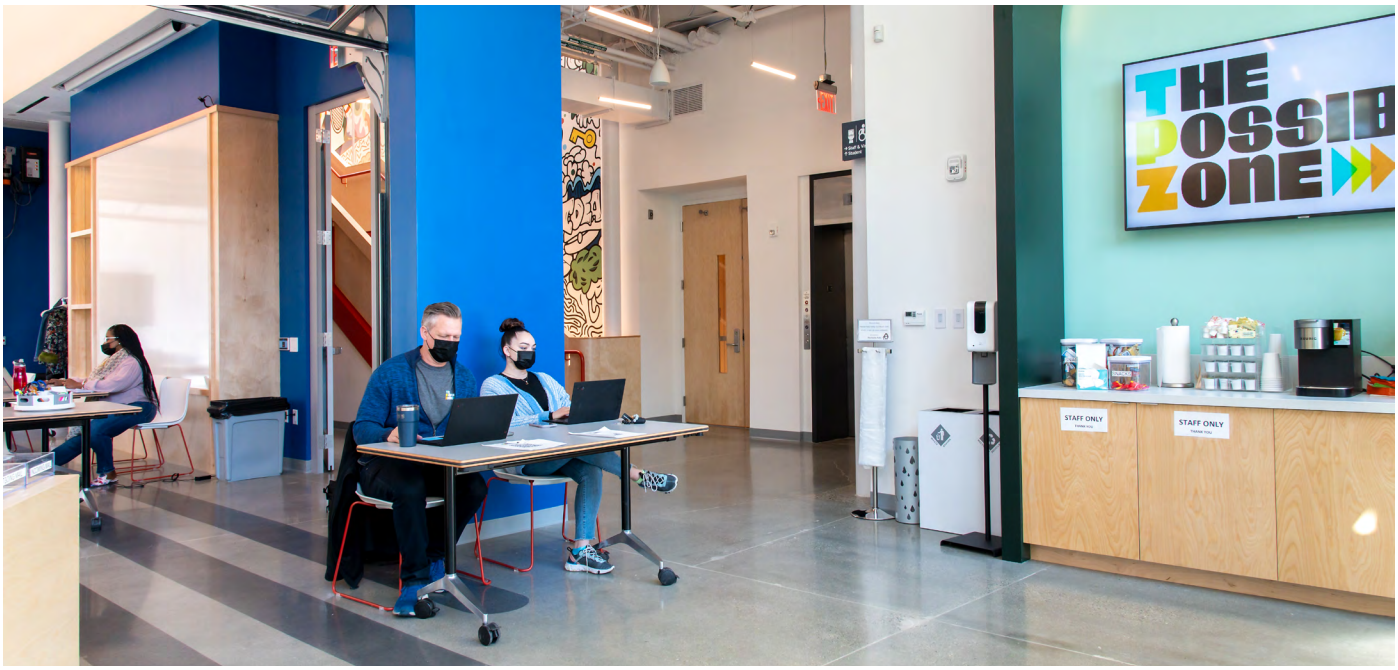
- TPZ's R&E team is working with each of TPZ's functional working areas (i.e., departments), starting with Program and Fundraising/Development, to identify key metrics that are frequently needed to support program delivery, student recruitment and retention, and/or fundraising. As TPZ's data infrastructure is developed, various dashboards will be developed to provide live overviews of data on key metrics that are most relevant to our various stakeholders.

QUARTERLY REPORTING

- Data to optimize implementation and continuously improve practice will be shared with TPZ's program team through a quarterly data summary (i.e., "TPZ by the numbers"), as well through quarterly data reflection sessions facilitated by a member of the R&E team.
- A high-level overview of program quality and student learning will be presented to TPZ's senior leadership on a quarterly basis, in order to promote accountability and track progress toward organizational goals.

ANNUAL REPORTING

- Data to evaluate annual organizational goals and to contribute to TPZ's thought leadership efforts will be reported in our annual Impact & Learning Report, the first of which will be finalized in Q4 of 2022, shared publicly in Q1 of 2023, and shared annually thereafter.
- Data will also be shared annually with TPZ' partner schools. These data will be summaries of enrollment and student accomplishments at TPZ, and will not reveal information or data about any specific student or group of students.



SCHEDULED GRANT REPORTING

- Data on metrics to which we are accountable to various funding sources will be compiled, summarized, and shared with those funders according to the timelines outlined in our grant agreements. The TPZ R&E and Development teams have collaborated to assemble and maintain a Grants & Metrics database that details all grants we are awarded, the timelines for reporting requirements, and the specific metrics and measurements to which we are accountable for each grant. This database is regularly reviewed for approaching reporting deadlines and new grants are added to the database by the Development team as they are awarded to TPZ.

OTHER REPORTING

Several kinds of other reporting will also be executed by the R&E team. Examples of reports will include, but not be limited to:

- 90 Day Improvement Cycle Reports: Culminating reports of 90-day improvement cycles, which are structured and time limited rapid improvement projects that focus on high priority areas of improvement for TPZ. TPZ successfully completed two previous cycles, but paused further cycles due to shifting priorities caused by the COVID-19 pandemic. We plan to resume 90-day cycles in 2022, launching one in the second half of the year, and plan to conduct up to two cycles annually in subsequent years. Findings are shared with TPZ leadership and staff via presentation.

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APPENDIX

APPENDIX A. STAKEHOLDERS AND EVALUATION REPORTING/CONSUMPTION

STAKEHOLDERS	PRIMARY METHOD(S) OF REPORTING
Students	• Student Dashboards • Annual Impact & Learning report • Annual Town Hall For Report Debrief
Alumni	• Alumni Newsletter/Mailing • Annual Impact & Learning report
TPZ Leadership	• Quarterly "TPZ-by-the-numbers" & Data Summary Presentation • Organizational Dashboard (including Evaluation data) • Annual Impact & Learning report
TPZ Program Staff	• Quarterly "TPZ-by-the-numbers" Summary • Quarterly "Data Reflection Sessions" • Program Data Dashboards • Annual Impact & Learning report
TPZ Non-Program Staff	• Quarterly "TPZ-by-the-numbers" Summary • Departmental Data Dashboards • Annual Impact & Learning report
TPZ Board of Directors	• Organizational Dashboard • Annual Impact & Learning report
Families & Community	• TPZ Newsletter & Social Media Data Gems • Annual Impact & Learning report • Annual Town Hall For Report Debrief
Funders	• TPZ Newsletter & Social Media Data Gems • Annual Impact & Learning report • Grant mandated reporting
School Partners	• TPZ Newsletter & Social Media Data Gems • Annual Impact & Learning report • Annual School Data Overviews (i.e., two-pagers)
Collaborators & Ecosystem Partners	• TPZ Newsletter & Social Media Data Gems • Annual Impact & Learning report • *Collective Impact Report (launching in late 2023)*
Policymakers	• Annual Impact & Learning report • Policy Brief (Drafted every-other-year starting in late 2023)

APPENDIX B. TPZ RESEARCH QUESTIONS (EVOLVING LIST)

NOTE: Each research question below will be explored on its own, as well as for how it varies based on student characteristics, student subgroups, and according to programmatic and/or external factors. All questions will be explored for the degree to which results vary as a function of many factors, such as: race, gender, SES, school, home neighborhood, IEP status, ELL status, various internal and external assets, program experience, and more. Additionally, the lists below are not comprehensive, as additional research questions will emerge as we learn from the various phases of our evaluation process.

FORMATIVE EVALUATION RESEARCH QUESTIONS	
What strengths, assets, experiences, and backgrounds do students bring with them as they enroll and participate in TPZ programming?	• What external assets do students bring with them to TPZ? Are they supported? Are they empowered? Are they provided clear boundaries and expectations? • What Internal assets do students bring with them to TPZ? Are they committed to learning? Do they bring strong social and emotional abilities? Do they bring a positive identity? • From what contexts do students bring assets with them to TPZ? Personal assets? Social assets? Family assets? School assets? Community assets? • Which neighborhoods, schools, demographics, and socio-economic backgrounds do TPZ students represent?
To what extent is the program implemented with fidelity and quality?	• To what degree and how do TPZ students and fellows experience the INSPIRE dimensions of Entrepreneurial Culture (see Appendix C for dimensions of INSPIRE in logic model)? • To what degree and how do TPZ students and fellows experience the IGNITE dimensions of Entrepreneurial Culture (see Appendix C for dimensions of INSPIRE in logic model)? • To what degree and how do TPZ students and fellows experience the THRIVE dimensions of Entrepreneurial Culture (see Appendix C for dimensions of INSPIRE in logic model)? • What do students' paths through TPZ's program model look like? • To what degree and how are students retained in TPZ programming through high school graduation or beyond? • What program, environmental, or student factors predict retention in TPZ programming (i.e., for a term, one-year, and through senior year)? • What student or program quality factors relate to sustained attendance, engagement, and learning? How does the degree to which students engage and persist in TPZ programming differ by student subgroups (e.g., race, gender, SES, students' school, family factors, individual strengths...etc)? How does impact on outcomes differ by student subgroups?

To what extent do students achieve learning targets and demonstrate growth in dimensions of Entrepreneurial Spirit (i.e., key aspects of social and emotional skills and mindsets, occupational identity, and social capital) as they engage in TPZ's program elements?	• To what degree and how do students experience growth on programmatic learning targets? • To what degree and how do TPZ students and fellows demonstrate growth in the I COULD dimensions of Entrepreneurial Spirit (see Appendix C for dimensions of INSPIRE in logic model)? • To what degree and how do TPZ students and fellows demonstrate growth in the I CAN dimensions of Entrepreneurial Spirit (see Appendix C for dimensions of INSPIRE in logic model)? • To what degree and how do TPZ students and fellows demonstrate growth in the I AM dimensions of Entrepreneurial Spirit (see Appendix C for dimensions of INSPIRE in logic model)? • What student or program quality factors relate to growth on learning targets or dimensions of Entrepreneurial Spirit (see Appendix C for dimensions of INSPIRE in logic model)? • Are particular dimensions of Entrepreneurial Spirit more likely to demonstrate growth during particular phases of TPZ programming (see Appendix C for dimensions of INSPIRE in logic model)? • Are different patterns of experiences within TPZ programming associated with strong growth in Entrepreneurial Spirit (see Appendix C for dimensions of INSPIRE in logic model)? • To what degree and how does Entrepreneurial Culture promote Entrepreneurial Spirit within TPZ programming? To what degree and how is the link between the two concepts reciprocal (see Appendix C for dimensions of INSPIRE in logic model)?

SUMMATIVE EVALUATION RESEARCH QUESTIONS	
To what degree is cultivating positive identity — including self-efficacy, social capital, and occupational identity — predictive of leading indicators of economic mobility?	• To what degree is growth in self-efficacy, social capital, and/or occupational identity predictive of on-time high school graduation among TPZ graduating seniors? • To what degree is growth in self-efficacy, social capital, and/or occupational identity predictive of greater interest in and/or intentions to pursue STEAM careers among TPZ graduating seniors? • To what degree is growth in self-efficacy, social capital, and/or occupational identity predictive of greater rates of matriculation to college or other post-secondary advanced training among TPZ alumni? • To what degree is growth in self-efficacy, social capital, and/or occupational identity predictive of greater rates of matriculation to college or other post-secondary advanced training among TPZ alumni? • To what degree is growth in self-efficacy, social capital, and/or occupational identity predictive of greater rates of post-secondary degree or credential attainment among TPZ alumni? • To what degree is growth in self-efficacy, social capital, and/or occupational identity predictive of greater income 10 years after high school graduation among TPZ alumni?
To what degree and how does TPZ programming impact leading indicators of economic mobility for students we serve[3]?	• To what degree do TPZ students demonstrate stronger school attendance after enrolling and participating in programming, as compared to matched comparison students that did not participate in TPZ? How does this vary based on students' socioeconomic status when enrolling in TPZ? • To what degree do TPZ students demonstrate higher rates of on-time high school graduation than matched comparison students that did not participate in TPZ? How does this vary based on students' socioeconomic status when enrolling in TPZ? • To what degree do TPZ students demonstrate greater interest in and/or intentions to pursue STEAM careers than matched comparison students that did not participate in TPZ? How does this vary based on students' socioeconomic status when enrolling in TPZ? • To what degree do TPZ alumni demonstrate greater rates of matriculation to college or other post-secondary advanced training than young people that did not participate in TPZ?How does this vary based on students' socioeconomic status when enrolling in TPZ? • To what degree do TPZ alumni demonstrate greater rates of post-secondary degree or credential attainment than young people that did not participate in TPZ? How does this vary based on students' socioeconomic status when enrolling in TPZ?

[3]The TPZ R&E team will only be able to explore this research question and its most of its sub-questions with a limited number of students (i.e., up to ~350) within the time frame of this five-year evaluation plan, due to the duration of the program and time required to realize the outcome. In some cases (e.g., degree/credential attainment and income 10 years after high school), sub-questions will not be able to be explored at all because of the timeframe.

To what degree and how does TPZ programming impact leading indicators of economic mobility for students we serve? (cont'd)	• To what degree do TPZ alumni report feeling a sustained sense of power and autonomy — a key element of economic mobility? How does this vary based on students' socioeconomic status when enrolling in TPZ? • To what degree do TPZ alumni report feeling a sustained sense of being valued in community — a key element of economic mobility? How does this vary based on students' socioeconomic status when enrolling in TPZ? • To what degree do TPZ alumni, ten years after high school graduation, earn an income in the top 20% of similar-aged peers? How does this vary based on students' socioeconomic status when enrolling in TPZ?

APPENDIX C. NEW TPZ LOGIC MODEL

ADVANCING ECONOMIC EQUITY THROUGH AN ECOSYSTEM OF ENTREPRENEURSHIP, OPPORTUNITY, & RELATIONSHIPS

THE POSSIBLE ZONE

INPUTS

Students' Strengths and Assets: Experiences, skills, knowledge, mindsets, talents, supports
Stakeholders: Staff, volunteers, alumni, family, community
Curriculum: Evidence-based Eship, Advisory, WBL, and Deep Dive curriculum and/or course structures
Training: Leadership development, professional learning, culturally responsive, community and culture
Space and Equipment: Innovation Center, makerspace, CAD/Adobe software, digital fabrication tools
Partners: Schools, local businesses, complementary organizations, industry/corporate
Financial Support: Foundation and corporate giving, government grants, TPZ enterprise revenue

ENTREPRENEURIAL CULTURE

INSPIRE — Inspire students to dream without limits by reinforcing their worth and potential.

Program Levers
- Student-centered spaces
- Physical/emotional safety
- Culturally-responsive design/practice
- Student leadership, alumni presence
- Supportive staff & advisors
- Volunteers that inspire, relate, & challenge
- Developmental relationships

IGNITE — Ignite passion and creativity through authentic and collaborative learning, spaces equipped for innovation.

Program Levers
- Access to state-of-the-art technology and facilities
- Authentic Eship instruction & experiences that foster SEL
- Immersive STEAM Deep Dives
- Meaning-making & guidance through Advisory

THRIVE — Thrive within strong and mutually supportive networks; belonging in a professional communities

Program Levers
- Work-based Learning that fosters relationships & career-readiness
- College & career advising
- Alumni leadership & role modeling
- Post-secondary programming & alumni support

ENTREPRENEURIAL SPIRIT

I COULD — Defining what is possible for themselves. "I COULD do whatever I dream."

Skills, Mindsets, & Assets
- Interest sparked by access
- Positive self-concept
- Growth mindset
- Sense of belonging at TPZ

IGNITE — Finding insights in failures, gaining confidence to achieve. "I CAN overcome. I CAN succeed."

Skills, Mindsets, & Assets
- Communication & teamwork
- Problem-solving & design thinking
- Self-efficacy & STEAM interest
- Tech agency
- Business & Eship concepts
- Emerging social & professional network

I AM — Having clear aspirations, confidence in their path. "I AM a learner. I AM a success. I AM leading the way."

Skills, Mindsets, & Assets
- Fortified self-efficacy & resilience
- Growing & solidifying social capital
- Refined technical skills, aligned with career aspirations
- Sense of belonging in professional settings
- Commitment to inspiring others

IMPACT

UPWARD MOBILITY PROMOTING EQUITY

1. **Economic Success:** Earning in top 20% of income among same-age peers, 10-years after high school graduation.
2. **Power and Autonomy:** Ability to influence one's environment, other people, and your own outcomes; ability to act according to your own decisions. **Indicators:** Agency, Self-Efficacy, & Growth Mindset
3. **Being Valued in Community:** A sense that one belongs and is included among family, friends, coworkers, neighbors, other communities, and society. **Indicators:** Social Capital & Belonging

APPENDIX D. EVALUATION ROLES & RESPONSIBILITIES

STAKEHOLDERS	ROLES AND RESPONSIBILITIES
Students & Families	• Share perspective via surveys & focus groups • Reflect on data with staff during data debriefs • Provide consent for data sharing and participation in evaluation activities
Alumni	• Share perspective via surveys, focus groups, & interviews
TPZ Program Staff	• Communicate purpose and importance of data; obtain consent from students and families • Reserve session time and ensure data collection from students • Regularly reflect on learning target data with students • Reflect on program evaluation data quarterly with R&E staff for continuous improvement • Collect/record course attendance data and artifacts of student work in LMS
TPZ Non-Program/ Non-R&E Staff	• Reflect on program evaluation data annually in continuous improvement retreat • Support data collection, management, and security (IT/Ops staff)
TPZ R&E Staff	• Ensure collection of consent from students and families • Ensure timely collection of survey data; conduct observations with peer organizations & coordinate external observations of TPZ through BASB • Coordinate with external evaluation partners for data collection and reporting • Obtain approval of, and annually renew, BPS research agreement; maintain Institutional Review Board (IRB) approval • Obtain data from BPS annually, per research agreement; Obtain NSC data annually • Analyze all data according to established research questions • Prepare and share formal data reporting, including quarterly TPZ By The Numbers, annual Impact & Learning Report, and grant reports as needed • Plan, design, and facilitate (with Program leaders) annual continuous improvement retreats to foster ongoing continuous improvement of practices and program model

	• Collaborate with members of the TPZ team to identify and leverage thought leadership opportunities based on evaluation findings • Work with TPZ Operations team and IT supports to ensure necessary data systems are developed and maintained; to ensure ongoing security of student data • Identify external evaluation partner that will plan and execute summative evaluation phase of plan
TPZ Leadership	• Reflect on evaluation data quarterly, as presented by R&E team • Reflect on evaluation data annually as part of annual continuous improvement retreat, using evaluation findings to drive organizational decision-making and improvement • Promote buy-in of staff for rigorous evaluation and continuous improvement, communicating clear expectations and support for evaluation efforts
Evaluation Advisors	• Share feedback with TPZ's R&E team on execution of evaluation plan, in order to ensure high quality and rigorous evaluation, as well as culturally-responsive evaluation practices
External Evaluation Partner	• Collaboratively plan summative evaluation with TPZ's R&E team and leadership, including data collection, analyses, and reporting. • Execute summative evaluation plan, including annual interim evaluation reports and aggregate final report at conclusion of project