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Panorama for Social-Emotional Learning: Research Rationale and Logic Model

Study Type: ESSA Evidence Level IV

Prepared by Panorama Education: June, 2023

Executive Summary

Panorama Education developed a research rationale for Panorama for Social-Emotional Learning (SEL) and accompanying logic model to satisfy Level IV requirements (Demonstrates a Rationale) according to the Every Student Succeeds Act (ESSA).[1]

Research Rationale and Logic Model

Together, the research rationale and logic model provide a program roadmap, detailing program inputs, participants reached, program activities, outputs, and outcomes. Members of Panorama Education's Data Science and Applied Research team developed and revised the research rationale and accompanying logic model.

Study Design for Panorama for Social-Emotional Learning Evaluation

Informed by the logic model, the next phase of this work will focus on planning for an ESSA Level III study to examine correlations between SEL product use, change in students' SEL skills, supports, and environments, and student outcomes.

Conclusions

This report satisfies ESSA evidence requirements for Level IV (Demonstrates a Rationale). Specifically, the report meets the following criteria for Level IV:

- Detailed logic model informed by previous, high-quality research
- Study planning and design is currently underway for an ESSA Level III study

[1] Level IV indicates that an intervention should include a "well-specified logic model that is informed by research or an evaluation that suggests how the intervention is likely to improve relevant outcomes; and an effort to study the effects of the intervention, that will happen as part of the intervention or is underway elsewhere…" (p. 9, U.S. Department of Education, 2016).

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Introduction

As part of its mission to radically improve education for all students, Panorama Education is a national leader in the provision of research-backed products and services to support SEL in districts and schools. Researchers at Panorama Education documented the research rationale and accompanying logic model for Panorama for Social-Emotional Learning to satisfy Level IV requirements (Demonstrates a Rationale) according to the Every Student Succeeds Act (ESSA). LearnPlatform by Instructure, a third-party edtech research company, validated that Panorama's product offering met the Level IV requirements.

What is SEL?

In 2020, the Collaborative for Academic, Social, and Emotional Learning (CASEL, 2020) defined SEL as:

> ...the process through which all young people and adults acquire and apply the knowledge, skills, and attitudes to develop healthy identities, manage emotions and achieve personal and collective goals, feel and show empathy for others, establish and maintain supportive relationships, and make responsible and caring decisions.

SEL is a universal, strength-based, proactive approach to education that helps all students acquire the skills they need to be successful at school, in relationships, at work, and in life (Mahoney et al., 2021; Weissberg et al., 2015). SEL recognizes academic and social and emotional learning are inseparable, and all learning is fundamentally relational (Dunbar, 1998; Tomasello, 2009). This recognition has been deemed a solution, or "missing piece," to challenges in education (Bridgeland et al., 2013). By developing childens' social and emotional skills, creating caring classroom communities, and cultivating supportive school environments, educators can achieve the broader goals of whole-child education (Schonert-Reichl, 2017). To this end, districts and schools, in partnership with families and communities, use evidence-based SEL programs and practices to create positive learning environments that provide the opportunities for students and adults to learn and practice SEL skills.

SEL is not new for educators or families. They have always always engaged in the social and emotional development of children (Mahoney et al., 2023). Children learn best in the context of positive, caring relationships and families and schools are rich settings for supporting social and emotional development (Dewey, 1916; Vygotsky, 1926/1997). Research shows that SEL skills can be taught by classroom teachers and parents and, in turn, students can learn and apply these skills to succeed in the real world (e.g., Durlak et al., 2011; Cipriano et al., in press).

Literature Review

A substantial amount of rigorous research is available to show SEL programs[2] both prevent problems and promote positive outcomes in the short- and long-term (e.g., Cipriano et al., in press; Durlak et al., 2022). In the section below, we will briefly review research into: (1) program outcomes, (2) moderators of program outcomes including program implementation and integration of SEL with a multi-tiered system of supports (MTSS), and (3) measurement of SEL.

Program Outcomes

There is substantial evidence that participating in SEL programs benefits students in the short- and long-term. The benefits of SEL are observed across a range of different outcomes, age groups, samples, geographic areas, and historical time. For example, Durlak et al. (2022) conducted a meta-review of 12 meta-analyses of universal, school-based SEL programs involving 523 unique studies reported between 1955-2018 carried out in 24 countries with an estimated one million students. When program participants were compared to controls, the average effects were consistent, positive, and statistically significant across a range of outcomes including increased SEL skills, positive attitudes, academic achievement, and decreased conduct problems and emotional distress. These impacts held in follow-up studies conducted several months to many years after the SEL programs had ended.

Likewise, in a recent meta-analysis of universal SEL programs not available at the time of Durlak's review, Cipriano et al. (in press) reported findings from 258 studies conducted between 2008-2020 carried out in 45 countries. Studies reporting both post- and follow-up program effects were included. Results showed that, compared to control conditions, program participants experienced significant improvements in SEL skills, school climate and safety, positive attitudes, and school functioning including improved attendance and achievement.

SEL impacts have practical importance for academic achievement and many other student outcomes. For instance, students participating in an SEL program showed a 11 percentile gain in academic achievement compared to students who did not (Durlak et al., 2011). If schools add an SEL program, on average, 57% more students would gain SEL skills, 27% more would improve their academic performance, and 22% more would show fewer conduct problems compared to current school services (Durlak & Mahoney, 2019). These practical benefits are apparent for students from different demographic groups and socioeconomic backgrounds.

Accordingly, Panorama Education clients engaged in SEL should, over time, have students that increase their SEL skills, experience more positive climates, and develop the learning skills and well-being to foster improved school performance and behavior. Of course the effectiveness of any educational program is not constant, and depends on a variety of implementation and educational variables. In the next section, we review the literature on those moderating variables.

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[2] SEL programs refer to a carefully coordinated curriculum organized into developmentally sequenced units and learning experiences that focuses on creating relationally healthy places for children and adults to develop, explicitly and intentionally, knowledge, mindsets, and social-emotional skills. SEL programs can be organized in different ways including standalone classroom instruction, integration of SEL with academic curricula, and whole school approaches. Panorama does not offer SEL programs directly, but supports them through its measurement tools, reporting platform, and professional services.

Moderators of Program Outcomes

Certain factors are associated with larger or smaller SEL program impacts. Both Durlak et al. (2022) and Cipriano et al. (in press) investigated factors that could lead to larger or smaller SEL program impacts. There was not always consistency in which of these "moderators'' were examined, how they were studied, or which outcomes they influenced. However, some were common to two or more of the meta-analyses in the Durlak et al. meta-review or found in the most recent meta-analysis by Cipriano et al. Using this criterion, Table 1 shows the moderators found to impact program effects. These begin to establish "best practices" for SEL programs.

Table 1. Moderators of SEL Program impacts.

Moderator	Study	Result
Student age	Durlak et al., 2022	Stronger for younger students
Program delivery	Cipriano et al., in press	Stronger for teacher delivery over non-school personnel
Program features	Cipriano et al., in press	Stronger for programs with S.A.F.E.[3] features
Program sequence	Cipriano et al., in press	Stronger for teaching intrapersonal skills before interpersonal skills
Implementation quality[4]	Cipriano et al., in press Durlak et al., 2022	Stronger for higher quality
Program duration	Cipriano et al., in press Durlak et al., 2022	Stronger for shorter programs[5]
Multicomponent	Durlak et al., 2022	Stronger for programs with parent or community participation

Program Implementation. Table 1 identifies several areas where SEL program support might be focused to garner larger impacts. Program implementation – identified as a significant moderator in both reviews – is a modifiable change lever and current target of Panorama Education's SEL products and services.

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[3] S.A.F.E is an acronym that stands for sequenced, active, focused, and explicit instruction.
[4] Higher quality implementation could refer to different aspects of programming. In several meta-analyses, it was defined as fidelity of implementation, or the extent to which programs were delivering the active ingredients of an intervention crucial for achieving its intended effects.
[5] The authors suggest this could mean that programs with longer duration typically serve populations of students that need more support. However, interactions between moderators could not be tested.

SEL programs need to be implemented well to achieve positive impacts on students and learning environments. Program implementation is complex, involving many components and stages (Durlak, 2015). However, the fields of improvement science (Bryk et al., 2015; Scott et al., 2019) and SEL assessment (McKown, 2022) agree that intentionally collecting, reflecting on, and using psychometrically sound data is essential for implementation to be high quality such that benefits attained by the program participants are maximized. Moreover, to be skillful at this process, professional learning for educators is often called for (Durlak, 2015). Panorama for Social-Emotional Learning is designed to meet these criteria and support strong SEL program implementation by helping educators work collaboratively and skillfully when collecting and interpreting data and taking data-based action.

Accordingly, Panorama Education clients with high engagement in key implementation activities (i.e., using SEL data to guide instructional decisions and professional learning) should have students that experience more positive environments and greater growth in SEL skills than clients with little or no engagement in these activities.

Integration of SEL and MTSS. In addition to those moderators in Table 1, **supporting whole child development through an integration of SEL and MTSS approaches is important.** MTSS is an evidence-based educational approach that recognizes different students need different types of support to succeed at school and in life (Arora et al., 2019; Cho Blair et al., 2021; Lee & Gage, 2020). Panorama Education's Student Success platform is a MTSS solution for many school districts (Hunt et al., 2023) designed to work in tandem with Panorama for Social-Emotional Learning. Moreover, SEL and MTSS each have considerable research support on overlapping outcomes (e.g., student achievement, positive attitudes and behaviors, and reduced conduct problems). Therefore, Panorama Education provides data to support differentiated SEL instruction to students and offers research-backed tiered SEL strategies (i.e., Playbook is Panorama's library of evidence-based and research-backed strategies to provide differentiated, whole-child instruction) to integrate SEL with academic and behavior instruction to support the whole child (Jackson & Wolforth, 2021; Schaper et al., 2023).

Accordingly, schools using Panorama for Social-Emotional Learning that also engage with Panorama's Student Success platform to provide whole-child, tiered SEL strategies should have students that experience more positive environments and greater growth in SEL skills than clients with little or no engagement in these activities.

Measurement of SEL

The preceding review shows student success depends on attributes beyond those measured by achievement tests (Merrill, 2020). SEL programs, when implemented well, positively impact students' social, emotional, and academic development in the short- and long-term. The availability of psychometrically sound measures of SEL skills, supports, and environments makes this inference possible. While all approaches to SEL assessment have strengths and limitations (Duckworth & Yeager, 2015), Panorama Education provides SEL scales as a relatively efficient, reliable, valid approach to SEL measurement (Panorama Education, 2020). Moreover, the measures elevate student voice and allow for internal psychological states (e.g., feelings of belonging) to be measured.

The intended purpose of Panorama for Social-Emotional Learning is to help educators make data-based decisions that improve the social, emotional, and academic outcomes of all students. By

collecting relevant data using psychometrically sound instruments, educators can better understand how to improve educational systems and support individual students. Developing a culture of data use and the professional learning and resources to support it takes time, but doing so depends on having pertinent data reported in user-friendly data systems (Mandinach, 2012). Panorama for Social-Emotional Learning provides both.

Accordingly, Panorama education clients more engaged in SEL measurement and data use as evidenced by their survey completion rates, time spent engaged with data, and professional learning around data use, should have students that experience more positive environments and greater growth in SEL skills than clients with little or no engagement in these activities.

Logic Model

A logic model is the roadmap for a program or product. It identifies how the program aims to influence learners and transform inputs into measurable actions that lead to expected outcomes. Despite some variations, a logic model typically has five main components: inputs, participants, activities, outputs, and outcomes (see Table 2).

Table 2. Logic model core compontents

Component	Description	More Information
Inputs	What we invest	What resources are invested and/or required for your product to function effectively in real schools?
Participants	Who we reach	Who receives the product or intervention? Who are the key users?
Activities	What we do	What do you do with the resources identified in inputs? What are core/essential components of your program? What are you delivering to help students/teachers achieve the program outcomes you identify?
Outputs	Products of activities	What are numeric indicators of activities? (e.g., key performance indicators; allows for examining program implementation)
Outcomes	Short-term, intermediate, long-term	Short-term outcomes are changes in awareness, knowlege, skills, attitures and aspirations. Intermediate outcomes are changes in behaviors or actions. Long-term outcomes are ultimate impacts or changes in social, economic, civil or environmental conditions.

Table reproduced with permission from Hunt et al. (2023).

In line with the components in Table 2, we reviewed Panorama for Social-Emotional Learning, in relation to the foregoing research rationale, to develop a logic model (Figure 1).

SEL Logic Model Components. Panorama invests in several resources to support SEL including access to: the Student Success platform that allows educators to review whole-child data that includes SEL data; psychometrically sound survey scales organized into a range of SEL skills, supports, and environments; Playbook, a professional learning library of instructional resources and interventions to support students holistically, including SEL; teaching and learning staff who provide professional learning on all resources connected to SEL. Ultimately, Panorama aims to support educators in the provision of SEL programming to foster student success.

Purpose Statement: Educators find it challenging both to measure SEL and to use data to make instructional decisions that can support all their students from a whole-child perspective. When paired with the Student Success platform, Panorama Education's SEL surveys, Playbook strategies, and professional learning provide educators with the knowledge, tools, and data to view SEL through a whole-child lens and confidently take instructional actions to: (1) implement and continuously improve SEL programs and practices, (2) build positive, supportive environments, and (3) foster the SEL skills of all students. These actions help students succeed at school and in life.

Figure 1: Panorama for Social-Emotional Learning Logic Model

Inputs	Participants	Activities	Outputs	Outcome		
				Short-Term	**Intermediate**	**Long-Term**
Access to SEL Surveys Access to Student Success platform Access to Playbook Access to professional learning (PL)	Students Educators	Students complete SEL surveys Educators use the Student Success platform Educators use Playbook Educators participate in PL on Student Success, SEL, and Playbook	Survey completion rates Amount and longevity of: • Student Success platform use, overall and for SEL reporting • Playbook use, overall and use of tiered strategies • Participation in PL for Student Success, SEL, and Playbook	Improved supports & environments Improved SEL Skills	Improved well-being Improved learning skills	Fewer conduct problems Improved attendance Improved academic performance

Using these SEL resources, students and educators can engage with Panorama Education in the following activities:

- Students:
  - Complete surveys on SEL skills, supports, and environments
  - Engage in Playbook-recommended SEL activities

- Educators:
  - Administer SEL surveys
  - Review whole-child data in the Success Platform, including SEL-specific data
  - Provide SEL practices through Playbook-supported activities, including tiered programming
  - Engage in professional learning activities with Panorama Education staff

Panorama Education's partner districts can examine the extent to which these key activities have been achieved by examining the following outputs:

- Completion rate of SEL and climate surveys by students
- Amount (number of times) and longevity (number of different days) of Student Success platform use by educators, including review of SEL data
- Amount (number of times) and longevity (number of different days) of Playbook use by educators, including SEL-specific strategies and tiered strategies
- Amount (number of sessions), type (virtual, live, personalized), and content (Student Success, SEL, Playbook) of professional learning received by educators

If implementation is successful, based on a review of program impacts, Panorama Education expects the following short-term student outcomes:

- Improved supports and environments, including feelings of belonging
- Improved SEL skills, both overall and in specific topic areas chosen by users
- Connections between SEL skills, supports, and environments as these aspects have been shown to support one another

Students, in the intermediate term, are expected to improve in well-being and learning skills, resulting in the following long-term outcomes:

- Fewer conduct problems, including minor and major discipline incidents
- Improved attendance, including fewer students with chronic absenteeism
- Improved academic performance, including GPA and achievement tests
- Because academic and behavioral outcomes are, from a whole child perspective, inter-related, improvement in one area should lead to improvement in the other.

Study Planning for Panorama SEL Product Evaluation

To continue building evidence of effectiveness and examine the proposed relationships in the logic model, in the next phase of this work, Panorama Education plans to correlate SEL product usage with student outcomes. Specifically, Panorama Education plans to begin an ESSA Level III study to answer the following questions:

- Can discernable change – growth and decline – be identified in students' SEL skills, supports, and environments over time?
- Are changes in students' SEL skills, supports, and environments related to changes in intermediate and long-term student outcomes as specified in the logic model?
- Are changes in students' SEL skills, supports, and environments related to SEL product usage as specified in the logic model?

Conclusion

This research rationale and accompanying logic model satisfies ESSA evidence requirements for Level IV (Demonstrates a Rationale). Specifically, this report met the following criteria for Level IV: detailed logic model informed by previous high-quality research and planning underway for an ESSA Level III study.

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