SHERMAN CENTER
for Early Learning
in Urban Communities

EVALUATION OF THE SHERMAN CENTER TEACHER SUMMER INSTITUTE

Karrie E. Godwin, Ph.D.
Praveen Kumaravelan
Shahin Hossain
Linda Baker, Ph.D.
Jennifer Mata-McMahon, Ed.D.

Sherman Center Research Report No. 7
July 2025

UMBC

The Role of Professional Development in Enhancing Teachers' Pedagogical Practice: An Evaluation of the Sherman Center Teacher Summer Institute

Karrie E. Godwin, Praveen Kumaravelan, Shahin Hossain, Linda Baker, & Jennifer Mata-McMahon

Corresponding Author Information

Karrie E. Godwin (kgodwin@umbc.edu)

University of Maryland, Baltimore County

Word count: 6,692

Abstract

Professional development (PD) is seen as an avenue to improve student achievement outcomes by modifying teacher knowledge and practices. The present work focuses on evaluating one model of PD, the *Teacher Summer Institute* (TSI), a Sherman Center for Early Learning in Urban Communities initiative designed for urban early childhood educators in Maryland. The TSI equips teachers with tools, resources, and opportunities to acquire the necessary knowledge and skills to enhance their pedagogical practices. The TSI involves keynotes, PD sessions, collaborative working sessions, research scholars' presentations, and reflection opportunities. Through two studies, we evaluated the TSI's impact on early childhood educators' pedagogical practices by analyzing five years of program archival data (Study 1) and conducting a retrospective study (Study 2) in which we fielded an online survey of participating teachers. Implications for future program iterations and subsequent research evaluation efforts are discussed.

Key Words: Elementary Education; Teacher Professional Development; University-School Partnerships

The Role of Professional Development in Enhancing Teachers' Pedagogical Practice: An Evaluation of the Teacher Summer Institute

Professional development (PD), also known as ongoing training, or continuing education is a common requirement across many professions, such as healthcare, law, engineering, and aviation, as well as in education (Institute of Medicine, 2010). PD is designed to help professionals stay abreast of new developments in the field, learn best practices, and expand their skill set. It is estimated that most teachers participate in PD every year (Hill, 2007). Indeed, in-service teachers are required to participate in PD activities as part of maintaining their licensure. For example, in Maryland, educators must complete 90 hours of PD every five years as part of their licensure renewal (Maryland State Department of Education, 2024). It is perhaps not surprising that teachers are unlikely to exceed the prescribed minimum amount of PD training; however, it is unclear whether the prescribed PD is sufficient to produce meaningful improvements in classroom practice (Hill, 2007). Additionally, critics have questioned the quality of PD offerings and the integration of PD training back into teachers' classrooms (Hill, 2007). Nevertheless, education reforms have focused on PD because teachers are seen as "promising agent[s] of change," and teacher effectiveness (as indexed by student achievement measures) is variable (Scher & O'Reilly, 2009, p. 209).

Below, we provide a brief overview of teacher PD regarding its delivery, content, theoretical underpinnings, efficacy, and teacher perceptions. This overview provides important context for the present study, which evaluates one model of PD, the *Teacher Summer Institute* (TSI) which was implemented to support educators working in urban communities. This work provides important insights into the perceived impact of the PD program on teachers' pedagogical practices and ways in which teachers' PD experience can be enhanced.

Teacher Professional Development: Delivery and Content

Teacher professional development (PD) is provided by a variety of entities, including in-house or district-sponsored training, as well as training provided by private vendors, universities, museums, publishers, etc. (e.g., Schwartz, 2023; Wilson et al., 2011). PD offerings might occur in person or online (Meyer et al., 2023) and on different timescales (Basma et al., 2018; Darling-Hammond et al., 2017; Lindvall et al., 2022; Garrett et al., 2019; Yoon et al., 2007). The content of teacher PD is also highly variable, with offerings focusing on instructional strategies, skill development, building content knowledge, introductions to novel technologies, pedagogical practices for working with different student populations, etc. (Wilson et al., 2011). The variability has led some critics to claim that the PD landscape is more akin to a "carnival" - "crowded, noisy, incoherent, with both attractive and seedy options" in which program selection is based on mandates, zeitgeist, and practical constraints rather than empirical research" (Wilson et al., 2011, p. 383). The "uncoordinated" or "patchwork" nature of the U.S. teacher PD system has given rise to several concerns regarding the obstacles such a system may pose to establishing high-quality PD programs and the ability to conduct meaningful PD evaluations.

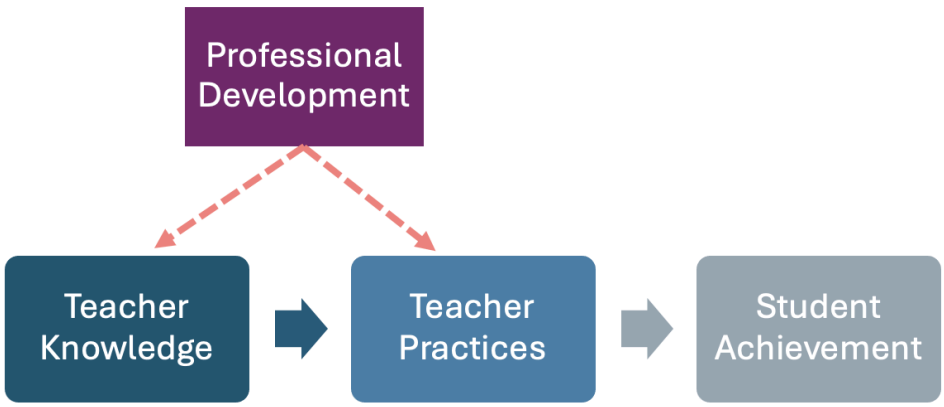
Teacher Professional Development: A Mechanism for Change?

Despite the lack of consensus on what teacher PD should entail or solidified knowledge of the optimal duration of PD, teacher PD remains a popular approach to building capacity in education. For example, urban school districts in the U.S. are estimated to spend between $6,000 to $8,000 per teacher per year for PD (Bocala, 2019). Scholars have suggested a model of change in which teacher knowledge is causally linked to teacher practices and, in turn, student achievement, with PD hypothesized to impact both teacher inputs (see Figure 1 for schematic). However, this causal model is likely an oversimplification as the model overlooks potential

mediators and moderators. Unfortunately, there is limited empirical research using direct measures to test the validity of this causal model (for discussion see Scher & O'Reilly, 2009). Indeed, in a review (Yoon, Duncan, Lee, Scarloss, & Shapley, 2007) of studies investigating the effectiveness of teacher PD on student achievement, only 9 of more than 1,300 studies were found to meet the *What Works Clearinghouse* standards for evidence, highlighting the lack of available high-quality causal research on this critical topic.

Figure 1

Schematic Representation of a Hypothesized Causal Pathway between Professional Development, Teacher Knowledge and Practices, and Student Achievement



Despite the widespread implementation of teacher PD, its efficacy has been questioned (see Guskey, 2002; Newman et al., 2000). However, evaluating the efficacy of PD is a complex endeavor, given that teacher PD is not uniform in terms of its structure, content, or the extent to which there is a focus on "enactment" or transferring the learning back into teachers' classrooms (Kennedy, 2016). Despite these challenges, a meta-analysis examining the effect of teacher PD on students' math and science achievement found generally positive, albeit modest, effects of teacher PD (effect size: Math achievement = .14; Science achievement = .13; Scher & O'Reilly, 2009). Similarly, Yoon et al. (2007) found in their review (of the aforementioned nine PD studies) that there was a moderate effect of PD on student achievement measures and that these effects were fairly uniform across content areas.

To increase the efficacy of teacher PD, experts have suggested modifications to PD, including increasing training intensity, closely aligning PD to content and the district curriculum, as well as incorporating more active learning opportunities that include coaching and teacher collaboration rather than more passive instruction (see Scher & O'Reilly, 2009 for discussion). However, others have argued that such recommendations are not warranted as a stronger research foundation is needed to accurately specify what constitutes effective teacher PD (Ball et al., 2008). The present research helps address this issue by expanding upon the existing literature on teacher PD by focusing on early childhood educators in urban environments thereby helping to create a stronger and more diverse research foundation from which to base recommendations.

Teachers' Perceptions of Professional Development

Teacher perception of PD is not always positive, with some teachers reporting they are underwhelmed by the PD, that the program offerings are ineffectual, or that the PD merely reinforced what teachers were already doing (for discussion, see Hill, 2009). One potential

reason teachers may express apathy toward PD could be a lack of alignment between the program offerings and teachers' real-world needs. Results from a recent national teacher survey found that PD opportunities did not always provide teachers with access to expertise in critical areas, such as supporting specific student populations (e.g., English language learners or students with 504s or IEPs) (Zuo et al., 2023). Although some scholars have criticized studies that focus only on teacher self-reports (Scher & O'Reilly, 2009), we contend that teachers' goals, perceptions, and experiences provide valuable information that should be taken into account, in conjunction with other empirical data, to develop effective PD and increase the likelihood that the knowledge and skills gained through the PD training will be successfully enacted back in the classroom.

Sherman Center Teacher Summer Institute: A Professional Development Initiative

The *Teacher Summer Institute* (TSI) was a PD initiative implemented by the Sherman Center that recognized the pivotal role teachers play in facilitating student learning. The program sought to equip early childhood educators working in urban communities with various tools, resources, and opportunities to provide teachers with the necessary knowledge and skills to enhance their pedagogical practices. The TSI programming took place over the course of four days and was held annually each summer from 2018 to 2022. The TSI was designed and delivered in person except for 2020 and 2021, in which the program modality was modified in response to the COVID-19 pandemic. As such, the TSI was held virtually in 2020, and a hybrid event was held in 2021 before returning to in-person in 2022.

Planning the TSI was a collaborative effort that involved multiple stakeholders, including Sherman Center personnel, campus advisory committee members, and partner teachers. These stakeholders worked together to design and organize the PD opportunity, aligning the PD with

the needs of early childhood educators and the specific needs of the student populations participating teachers serve. Furthermore, the TSI was part of a progressive PD model that, beginning in 2019, included follow-up activities. The follow-up sessions were intended to provide teachers with access to more comprehensive and ongoing PD opportunities and resources to facilitate the implementation of effective pedagogical practices educators learned through the TSI. The follow-up sessions were delivered in-person or online, depending on program year.

The TSI had five distinct components, each designed to provide early childhood educators with a more comprehensive PD experience. These components included 1) keynote presentations by experienced educators, researchers, and children's book authors, 2) PD sessions covering a range of topics (e.g., translanguaging, trauma-sensitive practices, differentiated instruction), 3) collaborative working sessions where educators could engage in planning and material development, 4) research scholars' presentations aimed at enhancing pedagogical practices grounded in research, and 5) opportunities for reflection. By integrating these five components, the TSI aimed to enhance educators' pedagogical practices, ultimately contributing to improved student learning outcomes.

Current Studies

Through two studies we assessed teachers participation in the TSI, the perceived impact of the TSI on teachers' pedagogical practices, and we queried teachers on how to improve their PD experience. To that end, in Study 1 we analyzed archival data, including attendance records and teacher feedback forms, collected over the five years the TSI was implemented. Study 2 was a retrospective study in which an online survey was administered to participating teachers to

provide a more direct assessment of the TSI's perceived impact on early childhood educators' pedagogical practices.

Study 1

Method

Participants

Participating teachers were from 5 partner public schools around an urban city center in Maryland. The number of school partners varied across program years (Schools: 2 in 2018, 4 in 2019, 5 in 2020, 2021, and 2022). Five grade levels (pre-K to 3rd grade), special education, and TESOL teachers were represented. No other demographic information was collected by the program developers as the PD was not designed for research purposes nor with the foresight of future evaluation needs.

Archival Analysis: Measures

Attendance Records

Teachers were asked to sign in each day. The total number of attendees per day and program year were then calculated, as well as mean attendance. In addition, the number of returning teachers (i.e., those teachers who participated in the TSI for multiple years) was also calculated. Note that during program years in which the TSI was held virtually, attendance was determined based on the teachers' virtual submission of an action plan following that day's TSI lesson.

Teacher Feedback Forms

Attendees were invited to complete informal daily feedback forms. The feedback forms were created by the program designers, and different iterations of the forms were developed over the 5 years in which the program was implemented. For our evaluation purposes, the focus of our

analysis was placed on the subset of questions that were asked across multiple years of the TSI. These questions asked teachers to rate their knowledge about the PD topics using a 4-point scale (i.e., 1 = Novice to 4 = Expert) before and after the TSI. Participants were also asked to rate the quality of the TSI on a 5-point scale where 1 indicates poor quality, and 5 indicates excellent quality. Mean scores were then calculated for participants' knowledge ratings pre- and post-TSI and the TSI quality ratings.

The feedback forms also included two open-ended questions in which teachers were invited to share what aspects of the TSI they liked most and to provide suggestions to improve the PD. Participants' responses as to what they liked most about the TSI were categorized according to 7 themes: (1) Collaboration, (2) Material access, (3) Presentations, (4) Content, (5) Planning time, (6) Respect for teachers, (7) General positive feedback. Participants with missing responses were coded as N/A.

Teachers' suggestions for improvements to the TSI were coded based on six themes: (1) Collaboration & Interaction, (2) Communication & Expectations, (3) Content & Topic Specialization, (4) Food & Materials, (5) Format & Structure, (6) Length & Timing of Training. Participants who did not respond, had no suggestions, or whose responses indicated general appreciation or positive regard for the TSI to continue were coded as N/A. Note that for both open-ended prompts, some participants submitted multiple responses. Each response was coded separately; thus, the total percentage can exceed 100%.

Coding of the open-ended responses was completed by the first and third authors of this paper. To ensure strong inter-rater reliability, a subset of the responses (60 out of 137 responses or 44%) for each open-ended question were re-coded by the second author. Kappa values for

both open-ended prompts indicate good inter-rater reliability (Kappa for the Most Liked Program Aspects = .91; Kappa for Suggestions for Improvement = .87).

Results

Attendance

Attendance was tallied for each day of the TSI, and a mean was calculated for each program year (See Table 1). Across program years, 76 unique teachers participated. On average, teachers participated for 1.41 years (*SD* = 0.84): 37 teachers participated for one year, 24 for two years, 13 for three years, and 2 for four years (no teachers participated for all five program years). TSI participation was somewhat variable across program years, with an overall mean attendance of 30 participants (*M* = 30.65, *SD* = 15.11). There was a notable peak in attendance in 2020, during the height of the COVID-19 pandemic, and when the TSI was 100% virtual, in which nearly 50 participants attended the TSI (*M* = 49.75, *SD* = 1.89). The lowest participation rates occurred in 2022, the first year the TSI returned to an in-person modality following the COVID-19 pandemic, in which participation dropped to an average of 12 participants (*SD* = 0.82).

Table 1

TSI Attendance Rates by Year and Day of the Programming and by Program Modality

	2018	**2019**	**2020**	**2021**	**2022**
Day 1	20	34	47	40	12
Day 2	20	35	51	40	13
Day 3	19	34	51	37	12
Day 4	18	32	50	37	11
Average Attendance	**19.25**	**33.75**	**49.75**	**38.50**	**12.00**
Program Modality	In-Person	In-Person	Virtual	Hybrid	In-Person

Analysis of the Teacher Feedback Forms

Teachers' Self-Reported Domain Knowledge Pre and Post-TSI

Teachers were asked to self-report their domain knowledge before and after the TSI (except for TSI 2018) to assess the effectiveness of the PD. Teachers rated their domain knowledge using a 4-point scale (1 to 4), with higher scores indicating greater levels of knowledge. Mean prior and post-knowledge scores were then calculated for each teacher. Note that the number of items (domains) varied across program years (i.e., 2 to 5 items). See Table 2 for teachers' pre/post TSI domain knowledge ratings by program year and topic.

Table 2

Teachers' Self-Reported Domain Knowledge Before and After Participating in the TSI (N_{Pre} = 131, N_{Post} = 121)

		Domain Knowledge			
		Pre-TSI		Post-TSI	
Year	**Topic**	**N**	**Mean (*SD*)**	**N**	**Mean (*SD*)**
2018	Multicultural literature	--	--	--	--
2019	Translanguaging	38	1.24 *(0.43)*	23	2.24 *(0.65)*
2020	Trauma sensitive practices	48	1.81 *(0.53)*	50	2.52 *(0.56)*
2021	Differentiated instruction	40	2.32 *(0.51)*	37	2.56 *(0.57)*
2022	Family engagement	5	1.93 *(0.43)*	11	3.00 *(0.21)*
Average			**1.80 *(.64)***		**2.52 *(.58)***

Note. Domain knowledge was assessed on a scale from 1 to 4, with higher scores indicating greater levels of domain knowledge.

Teachers (n = 131) generally indicated relatively low levels of initial domain knowledge with a mean knowledge rating of 1.80 (SD = 0.64; Range: 1 to 3.2). Following the TSI,

participants (n = 121) reported numerically higher levels of domain knowledge (M = 2.52, SD = 0.58; Range: 1 to 4). Note that the data was collected anonymously, and thus, individual participant responses could not be linked across time points, preventing the use of inferential statistics to ascertain whether changes in domain knowledge pre to post TSI were statistically significant. This is a critical limitation that we return to in the discussion.

TSI Perceived Quality

Participating teachers were asked to rate the quality of the TSI on a scale from 1 to 5, with higher scores reflecting higher program quality. Teachers (N = 139) generally reported that the TSI was high quality, with a mean rating of 4.78 (SD = 0.45). However, there was some variability in quality ratings as individual scores ranged from 3 to 5. Across program years, quality ratings were also high and largely uniform (Mean Range: 4.67 to 5.00). See Table 3 for quality ratings by program year and topic.

Table 3

Participants Quality Ratings of the TSI (N = 139)

Year	Topic	*N*	Mean (*SD*)
2018	Multicultural literature	18	4.67 *(0.59)*
2019	Translanguaging	23	5.00 *(0.00)*
2020	Trauma sensitive practices	50	4.68 *(0.51)*
2021	Differentiated instruction	37	4.78 *(0.42)*
2022	Family engagement	11	4.91 *(0.30)*
Average			**4.78 *(0.45)***

TSI Program Attributes Teachers Reported Liking Most

Teachers' (n = 137) open-ended responses to the prompt about what they liked most about the TSI revealed a variety of attributes that participants valued. The *quality of presentations and speakers* was the most frequently endorsed aspect of the TSI and was noted in 27% of teachers' responses. Teachers indicated that they valued the presenters' contributions and appreciated their expertise and the presentations' clarity (e.g., *"The two speakers were excellent and imparted many new ideas and strategies"*).

Collaboration and peer interaction was the second most commented upon program attribute, with 23% of responses suggesting the importance of providing opportunities for teachers to interact and collaborate with their colleagues throughout the TSI (e.g., *"I really enjoyed the breakout groups with my school and being able to bounce ideas off each other"*). Additional PD components valued by participating teachers were *access to materials and resources* (16%) and the *relevance* of the program content (18%). In contrast, program features such as *professional respect/ valuing of teachers* comprised only 7% of responses, and *time for planning /creating* garnered only 8% of responses. Although some teachers identified these program attributes as the most important, they were not discussed as widely as other aspects of the TSI. Table 4 details the frequencies and percentages of endorsement for each program feature.

Table 4

TSI Program Features Participants' Reported Liking Most about the TSI (n = 137)

Program Features	Frequency	% of Responses (out of 192)	% of Teachers (out of 137)
Access to Materials & Resources	31	16%	23%
Collaboration & Peer Interaction	45	23%	33%
Content Relevance	35	18%	26%
Professional Respect & Valuing of Teachers	14	7%	10%
Quality Presentations & Speakers	51	27%	37%
Time for Planning & Creating	16	8%	12%
Total	**192**	**100%**	**140%**[a]

[a] Total exceeds 100% as teachers identified multiple components they liked about the TSI (n = 192 responses).

Teachers' Suggestions To Improve Future TSI Programming

Teachers were given the open-ended prompt, "*What suggestions do you have to improve future TSIs?*" More than half of teachers indicated they did not have specific suggestions for improving the TSI or expressed positive regard for the program (n = 77, 56%). It is possible the high percentage of non-responses reflects, in part, participants' general reticence to complete open-ended survey items, a known issue in survey research (e.g., Dunn & Gomez, 2023). However, an alternative interpretation is that teachers were generally content with the TSI.

Nevertheless, a subset of teachers (*n* = 60) were able to identify potential areas for improvement. Among those teachers who offered suggestions for improvement, the most frequently mentioned area for proposed changes was to the *Format* and *Structure* of the TSI (40%), such as changing the meeting modality (e.g., *"I hope we can be in-person next time; continue the hybrid choice of participation"*) or adjusting the composition of the breakout groups (e.g., *"Be in breakout groups based on grade and school"*) which may suggest that PD programs

that offer coordinated break-out groups to facilitate participant connections by grade level/school and more flexible meeting modalities could potentially enhance teachers' PD experience.

Somewhat less frequently mentioned areas for improvement to the PD included themes such as the *Length and Timing of Training* (12%) in which some participants suggested extending the length of the TSI (e.g., extending programming to a full week) or shifting the days of the week that the program was offered (i.e., avoiding Fridays). Participants also suggested changes to the PD *Content & Topic Specialization* (15%), such as tailoring strategies more based on teachers' level of prior knowledge, and they suggested providing more opportunities for *Collaboration & Interaction* (17%). A smaller percentage of teachers' responses requested changes to *Communication and Expectations* (10%), such as providing information about what teachers would be producing during the PD and the related readings ahead of time, as well as modifications to the *Food & Materials* (7%) (e.g., adding healthier food options as well as vegan options). See Table 5 for details regarding the frequency and percentage of each theme from the open-ended responses.

Discussion

Several promising findings emerged from the archival analysis that can help to identify program strengths as well as opportunities for potential program modifications. The self-report data from the teacher feedback forms suggests increases in teachers' domain knowledge following the TSI, a trend observed across all program years and topics. Across all five years of the TSI participants reported that the PD was of high quality. The presentation and speaker quality were the most frequently mentioned aspects of the PD that teachers' reported liking, followed by the opportunities teachers were provided for collaboration and peer interaction. Other program features that teachers appreciated were access to materials and

Table 5

Participants' Suggestions to Improve PD/ Future TSI Programming (N = 137)

Program Features	Frequency	Percent	Valid Percent
Collaboration & Interaction	10	7%	17%
Communication & Expectations	6	4%	10%
Content & Topic Specialization	9	7%	15%
Food & Materials	4	3%	7%
Format & Structure	24	18%	40%
Length & Timing of Training	7	5%	12%
No Suggestions [a]	77	56%	--
Total	**137**	**100%**	**100%**

Note. Valid percent is calculated using the 60 responses that included a suggestion for improvement (i.e., 137 - 77 = 60); [a] Recall that the category "No Suggestion" includes no responses, N/As, as well as comments conveying contentment, general appreciation, and desire for the continuation of the program.

resources and the relevance of the program content. Of note, when teachers were asked how the TSI could be improved, most teachers did not provide any suggestions, which may indicate that many teachers were content with the PD in its current form. However, a subset of teachers did point to potential areas of the PD programming that could be modified including proposed changes to the program format, length, and further increasing the amount of time for planning and discussion.

Participation across years of the TSI was variable. Interpreting these fluctuations is difficult given variability in the number of schools that participated each year, changes in Sherman Center leadership, changes in program modality, and the impact of the global COVID-19 pandemic. Nevertheless, it is unlikely the drop in TSI attendance in 2022 reflects a

modality preference for virtual programming, particularly given that attendance rates were high for the first two years of the TSI, years in which the program modality was also in-person. However, since the TSI has not been offered since 2022, it is unknown whether attendance rates would have eventually rebounded to pre-pandemic levels making it difficult to make conclusions about PD modality preference and the association between attendance and PD modality (virtual vs. in-person). The archival data, in combination with teachers' tendency to register for multiple years of the PD and teachers' open-ended responses noting their desire for the program to be revived, suggest that the TSI is a PD program teachers found beneficial. However, more information is needed to understand how the PD program impacted specific pedagogical practices and to learn more from stakeholders about improving teacher PD to better meet the needs of local educators. These questions were addressed in Study 2 through an online survey that was fielded to past TSI participants.

Study 2

Method

Procedure

An online survey was fielded to evaluate retrospectively the perceived impact of the Sherman Center's *Teacher Summer Institute* (TSI) on early childhood educators' pedagogical practices. The online survey was programmed in Qualtrics and fielded between September 2023 and June 2024. Approval was obtained from the relevant Institutional Review Boards (#1090; #2023-009), and participants gave their consent online. Participants could elect to provide their contact information to receive a $20 incentive via Reward Genius for participating.

Participants

Seventeen teachers consented to participate in the online survey. Of those who consented, 15 teachers completed the survey. Participating teachers identified as women (100%), predominantly non-Hispanic (67%) and White (73%). Approximately half of the teachers were between the ages of 25 and 34 (53%). See Table 6 for full demographic information.

The majority of teachers had advanced training and education. Fifty-three percent of teachers had an advanced professional certificate, while less than a third (27%) reported having a Standard Professional Certificate (I or II). Additionally, most teachers reported earning an advanced degree (73%).

Teachers largely identified as the primary teacher (80%), while 13% reported that their role was an instructional or curriculum specialist. Forty percent of teachers had been teaching for 4 to 6 years, indicating they were relatively new to the profession, while 47% reported teaching for 11 years or more. Participating teachers were from five grade levels: Pre-K = 7%, Kindergarten = 20%, First-grade = 13%, Second-grade = 7%, Third grade = 7%; while almost half (47%) of teachers reported teaching a combination of grade levels.

Measure: Online Survey

The survey included multiple choice, Likert scales, rankings, and open-ended questions. Teachers were able to skip items based on their comfort level. The survey was estimated to take approximately 15 minutes to complete. The survey asked teachers to report basic demographic information (e.g., age range, race/ethnicity, gender identity, educational background, teaching experience, classroom role). In addition, teachers were asked about their level of participation in the TSI and to rate the perceived impact of the TSI and its program components (i.e., Keynotes, Professional Development Workshops) on their pedagogical practices. The survey also included

open-ended questions asking respondents for suggestions to improve the TSI and to share any additional thoughts they had about the TSI.

Table 6

Participant Demographic Information (N=15)

	Frequency	%
Age		
18-24 years of age	0	0
25-34 years of age	8	53
35-44 years of age	3	20
45-54 years of age	3	20
55 years of age or older	1	7
Gender Identity		
Woman	15	100
Man	0	0
Non-Binary	0	0
Self-Identify	0	0
DNR	0	0
Ethnicity		
Hispanic, Latino, or Spanish origin	5	33
Not Hispanic, Latino, or Spanish origin	10	67
DNR	0	0
Race		
American Indian or Alaskan Native	0	0
Asian	0	0
Black or African American	2	13
White	11	73
Native Hawaiian/Other Pacific Islander	0	0
Biracial or Multiracial	1	7
Other	0	0
DNR	1	7
Educational Attainment		
Some college education	0	0
Associate's degree	0	0
Bachelor's degree	4	27
Master's degree	11	73
Doctoral degree	0	0
Other	0	0
DNR	0	0
Teaching Experience		
Less than 1 year	0	0
1 - 3 years	0	0
4- 6 years	6	40
7 - 10 years	2	13
11- 14 years	4	27
15 years or more	3	20

Note. DNR = Did not report.

Data Analysis Approach

Quantitative Data

Frequencies, percentages, and basic descriptive statistics were calculated to investigate the perceived impact of the TSI and its key program components (Keynotes, Professional Development Workshops) on teachers' pedagogical practices and beliefs, alignment of the program with teachers' expectations, and program endorsement.

Qualitative Data

Teachers' responses to the two open-ended questions were coded using NVivo (12), a software application for qualitative data analysis. The open-ended responses were coded by two coders (the first and second authors). Cohen's kappa for the two open-ended questions ranged from .76 to .88, indicating strong inter-rater reliability.

Teachers' suggestions to improve the TSI were coded into one of three primary categories: 1) Expansion - which included suggestions to extend the PD programming to more schools and teachers; 2) Difficulties Attending - which focused on logistical issues of attending the PD, 3) Proposed Changes to TSI Activities, and 4) No Suggestions, which included responses in which participants indicated they had no suggestions, N/As, as well as comments conveying contentment, general appreciation, and/or desire for the continuation of the PD program.

Similarly, teachers' responses to the prompt to share any additional thoughts they had about the TSI were coded into one of four primary categories that reflected an appreciation for (1) information on Incorporating Diversity and Inclusion in the Classroom, (2) opportunities for Collaboration with Other Teachers, (3) Access to Materials and Resources, and 4) General Appreciation. Responses of "No" and "N/A" were coded as no response.

Results

TSI Attendance

As noted above, the TSI ran for five years (2018-2022). All teachers who participated in the online survey reported attending the TSI for more than one year, and 60% reported that they attended for two or three years, resulting in a strong representation of respondents across each year of the TSI programming (Year: 2018 = 47%, 2019 = 60%, 2020 = 73%, 2021 = 53%, 2022 = 60%).

Perceived Impact of the TSI

Teachers were asked to rate their agreement with various statements about the benefits of the TSI on a scale from 1 (Strongly Disagree) to 5 (Strongly Agree). Note that teachers could also select the response option N/A. Teachers consistently expressed agreement that the TSI was beneficial for their pedagogical practice by enhancing their confidence in their teaching (M = 4.33, SD = .62, Range: 3-5), improving their teaching knowledge and skills (M = 4.40, SD = .63, Range: 3-5), and helping to connect theory and practice (M = 4.47, SD = .52, Range: 4-5). Teachers also agreed that the TSI was beneficial in other ways, such as networking and obtaining resources (M = 4.57, SD = .65, Range: 3-5). Of particular interest was teachers' general agreement that the TSI helped make them more conscious of promoting equity in their classrooms (M = 4.80, SD = .41, Range: 4-5), increased their comfort level in teaching students from diverse backgrounds (M = 4.73, SD = .46, Range: 4-5), and increased awareness of how to bridge student achievement gaps to foster equity (M = 4.6, SD = .63, Range: 3-5).

Perceived Impact of the TSI Program Components

Teachers were also asked to rank the TSI program components from most (1) to least (7) helpful; thus, lower numbers indicate program components teachers perceive as being *more*

helpful. Seven TSI components were evaluated: (1) Keynote speakers, (2) PD workshops, (3) Collaborative planning and material development, (4) Research presentations, (5) Teacher reflections, (6) Networking with other teachers and informal interactions with early childhood education (ECE) community, and (7) TSI spring follow-up session.

The three program components teachers rated as most helpful were *Planning and Material Development* (M = 2.13, SD = 1.19), *PD Workshops* (M = 2.67, SD = 1.29), and *Keynotes* (M = 2.67, SD = 1.72). Surprisingly, the follow-up sessions were rated as least helpful (M = 6.73, SD = .46). However, given the low attendance rates at the follow-up sessions and the more recent addition of this program component, this finding should be interpreted cautiously.

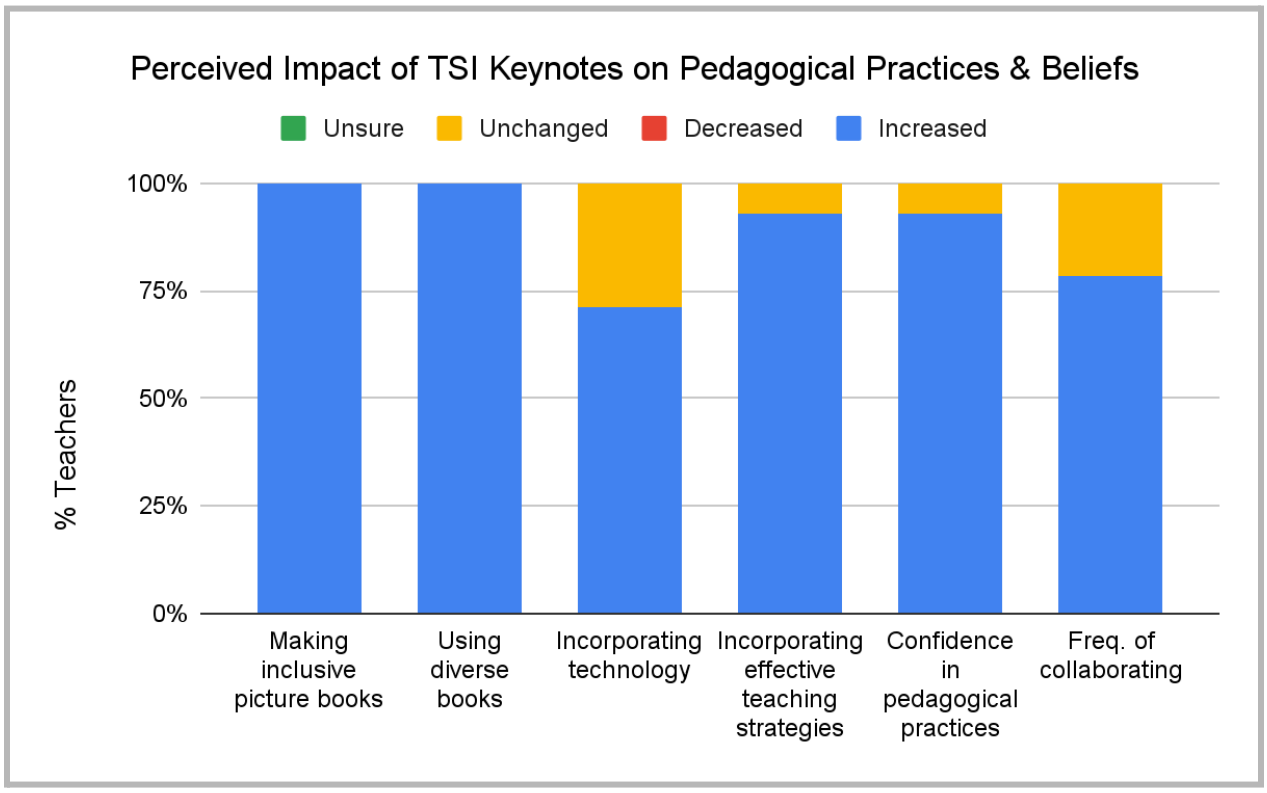
Perceived impact of the TSI Keynotes on pedagogical practices and beliefs

Teachers were asked if the TSI impacted key pedagogical practices or beliefs that were targeted in different TSI keynotes. The six pedagogical practices were: (1) Making inclusive picture books, (2) Using diverse books, (3) Incorporating technology, (4) Incorporating effective teaching strategies, (5) Confidence in their pedagogical practices, and (6) Frequency of collaborating with special educators and/or general teachers to improve student learning. Teachers were asked to indicate if the aforementioned practices or beliefs decreased, increased, or were unchanged following the corresponding TSI keynote. Teachers could also select the response option "not sure" or N/A if they did not attend the relevant keynote. N/A responses were omitted from the descriptive results. Teachers generally reported that the TSI improved their pedagogical practices and/or beliefs across all six areas. However, there was some variability across domains. For example, 71% of teachers reported that their use of technology increased following the TSI keynote compared to 100% of teachers who reported that their use

of diverse books had increased following the TSI keynote. See Figure 1 for changes in pedagogical practices/beliefs by area.

Figure 1

Percentage (valid) of teachers who reported changes to their pedagogical practices or beliefs following the TSI keynotes



Perceived impact of the TSI Workshops on teachers' pedagogical practices and knowledge

Teachers were asked to indicate the extent to which the workshops changed their pedagogical practice or knowledge of (1) family engagement, (2) translanguaging, and (3) children's social-emotional development. For each pedagogical practice or knowledge component, teachers were asked to indicate if it had decreased, increased, or been unchanged

following the workshop. As before, teachers could also select the response option "not sure" or N/A if they did not attend the corresponding workshop. Note that valid percentages are presented below as N/A responses were omitted from the analysis.

Promoting family engagement. Teachers were asked to indicate the extent to which four practices promoting family engagement changed following the workshop: (1) Engaging directly with students and families to create collaborative relationships, (2) Engaging in activities to help build trust between myself [the teacher] and my students and families, (3) Creating opportunities for community building for my students and their families, and (4) Involving families in teaching-learning activities in the classroom to ensure equity and access. Teachers consistently reported an increase across all four of the aforementioned family engagement practices following the TSI workshop. The percentage of teachers who endorsed an increase in a family engagement practice ranged from 80% to 87%. See Figure 2 for details by practice.

Promoting Translanguaging. Teachers were asked whether the TSI PD workshop increased three translanguaging pedagogical practices: Engaging bi/multilingual students in (1) literacy activities that deepen their understanding of texts, (2) literacy activities that develop their language skills, and (3) other literacy activities. Again, teachers consistently reported an increase across all three translanguaging practices following the TSI PD workshop. The percentage of teachers who endorsed an increase in these practices following the TSI PD workshop ranged from 93% to 100%. See Figure 3 for details by practice.

Figure 2

Percentage of teachers who reported changes to their family engagement pedagogical practices following the TSI PD workshop

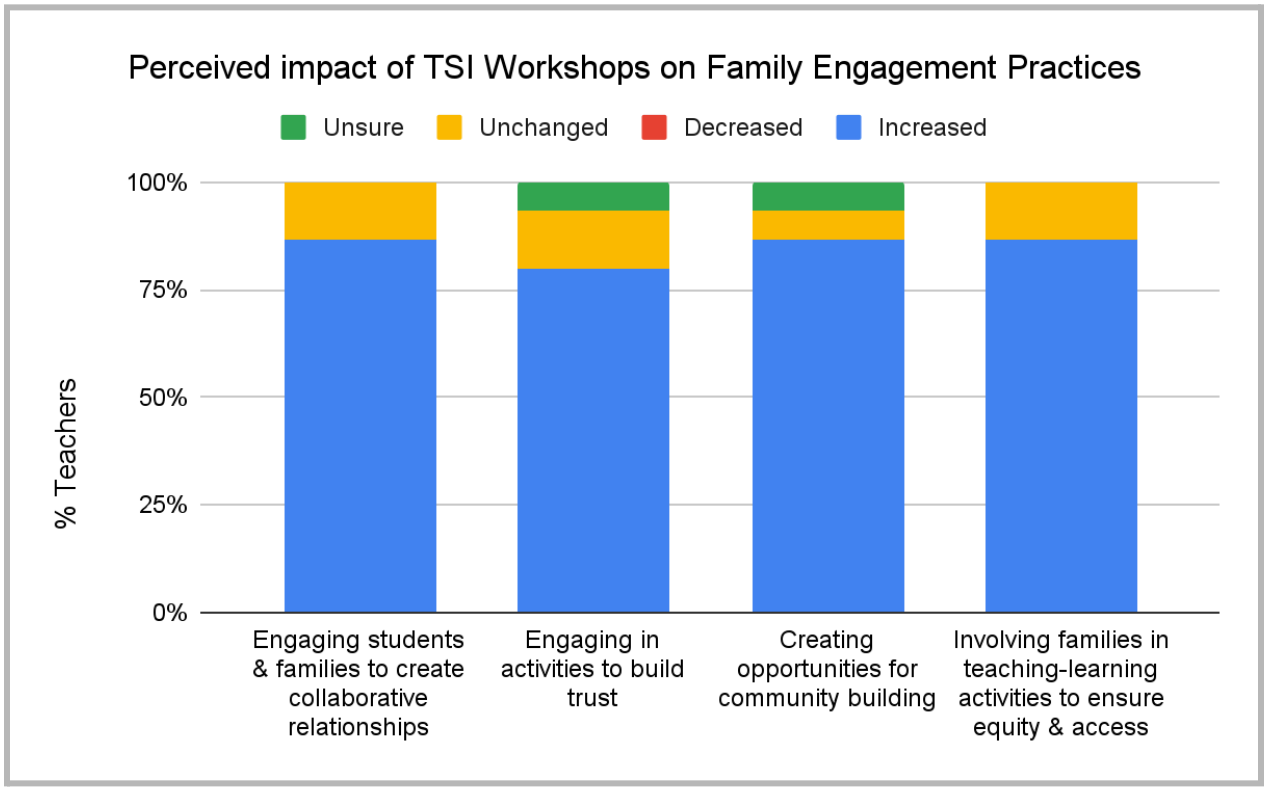
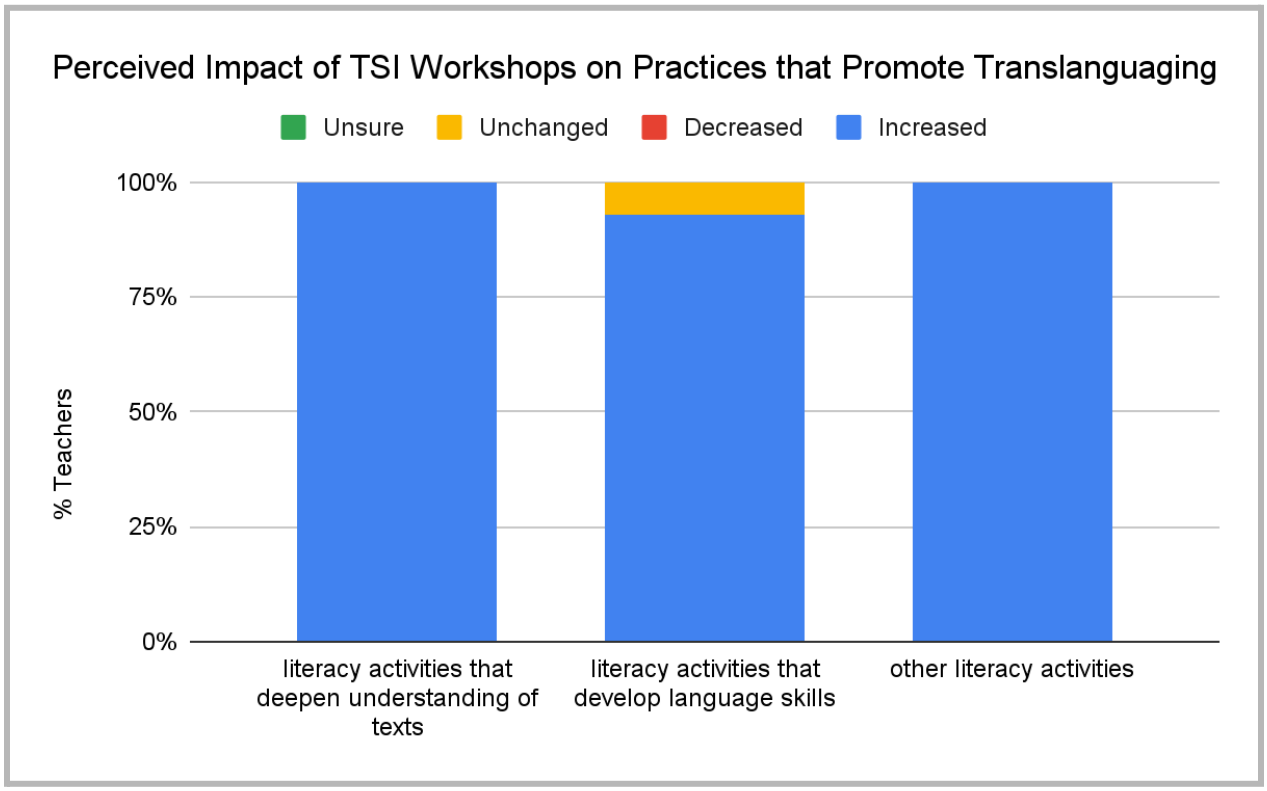


Figure 3

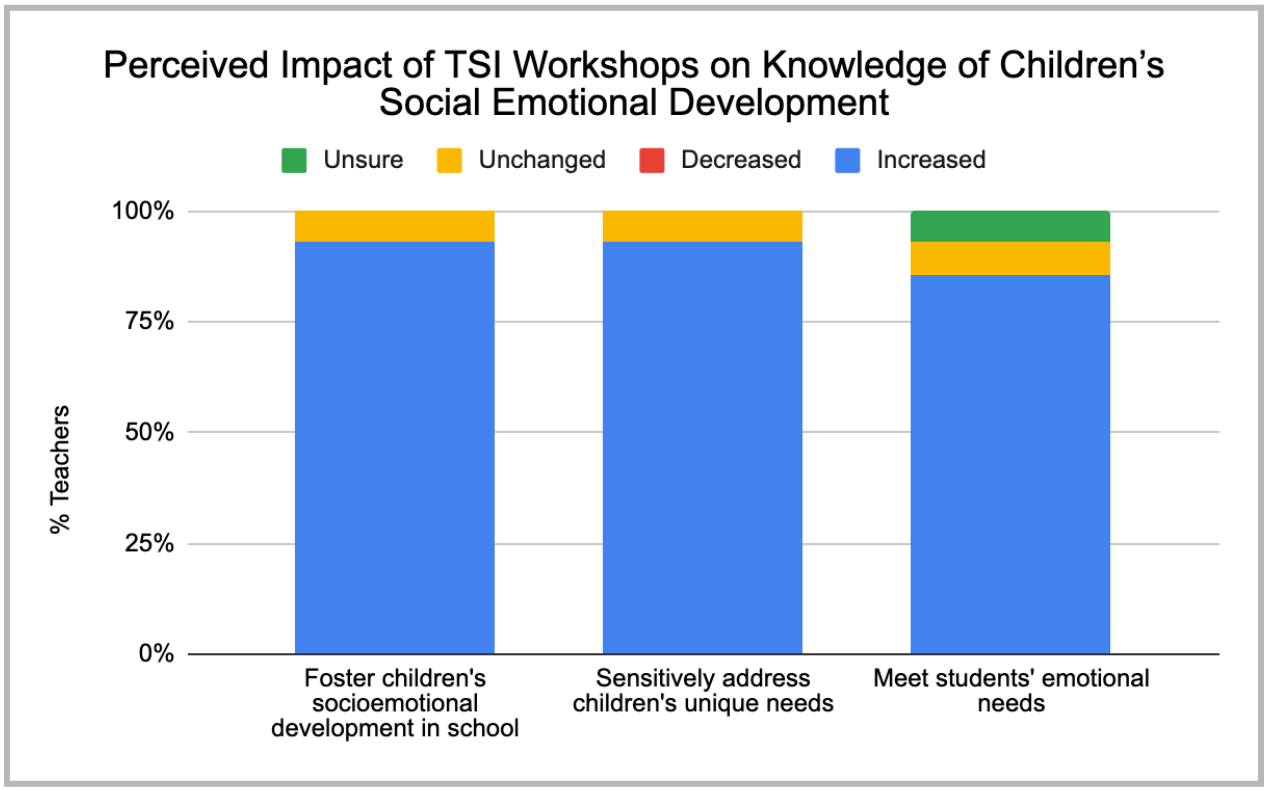
Percentage (valid) of teachers who reported changes to their translanguaging pedagogical practices following the TSI PD workshops



Knowledge of children's social-emotional development. Participating teachers were asked whether their topic knowledge on three aspects of children's social-emotional development had changed following the TSI workshops: (1) How to foster children's socioemotional development in school, (2) How to sensitively address children's unique needs and (3) How to meet students' emotional needs. Teachers consistently reported that the TSI workshops increased their topic knowledge of children's social-emotional development, with 86% to 93% of teachers reporting increases in their topic knowledge across each domain. See Figure 4 for details.

Figure 4

Percentage (valid) of teachers who reported changes to their topic knowledge of children's social-emotional development following the TSI PD workshops



Teachers Expectations and Endorsement of the TSI

Teachers' positive regard for the TSI was also reflected in the perceived alignment between teachers' expectations and the TSI offerings. Indeed, all teachers agreed that the TSI met their expectations (73% strongly agreed; 27% agreed). Furthermore, teachers universally endorsed the TSI noting that they would recommend the TSI to a colleague (80% strongly agreed; 20% agreed).

Qualitative Analysis

Suggestions to Improve the TSI

Teachers were given the open-ended prompt, "*What changes (if any) would you suggest to improve TSI?*" Only 11 (of 15) teachers responded to this specific question. Additionally, one teacher submitted multiple suggestions, so each suggestion was coded separately for a total of 12 responses that were available for analysis. Of these responses, the most common suggestion focused on program expansion (43%; e.g., increasing the number of schools and/or teachers the PD was open to). Another 29% of responses cited difficulties attending the PD in person (e.g., "*Parking; I would love to do it this year if it is virtual"*), and another subset of responses (29%) suggested potential changes to TSI activities (i.e., "*For the keynote speakers, maybe have them talk about strategies they would use or were exposed to in the classroom*"). See Table 7 for the frequency and percentage of each type of suggestion.

Participants' Additional Thoughts on the TSI

Additionally, teachers were asked to share any additional thoughts about their TSI experience. Only 10 (of 15) teachers responded to this open-ended question. When teachers submitted multiple thoughts on their TSI experience, each comment was coded separately for 12 responses that were available for analysis. Of the 12 responses, 17% expressed no comment or N/A. Of the 10 remaining substantive comments, 50% of responses indicated general appreciation of the TSI, 20% expressed gratitude for the access they were given to materials and resources during the TSI, and an appreciation for learning to incorporate diversity and inclusion into their classroom (20%). Other less frequently mentioned responses from teachers included expressions of gratitude for the opportunities to collaborate with other teachers (10%). See Table 8 for details regarding the frequency and percentage of each comment type.

Table 7

Teachers' (n = 11) Suggestions to Improve Future TSI Programming

Program Features	Frequency	Percent	Valid Percent
Expansion	3	25%	43%
Difficulties Attending In-Person	2	17%	29%
Changes to TSI Activities	2	17%	29%
No Suggestion [a]	5	42%	--
Total	**12[b]**	**100%**	**100%[a]**

Note. Valid percent is calculated using the 7 responses that included a suggestion for improvement (i.e., 12 - 5 = 7);
[a] Recall that the category "No Suggestion" includes N/As and comments conveying contentment, general appreciation, and desire for the continuation of the program.
[b] One teacher had multiple suggestions to improve TSI programming, and each response was coded.

Discussion

The survey data indicates teachers perceived the TSI as an effective PD program with wide-ranging benefits for their pedagogical practice, including increasing their confidence in their teaching, helping teachers connect theory to practice, and providing benefits such as networking and resources. Notably, the TSI was also influential in supporting teachers' pedagogical practices that center diversity and equity, including elevating teachers' consciousness of promoting equity in their classrooms, helping to increase teachers comfort level in working with students from diverse backgrounds, as well as increasing awareness of how to foster equity by bridging student achievement gaps. Additionally, teachers reported increases across various pedagogical practices following the TSI, including pedagogical practices that promote family engagement, translanguaging, and deepening their topic knowledge of children's social-emotional development. Teachers generally viewed the TSI favorably, reporting that it met their expectations and indicated a willingness to recommend the program to their colleagues.

Furthermore, the analysis of the open-ended responses suggests that teachers were generally satisfied with TSI upon retrospection. While teachers did suggest some changes, such as adding more participants and making minor changes to existing activities, many responses reflected a general appreciation for the PD.

Table 8

Teachers' (n = 10) Additional Thoughts on the TSI

Program Features	**Frequency**	**% of Responses** (out of 12)	**Valid Percent** (out of 10)
Incorporating Diversity & Inclusion in the Classroom	2	17%	20%
Collaboration with Other Teachers	1	8%	10%
Access to Materials and Resources	2	17%	20%
General Appreciation	5	42%	50%
No Response	2	17%	--
Total	**12**[b]	**100%**	**100%**[a]

Note. [a] Valid percent is calculated using the 10 responses that included a substantive comment (i.e., 12 - 2 = 10); [b] Some teachers shared multiple thoughts on their TSI experience. Each response was coded separately.

General Discussion

Across both studies (Study 1 & 2), teachers' responses affirmed their positive regard for the TSI. Teachers reported a general perception that the programming was effective at increasing teachers' domain knowledge, confidence, and enhancing their pedagogical practices. While the existing data does not allow linking participants' responses from Study 1 to those who completed the retrospective survey in Study 2, it is of interest to note that in Study 1, the domain teachers reported having the lowest prior knowledge in, translanguaging, was the same domain in Study 2

in which teachers overwhelmingly reported increases in their pedagogical practices following the TSI. There was also overlap across studies in the components of the TSI that were viewed as being particularly beneficial - in both Study 1 and 2, the programming (e.g., presentations, workshops, speakers) was noted as a helpful aspect of the PD.

One limitation of the present work is that it relies on self-report data (and in Study 2, retrospective self-reports). Critically, no direct measures of teachers' prior/post TSI knowledge, behavior, or pedagogical practices were obtained to triangulate teachers' self-reports. This limitation will be important to address in future experimental research in which a systematic program evaluation can be conducted. Nevertheless, these studies provide an essential foundation and offer insights into the experiences and perceptions teachers have about this model of PD, which may serve to guide the redesign of the program and inform the creation of partner programs thereby enhancing PD offerings for early childhood educators.

Acknowledgments

We thank our partner schools and teachers for making this work possible, the Sherman Family Foundation for supporting this critical work, and the Sherman Center for Early Learning in Urban Communities for funding this study. We also thank the Sherman Center faculty and staff who designed, implemented, and documented this program.

Disclosures

Conflict of Interest: The authors are affiliated with the Sherman Center for Early Learning in Urban Communities. However, the lead researchers were not involved in the design of the programs.

References

Ball, D. L., Simons, J., Wu, H., Simon, R., Whitehurst, G. J., & Yun, J. (2008). Chapter 5: Report of the Task Group on Teachers and Teacher Education. Washington, DC: United States Department of Education, National Mathematics Advisory Panel.

Basma, B., Savage, R. (2018). Teacher professional development and student literacy growth: A systematic review and meta-analysis. *Educ Psychol Rev* 30, 457–481. https://doi.org/10.1007/s10648-017-9416-4

Bocala, C. (2019, June). *Supporting districts' efforts to evaluate professional development.* IES: Regional Educational Laboratory Program. https://ies.ed.gov/ncee/rel/Products/Region/northeast/Blog/50178

Darling-Hammond, L., Hyler, M. E., Gardner, M. (2017). *Effective Teacher Professional Development*. Palo Alto, CA: Learning Policy Institute. https://doi.org/10.54300/122.311

Garrett, R., M. Citkowicz, and R. Williams. 2019. "How Responsive is a Teacher's Classroom Practice to Intervention? A Meta-Analysis of Randomized Field Studies." *Review of Research in Education* 43 (1): 106–137. doi:10.3102/0091732X19830634.

Guskey, T. R. (2002). Professional development and teacher change. *Teachers and Teaching: Theory and Practice*, 8(3/4), 381-391. https://doi.org/10.1080/13540600210000051

Dunn, A. & Gomez, V. (2023). Nonresponse rates on open-ended survey questions vary by demographic group, other factors. Pew Research Center. https://www.pewresearch.org/decoded/2023/03/07/nonresponse-rates-on-open-ended-survey-questions-vary-by-demographic-group-other-factors/

Hill, H.C. (2007). Fixing teacher professional development. Phi Delta Kappan, 90(7), 470-477. https://www.pdkmembers.org/members_online/publications/archive/pdf/k0903hil.pdf

Institute of Medicine (US) Committee on Planning a Continuing Health Professional Education Institute. Redesigning Continuing Education in the Health Professions. Washington (DC): National Academies Press (US); 2010. Appendix D, Continuing Education in Professional Fields Outside of Health Care. Available from: https://www.ncbi.nlm.nih.gov/books/NBK219812/

Kennedy, M.M. (2016). How does professional development improve teaching? *Review of Educational Research*, 86(4), 945–980. https://doi.org/10.3102/0034654315626800

Lindvall, J., Kirsten, N., Eriksson, K., Brehmer, D., & Ryve, A. (2023). Does the duration of professional development programs influence effects on instruction? An analysis of 174 lessons during a national-scale program. *European Journal of Teacher Education*, 1–19. https://doi.org/10.1080/02619768.2023.2198101

Maryland State Department of Education (2024, June). *Educator Licensure Overview*. https://baltimoreteachers.org/wp-content/uploads/2024/06/Educator-Licensure-Overview-for-BTU-BCPSS.pdf

Meyer, A., Kleinknecht, M., Richter, D. (2023). What makes online professional development effective? The effect of quality characteristics on teachers' satisfaction and changes in their professional practices. *Computers & Education*, 200, 104805. https://doi.org/10.1016/j.compedu.2023.104805

Newman, F.M., King, M.B., & Youngs, P. (2000). Professional development that addresses school capacity: Lessons from urban elementary schools. *American Journal of Education* 108(4), 259-299.

Scher, L. & O'Reilly, F. (2009) Professional development for K–12 math and science teachers: What do we really know? *Journal of Research on Educational Effectiveness*, 2(3), 209-249. https://doi.org/10.1080/19345740802641527

Schwartz, S. (2023, July). *Teacher professional development, explained*. Education Week. https://www.edweek.org/leadership/teacher-professional-development-explained/2023/07

Wilson, S.M., Rozelle, J. J., & Mikeska, J. N. (2011). Cacophony or embarrassment of riches: Building a system of support for quality teaching. *Journal of Teacher Education,* 62(4) 383–394. https://doi.org/10.1177/0022487111409416

Yoon, K. S., Duncan, T., Lee, S. W. Y., Scarloss, B., & Shapley, K. (2007). Reviewing the evidence on how teacher professional development affects student achievement (Issues & Answers Report, REL 2007—No. 033). Washington, DC: U.S. Department of Education, Institute of Education Sciences, National Center. for Education Evaluation and Regional Assistance, Regional Educational Laboratory Southwest. Retrieved from http://ies.ed.gov/ncee/edlabs/regions/southwest/pdf/REL_2007033.pdf