

Improving Quality for Child Care Centers in Greater Philadelphia: An Evaluation of Success By 6[®]

Final Report

Mallory Warner-Richter, M.P.P., Claire Lowe, B.A., Kathryn Tout, Ph.D., Dale Epstein, Ph.D., Weilin Li, Ph.D.



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Executive Summary

The Success By 6® (SB6) initiative is designed to support early care and education centers in improving and sustaining quality in Pennsylvania's Keystone STARS Quality Rating and Improvement System (QRIS).¹ Keystone STARS is a statewide QRIS that is comprised of four levels, STAR 1 through 4. Achieving high quality early care and education is a critical activity to promote positive development of children in Philadelphia and the nation, particularly for children from low-income families. SB6 was launched in 2007 by the United Way (UW) of Greater Philadelphia and Southern New Jersey with funding from the William Penn Foundation, United Way, and other community partners. Centers engaged in the 18 – 24 month initiative receive intensive technical assistance, program improvement funds, and other resources that target movement in Keystone STARS from a STAR 2 to a STAR 3. In addition, SB6 supports sustainability at the centers by offering leadership development as well as financial awards for centers that achieve a STAR 3 or 4.

SB6 is at a point in implementation that is ideal for reflection and evaluation. In the past eight years, SB6 has recruited 368 centers to participate in the initiative and has achieved an overall success rate (center movement to a STAR 3 or higher within 24 months of participation) of 60% regionally and 46% in Philadelphia. From the inception of SB6, the management team at UW, with partners from the Delaware Valley Association for the Education of Young Children (DVAEYC), Montgomery Early Learning Centers (MELC) and Saint Joseph's University, has engaged in shared decision-making and a continuous improvement process to revise and update service components in response to feedback from the centers that participate and the technical assistance consultants working in the field. To supplement this ongoing internal review of SB6 activities and progress, Child Trends was engaged in 2014 to conduct an evaluation of SB6 design, implementation and results. **The purpose of the SB6 evaluation report is to describe key findings and to offer a set of recommendations for SB6 stakeholders to consider for improvement. The report is intended to inform discussions about quality improvement within SB6 and nationally.**



Summary and Implications

The SB6 evaluation report examined implementation and outcomes using multiple perspectives and analytic techniques. The findings have implications for SB6 continuous quality improvement process and can inform the broader field of ECE quality improvement.

SB6 operates effectively, and is well-equipped to make changes for the future.

Results from interviews and surveys indicate that SB6, overall, has a strong set of collaborative partners. The management team has a history of making changes to SB6 as centers' needs have changed, or when improvements were required in SB6 operations. SB6 participants, particularly the center directors, are very satisfied with their experience and believe the quality of their center has improved as a result of participating in SB6. In recent years, SB6 partners have seen a shift in the needs of incoming centers. This perception was verified with evaluation data showing differences in the characteristics of directors and teachers from previous and current SB6 cohorts. New engagement and consultation strategies are needed to address the next generation of centers entering SB6 and to provide support to centers as they work to improve and sustain quality. In addition, Pennsylvania is considering a revision of the Keystone STARS standards. These newly revised standards may necessitate more significant changes to the quality improvement activities offered in SB6.

¹ Keystone STARS is an initiative of Pennsylvania's Office of Child Development and Early Learning (OCDEL).

TA consultants may need enhanced supervision and mentoring, opportunities to build skills and access to better tools to support their work with centers.

Across current and previous SB6 participants, satisfaction with TA consultants is very high. Yet, the analysis revealed specific concerns about the recruitment, selection, and training of TA consultants. First, 70% (seven out of 10) of SB6 partners reported that they would like TA consultants to have more experience with specific consultation topics (e.g., business practices). Four out of the 10 respondents also indicated that they encounter a limited pool of TA consultants when recruiting for new positions. Given recruitment challenges, it is important to provide closer supervision and mentoring as well as opportunities for professional development for TA consultants. Current TA consultants identified conflict resolution, business practices, managing change, and leadership/management as areas for their own professional development. As SB6 shifts to serving a more disadvantaged group of centers, TA consultants may identify additional training requests and tools that are needed to support their work.

Teachers have unique experiences in SB6, and it will be helpful to learn more about their needs.

Though current and previous SB6 teachers are generally positive about SB6, they report a less positive experience than directors. Though directors (not teachers) are typically the primary audience for SB6 services, TA consultants often work directly with teachers, and teacher buy-in, capacity to change their practices, and increase their education are critical to moving up in STARS. UW and the TA agencies would benefit from further assessment of how teachers' needs in SB6 might be the same or different than directors' needs in the TA process. For example, tools to measure "readiness to change" could be completed by teachers and then used as a way for TA consultants to tailor their approach with each teacher. Directors may also need new ways to communicate the expectations of teachers throughout the quality improvement process so that it incorporates teachers' ideas and goals.

The ERS are a focal point of SB6 consultation.

The evaluation team observed TA consultants working on the ERS or the learning environment in 75% of the observation cycles, a finding that is consistent with TA consultants' reports of the topics they spend time on with centers. As the ECE field shifts toward a greater emphasis on intentional teaching and interactions and their role in supporting children's development, it will be important to consider how to enhance SB6 consultation to include tools that measure and support these constructs. The pending revision of Keystone STARS standards will provide additional guidance. This revision process is intended to clarify how the STARS standards align with goals such as improved policies and procedures and promotion of child development outcomes. The SB6 model may need adjustments to support centers in meeting these revised quality indicators.

The data infrastructure of SB6 could benefit from an upgrade to a paperless system.

Administrative documents (e.g., contact logs, quarterly reports, PIF budgets) in SB6 are currently gathered and stored using paper and some electronic files (e.g., excel files and pdf's). The current structure is not set up to provide opportunities for easy tabulations and report-generation, particularly for documentation of consultation visits. Investment in a simple web-based data system to facilitate data entry across organizational partners and the SB6 management team is worth consideration.

Centers are improving, but further supports are needed to improve the move up rate.

The analysis of move up rates indicates that many centers are benefiting from participation in SB6. SB6 centers move up in STARS at a higher rate than a matched comparison group of centers. Centers also are improving their ERS scores *during* participation in SB6. Overall, however, about 50% of centers that participate in SB6 do not move up in STARS.

Data are not available to show how SB6 centers fare on all STARS standards above STAR 2 which limits the ability to understand move up rates completely. We can, however, use available data to draw some initial conclusions about why centers do not move up in STARS. For example, SB6 administrator and supervisor interviews and TA consultant surveys indicate that the most significant barrier to

moving up to STAR 3 is standards related to Career Lattice and Staff Qualifications. Data from the contact logs and interviews indicate that TA consultants spend a small portion (13%) of their time working with centers on staff development and qualifications. Because we have insufficient data on teacher and director education before and after SB6 participation, it is important to examine this area more closely and to track it over time to understand the options for supporting centers on this component of STARS. It may be possible to provide TA consultants with new strategies for working with centers on teacher development, recruitment and selection of teachers, and retention of high-quality teachers. Other opportunities such as scholarships for education and obtaining credit for training completed through SB6 should also be discussed as options for improving career lattice and qualifications.

Center size is an important factor to consider in SB6 consultation and STARS move up.

Center size emerged as a predictor of the STARS move up profiles of centers in SB6. The analyses indicate that large centers (those serving 100 or more children) were in the group that had the highest move up rates, despite having the same baseline ERS score as other groups. It will be helpful to look further into the role of center size in move up and when allocating TA hours and Program Improvement Fund (PIF) resources. Since both the amount of time with TA consultants and PIF awards are allotted based on the number of children or classrooms, large centers are receiving the most consultation time and financial awards. It is possible that large centers are allocating PIF funds and using TA time in a more effective way, or it's possible that they are simply improving because they have more resources. Further analysis of these questions is needed.

Lessons for the Field of ECE Quality Improvement

Though SB6 is a regional initiative with a focus on quality improvement in one state's QRIS, the lessons learned from the evaluation are valuable to share with the larger field of ECE quality improvement. The findings from the SB6 evaluation contribute to the limited knowledge about implementation and outcomes of quality improvement initiatives associated with QRIS. We highlight the following themes and implications for the field:

- 1. Effective implementation of quality improvement initiatives requires monitoring and flexibility to adjust policies and procedures.** Quality improvement initiatives underway nationally have structures similar to SB6. They involve multiple partners in the delivery of consultation, and they require coordination with a state or local QRIS that may have frequent changes in its own operations (e.g., changes in the QRIS quality standards) (Isner et al., 2011). The findings from SB6 highlight the importance of developing administration and management structures that can monitor activities in the field and develop solutions to implementation issues that arise. For example, as the needs of centers changed in recent SB6 cohorts, the management team developed a new feature – a readiness cohort – to address the challenges that center directors faced in engaging fully in the typical SB6 activities. The evaluation also revealed the importance of attending to data infrastructure and investing in a system that can facilitate entry and review of documentation and production of reports that can be used for monitoring and feedback about implementation.
- 2. Management structures that include key partners from the ECE system are important for quality improvement initiatives.** The SB6 management team includes representatives from United Way, the agencies delivering technical assistance and Keystone STARS (through the regional keys). The partners report that this structure supports regular communication and problem-solving and has allowed for adaptation of the initiative over time. The inclusion of this team is consistent with best practices in implementation.



- 3. Financial incentives are an important component of a quality improvement initiative.** SB6 provides substantial financial incentives through the provision of Program Improvement Funds, and centers also have access to STARS awards. The SB6 funds are used primarily to support the purchase of classroom materials and make some facility improvements. Because quality improvement funds in SB6 are packaged together with other supports such as consultation, it is impossible to isolate the effectiveness of financial incentives in improving classroom quality. However, nearly all directors agree that the funds are a critical tool in their quality improvement. And, it is likely that the materials that are purchased with the funds are supporting center improvements on the ERS. As quality improvement initiatives shift to include a focus on intentional teaching, it is important to consider how financial incentives can be used to promote improvements in the environment and in interactions with children.
- 4. Supporting the early care and education workforce is a key challenge for quality improvement initiatives.** Results from the SB6 evaluation indicate that TA consultants spend most of their time focusing on improvements in the learning environment. While some time is allocated to reviewing staff qualifications and career lattice levels, TA consultation is not designed for addressing workforce qualification issues. It is important to discuss how other meaningful workforce opportunities can be embedded in quality improvement initiatives. Scholarships for higher education, wage supplements, and credit-bearing training opportunities are options that could be tested but that would require additional investments.

Study Overview

The evaluation activities address research questions related to SB6 design, implementation and results:

SB6 Design: SB6 design includes the logic model and the activities conducted to support centers in quality improvement (i.e., the service model). Evaluation activities in this area assessed how the SB6 service model compares to other evidence-based models of quality improvement being used nationally. To facilitate the comparison, Child Trends² conducted a synthesis of the quality improvement literature—[A Blueprint of Early Care and Education Quality Improvement Initiatives](#)—and used the Blueprint as a structure for examining SB6 design and identifying strengths and areas for improvement. The results of the analysis are available in the Program Design Appendix (see www.childtrends.org).

SB6 Implementation: SB6 implementation includes the fidelity and consistency with which SB6 activities are delivered to centers. Evaluation activities in this area assessed the services provided, the perceptions of the center directors and teachers participating in the activities, and the experiences of the technical assistance consultants delivering the services.

SB6 Results: SB6 results refers to its success rate, documented as the percentage of centers served that move from a STAR 2 to a STAR 3 within 24 months. Evaluation activities in this area assessed how SB6 services are related to outcomes as well as the predictors of success and sustained quality improvement.

Method

The evaluation included data from multiple sources:

- surveys of 132 directors and 114 teachers working in centers served by SB6 (either currently or in the past²),
- 14 interviews with members of the SB6 management team,

² For this report, Cohorts 5-13 (program start dates July 2009 – July 2013) were considered previous participants. Cohorts 14-15 (program start dates which began in January 2014 – July 2015) were considered current participants.

- 18 on-site observations of SB6 technical assistance (TA) consultants working directly in centers,
- document review of 365 contact logs with details about TA consultants' contacts with 17 centers,
- census data to understand the community context of SB6 centers, and
- center-level Keystone STARS data obtained from the Pennsylvania Office of Child Development and Early Learning.

The STARS data included information about STARS rating, STARS technical assistance, and financial awards from over 300 centers. The census data and Keystone STARS data were used to create a matched comparison group of 153 centers in the Philadelphia region which had characteristics similar to SB6 centers but had not received SB6 services (non-SB6 centers).³

Interviews, surveys, contact logs, and observation data were analyzed and coded to provide insights into the fidelity and consistency of service delivery in SB6 including strengths and areas for improvement.

Multivariate statistical analyses were conducted to examine the “move up” rate for SB6 centers compared to the matched non-SB6 centers.⁴ To acknowledge the possibility that individual centers may have different facilitators and barriers to increasing quality in Keystone STARS, four “profiles” of centers were created and their patterns of move up and observed quality on the Environment Rating Scales (ERS) were compared.⁵

Results

Community Context of SB6 Centers: When interpreting the evaluation results, it is important to understand the communities in which SB6 centers are located. SB6 centers analyzed for this study were situated in a diverse mix of communities that serve low-income and middle-income families. In the areas served by SB6 in greater Philadelphia, the average unemployment rate was 12%, and 12% of families lived below the poverty level. The majority (63%) of residents were white, and a quarter (28%) of residents were black. Working families surrounding SB6 centers had a median income of about \$60,000. There are notable differences, however, in the demographics of centers in Philadelphia relative to the three surrounding suburban counties. In Philadelphia county, unemployment was at 13%, 15% of families live below the poverty level, 38% of the residents were black, and the median income was \$48,000.

Change in Center Participants across SB6 Cohorts: Directors and teachers participating in current SB6 cohorts differ in important ways from those who participated previously in SB6. In general, current participants are more disadvantaged than previous SB6 participants. For example, current SB6 directors report working fewer hours per week (34 vs. 44), and have lower annual salaries than previous SB6 directors (\$32,000 vs. \$52,000). Current SB6 teachers are much more likely than previous teachers to have a high school diploma as their highest level of education (24% vs. 0%). Similarly, current teachers are less likely to have a bachelor's degree than previous SB6 teachers (19% vs. 37%). The SB6 management team has adjusted the SB6 service model to address the challenges of centers in recent cohorts, but further adjustments may be needed to support new entrants to SB6.

Implementation Results: TA consultants averaged 3.4 hours per visit and reported visiting centers once or twice per month. While at the center, TA consultants were observed to use a variety of strategies in their work with directors and teachers: gathering information by answering and asking questions (observed in 64% of the 15-minute observation cycles); giving feedback and recommendations (59% of cycles); relationship building (39% of cycles); conducting observations

³ Propensity score matching was used to create the comparison group.

⁴ Two statistical techniques were employed to compare move up rates: multivariate logistic regression models and a survival analysis.

⁵ Latent profile analysis was used to create the four groups.

(34% of cycles); setting goals (24% of cycles); and modeling (9% of cycles). TA consultants reported that relationship-building is the most important strategy they use. TA consultants reported spending the most time with centers on topics related to the Environment Rating Scales, child observation, curriculum and assessment, business practices, and continuous quality improvement. TA consultants reported that the ERS results are the most useful tool they use in quality improvement, followed by the SB6 Service Plan (a jointly developed plan for improvement structured around the Keystone STARS quality standards) and Program Improvement Funds. All TA consultants reported that they have positive relationships with the centers they serve and believed that SB6 is beneficial for centers. However, the majority of TA consultants only somewhat agreed that their time with centers is spent efficiently and that centers respond to them in a timely manner. While 8 of 13 TA consultants reported mostly following the SB6 technical assistance guide in their work, five reported following about half of the model and making their own modifications.

Directors participating in SB6 (either currently or previously) reported having a very positive impression of SB6 (78% and 91% respectively). Nearly all (94%) of directors previously in SB6 agreed that their center is higher quality as a result of participating in SB6, compared to 67% of directors who are still in process with SB6. Current and previous SB6 directors reported that the SB6 TA consultation and Program Improvement Funds are/were the most helpful in achieving their Service Plan goals. Current and previous SB6 directors generally reported being very satisfied with the various SB6 activities. Among previous SB6 directors, however, lower satisfaction levels (“somewhat satisfied”) or reports of “no opinion” or “not applicable” were noted for Directors’ Learning Circles, Peer Learning Circles, and Institute for Family Professionals Courses.

Teachers participating in SB6 (either currently or previously) also reported positive impressions of SB6 though teachers are overall less positive than directors. For example, 63% of current SB6 teachers and 47% of previous SB6 teachers reported that they have a very positive impression of SB6. (Interestingly, current teachers have more positive impressions than previous teachers, while the reverse is true of directors.) Teachers (current and previous) reported lower levels of satisfaction (“somewhat satisfied” or “somewhat dissatisfied”) or “no opinion” of SB6 activities. About two thirds (64%) of previous SB6 teachers agreed that their center is higher quality as a result of participating in SB6 compared to 47% of teachers currently participating in SB6.

Across TA consultants, directors and teachers, the results suggest that implementation of SB6 has a number of strengths but also opportunities for improvements.

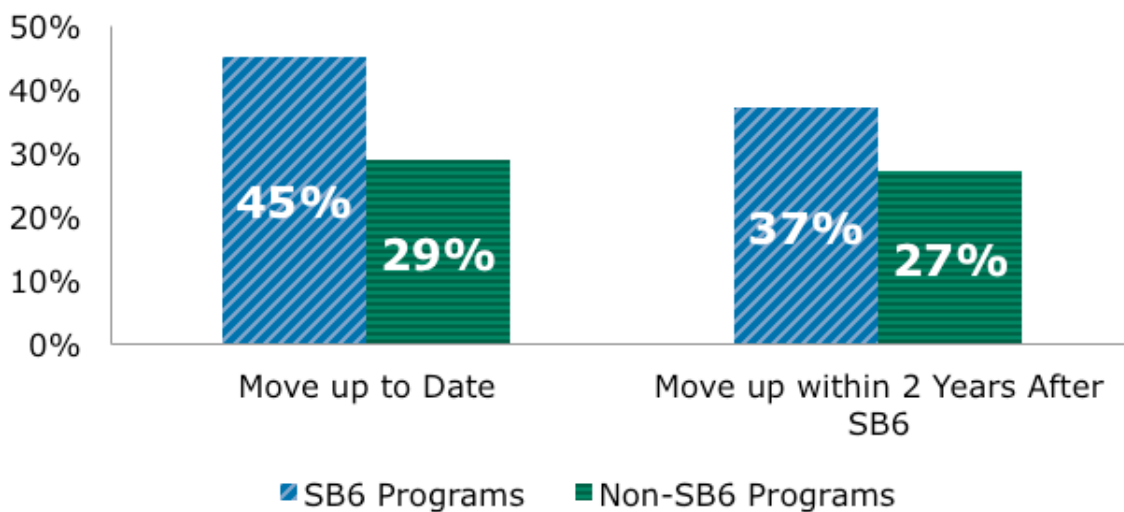
- Teachers have a different experience than directors in the quality improvement process. The SB6 management team and TA consultants could benefit from a better understanding of the motivations and needs of teachers in the quality improvement process and how they differ from directors’ needs. TA consultants may need additional strategies to increase teachers’ positive perceptions of SB6.
- Strategies are needed to increase the efficiency of TA consultant time spent at centers. The SB6 management team may want to shadow TA consultants on visits over a defined period and then convene a meeting with them to reflect together on their observations and discuss opportunities for improvement.
- It is important to understand the variations in the consultation model that TA consultants reported and whether the variations are supporting SB6 goals. The SB6 management team may need to provide updated training and refresh the consultation model to ensure that it is providing a strong foundation for consultation. This review should also include a review of contact log content and procedures for completing Service Plans.
- Enhancements are needed to improve uptake of and satisfaction with Directors’ Learning Circles and Peer Learning Circles. A new format and/or new content may be helpful for increasing interest in these activities among SB6 participants. Alternatively, the SB6 management team may want to consider developing new opportunities or enhancing existing TA consultation to replace the learning circles for some participants.

Implementation Summary: SB6 has been operating effectively with high levels of satisfaction from participants. Areas for improvement include increasing efficiency of TA consultant time, increasing fidelity to the service model and service documentation, and revisiting the purpose and structure of the learning circles for directors and teachers.

Outcomes Results: The SB6 management team tracks the “move up” rate of SB6 centers. However, the tracking process doesn’t allow a comparison of move up rates between SB6 centers and centers that are similar but have not enrolled in SB6. The evaluation team used administrative data from Keystone STARS to identify a matched comparison group of centers. The results indicate that SB6 centers, to date, were more likely to move up in STARS than the comparison group (45% vs. 29%).⁶ The probability of moving up within two years⁷ of completing SB6 was also higher for SB6 participants (37% vs. 27%).

A second analysis was conducted to identify unique profiles of SB6 centers. Center size, years enrolled in Keystone STARS, and participation in STARS TA were defining characteristics between the four profiles that were identified. The first group was medium sized SB6 centers that had also participated in STARS TA (i.e., Medium/TA). SB6 centers that hadn’t participated in STARS TA were a second group (i.e., No STARS TA). The third group had fewer years in STARS than other groups, and was made up of current SB6 participants (i.e., Current Centers). The fourth group was a mix of small and large SB6 centers that had also participated in STARS TA (i.e., Small + Large/TA). As expected, the “Current Centers” group had low move up rates (7%) because they are still participating in SB6. The “Medium/TA” centers moved up in STARS at a higher rate than “No STARS TA” centers (52% vs. 42%). Small + Large/TA centers had the highest move up rate (63%).

Figure 1: Percentage of Centers Moving Up* from a STAR 2 in Keystone STARS



Source: Child Trends’ analysis of Keystone STARS administrative data obtained from OCDEL, April 30, 2015.

*Percentages represent predicted probability of moving up after controlling for years in STARS, enrolled in STARS before or after 2009, center size, receipt of STARS TA and awards, and census demographics.

Outcomes Summary: Overall, the outcome results indicate that SB6 is successful in moving centers from a STAR 2 to a STAR 3. SB6 provides a 16 percentage point “move up” boost to centers that participate. The profile analyses suggest that factors such as center size play a role in the quality improvement process and are worth attending to in SB6 policies and practices. The results also reflect the challenges of quality improvement for many centers, even when they have access to supports.

⁶ SB6 centers were matched with similar centers based on their tenure in Keystone STARS (as one matching factor). “To Date” moving up in STARS indicates whether a center moved from a STAR 2 to a STAR 3 or above at some point since enrolling in STARS. This timeframe varies and begins when the center entered STARS and ends in April 2015 when the data were obtained.

⁷ For SB6 centers, move up within two years was calculated by adding 24 months to the date after they completed SB6 (which typically takes 18 months). For the comparison group, this move up metric was calculated by adding 3.5 years from their first STAR 2 rating. This was approximately equivalent to the 18 months plus 24 months post-SB6 for the treatment group.

INTRODUCTION

The Success By 6® (SB6) initiative is designed to support early care and education centers in improving and sustaining quality in Pennsylvania's Keystone STARS Quality Rating and Improvement System (QRIS).⁸ Keystone STARS is a statewide QRIS that is comprised of four levels, STAR 1 through 4. Achieving high quality early care and education is a critical activity to promote positive development of children in Philadelphia and the nation, particularly for children from low-income families. SB6 was launched in 2007 by the United Way (UW) of Greater Philadelphia and Southern New Jersey with funding from the William Penn Foundation, United Way, and other community partners. Centers engaged in the 18 – 24 month initiative receive intensive technical assistance, program improvement funds, and other resources that target movement in Keystone STARS from a STAR 2 to a STAR 3. In addition, SB6 supports sustainability at the centers by offering leadership development as well as financial awards for centers that achieve a STAR 3 or 4.



SB6 is at a point in implementation that is ideal for reflection and evaluation. In the past eight years, SB6 has recruited 368 centers to participate in the initiative and has achieved an overall success rate of 60% regionally and 46% in Philadelphia. From the inception of SB6, the management team at UW, with partners from the Delaware Valley Association for the Education of Young Children (DVAEYC), Montgomery Early Learning Centers (MELC) and Saint Joseph's University, has engaged in shared decision-making and a continuous improvement process to revise and update service components in response to feedback from the centers that participate and the technical assistance consultants working in the field. To supplement this ongoing internal review of SB6 activities and progress, Child Trends was engaged in 2014 to conduct an evaluation of SB6 design, implementation and results. **The purpose of the SB6 evaluation report is to describe key findings and to offer a set of recommendations for SB6 stakeholders to consider for improvement. The report is intended to inform discussions about quality improvement within SB6 and nationally.**

The report is structured to provide key themes and findings from the evaluation with minimal description about the methods and analyses. A technical appendix (available at www.childtrends.org) accompanies the report and provides more information and details. The main report includes the following:

- background information about quality improvement initiatives similar to SB6 and what is known nationally and in Pennsylvania about movement up the quality levels in a QRIS,
- a description of SB6 and its components (including a logic model),
- a brief overview of the evaluation questions and methods,
- evaluation findings related to SB6 design, implementation and success rate, and
- a synthesis of key themes and recommendations.

In addition to the SB6 evaluation report, the Child Trends' team produced a research synthesis examining the correlates of effective quality improvement. [A Blueprint of Early Care and Education Quality Improvement Initiatives](#) (Tout, Epstein, Soli & Lowe, 2015) described QI practices and design

⁸ Keystone STARS is an initiative of Pennsylvania's Office of Child Development and Early Learning (OCDEL).

considerations that are linked to QI initiatives that achieve positive outcomes. The Blueprint provided a structure for examining SB6 design and identifying strengths and areas for improvement. The results of the analysis are available in the Program Design Appendix (see www.childtrends.org).

BACKGROUND

Nationally, early care and education (ECE) quality improvement (QI) initiatives similar to SB6 have become common as the number of state and local QRIS have grown. Quality improvement in the context of a QRIS has features that distinguish it from other QI initiatives documented in the research literature (Tout, Epstein, Soli & Lowe, 2015). Notably, QI in a QRIS typically combines multiple components (for example, financial incentives, on-site technical assistance, and access to other professional development opportunities) and addresses multiple levels (director, classroom and teacher) to improve overall ECE program quality as defined by the QRIS. Other QI initiatives may focus on a more specific aspect of quality such as implementation of a particular curriculum or teachers' practices to support early literacy (Akers & Aikens, 2011; Isner et al., 2011). The research literature on QI initiatives is limited because the initiatives are relatively new, and the study designs do not permit examination of the individual components of the initiatives. Features such as financial incentives, coaching, other technical assistance, and access to training are examined as a "package" without the option to isolate the effectiveness of particular features within the package (Boller, Tarrant, & Schaack, 2014).



The small literature on QI in QRIS indicates that early care and education programs generally move up the quality levels or tiers when receiving technical assistance or other supports.⁹ In addition, studies find changes in observed quality using measures such as the suite of Environment Rating Scales (ERS; Harms, Clifford & Cryer, 1998) and the Classroom Assessment and Scoring System (CLASS; Pianta, La Paro, & Hamre, 2008) as programs participate in a QRIS, though the changes are small and may not include all domains (for example, programs in Minnesota made gains on the ERS and on the Emotional Support and Classroom Organization domains of the CLASS, but not the Instructional Support domain; Tout et al., 2011). A rigorous evaluation in Washington State noted changes in ERS scores as a result of program participation in the pilot QRIS (including receipt of technical assistance) but no change in overall QRIS levels (which also included components related to teacher experience and education).

In Pennsylvania, the Office of Child Development and Early Learning (OCDEL) has tracked movement among ECE programs¹⁰ in Keystone STARS and related it to technical assistance received by the programs (OCDEL, 2011; OCDEL, 2013). OCDEL provides a variety of technical assistance (TA) opportunities on topics such as health and safety, inclusion, infants and toddlers, and dual language learners in addition to the topics covered through STARS TA. An analysis of data from 2011-2012 revealed different rates of movement related to receipt of technical assistance. Just under 50% of ECE programs rated in Keystone STARS and receiving STARS technical assistance (TA) moved up compared to 22% of a matched sample of rated programs that did not receive TA (OCDEL, 2013). Additional analysis revealed higher "move up" rates for programs at lower star levels (including Start with STARS, STAR 1 and STAR 2) compared to higher levels (STAR 3 and STAR 4). Without STARS TA, the move up rate for STAR 2 programs in Keystone STARS is 14% compared to 41% of STAR 2 programs receiving STARS TA. At STAR 1, the move up rate for programs without STARS TA is 11% compared to 57% of programs with STARS TA. The findings underscore the positive role that TA can

⁹ See, for example, reports from Minnesota (Tout et al, 2011), Oregon (Lipscomb, 2012), Palm Beach (Shen, Tackett, & Ma, 2009) and Washington (Boller et al., 2010).

¹⁰ The OCDEL analyses included both center-based and family child care programs.

play in quality improvement, though limitations of the analysis are important to acknowledge.¹¹ To our knowledge, Pennsylvania is the only state to date to report on move up rates in a QRIS. Given the limited literature, this evaluation report makes a significant contribution to the body of evidence on QI initiatives in QRIS.

Success By 6[®] Service Components

Success By 6[®] targets early care and education centers in Philadelphia and the surrounding region. The ultimate goal of the initiative is to improve kindergarten readiness by supporting improved and sustained quality, particularly among centers in high-need neighborhoods. Services are provided to help centers move from a STAR 2 to a STAR 3 in Keystone STARS.

SB6 is implemented through the United Way of Greater Philadelphia and Southern New Jersey (UW) in collaboration with four partners: the Delaware Valley Association for the Education of Young Children (DVAEYC), Montgomery Early Learning Centers (MELC), Saint Joseph's University, and Stamm Consultancy, Inc. The SB6 Management Team includes the implementation partners as well as the Southeast and South Central Regional Keys.

A set of services are offered to centers participating in SB6 to help the center achieve a Keystone STAR 3 rating:

- The center receives two Environment Rating Scale (ERS) observations (the ECERS-R for preschool classrooms and the ITERS-R for infant and toddler classrooms) which assess the daily routines, health and safety provisions and learning environment in classrooms. To achieve a STAR 3 in Keystone STARS, the center must achieve an average facility score of 4.25 (out of 7.0) across all sampled classrooms. The SB6 ERS observations are conducted by staff from Saint Joseph's University, and results are shared with the technical assistance (TA) consultant assigned to the center.
- The center receives intensive on-site technical assistance for 2-5 hours per week (approximately 8-22 hours per month), depending on center size. After conducting a needs assessment and working collaboratively with the center director, the TA consultant develops a Service Plan that provides guidance for the joint work the TA consultant does with the center. The plan focuses on each of the four areas of Keystone STARS standards: Director and Staff Qualifications, Learning Environments, Strengthening Community Partnerships, and Leadership/Management.
- The center receives Program Improvement Funds (PIF) averaging \$10,000 to purchase materials, equipment, and/or professional development to improve the quality. The TA consultant works collaboratively with the center director to develop a PIF budget that corresponds to items in the Service Plan. The PIF may not be used to cover general operating expenses that a center may have.
- The center director can participate in Director Learning Circles which are bi-monthly leadership development groups for directors to develop best practices, problem-solve and share experiences with other directors. One goal of the Director Learning Circles is to support the director in her role as a change agent in the center.

After participation in SB6 and achievement of STAR 3, centers are eligible for the following supports to help them maintain high quality:

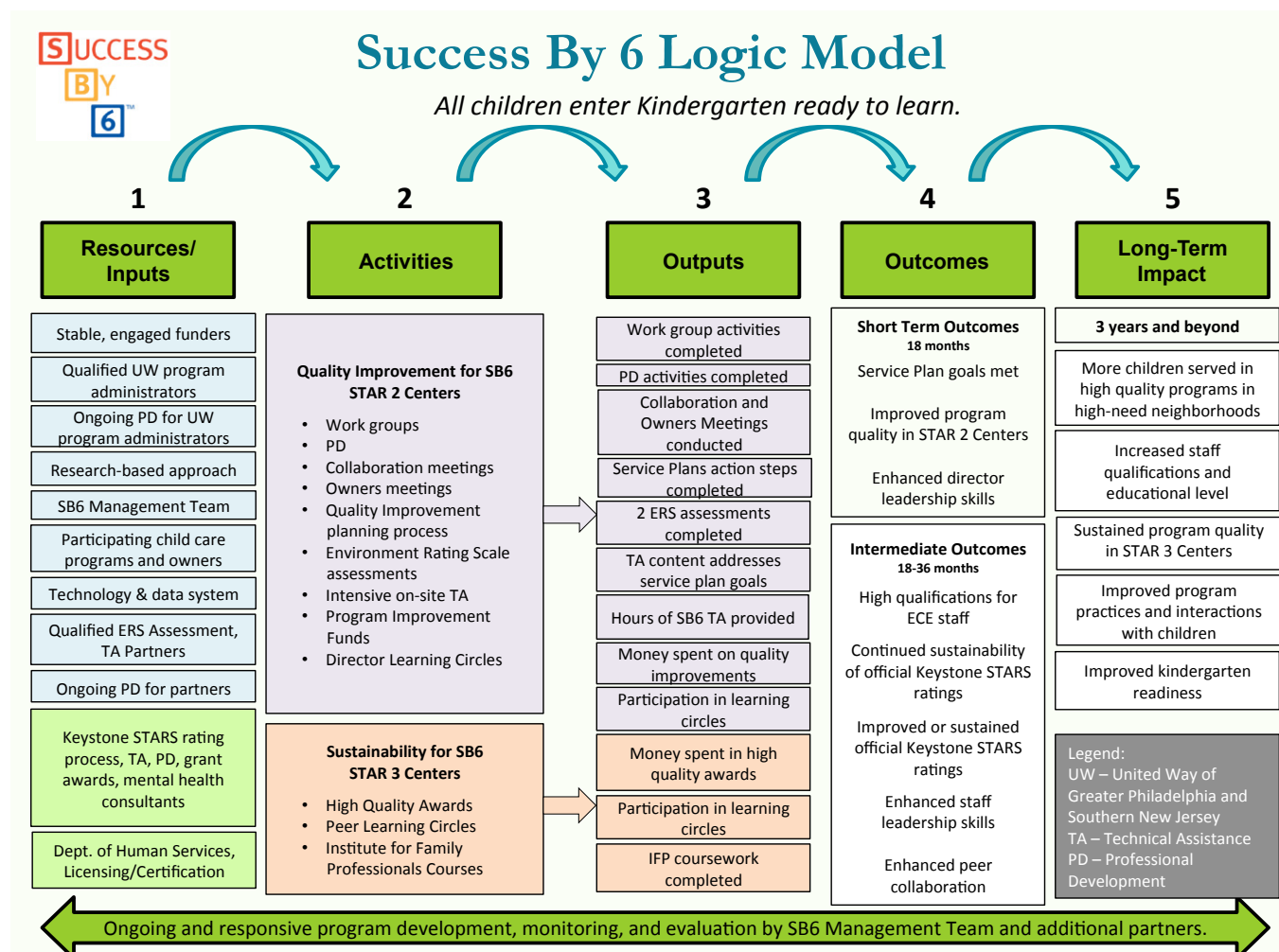
- The center can receive a High Quality Award averaging \$5,000 to help offset the additional costs of maintaining a high quality center.

¹¹ The matching variables used in the OCDEL analysis include program type, STAR level, county and time in Keystone STARS. Other unmatched characteristics may be related to the propensity to move up in STARS. For example, seeking out STARS TA may reflect other program resources and capacities that support move up in addition to the facilitation by STARS TA. Thus, no causal link between STARS TA and move up should be inferred.

- The director can participate in Peer Learning Circles which are monthly leadership groups that provide directors with peer support, sharing of best practices and higher level peer learning opportunities.
- The center has access to Institute for Family Professionals Courses for directors and teachers to enhance their child development skills and knowledge and learn about the impact of trauma on young children.

Figure 2 depicts the logic model for SB6. It highlights the quality improvement and sustainability supports provided to centers and their intended role in promoting short-term, intermediate, and long-term outcomes for centers in SB6.

Figure 2: Logic Model for Success By 6®



Some centers may be eager to participate in SB6 but may not have the capacity to engage fully in the activities. To support these centers, SB6 initiated a pilot establishing a “readiness” cohort. Centers in the readiness cohort receive support with licensing compliance, leadership, business practices, and meeting director and staff qualifications before starting SB6.

Moving from a STAR 2 to a STAR 3 in Keystone STARS

Moving from a STAR 2 to a STAR 3 in Keystone STARS requires demonstration of STARS standards that are significantly more challenging for centers to meet. Table 1 provides an overview of how STARS standards change at STAR 2 to STAR 3.¹² The table contains only the indicators that are added or made more challenging at STAR 3. The table does not include indicators that are the same at STAR 2 and STAR 3.

Table 1: Overview of how Keystone STARS center requirements differ between STAR 2 and STAR 3

	STAR 2	STAR 3
Director qualifications and professional development	<p>15 annual clock hours of professional development</p> <p>Annually participate in 1 professional growth activity</p>	<p>21 annual clock hours of professional development</p> <p>Director meets Level V or above on career lattice.</p> <p>Director completes the PA Director's Credential</p> <p>Annually participate in 2 professional growth activities</p>
Staff qualifications and professional development	<p>50% of teachers meet Level V or above on career lattice; 50% of assistant teachers meet Level II or above, 100% of aides meet Level I or above</p> <p>1 staff member from each classroom must have pediatric first aid certification</p> <p>12 annual clock hours of professional development for each staff member</p> <p>All staff must attend two hours of professional development annually on child observation, inclusive practices and/or ERS</p>	<p>100% of teachers meet Level V on career lattice; 75% of assistant teachers meet Level III or above, 25% of aides meet Level II or above</p> <p>All staff from each classroom must have pediatric first aid certification</p> <p>18 annual clock hours of professional development for each teacher/assistant teacher; 12 annual clock hours of professional development for each aide (same as STAR 2)</p> <p>Teachers and assistant teachers must attend at least two hours of professional development annually on curriculum, program or child assessment, the age-appropriate Learning Standards and/or ERS</p> <p>Annually all staff participate in 1 professional growth activity</p>
Learning Program – Child observation/ curriculum/ assessment		<p>Implement a learning curriculum that incorporates the Learning Standards, including a written curriculum statement</p> <p>Based on ongoing child observations, developmentally appropriate authentic assessments of the child are completed and reported electronically into an OCDEL approved assessment tool following the tool's specified timeframes</p> <p>Results from authentic assessments are used for curriculum, individual child planning, and referral to community resources.</p>

¹² Specific details about STARS standards can be found at http://www.pakeys.org/pages/get.aspx?page=programs_stars

	STAR 2	STAR 3
Learning program – Environment Rating Scale scores	<p>ERS self-assessment by director or staff member with approved ERS professional development</p> <p>A written improvement plan is developed to address any ERS subscale score below a 3.0</p>	<p>ERS self-assessment by director or staff member with approved ERS professional development</p> <p>Center achieves an average facility ERS score of 4.25 across all classrooms. ERS is conducted by a STARS ERS assessor</p> <p>Each classroom must have an ERS score no lower than a 3.5</p> <p>A written improvement plan is developed to address any ERS subscale score below a 3.5</p>
Partnerships with families and communities – Community resources/family involvement	<p>A minimum of one family conference is offered per year to discuss the child's progress and behavioral, social and physical needs</p>	<p>A minimum of two family conferences are offered per year to discuss the child's progress and behavioral, social and physical needs. Authentic assessments of the child are shared with the family a minimum of two times per year.</p> <p>A plan is written and implemented describing procedures to refer families to appropriate social, mental health, educational, wellness, and medical services.</p> <p>Coordinate a minimum of one annual group activity to involve families in meeting program learning goals.</p>
Partnerships with families and communities – Transition		<p>Families are offered a group meeting to provide information regarding a child's transition to another classroom or higher educational setting and to encourage families and their children to connect to the school setting by visiting.</p> <p>Program sends letter of introduction to appropriate community/school stakeholders outlining goal to partner in child transitioning efforts from child care to school setting.</p> <p>Program participates in community/school transition activities as available</p>
Leadership and management – Business practices		<p>A policy and procedure manual is developed and is available to the staff at all times</p> <p>A financial system with quarterly comparisons of expenses to revenue is implemented</p> <p>The program creates a mission statement.</p>
Leadership and management – Continuous quality improvement		<p>Provider develops and implements a Continuous Quality Improvement Plan using multiple sources</p>
Leadership and management – Staff communication and support		<p>Teachers and Assistant Teachers are provided at least two hours per month of paid curriculum and lesson planning/preparation time away from children</p> <p>Annually, at least two classroom observations are conducted and feedback regarding job performance is provided to the staff member</p> <p>Annual performance evaluation provided in written format to employee.</p>

	STAR 2	STAR 3
Leadership and management – Employee compensation	At least 2 employee benefits given to staff	At least 3 employee benefits given to staff, and explained in the Policy and Procedure Manual. A salary scale based on level of education/ training, and years of ECE experience is documented

Source: Keystone STARS worksheets for STAR 2 and STAR 3 <http://www.pakeys.org/pages/starsDocs.aspx>

As shown in Table 1, the requirements for STAR 3 increase significantly in the areas of director and staff qualifications and the learning program. For example, Level V on the Career Lattice is an Associate's degree in ECE or equivalent or a Bachelor's degree in an unrelated degree with 30 credits of ECE. A primary purpose of SB6 is to assist center directors and staff in understanding the new requirements at STAR 3 and providing resources to help them achieve the quality indicators.

Keystone STARS has TA specialists available to provide support to centers. SB6 is intended to supplement STARS TA and to go beyond the resources STARS TA can provide. It is not intended to provide duplicative services. When a center participates in SB6, the director is encouraged to access STARS TA for services not provided by SB6.

STUDY OVERVIEW

The evaluation activities address research questions related to SB6 design, implementation and results:

- 1. SB6 Design:** SB6 design includes the logic model and the activities conducted to support centers in quality improvement (i.e., the service model). Evaluation activities in this area assess how the SB6 service model compares to other evidence-based models of quality improvement being used nationally and possible changes that could be recommended for improvement. To facilitate the comparison, Child Trends' conducted a synthesis of the quality improvement literature – [A Blueprint of Early Care and Education Quality Improvement Initiatives](#) – and used the Blueprint as a structure for examining SB6 design and identifying strengths and areas for improvement. The results of the analysis are available in the Program Design Appendix (see www.childtrends.org).
- 2. SB6 Implementation:** SB6 implementation includes the fidelity and consistency with which SB6 activities are delivered to centers. Evaluation activities in this area assess the perceptions of the center directors and teachers participating in the activities, and the experiences of the technical assistance consultants delivering the services. Assessing implementation provides a context for interpreting SB6 outcomes and developing practical recommendations for improvement. Multiple implementation questions were addressed:
 - What is the community context in which SB6 is being implemented?
 - To what extent is SB6 implemented with fidelity to its design?
 - How satisfied are directors and teachers with their SB6 experience?
 - How have the characteristics of center staff changed across cohorts?



- How well do implementation partners collaborate in SB6?
- What are future implementation challenges and opportunities?

3. SB6 Results: SB6 results refers to the success rate of the initiative, documented as the percentage of centers served that move from a STAR 2 to a STAR 3 within 24 months. Evaluation questions assess how SB6 services are related to outcomes and the predictors of success and sustained quality improvement:

- Compared to centers with similar characteristics, does participation in SB6 increase the likelihood that centers will move up in STARS?
- What are the characteristics of centers that succeed in moving up in STARS by participating in SB6?
- How do ERS scores change for the centers participating in SB6?
- How does the move up rate in SB6 compare to other quality improvement initiatives?
- What are additional ways to measure SB6 results that are not currently being used?

The Child Trends team utilized a mixed methods approach for the evaluation. Data sources included: 14 interviews with SB6 management team, 18 observations of TA consultation sessions, 260 surveys of current and previous SB6 participants, analysis of UW administrative data (including regular reports submitted by SB6 partners and 365 contact logs with details about TA consultants' contacts with 17 centers), review of SB6 administrative and policy documents (e.g., a document providing written guidelines for SB6 technical assistance), census data on the neighborhood locations of SB6 centers, and Keystone STARS administrative data from Pennsylvania's Office of Child Development and Early Learning (OCDEL).

The STARS data included information about STARS rating, STARS technical assistance, and financial awards from over 300 centers. The census data and Keystone STARS data were used to create a matched comparison group of 153 centers in the Philadelphia region which had characteristics similar to SB6 centers but had not received SB6 services (non-SB6 centers).¹³

Interviews, surveys, contact logs and observation data were analyzed and coded to provide insights into the fidelity and consistency of service delivery in SB6 including strengths and areas for improvement.

Multivariate statistical analyses were conducted to examine the "move up" rate for SB6 centers compared to the matched non-SB6 centers.¹⁴ To acknowledge the possibility that individual centers may have different facilitators and barriers to increasing quality in Keystone STARS, four "profiles" of centers were created and their patterns of move up and observed quality on the Environment Rating Scales (ERS) were compared.¹⁵

SB6 is delivered to centers using a cohort approach in which centers apply and begin SB6 in a small group at set dates in the year (January and July). Because SB6 service components changed substantially between cohorts 4 and 5 of SB6, the evaluation team focused on SB6 participants and results from cohorts 5 – 16 (with cohort start dates spanning from July, 2009 through January, 2015). Details about the data collected and coded for each cohort are included in the Technical Appendix.

¹³ Propensity score matching was used to create the comparison group.

¹⁴ Two statistical techniques were employed to compare move up rates: multivariate logistic regression models and a survival analysis.

¹⁵ Latent profile analysis was used to create the four groups.

KEY FINDINGS

SB6 Implementation Results

To understand implementation of SB6, Child Trends synthesized findings across the SB6 service components from the perspective of the SB6 management team, TA consultants, and center participants (directors and teachers).

What is the community context in which SB6 is being implemented?

Understanding the context of communities served by SB6 is critical to understanding SB6 implementation and outcomes. SB6 serves centers in four counties including and surrounding Philadelphia. Centers vary in the number and ages of children served and the neighborhoods in which they are located. Addresses for the centers in our sample were used to identify key census demographic characteristics of the area surrounding the center. Across the four counties served by SB6, the average unemployment rate was 12% unemployment, and 12% of families lived below the poverty level. The majority (63%) of residents were white, and a quarter (28%) of residents were black. Working families surrounding SB6 centers had a median income of about \$60,000. There were notable differences, however, in the demographics of centers in Philadelphia relative to the three surrounding suburban counties. In Philadelphia county, unemployment was at 13%, 15% of families live below the poverty level, 38% of the residents were black, and the median income was \$48,000.

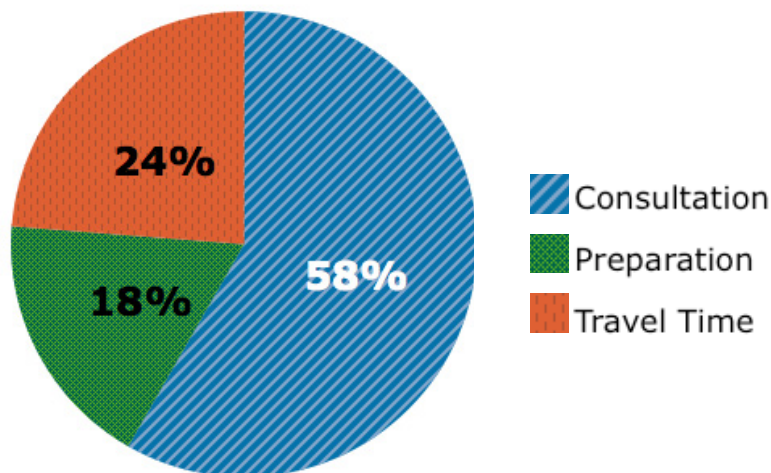
Overall, SB6 centers are situated in neighborhoods that are diverse and include a mix of low-income and middle-income families.

To what extent is SB6 implemented with fidelity to its design?

To assess the degree to which SB6 is being implemented as designed, we conducted observations of TA consultation, and analyzed contact logs, surveys of TA consultants and participants, and PIF budgets.



Figure 3: Allocation of TA Consultant Time Across Across a Contact with an SB6 Center



Source. Analysis of SB6 Contact Logs for 17 centers

Contact Logs

Contact logs completed by the TA consultant after a visit offer one lens on fidelity and consistency of delivery of SB6 services. According to the analysis of over 350 contact logs of selected centers, the primary TA consultant assigned to the center visited an average of 21 times (range, 10–43) and spent an average of 3.4 hours on site per visit. TA consultants also spent an additional one hour of prep time per visit, and travel time added 1.4 hours per visit. Figure 3 displays the average allocation of time across a visit with a center. The majority of time (58%) was allocated to consultation; 18% was allocated to preparation for the visit, and about one-quarter (24%) was allocated to travel.

Nearly all TA contacts were coded as face-to-face visits (98%). In just over half of the contacts (52%), the progress of centers was categorized by the TA consultant as “on schedule” to meet Service Plan goals, as opposed to “in progress” or “some progress”. Topics and activities engaged in during visits were summarized as covering ERS-related topics (64% of visits), classroom visits by the TA consultant (29% of visits), conducting observations (21% of visits), completing paperwork (17% of visits), working on the Service Plan/goal setting (15% of visits), working with a STARS specialist (13% of visits), relationship building (11% of visits) and working on PIF budgets (11% of visits).

Summary: TA consultants spent time in face-to-face visits with centers, focusing mostly on ERS-related topics. In half of the visits, the center was on schedule to meet their goals.

Observations

Child Trends’ observations of TA consultation during 18 center visits offered a second source of data about fidelity and consistency. The findings generally aligned with information from the contact logs and highlighted how the activities and content in a TA visit vary from center to center. The primary goal for the visits as captured by the observer was ERS-related (3 visits), relationship-building (3 visits) and Service Plan development/goal setting (3 visits), with other goals noted for six centers and no primary goal identified for three center visits. Observers rated the TA consultants in one-third of the visits as being very successful in setting clearly defined goals for the visit, and 44% of visits had consultants who were rated as very successful in using time efficiently during the visit.

The nature of problem solving during the visit also varied. Child Trends observers rated TA consultants in 39% of the visits as being very successful in collaboratively generating solutions to problems. In 17% of the visits, TA consultants were rated as very successful in encouraging reflection and guiding centers to their own solutions, while two-thirds of the visits (67%) had TA consultants who were rated as very successful in reinforcing others involved in the consultation process.

According to responses to questions asked after each observation, effectiveness of the visit was rated very high by consultants, directors and teachers (3.94, 4.00, and 3.88 out of 4.00, respectively). When asked what they wished had gone differently in the visit, consultants, directors and teachers shared similar themes. Consultants (22%, n=4) would have liked to have spent more time with teachers. Some consultants (22%, n=4) did not identify anything they wished to have gone differently during the visit. Three (17%) consultants wished for more time, and two consultants (11%) wanted to spend more time with the director. Nearly half (44%) of directors did not identify anything they wished to have gone differently during the visits. Three directors (19%) wished they had spent more time with the TA consultant, and two directors (13%) wished there was less stress on their staff during the visit. Teachers' responses varied, though three teachers (25%) didn't identify anything they thought should have been different during the visit.

During the observations, Child Trends' staff coded the consultation strategy being used by the TA consultant.¹⁶ In nearly two-thirds of the observation cycles (64%), observers documented TA consultants gathering information and asking and answering questions. Consultants also provided feedback and recommendations (59% of cycles), engaged in relationship building (39% of cycles), conducted observations (34% of cycles), and set goals (24% of cycles). TA consultants spent little time on modeling (only 9% of cycles). The ERS assessment was a focal topic in nearly half (44%) of the observation cycles. The learning environment was addressed in 34% of cycles, and logistics (reviewing paperwork, setting meeting times) were addressed in 32% of cycles.

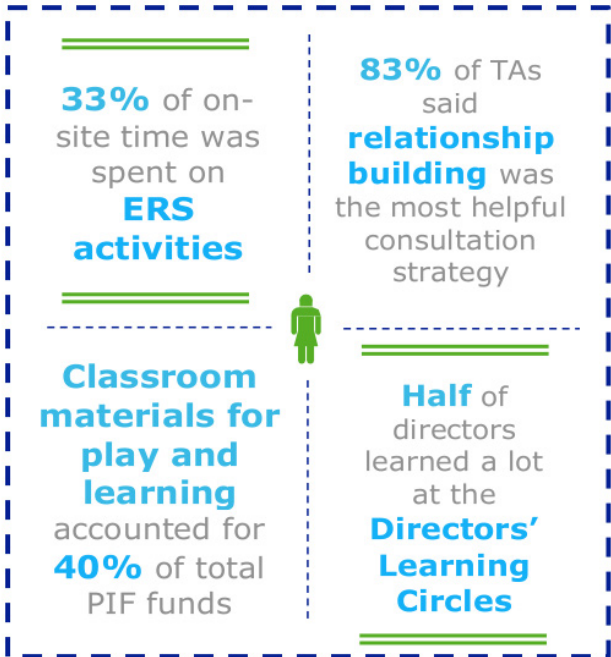
Summary: Observers noted TA consultants often, but not always, stating clear goals for the visit. During on-site visits, TA consultants used a variety of strategies with directors and teachers, relying mostly on asking and answering questions. ERS-related topics were the focal point of almost half of observation cycles.

TA Consultant Survey

To examine fidelity to the SB6 model and consistency of delivery across centers using a third data source, TA consultants completed a survey to assess their perceptions of on-site visits including the content delivered and the consultation strategies used with directors and teachers.

The majority of TA consultants (69%) reported that over the past six months, they visited centers twice per month. To gather more specific information on how TA consultants used their time, they selected one center they have worked with over the past six months and responded to questions about time use, content and consultation strategies used with that center. TA consultants reported spending an average of 68 hours with their selected center in the past six months. Time spent included time with staff (13 hours with directors, 12 hours with lead teachers, and five hours with other individuals in the center), time prepping for the session (10 hours), and time observing classrooms and other activities (28 hours).

The largest portion of time on-site (33%) was spent on ERS-related activities. Child observation/curriculum/assessment (11%), director development (9%), and business practices (8%) were also covered during visits in the past six months. When asked what three topics they spent the most time on with centers, 100% of consultants reported spending time on ERS, 54% on child observation/curriculum/assessment, 38% on business practices and 38% on continuous



¹⁶ Observations were conducted in 15 minutes cycles in which the observer would document the person(s) with whom the TA consultant was interacting, the consultation strategy used, and the topic areas covered.

quality improvement. Consultants reported that centers needed the least help with issues related to employee compensation (69%), director qualifications (46%) and community resources/family involvement (46%).

TA consultants primarily described the SB6 consultation approach as relationship-based (62%). The majority of TA consultants (83%) reported that relationship-building was one of the most helpful strategies they used. Additionally, giving feedback (58%) and encouraging reflection (50%) were reported to be helpful. Other approaches such as modeling (25%), observation (25%), answering questions (25%), and setting goals (25%) were less likely to be selected as one of the three most helpful strategies used.

TA consultants reported that the ERS results are the most useful tool they use in quality improvement, followed by the SB6 Service Plan (a jointly developed plan for improvement structured around the Keystone STARS quality standards) and the Program Improvement Funds. All TA consultants reported that they have positive relationships with the centers they serve and believed that SB6 is beneficial for centers. However, the majority of TA consultants only somewhat agreed that their time with centers is spent efficiently and that centers respond to them in a timely manner. While 8 of 13 TA consultants reported mostly following the SB6 technical assistance guide in their work, five reported following about half of the model and making their own modifications.

Summary: TA consultants rely on relationship building, giving feedback and encouraging reflection as the primary strategies for supporting centers. They spend the most time on ERS-related topics, and about 60% of TA consultants follow most of the SB6 guidance for their work.

Director and Teacher Surveys

Directors and teachers working in SB6 centers have a unique perspective on delivery of SB6 consultation and other service components. Overall, current and previous SB6 directors report high levels of agreement with positive statements about TA consultation. Nearly all current and previous directors (85%-96%) agree that working on goals with their TA consultant is helpful, that the TA consultant's advice is appropriate and helpful, that TA consultants are tailoring advice, responding in a timely manner, and answering questions fully. Fewer, but still a majority of directors, feel that time was used efficiently with their consultants (79% current; 86% previous). Teachers also are positive about SB6 consultation though they generally have lower levels of agreement than directors. Table 2 outlines director and teacher perceptions of SB6 components.

Current and previous directors reported lower levels of agreement about their enjoyment when attending and learning from other directors at Director's Learning Circles.

Summary: Previous and current directors are very satisfied with aspects of the TA consultation, but are less satisfied with the Directors' Learning Circles.

Table 2: Director and Teacher Perceptions of SB6 Components

	Director Responses		Teacher Responses	
	Current Participants	Previous Participants	Current Participants	Previous Participants
	Percent agree (does not include somewhat agree) (scale = agree, somewhat agree, somewhat disagree, disagree, no opinion)			
Working on goals with my SB6 TA consultant is helpful in improving my center.	96%	90%	65%	66%

	Director Responses		Teacher Responses	
	Current Participants	Previous Participants	Current Participants	Previous Participants
Time with the on-site SB6 TA consultant is used efficiently.	79%	86%	66%	61%
The on-site SB6 TA consultant's advice is appropriate and helpful.	93%	88%	70%	63%
My SB6 TA consultant explains how to implement her advice within my center specifically.	96%	89%	63%	59%
My SB6 TA consultant responds in a timely manner.	96%	89%	66%	61%
My SB6 TA consultant answers my questions and concerns fully.	96%	85%	70%	66%
I enjoy meeting with other directors in the Directors' Learning Circle.	56%	64%	N/A	N/A
I learn a lot from the other directors in my Directors' Learning Circle.	50%	52%	N/A	N/A

Source: Child Trends' SB6 Current and Previous Participant Surveys

Program Improvement Funds

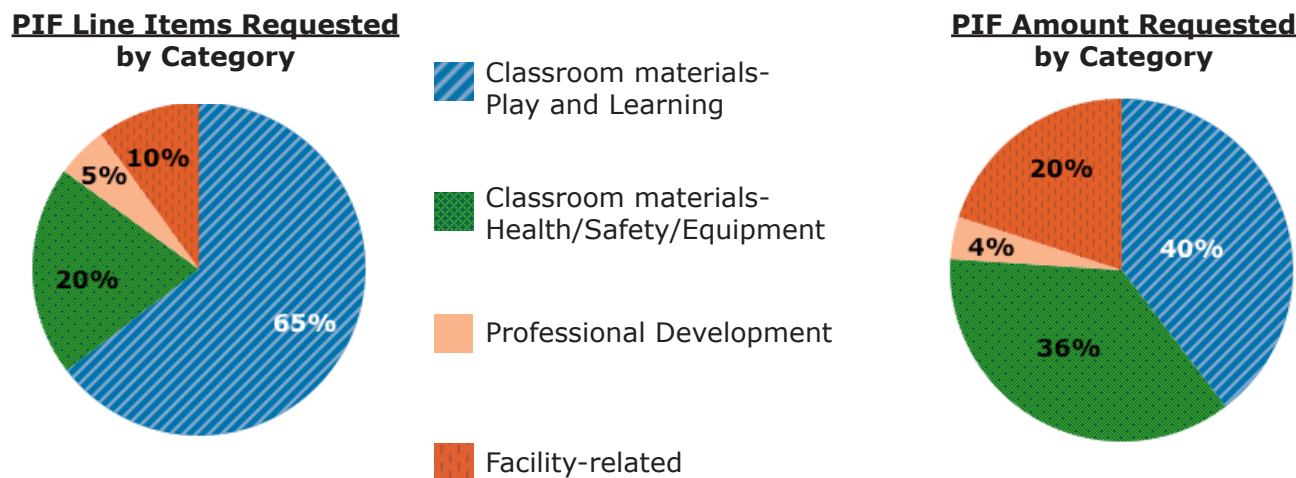
SB6 provides funding for quality improvements in participating centers through Program Improvement Funds (PIF). The amount of the award is determined by the number of classrooms serving children ages 0-5. For example, according to the 2015 PIF award chart, a center with one classroom serving children ages 0-5 would receive \$4,000. Each additional 0-5 classroom would earn the center an additional \$1,500 up to \$14,500 for centers with 8 or more classrooms.

Child Trends analyzed the materials and services requested from a selection of centers.¹⁷ In all, 500 budget line items were analyzed. The most requested items fell into the category of classroom materials for play and learning (65% of items requested). Health and safety items were the second most requested (20% of items requested). Facility-related items (repairs, replacements, non-classroom equipment, technology, outside or play area improvements) comprised 10% of the items requested.

Of the budget items requested, the total funds awarded totaled \$122,000. Classroom materials for play and learning accounted for 40% of the overall amount awarded, and health and safety items were an additional 36% of the total. Facility-related items comprised 20% of the funds awarded. Figure 4 displays the percentage of PIF funds requested and awarded by category.

¹⁷ Child Trends requested PIF budget requests for 17 centers that represented current and previous centers, some of which moved up in STARS and some of which remained at STAR 2. In addition, some of the centers closed their business or had their participation in SB6 terminated. This was a purposeful sample to capture the different outcomes in SB6. Of the 17 PIF budgets requested, 13 budgets were available and included in the analysis.

Figure 4: Percentage of Program Improvement Funds Line items and Amounts by Category



Source. Child Trends' analysis of SB6 Program Improvement Fund Budgets for 17 selected centers

Ninety percent of center directors that participated previously in SB6 identified PIF awards as helpful in making quality improvements in their centers. Nearly one-third of previous directors (31%) rated the PIF awards as the #1 most helpful support in SB6, second only to TA consultation which 32% rated as #1. Current directors had less positive impressions of PIF awards, but many may not have received the awards by the time of the survey.

TA consultants reported the PIF budgets to be somewhat helpful in improving quality. When asked to rank the various supports provided by SB6 in terms of helpfulness in improving quality, TA consultants ranked PIF third out of six. TA consultants reported spending just over five hours per week on PIF budgets over the past six months. Analysis of the contact logs revealed that TA consultants cover PIF awards in about 10% of their visits.

Summary: PIF funds are spent mostly on classroom materials for learning as well as health and safety materials. Directors are more likely to attribute PIF awards to helping them make quality improvements than are TA consultants.

How satisfied are directors and teachers with their SB6 experience?

Directors and teachers reported their levels of satisfaction with their SB6 experience (Table 3). Overall, current and previous SB6 directors are very satisfied with the various SB6 components. Current directors report the highest levels of satisfaction with TA consultation (86% very satisfied) and the Directors' Learning Circle (82% very satisfied). Previous directors rated TA consultation (89% very satisfied) and Program Improvement funds (90% very satisfied) most positively.

Table 3: Satisfaction with SB6 Program Components

	Director Responses		Teacher Responses	
	Current Participants	Previous Participants	Current Participants	Previous Participants
	Percent very positive/very satisfied			
Quality Improvement Components				
Overall impression of SB6	79%	91%	63%	47%

	Director Responses		Teacher Responses	
	Current Participants	Previous Participants	Current Participants	Previous Participants
TA consultation	86%	89%	51%	59%
Program Improvement Funds (PIF)	50%	90%	37%	46%
Directors' Learning Circle	82%	58%	N/A	N/A
ERS Rating Process	79%	77%	55%	48%
Sustainability Components				
High Quality Awards	N/A	72%	N/A	24%
Peer Learning Circles	N/A	42%	N/A	N/A
Institute for Family Professional's Courses	N/A	26%	N/A	20%

Source. Child Trends' SB6 Current and Previous Participant Surveys

Compared to directors, teachers overall were less satisfied with their SB6 experience. Just over half of current teachers are very satisfied with TA consultation (51%) and the ERS assessment process (55%) while 37% are very satisfied with PIF awards. In addition, when asked if they believed their center was higher quality because they joined SB6, 67% of current directors said they agreed while only 47% of current teachers agreed. Similarly, when asked if they would recommend other centers join SB6, 96% of previous directors agreed while only 70% of previous teachers agreed.

Directors and teachers also had different perceptions about which SB6 components were helpful in making quality improvements. For example, 86% of current directors identified PIF awards as helpful compared to 59% of teachers. Similarly, 89% of current directors found the ERS assessment process helpful compared to only 44% of teachers. Previous directors and teachers also disagreed on which SB6 components were helpful. While 82% of previous directors reported TA consultation as helpful, only 39% of teachers reported it to be helpful.

Summary: Though perceptions of directors and teachers are generally positive, the survey results indicate mixed levels of satisfaction based on role and current or previous participation. Directors have more favorable impressions of SB6 than teachers. This discrepancy is notable because teachers' buy-in and willingness to engage are critical for a center to meet quality improvement goals, especially because classroom practices and teachers' level of education are major areas of focus in STARS' standards.

How have the characteristics of center staff changed across SB6 cohorts?

The SB6 management team noted that centers in current SB6 cohorts appear to have more challenges than centers in previous cohorts. Child Trends investigated this perception by comparing the characteristics of directors and teachers in current and previous SB6 cohorts. Tables 4 and 5 describe the sample of directors and teachers that responded to the participants' survey.

Current SB6 directors and previous SB6 directors differ in a few important ways.

- Current SB6 directors report working fewer hours per week (34 vs. 44), and have lower annual salaries than previous SB6 directors (\$32,000 vs. \$52,000).
- Current SB6 directors are more likely to have a graduate degree in early education or a related field compared to previous SB6 directors (37% vs. 21%), but have fewer years of experience in their current position (5.7 vs. 8.9). A smaller portion of current directors have a director's credential than previous directors (69% vs. 93%).

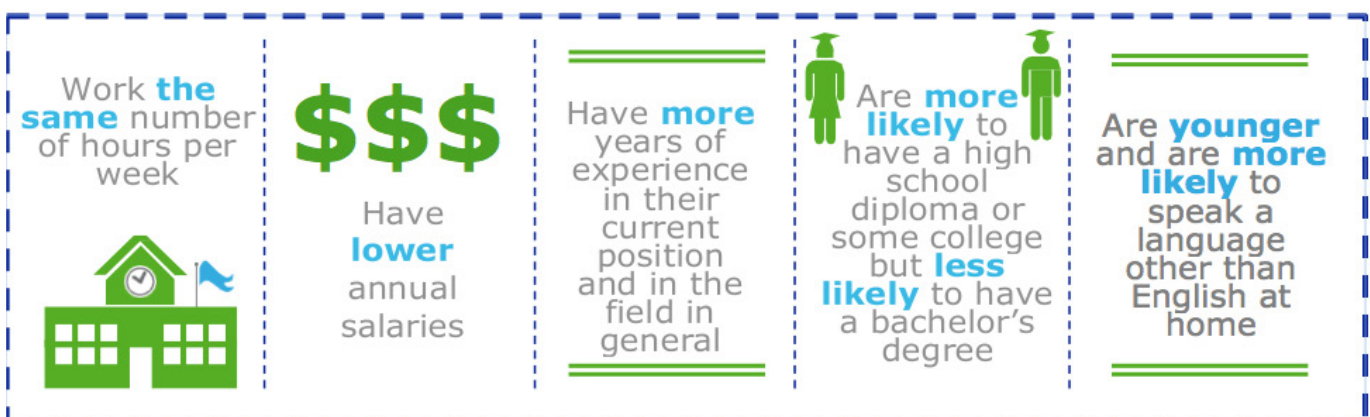
Compared to previous directors, current directors...



Current SB6 teachers are also different from previous SB6 teachers.

- Current SB6 teachers are much more likely than previous teachers to have a high school diploma as their highest level of education (24% vs. 0%). Similarly, current teachers are less likely to have a bachelor's degree than previous SB6 teachers (19% vs. 37%).
- Current SB6 teachers are more likely to have a CDA credential than previous SB6 teachers (67% vs. 47%).
- Current SB6 teachers have more years of experience in their current position (6.1 vs. 3.3) and have more years of experience in the field in general than previous SB6 teachers (18.5 vs. 11.4).
- Current SB6 teachers earn less per year than previous SB6 teachers (\$21,000 vs. \$28,000), despite working the same number of hours per week (38 vs. 37).
- Current SB6 teachers are younger than previous teachers (18% age 18-25 vs 5%), more likely to be black (34% vs. 18%) or Hispanic (11% vs 5%) and more likely to speak a language other than English at home (27% vs. 6%).

Compared to previous teachers, current teachers...



While some differences between current and previous SB6 staff may in fact be a result of their participation in SB6 (for example, directors are more likely to have a director's credential if they participated previously in SB6), the differences in characteristics between the two groups indicate a trend toward enrollment of centers in recent SB6 cohorts of centers with more challenges in meeting Keystone STARS standards.

Table 4: Education and Qualifications of Current and Previous SB6 Participants

	Director Characteristics		Teacher Characteristics	
	Current Participants	Previous Participants	Current Participants	Previous Participants
Highest Level of Education	(n = 27)	(n = 91)	(n = 30)	(n = 41)
High School Diploma or GED	0.00%	1.10%	23.81%	0.00%
Some college, but no degree	0.00%	0.00%	14.29%	26.83%
Two year college degree in non-related field	7.41%	1.10%	0.00%	2.44%
Two year college degree in Early Childhood or related field	7.41%	14.29%	21.43%	4.88%
Bachelor's Degree in non-related field	7.41%	10.99%	7.41%	17.07%
Bachelor's Degree in Early Childhood or related field	40.74%	41.76%	19.05%	36.59%
Graduate Degree in non-related field	0.00%	9.89%	2.38%	0.00%
Graduate Degree in Early Childhood or related field	37.04%	20.88%	11.90%	12.20%
Certificates	(n = 16)	(n = 58)	(n = 30)	(n = 30)
CDA	31.00%	8.62%	66.67%	46.67%
Director's Credential	68.75%	93.10%	3.33%	0.00%
Other	6.25%	6.90%	20.00%	23.33%
Time and Salary				
Average Paid hours worked per week	34.41 (n = 27)	43.76 (n = 85)	38.37 (n = 40)	37.42 (n = 41)
Average annual salary	31967.83 (n = 21)	51330.27 (n = 71)	21410.57 (n = 30)	27621.71 (n = 35)
Years experience	(n = 100)	(n = 100)	(n = 51)	(n = 61)
Average number of years in current position	5.67	8.9	6.08	3.28
Average number of years in early care and education since 18 years old	20.23	20.1	18.5	11.36

Source: Child Trends' SB6 Current and Previous Participant Surveys

Table 5: Demographic Characteristics of Current and Previous SB6 Participants

	Director Characteristics		Teacher Characteristics	
	Current Participants	Previous Participants	Current Participants	Previous Participants
Age Directors	(n = 27)	(n = 89)	(n = 39)	(n = 42)
18-25	0.00	0.00	17.95	4.76
25-30	18.52	8.79	23.08	26.19
31-40	29.63	28.09	30.77	38.10
41-50	25.93	21.35	12.82	9.52
51-60	22.22	24.72	10.26	16.67
61 or older	3.70	16.85	5.13	4.76
Racial/Ethnic Group	(n = 28)	(n = 91)	(n = 44)	(n = 44)
Black/ African American	28.57	26.37	34.09	18.18
White/ Caucasian	42.86	56.04	50.00	63.64
Asian	7.14	3.30	4.55	4.55
Hispanic/ Latino-Mexican	17.86	9.89	11.36	4.55
African	3.57	1.10	0.00	2.27
Other	0.00	2.20	0.00	6.82
Language at home	(n = 27)	(n = 90)	(n = 48)	(n = 38)
English	74.07	92.22	72.92	94.74
Spanish	11.11	4.44	8.33	5.26
English and other specified language EQUALLY	3.70	4.44	4.17	0.00
Multiple other languages EQUALLY	7.41	0.00	2.08	0.00
Other	11.11	1.11	12.50	0.00
Gender	(n = 27)	(n = 91)	(n = 44)	(n = 41)
Female	96.30	94.51	97.73	100.00
Male	3.70	5.49	0.00	0.00
Transgender	0.00	0.00	2.27	0.00

Source: Child Trends' SB6 Current and Previous Participant Surveys

How well do implementation partners collaborate in SB6?

Multiple partners are involved in the operation of SB6. Representatives from United Way, DVAEYC, MELC, Saint Joseph's University, Stamm Consultancy, Inc., and the Southeast and South Central Regional Keys meet quarterly for management team meetings where they provide updates on progress and share challenges. In addition, staff from United Way meeting monthly with the two technical assistance agencies – DVAEYC and MELC. Interviews with SB6 administrators and agency supervisor indicate that the SB6 collaborative leadership model is working well. Collaboration with Keystone STARS was an especially strong theme in the interviews with the majority of respondents

reporting that the collaboration with STARS has improved in recent years. Six of 12 respondents indicated that the management successes are a primary strength of SB6.



50% of SB6 partners said **management collaboration** is a strength of SB6.

What are future implementation challenges and opportunities identified by SB6 management and participants?

SB6 partners and TA consultants identified areas of implementation to address through the development of new management strategies and by improving existing policies and procedures.

- Changing demographics of centers are a challenge for SB6, and adaptations are needed. (6 out of 10 respondents).¹⁸ One recent change to the SB6 design, for example, is the addition of a “readiness” cohort which provides training and support to select centers on business practices, leadership and meeting director and teacher education qualifications before the centers begin the regular SB6 process. Other changes may be warranted as more is learned about the needs of newly enrolled centers in SB6.
- Members of the SB6 management team would appreciate greater sharing and data access with Keystone STARS (3 out of 4 respondents). Improvements in data sharing would promote a better understanding of how centers fare in their STARS verification visits and the supports that may be needed to help centers move to a STAR 3 or higher.
- When asked about what further enhancements would improve the experience for SB6 centers, respondents identified a greater focus on child outcomes, and more support for moving up on the career lattice as areas for change (4 out of 6 respondents).
- SB6 partners reported a need for support for TA consultants. Seven out of 10 partners would like TA consultants to have more experience with specific consultation topics (e.g., business practices). Four out of the 10 respondents also indicated that there is a limited pool of TA consultants when recruiting for new positions.
- When asked what additional professional development they would like to receive, 50% of TA consultants identified conflict resolution, business practices, managing change, and leadership/management.
- When asked how closely they followed the “Guide for SB6 Technical Assistance” in the past year, almost 40% of TA consultants (5 of 13) reported that they followed about half of the guidance on the model and modify the other half. Additional training is needed to promote greater consistency in the use of the model.
- All TA consultants reported that they have positive relationships with the centers they serve and believed that SB6 is beneficial for centers. However, only 39% of TA consultants agree that their time with sites was used efficiently. When asked what they would like to change about SB6, TA consultants noted that they would like to see changes to the consultation process (23%), and more flexibility about preparation and time at centers (23%).

In summary, across TA consultants, directors and teachers, the results suggest that implementation of SB6 has a number of strengths but also opportunities for improvements.

¹⁸ For management team interviews, some questions were asked of some (not all) respondents. This resulted in different number of total responses for each question.

- Teachers have a different experience than directors in the quality improvement process. The SB6 management team and TA consultants could benefit from a better understanding of the motivations and needs of teachers in the quality improvement process and how they differ from directors' needs. TA consultants may need additional strategies to increase teachers' positive perceptions of SB6.
- Strategies are needed to increase the efficiency of TA consultant time spent at centers. The SB6 management team may want to shadow TA consultants on visits over a defined period and then convene a meeting with them to reflect together on their observations and discuss opportunities for improvement.
- It is important to understand the variations in the consultation model that TA consultants reported and whether the variations are supporting SB6 goals. The SB6 management team may need to provide updated training and refresh the consultation model to ensure that it is providing a strong foundation for consultation. This review should also include a review of contact log content and procedures for completing Service Plans.
- Enhancements are needed to improve uptake of and satisfaction with Directors' Learning Circles and Peer Learning Circles. A new format and/or new content may be helpful for increasing interest in these activities among SB6 participants. Alternatively, the SB6 management team may want to consider developing new opportunities or enhancing existing TA consultation to replace the learning circles for some participants.

SB6 Outcomes

As part of their internal evaluation, the SB6 management team tracks the “move up” rate of SB6 centers. However, the tracking process doesn't allow a statistical comparison of move up rates between SB6 centers and centers that are similar but have not enrolled in SB6. In this evaluation, we expanded the analysis of move up rates to include a comparison group. This allowed us to make more precise estimates of move up rates for SB6 participants.

To conduct the analysis, Child Trends created a comparison group of centers with characteristics similar to SB6 centers. Data on centers participating in Keystone STARS were obtained from the Office of Child Development and Early Learning (OCDEL), and propensity score matching¹⁹ was used to create the matched comparison group. The following center characteristics were used in the matching process:

- was operating in the four county area served by SB6 (Philadelphia, Chester, Montgomery, and Delaware counties),
- had been enrolled in Keystone STARS an equal number of years as their matched SB6 center
- was rated at STAR 2 within one year of the matched SB6 center,
- was enrolled in Keystone STARS before or after 2009,²⁰
- enrolled a similar number of children,
- demonstrated the same pattern of receipt of technical assistance from Keystone STARS,

¹⁹ Propensity Score Matching is a statistical technique that is often used in research and evaluation to create a strong comparison group when random assignment into the intervention is not possible.

²⁰ Around 2009, the Southeast Regional Key (SERK) of Keystone STARS implemented an enrollment initiative called Start with STARS that provided incentives for new centers to enroll in STARS. Upon analysis, Child Trends discovered that the rate of new centers enrolling in STARS was dramatically increased after Start with STARS. This trend signaled that centers that participated in STARS before Start with STARS might be different than centers that enrolled after the incentives with Start with STARS were provided. Child Trends categorized SB6 and comparison centers enrolling in STARS either before or after the Start with STARS initiative, and used this enrollment status in the matching process.

- demonstrated the same pattern of receipt of financial awards from Keystone STARS, and
- was serving communities with similar demographic and economic conditions (race/ethnic groups, number of children under age 5, poverty status of families with children under age 5, median household income, employment status of families with children under age 5).

Prior to the matching process, center characteristics were available for 221 centers that had participated in SB6 from cohorts 5-15; these centers were included in the SB6 intervention group. After narrowing down the comparison centers to the four SB6 counties, there were 417 possible non-participating centers for the comparison group. Before matching, the sample of SB6 centers and non-participating centers were significantly different on the following characteristics:

- number of years in Keystone STARS,
- enrolled in STARS before 2009 or after 2009,
- number of children served,
- use of Keystone STARS technical assistance, and
- use of financial awards from Keystone STARS.

After the matching process, there were 153 matched pairs of SB6 centers and non-participating centers (69% of SB6 centers were matched). The differences between the SB6 and comparison group were no longer statistically significant, suggesting that the groups were well matched. Further details about the matching variables are available in the Technical Appendix. Table 6 describes the characteristics of the sample after the matching was completed.

Table 6: Sample Characteristics After Matching

	SB6 N=153		Non-SB6 N=153	
	<u>Mean</u>	<u>SD</u>	<u>Mean</u>	<u>SD</u>
Center Characteristics				
Years in Keystone STARS	6.15	2.28	6.25	2.01
Enrolled in STARS before Start with STARS	0.45	0.50	0.45	0.50
Small Center (1-45 children)	0.46	0.50	0.42	0.50
Medium Center (46-99 children)	0.41	0.49	0.45	0.50
Large Center (100+ children)	0.10	0.31	0.11	0.32
Participation in STARS				
Received STARS TA	0.78	0.42	0.75	0.43
Received STARS Awards	0.96	0.19	0.96	0.19
Community Characteristics				
ACS: % white	0.63	0.33	0.63	0.32
ACS: % black	0.28	0.33	0.30	0.33
ACS: N under 5	150.33	138.57	161.96	125.23
ACS: N families with children under 5, employed	396.47	156.96	382.55	172.92
ACS: Median income	59,129	25,746	60,173	24,619
ACS: N families with children under 5, poverty	161.07	190.89	147.78	174.53

Notes. None of the sample characteristics were significantly different after matching. ACS is the American Community Survey, 2009-2013.

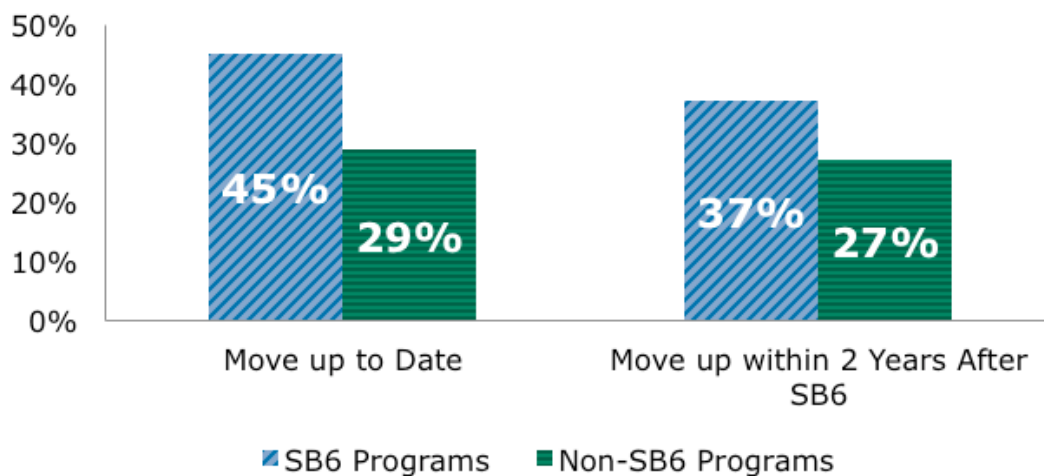
Source. Child Trends' analysis of Keystone STARS administrative data obtained from OCDEL, April 30, 2015.

Does participating in SB6 increase the likelihood that centers will move up in STARS?

Two strategies were used to examine the “move up” rate of SB6 centers compared to the matched centers. One strategy used logistic regression models that estimated the odds of moving up in STARS from a STAR 2 to STAR 3 or 4 while controlling for center characteristics. We examined the odds that the center would move up in STARS from the time of entry to the end of data collection in April 2015 (“to date”). We also examined the odds that the center would move up within two years of completing SB6 (or, for the comparison group, within 3.5 years of being rated as STAR 2).

Figure 5 displays the probability of move up for SB6 centers (n=153) and the matched comparison group (n=153). Just under half of SB6 centers (45%) moved up to STAR 3 or 4 to date compared to 29% of comparison centers. SB6 participation was a statistically significant predictor of move up to date. Similarly, participation in SB6 significantly increased the probability of moving up in STARS within the two-year timeframe for SB6 centers or the 3.5 year timeframe for matched centers (37% vs. 27%).

Figure 5: Percentage of Centers Moving Up* from a STAR 2 in Keystone STARS



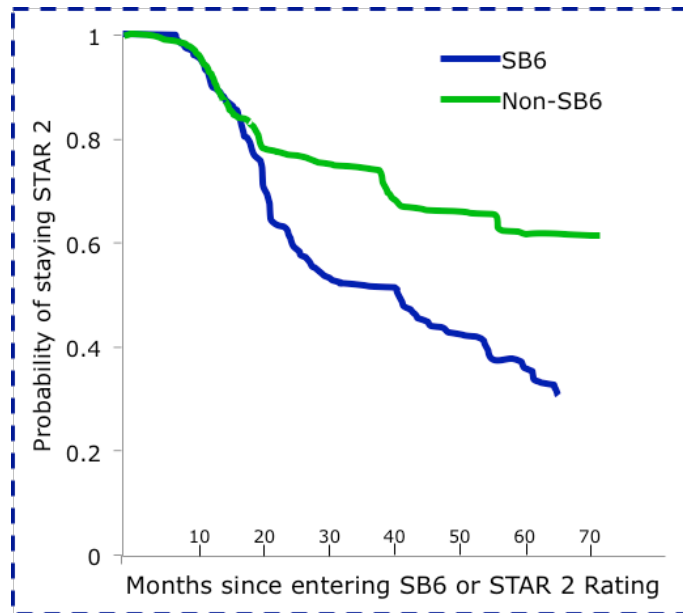
Source: Child Trends’ analysis of Keystone STARS administrative data obtained from OCDEL, April 30, 2015.

*Percentages represent predicted probability of moving up after controlling for years in STARS, enrolled in STARS before or after 2009, center size, receipt of STARS TA and awards, and census demographics.

The second strategy for analyzing center move up examines how move up rates may differ over time.²¹ Results from the analysis show that the probability of remaining at STAR 2 (instead of moving up to STAR 3 or 4) decreases for SB6 centers over time. Figure 6 illustrates the shift in probabilities for SB6 centers and comparison centers. The closer the probability to 1, the more likely a center is to be at a STAR 2. A decrease in this probability overtime is preferred since the goal is for centers to move from STAR 2 to STAR 3 or 4. The two groups have similar probabilities of being STAR 2 for the first 20 months. However, after 20 months, the probability of remaining at STAR 2 decreases for SB6 centers, and continues to decrease through 67 months (the end of the data collection period). For non-SB6 centers, the probability decreases as well, but at a significantly slower rate.

²¹ Survival analysis is a statistical technique that compares the outcomes of people or programs that have been participants in an initiative or “treatment” overtime. These data are right-censored, which means that because the study was restricted to a given time frame, the outcomes past the end of the study are unknown. The survival analysis model accounts for these missing data.

Figure 6: Probability of a center staying at STAR 2 over time



Summary: Across the two analyses, the findings indicate that SB6 is providing a significant boost to centers that supports their improvement from a STAR 2 to a STAR 3 or higher. Though the overall move up rate is around 50%, it is clear that SB6 centers are more likely to improve in STARS than a matched sample of centers with similar characteristics (including their time in STARS and their use of STARS TA and awards).

What are the characteristics of centers that succeed in moving up in STARS by participating in SB6?

The next analysis focuses on SB6 centers (not comparison centers) to understand the characteristics associated with patterns of move up in STARS. To identify how patterns of move up varied for different groups of centers, we conducted a latent profile analysis (LPA). This type of analysis identifies groups of centers with similar profiles of characteristics. The analysis included time in Keystone STARS, center size, baseline Saint Joseph's University ERS rating (facility score), participation in STARS TA (yes or no), and receipt of STARS awards (yes or no).²²

Four distinct groups of SB6 centers emerged in the analysis (see Table 7). Center size and participation in STARS TA were the characteristics that most distinguished the groups from one another.

- Group 1 was comprised of medium sized centers that had received STARS TA and awards (i.e., Medium/TA). Just over half of the Medium/TA group had enrolled in STARS before the Start with STARS initiative.
- Group 2 was made up of small and medium sized centers and had almost no participation in STARS TA, though 85% had received STARS awards (i.e., No STARS TA).

²² Census variables indicating neighborhood characteristics and non-profit status were included in initial analyses but did not contribute to the identification of profiles and were therefore not included in final models.

- Group 3 were small centers that had received STARS TA and awards, but generally had enrolled in STARS after the Start with STARS initiative. Further analysis of this group revealed that this group was made up of nearly all the current participants in cohorts 14 and 15 even though cohort was not included in the profile analysis (i.e., Current Centers).
- Group 4 was a mix of small and large centers that received STARS TA and awards (i.e., Small + Large/TA). Group 4 was significantly different from Group 3 in the number of years enrolled in STARS.

Table 7: Description of Four SB6 Center Profiles

	Group 1	Group 2	Group 3	Group 4
	Medium/TA N=79	No STARS TA N=53	Current Centers N=27	Small + Large/TA N=62
Average years in Keystone STARS	6.32 ³	5.92	5.17 ^{1,4}	6.68 ³
Enrolled in STARS before "Start with STARS"	54% ³	57% ³	30% ^{1,2,4}	56% ³
Small center	0% ^{2,3,4}	53% ^{1,3}	93% ^{1,2,4}	55% ^{1,3}
Medium center	100% ^{2,3,4}	36% ^{1,3,4}	4% ^{1,2}	0% ^{1,2}
Large center	0% ⁴	4% ⁴	0% ⁴	42% ^{1,2,3}
Set STARS TA goals	100% ²	0% ^{1,3,4}	100% ²	100% ²
Received STARS TA content	100% ²	0% ^{1,3,4}	96% ²	100% ²
Received STARS TA type	99% ²	25% ^{1,3,4}	100% ²	100% ²
Received STARS award	100% ^{2,3}	85% ^{1,4}	93% ¹	98% ²
Baseline ERS	3.72	3.84	3.90 ⁴	3.64 ³

Note. Significant differences between groups are noted with the number of the group that is statistically different. For example, ¹ indicates that this group is significantly different from group 1. Census demographics and non-profit status were not significant predictors when determining groups.

Source. Child Trends' analysis of Keystone STARS administrative data obtained from OCDEL, April 30, 2015.

Once the groups were identified, we compared STAR move up patterns and the highest ERS score to date documented for centers within the groups (see Table 7).

- **Move up to Date:** For move up to date, Small + Large/TA centers had the highest rate (63%) which was significantly different from the No STARS TA and Current Centers groups. Only 7% of Current Centers had moved up to STAR 3 or 4 which was not surprising given that they are still participants in SB6.
- **Move up within 2 years after SB6:** Medium/TA, No STARS TA, and Small + Large/TA had similar patterns of move up within two years (i.e., the rates were not significantly different). Current Centers emerged as significantly different from the other groups, in that their move up rate was low.

- **Highest ERS score to Date:** The Small + Large/TA centers had the highest ERS facility score (4.32) which was significantly different from the Medium/TA group and Current Centers. It is notable that the lowest OCDEL ERS score was documented for the Small + Large/TA centers (and was significantly lower than the Medium/TA centers).

Table 8: Outcomes for Center Groups

	Group 1	Group 2	Group 3	Group 4
	Medium/TA N=79	No STARS TA N=53	Current Centers N=27	Small + Large/TA N=62
Moved up to STAR 3 or 4 to date	52% ³	42% ³	7% ^{1,2,4}	63% ³
Moved up within 2 years of completing SB6	38% ³	38% ^{3,4}	7% ^{1,2,4}	52% ^{3,4}
Highest Saint Josephs' ERS to date	3.92 ⁴	4.16	3.94 ⁴	4.32 ^{1,3}
	Group 1	Group 2	Group 3	Group 4
	Medium/TA N=41	No STARS TA N=24	Current Centers N=5	Small + Large/TA N=44
Highest OCDEL ERS	5.47 ⁴	5.33	5.34	5.11 ¹
OCDEL ERS meets STAR 3 cut-off (4.25)	100%	96%	100%	93%

Note. The low sample size in group 3 for OCDEL outcomes reflects the composition of the centers in the group. These centers are more recent centers and may not have attempted to move up to STAR 3. Source. Child Trends' analysis of Keystone STARS administrative data obtained from OCDEL, April 30, 2015, and ERS data from United Way.

Summary: The group of SB6 centers characterized by the highest move up rate was the only one of four identified groups that had a significantly higher proportion of large centers.

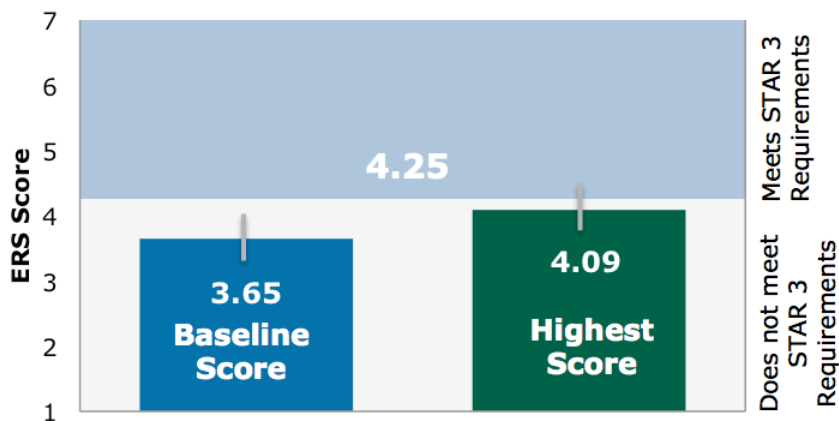
How do ERS scores change for the centers participating in SB6?

ERS observations are an important feature of Keystone STARS for centers. To earn a STAR 3, centers must have an average facility score of at least a 4.25 across all classrooms observed. Through SB6, centers receive two ERS observations conducted by trained and reliable observers from Saint Joseph's University. The first observation is shortly after they have started SB6, and the second observation comes near the end of their participation.

To learn more about ERS scores of centers participating in SB6, we accessed ERS scores (when available) for centers in cohorts 5-15 that participated in SB6 (n=221). The ERS scores are facility scores that represent the average score of classrooms observed (Keystone STARS selects one-third of classroom for each age group: infants and toddlers and preschoolers). We analyzed the average baseline score and the average score from the second observation. Overall, the average ERS facility score increased 0.44 points; this change was statistically significant. Figure 7 shows that the average baseline score is 3.65 and the average final score is 4.09. While the average final score is not yet meeting the 4.25 requirement for Keystone STARS at STAR 3, it is within the margin of error of the ERS tools.²³

²³ Studies of the inter-rater reliability on ECERS-R show that 71% of observers agree on the indicator scores within one point (Harms, Clifford, and Cryer, 1998). The interclass correlation, which tells us how much of the measure constitutes actual variation, is 0.918.

Figure 7: Change in ERS score for SB6



Source. Child Trends' analysis of St. Joseph's University ERS data from United Way. Vertical gray lines indicate margin of error for baseline and highest ERS rating. The highest score bar represents the highest score rated by a St. Joseph's University observer, not necessarily the final score.

Summary: After participating in SB6, centers achieve average ERS scores that are within the range required by Keystone STARS (4.25) for STAR 3. Further analysis of the ERS scores would be useful for highlighting how SB6 classrooms are faring on one or both of the tools used in the assessments (ITERS-R and ECERS-R). For example, scores on the ITERS-R are typically lower than those on the ECERS-R. Analyses of subscales and items could provide guidance about particularly difficult provisions on the ITERS-R and inform how TA consultants prioritize and select goals for the Service Plan.

What are additional ways to measure SB6 results that are not currently being used?

STARS move up is a key metric used to track the success of SB6. However, as noted in this report, move up rates are difficult to interpret without putting the results in context or comparing move up rates using sophisticated analytic techniques. Thus, it is useful to consider whether there are additional metrics that might be used to measure success in SB6. This section explores the feasibility of using several different metrics or data sources to assess SB6 results.

Improvements on Educational Qualifications. It would be useful to have a better understanding of how centers are improving on various aspects of STARS requirements beyond ERS scores during their participation in SB6. For example, nine out of 10 SB6 partners identified the career lattice as a major barrier to move up in STARS. SB6 asks about numbers of staff on various levels of the career lattice in the application process, but it may be useful to ask directors to report career lattice information upon completion of SB6. Similarly, a directors' credential is a requirement at STAR 3. Progress on this requirement also could be tracked through the center's participation in SB6. Alternatively, Keystone STARS designation data could be accessed to track a center's progress on the career lattice and director's credential.

Good, Better, Best. When a center is ready to move up to the next STAR level, they receive a visit from a STARS specialist. During the designation visit, the STARS specialist identifies whether the center meets each indicator. In addition, STARS specialists can also rate the degree to which the center met the indicator. The coding system for this is called Good, Better, Best (GBB). If SB6 implementation partners obtained the indicator-level data from a designation visit, it would be possible to analyze the areas where SB6 centers are just meeting the indicators (good) and where they are exceeding the criteria for the indicators (best). Understanding the areas that are "good" is important, and could be used to further tailor the supports offered by SB6. For example, if many SB6 centers are rated as "good" for the career lattice requirement, then it may be an indication that those centers are at risk of dropping back down to STAR 2 if there is staff turnover.

Leadership Capacity. One focus of SB6 is on developing the leadership skills of center directors to facilitate the change that occurs as part of quality improvement. Currently, the director's leadership capacity is not measured by SB6. Several existing leadership measurement tools exist that SB6 could consider adopting as both a pre and post measure that could be used both to guide SB6 TA consultation and to track growth in leadership skills.

Overall, the outcome results indicate that SB6 is successful in moving centers from a STAR 2 to a STAR 3. SB6 provides a 16 percentage point “move up” boost to centers that participate. The profile analyses suggest that factors such as center size play a role in the quality improvement process and are worth attending to in SB6 policies and practices. The results also reflect the challenges of quality improvement for many centers, even when they have access to supports.

DISCUSSION AND IMPLICATIONS FOR SB6

The SB6 evaluation examined implementation and outcomes using multiple perspectives and analytic techniques. The high-level findings are synthesized in this section, and implications for SB6 continuous quality improvement process are presented. We also discuss lessons learned for the broader field of ECE quality improvement.

SB6 Implementation

SB6 operates effectively, and is well-equipped to make changes for the future.

Results from interviews and surveys indicate that SB6, overall, has a strong set of collaborative partners. The management team has a history of making changes to SB6 as centers' needs have changed, or when improvements were required in SB6 operations. SB6 participants, particularly the center directors, are very satisfied with their experience and believe the quality of their center has improved as a result of participating in SB6. In recent years, SB6 partners have seen a shift in the needs of incoming centers. This perception was verified with evaluation data showing differences in the characteristics of directors and teachers from previous and current SB6 cohorts. New engagement and consultation strategies are needed to address the next generation of centers entering SB6 and to provide support to centers as they work to improve and sustain quality. In addition, Pennsylvania is considering a revision of the Keystone STARS. These newly revised standards may necessitate more significant changes to the quality improvement activities offered in SB6.

TA consultants may need enhanced supervision and mentoring, opportunities to build skills and access to better tools to support their work with centers.

Across current and previous SB6 participants, satisfaction with TA consultants is very high. Yet, the analysis revealed specific concerns about the recruitment, selection, and training of TA consultants. First, 70% (seven out of 10) of SB6 partners reported that they would like TA consultants to have more experience with specific consultation topics (e.g., business practices). Four out of the 10 respondents also indicated that they encounter a limited pool of TA consultants when recruiting for new positions. Given recruitment challenges, it is important to provide closer supervision and mentoring as well as opportunities for professional development for TA consultants. Current TA consultants identified conflict resolution, business practices, managing change, and leadership/management as areas for their own professional development. As SB6 shifts to serving a more disadvantaged group of centers, TA consultants may identify additional training requests and tools that are needed to support their work.



Teachers have unique experiences in SB6, and it will be helpful to learn more about their needs.

Though current and previous SB6 teachers are generally positive about SB6, their experience is less satisfying than it is for directors. Though directors (not teachers) are typically the primary audience for SB6 services, TA consultants often work directly with teachers, and teacher buy-in and capacity to change their practices and increase their education are critical to moving up in STARS. UW and the TA agencies would benefit from further assessment of how teachers' needs in SB6 might be the same or different than directors' needs in the TA process. For example, tools to measure "readiness to change" could be completed by teachers and then used as a way for TA consultants to tailor their approach with each teacher. Directors may also need new ways to communicate the expectations of teachers throughout the quality improvement process that incorporates teacher ideas and goals.

The ERS are a focal point of SB6 consultation.

The evaluation team observed TA consultants working on the learning environment (as measured by the ERS) in 75% of the observation cycles, a finding that is consistent with TA consultants' reports of the topics they spend time on with centers. As the ECE field shifts toward a greater emphasis on intentional teaching and interactions and their role in supporting children's development, it will be important to consider how to enhance SB6 consultation to include tools that measure and support these constructs. The pending revision of Keystone STARS standards will provide additional guidance. This revision process is intended to clarify how the STARS standards align with goals such as improved policies and procedures and promotion of child development outcomes. The SB6 model may need adjustments to support centers in meeting these revised quality indicators.

The data infrastructure of SB6 could benefit from an upgrade to a paperless system.

Administrative documents (e.g., contact logs, quarterly reports, PIF budgets) in SB6 are currently gathered and stored using paper and some electronic files (e.g., excel files and pdf's). The current structure is not set up to provide opportunities for easy tabulations and report-generation, particularly for documentation of consultation visits. Investment in a simple web-based data system to facilitate data entry across organizational partners and the SB6 management team is worth consideration.

SB6 Outcomes

Centers are improving, but further supports are needed to improve the move up rate.

The analysis of move up rates indicates that many centers are benefiting from participation in SB6. SB6 centers move up in STARS at a higher rate than a matched comparison group of centers. Centers also are improving ERS ratings *during* participation in SB6. Overall, however, about 50% of centers that participate in SB6 do not move up in STARS.

Data are not available to show how SB6 centers fare on all STARS standards which limits the ability to understand move up rates completely. We can, however, use available data to draw some initial conclusions about the success rate in SB6. For example, SB6 administrator and supervisor interviews and TA consultant surveys indicate that the most significant barrier to moving up to STAR 3 is standards related to Career Lattice and Staff Qualifications. Data from the contact logs and interviews indicate that TA consultants spend a small portion (13%) of their time working with centers on staff development and qualifications. Because we have insufficient data on teacher and director education before and after SB6 participation, it is important to examine this area more closely and to track it over time to understand the options for supporting centers on this component of STARS. It may be possible to provide TA consultants with new strategies for working with centers on teacher development, recruitment and selection of teachers, and retention of high-quality teachers. Other opportunities such as scholarships for education and obtaining credit for training completed through SB6 should also be discussed as options for improving career lattice and qualifications.

Center size is an important factor to consider in SB6 consultation and STARS move up.

Center size emerged as a predictor of the STARS move up profiles of centers in SB6. The analyses indicate that large centers (those serving 100 or more children) were in the group that had the highest

move up rates, despite having the same baseline ERS score as other groups. It will be helpful to look further into the role of center size in move up and when allocating TA hours and PIF resources. Since both the amount of time with TA consultants and PIF awards are allotted based on the number of children or classrooms, large centers are receiving the most consultation time and financial awards. It is possible that large centers are allocating PIF funds and using TA time in a more effective way, or it's possible that they are simply improving because they have more resources. Further analysis of these questions is needed.

LESSONS FOR THE FIELD OF ECE QUALITY IMPROVEMENT

Though SB6 is a regional initiative with a focus on quality improvement in one state's QRIS, the lessons learned from the evaluation are valuable to share with the larger field of ECE quality improvement. The findings from the SB6 evaluation contribute to the limited knowledge about implementation and outcomes of quality improvement initiatives associated with QRIS. We highlight the following themes and implications for the field:

- 1. Effective implementation of quality improvement initiatives requires monitoring and flexibility to adjust policies and procedures.** Quality improvement initiatives underway nationally have structures similar to SB6. They involve multiple partners in the delivery of consultation and they require coordination with a state or local QRIS that may have frequent changes in its own operations (e.g., changes in the QRIS quality standards) (Isner et al., 2011). The findings from SB6 highlight the importance of developing administration and management structures that can monitor activities in the field and develop solutions to implementation issues that arise. For example, as the needs of centers changed in recent SB6 cohorts, the management team developed a new feature – a readiness cohort – to address the challenges that center directors faced in engaging fully in the typical SB6 activities. The evaluation also revealed the importance of attending to data infrastructure and investing in a system that can facilitate entry and review of documentation and production of reports that can be used for monitoring and feedback about implementation.
- 2. Management structures that include key partners from the ECE system are important for quality improvement initiatives.** The SB6 management team includes representatives from United Way, the agencies delivering technical assistance, St. Joseph's University, Stamm Consultancy, Inc., and Keystone STARS (through the regional keys). The partners report that this structure supports regular communication and problem-solving and has allowed for adaptation of the initiative over time. The inclusion of this team is consistent with best practices in implementation.
- 3. Financial incentives are an important component of a quality improvement initiative.** SB6 provides substantial financial incentives through the provision of Program Improvement Funds, and centers also have access to STARS awards. The SB6 funds are used primarily to support the purchase of classroom materials and make some facility improvements. Because quality improvement funds in SB6 are packaged together with other supports such as consultation, it is impossible to isolate the effectiveness of this component in improving classroom quality. However, nearly all directors agree that the funds are a critical tool in their quality improvement. And, it is likely that the materials that are purchased with the funds are supporting center improvements



on the ERS. As quality improvement initiatives shift to include a focus on intentional teaching, it is important to consider how financial incentives can be used to promote improvements in the environment and in interactions with children.

- 4. Supporting the early care and education workforce is a key challenge for quality improvement initiatives.** Results from the SB6 evaluation indicate that TA consultants spend most of their time focusing on improvements in the learning environment. While some time is allocated to reviewing staff qualifications and career lattice levels, TA consultation is not designed for addressing workforce qualification issues. It is important to discuss how other meaningful workforce opportunities can be embedded in quality improvement initiatives. Scholarships for higher education, wage supplements, and credit-bearing training opportunities are options that could be tested but that would require additional investments.

We'd love to hear your thoughts on this publication. Has it helped you or your organization? Email us at feedback@childtrends.org

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