Massachusetts Early Childhood Support Organization (ECSO)

Year 3 Annual Evaluation Report

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Submitted to:

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Executive Summary

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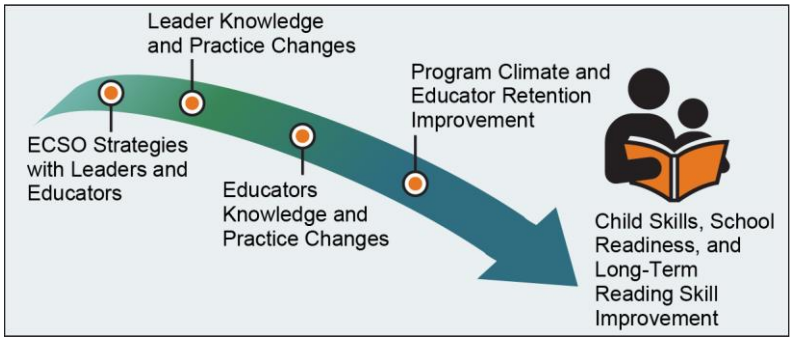
Equitable access to high-quality early education programs (EEPs) is essential for supporting young children's development and preparing them to succeed in school and in life. Although leadership is recognized as a key driver of organizational performance (Senge, 2006), little rigorous evidence exists on its role in driving EEP quality and outcomes for staff and children (Kirby et al., 2021; Douglas & Kirby, 2022). Effective EEP leadership has the potential to positively influence the work environment, educators' motivation, and – crucially – children's learning. Researchers agree that EEP working conditions influence educators' decisions about whether to stay in their programs and in the field (Totenhagen et al., 2016). Relationships between EEP leaders and educators, planning time, and support for responding to children's needs can mitigate or exacerbate educator stress, depression, and burnout (Friedman-Krauss et al., 2014; Whitebook et al., 2017). Surveys of Massachusetts EEP leaders and educators reveal a range of needs and fewer supports available for leaders compared to educators (Hanno et al., 2020; Patel, 2020; Bookman et al., 2018). Situated in this early education landscape, the ECSO initiative leverages a research-based understanding of EEP leadership to develop and test a unique model of support.

The ECSO initiative seeks to improve the quality of EEPs by supporting leaders to strengthen their organizational climate, provide job-embedded professional learning (JEPL) opportunities for educators, support the use of curriculum and child assessments in their program, and engage in continuous quality improvement. Ultimately, the initiative aims to empower EEP leaders to support educators in their provision of high-quality instruction that promotes positive outcomes for young children. Launched in 2020, the initiative is a public-private partnership between New Profit, a venture philanthropy organization, and the Massachusetts Department of Early Education and Care (EEC). Bridging the support of these two stakeholders allows for sustainability and opens the model to the real possibility of integration into the state's strategy to support quality.

In 2020, New Profit and EEC contracted with three ECSOs to carry out the initiative: (1) The Children's Literacy Initiative (CLI), (2) Flamingo Early Learning (Flamingo) at the University of Florida's Lastinger Center for Learning, and (3) The Institute for Early Education Leadership and Innovation at UMass Boston (UMB) in partnership with Start Early. The ECSOs provide intensive supports to EEPs over **two years**, including coaching, training, and other support for leaders and some direct support for classroom educators. After two years, the intensity of supports is stepped down. Each ECSO has its own model and set of planned services and supports, but all three models



"The ESCO program has truly enriched my professional development, enabling me to provide better support to my staff and promote high-quality early childhood education." – EEP Leader

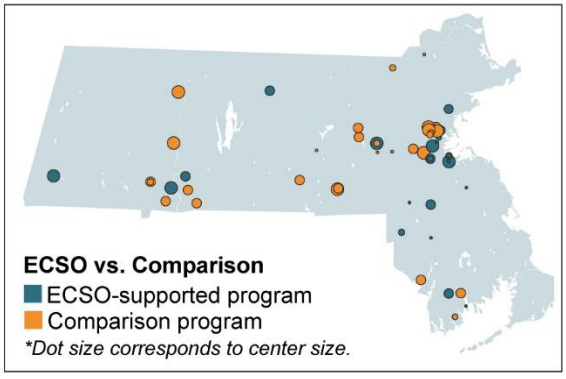
align with the initiative's overarching theory of change.

The theory of change models the intended flow of improvements beginning with program leadership and eventually improving outcomes for children.

In the initiative's pilot year, ECSOs supported 28 EEPs across Massachusetts, beginning in March of 2021. In late summer 2021, ECSOs onboarded an additional cohort of 27 EEPs. In the summer of 2022, ECSOs onboarded a third cohort of 26 EEPs. In total, 81 EEPs across all three cohorts received ECSO supports in the 2022-23 school year, though supports for the first cohort dropped in intensity per the model. All are licensed center-based childcare providers located across Massachusetts, including many in the greater Boston area.

Abt Associates, an independent research firm, is conducting an ongoing implementation and impact evaluation of the ECSO initiative. In the 2022-23 school year, 30 similar EEPs that were not receiving ECSO supports were recruited to serve as the first cohort of comparison programs for the impact evaluation, a quasi-experimental design (QED) that will ultimately involve two cohorts of ECSO-supported EEPs and two cohorts of comparison programs.

This report presents findings from the ongoing implementation and impact evaluations. The interim findings in this report focus primarily on data collected from ECSOs, participating Cohort 3 EEPs, and the comparison EEPs in the 2022-23 school year (see map), including surveys, classroom observations, and administrative data – data collected after the ECSO EEPs had experienced their first year of supports. Similar data from Cohort 2 after two years of supports are provided for context and to offer insight into what might be expected to happen in the QED after ECSO EEPs experience their second year of the initiative.

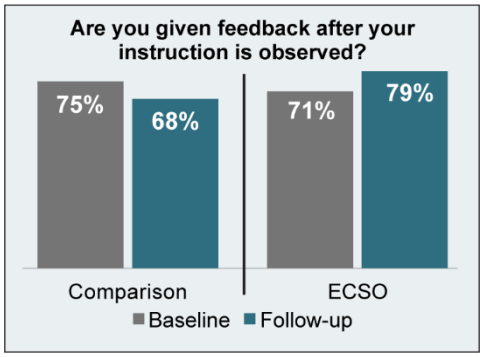


Although the findings are interim because the full QED relies on data from an additional cohort of treatment and comparison programs onboarded in the summer of 2023 and will not be completed until both cohorts experience the full two years of initiative supports, this report sheds light on the initiative's impact so far.

ECSOs continued to deliver supports as planned and according to the initiative's theory of change. On the whole, ECSOs succeeded in providing the types and intensity of supports to EEPs as planned. They provided between 3 and 12 hours of monthly support on average to each Cohort 3 EEP focused on improving instructional leadership through support for using and reflecting on data, continuous quality improvement, staff support and development, and other topics. One ECSO also provided training and coaching directly to educators, with the goal of transferring these activities to instructional leaders over time. The other two ECSOs provided various supports to educators directly and via partner relationships. Moreover, ECSOs reported implementing many elements of their models with intended fidelity.

EEP leaders were more confident in their leadership skills and engaged in significantly more positive leader practices than leaders in comparison programs. After their first year of

ECSO participation, EEP leaders in the third cohort of supported programs reported feeling more confident about their leadership and program management abilities than leaders in similar comparison programs. Leaders in ECSO-supported EEPs were much more likely to engage in practices like providing on-site educator training to improve instructional practice and sharing images of high-quality instructional practice with educators. They also reported engaging in significantly more positive leadership practices and observed educators more, more frequently, and provided them with feedback from observations more than did leaders in comparison EEPs.



Educators in ECSO-supported EEPs maintained a positive view of program climate and positive intentions to stay in the field. Educators in the third cohort of ECSO EEPs maintained high ratings of program climate throughout their first year of supports and had significantly higher ratings at the end of the year than did educators in comparison programs, an important outcome given the stressed EEC climate across Massachusetts and more largely. Similarly, a significantly higher percentage of educators in ECSO EEPs expressed a desire to stay in the field and/or at their current program at the end of the year than did educators in comparison EEPs, controlling for intentions at the beginning of the year. Though we did not see *change* in these metrics over the year, we did maintenance of positive sentiments whereas we saw decreases in comparison programs.

After their first year of ECSO supports, ECSO programs did not have higher observed classroom quality than comparison programs, though data from Cohort 2 suggest that another year of supports may lead to positive change. Overall scores on the Classroom Assessment Scoring System® (CLASS) across age groups did not increase meaningfully during the first year of supports in ECSO-supported EEPs, despite some growth in comparison EEPs. We also did not observe consistent improvement in more nuanced behaviors observed with a different quality measure. After two years of supports, we see larger improvements in infant and toddler classrooms in Cohort 2 EEPs, providing some context for what we might expect in Cohort 3 in the coming year. ECSOs are working to strengthen their focus on these important outcomes.

In the coming year the ECSOs, with support from EEC and New Profit, will continue to provide supports to leaders and educators across the Commonwealth, and the impact evaluation will continue, examining the initiative's impact on programs after two years of supports. At this point in the ECSO initiative, we have found positive impacts on leadership beliefs, attitudes, and practices after one year of supports. As the second year begins for Cohort 3, we expect to see more changes in leader and educator practices as the ECSOs begin to shift the focus of their supports. Descriptive findings from Cohort 2 suggest that the second year of implementation has the potential to bring about positive change at multiple levels within participating EEPs compared to similar programs that are not receiving these leader and educator supports. The ECSO evaluation has the potential to produce actionable insights for instructional leadership policy and practice and contribute to the early childhood knowledge base at both state and national levels. Data from the impact evaluation will shed light on the ECSOs' impact on leaders, educators, and classrooms and the drivers of those changes. Findings from both the implementation and impact evaluations can inform scaling of an enhanced statewide system of technical assistance and training to support EEP quality.

For more information on the ECSO evaluation, please contact: ecsoeval@abtassoc.com

Introduction

"Participating in the ESCO program as an Instructional Leader has brought immense benefits to my professional growth. The greatest value lies in the collaborative learning experience with the exceptional coaching team and fellow instructional leaders within the program. By engaging with this network of dedicated professionals, I have gained invaluable insights, best practices, and innovative approaches to enhance my instructional leadership skills. The guidance and support received have offered me a fresh perspective and a wealth of ideas to drive positive change and growth in our preschool. The ESCO program has truly enriched my professional development, enabling me to provide better support to my staff and promote high-quality early childhood education."—Program Leader in ECSO Site

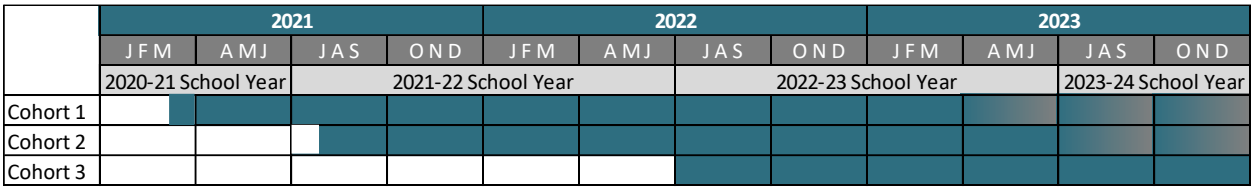
Early childhood educators are the primary agents of change when it comes to supporting children's development in early care environments. The leaders behind those educators—working to maintain a functioning program responsive to the needs of families and communities while also striving to grow the quality with which they serve the children in their care—are just as critical. Despite their influence over program practices and climate, early education and care leaders are less understood and less researched than educator staff.

New Profit and the Massachusetts Department of Early Education and Care (EEC) launched the Early Childhood Support Organization (ECSO) initiative in 2020 through a public-private partnership. The ECSO initiative seeks to improve the quality of Early Education Providers (EEPs) by helping leaders strengthen their organizational climate, provide job-embedded professional learning (JEPL) opportunities for educators, support the use of instructional curriculum and child assessments in their program, and use continuous quality improvement to improve their programs. In addition, it provides programs with supports, resources, and financial incentives, as well as coaching and training, to help program leaders use these tools in their practice. Ultimately, the initiative aims to empower EEP leaders to support educators in their provision of high-quality instruction that promotes positive outcomes for young children.

New Profit and EEC contracted with three organizations to provide two years of intensive supports and resources to program leaders and, to a lesser extent, educators. Each organization—the Children's Literacy Initiative (CLI), Flamingo Early Learning (Flamingo) at the University of Florida's Lastinger Center for Learning, and the Institute for Early Education Leadership and Innovation at UMass Boston (UMB) in partnership with Start Early—utilizes a unique model of supports, though each adheres to an initiative-wide theory of change (see Appendix D) with a common set of ideals and goals.

New Profit partnered with Abt Associates to lead the evaluation of the initiative's implementation and impact. After a pandemic-related delay in the fall of 2020, the initiative began with a pilot year in March of 2021 (Exhibit 1). In the pilot year, the three ECSOs began supporting an initial cohort of 28 licensed center-based programs, or EEPs, across Massachusetts. The ECSOs onboarded a second cohort of 27 EEPs in the summer of 2021 and a third cohort of 26 EEPs in the summer of 2022.

Exhibit 1. ECSO Service Delivery Timeline, by Cohort



*Overall timeline differed somewhat by ECSO. CLI did not provide much support to Cohort 1 leaders until October of 2021. CLI and Flamingo began Cohort 2 leader supports in August 2021, and UMB began Cohort 2 leader supports in September 2021.

To compare outcomes between the ECSO-supported EEPs and similar EEPs that did not have the benefit of ECSO supports, a group of 30 EEPs were also recruited in the summer of 2022 to serve as a comparison sample to the third cohort of ECSO-supported EEPs.

As a continuation of the ongoing implementation study, Abt Associates collected information on the number and types of supports that ECSOs provided to each participating EEP across cohorts. Each ECSO provided these data to Abt on a monthly basis using a standardized reporting tool. Per the initiative-wide model, intensive supports are delivered for two consecutive years with some additional supports provided after that two-year period on an as-needed basis and provisional on the specific needs of each EEP.

For the descriptive and impact studies, in 2021-22, Abt Associates collected data from the second cohort of ECSO EEPs during their second year of implementation; those data included fall and spring classroom observations, surveys of program leadership teams, and surveys of educators. Abt collected these same data in the 2022-23 year from ECSO Cohort 2, ECSO Cohort 3, and the sample of comparison EEPs.

The purposes of this report are twofold:

1. To examine the implementation of the ECSOs' supports delivery using data from Cohorts 1 to 3; and
2. To examine the initiative's initial impact on program leaders, educators, and classroom quality outcomes after one year of implementation. Given the study design, the impact analysis section of the report focuses primarily on the data collected from ECSO Cohort 3 and the associated comparison group (with the exception of the implementation findings which include all ECSO cohorts), though we often reference data collected from ECSO Cohort 2 to provide additional context. A key differentiator between the two cohorts is that, at the time of the spring 2023 data collection, Cohort 2 EEPs had participated in the ECSO initiative for nearly two full school years, where Cohort 3 EEPs had just completed their first year of the initiative. Learnings from Cohort 2 can provide valuable insight into what we might expect to see from Cohort 3 by spring 2024.

Importantly, this is only the first year of the impact evaluation and is limited to a single cohort (Cohort 3) after one year of a two-year intensive intervention. This first year concentrates on shifting leader attitudes and mindsets. The quasi-experimental design (QED) that will rigorously test the initiative's impact will rely on the full sample of Cohorts 3 and 4 treatment and comparison programs across two years of participation in the ECSO initiative. Early positive signs of improvement in key aspects of the theory of change as outlined in this report support promise for the long-term positive impact of the initiative. We have no evidence to suggest how long the intervention might need to be in place in order for the desired effects to be seen; as such, the full impact evaluation is less a test of whether two years of implementation has an impact but more of an exploration into what impacts might be evident after two years of the initiative. Findings from this interim report as well as the ultimate full impact evaluation will help underscore or adjust the theory of change to appropriately represent the levers responsible for expected change and when those changes begin to take shape.

The ECSO evaluation has the potential to produce actionable insights for instructional leadership policy and practice and contribute to the early childhood knowledge base at both state and national levels. Data from the impact evaluation will shed light on the ECSOs' impact on leaders, educators, and children and the drivers of change in practice and child outcomes. Findings from both the implementation and impact evaluations can inform scaling of an enhanced statewide system of technical assistance and training to support EEP quality. Finally, findings from this evaluation should be considered in light of the childcare crisis that has been exacerbated by the COVID-19 pandemic. In particular, EEPs in Massachusetts and across the nation have faced extensive staffing shortages and high staff turnover rates, which are not surprising given low educator wages in a demanding occupation.

Impact Study Sample

In a QED, because participants are not randomly assigned to be in the treatment or comparison conditions, it is critical that they be as equivalent as possible on known variables at the beginning of the initiative so that any change seen can be attributed to the presence of the intervention and not other preexisting differences. In this first year of the ECSO impact QED, we matched comparison programs to treatment programs based on capacity, a combination of SVI and region, and *C3* Funding, defined below:

- *Capacity* is a categorization of the EEC 'licensed capacity' variable; we categorized the EEC information into programs that were *small* (less than 40 slots), *medium* (40-79 slots), *large* (80-120 slots), and *extra large* (more than 120 slots).
- *SVI x Region* is the combination of SVI (Zip) and Licensing Region. SVI (Zip) is the SVI score calculated by EEC using the program zip code. We categorized SVI into four groups: *low* (an SVI of 0.25 or less), *medium low* (between 0.26 and 0.50), *medium high* (between 0.51 and 0.75), *and high* (over 0.75) and combined that categorization with the five Licensing Regions (Central, Metro Boston, Western, Northeast, and Southeast and Cape.
- *C3 Funding* (Commonwealth Cares for Children/Child Care Stabilization Grants) is the average per seat C3 funding provided by EEC. We categorized it into 4 groups. Note that the average C3 funding per seat is highly correlated with SVI (SVI is one of the key components of the C3 formula). It is also correlated with subsidy slots (a variable not used in this matching procedure), as providers can qualify for an equity bonus either through their SVI or the percent of children served who are receiving subsidies.

The distribution of Cohort 3 treatment and comparison programs across these variables can be found in Appendix A.

Data Sources in this Report

As described above, this report presents findings from the implementation and impact studies based on data collection from Cohort 3 treatment and comparison programs in the 2022-23 school year, but we also reference Cohort 2 treatment program growth for context. Exhibit 2 describes the data sources and collection methods, and more details are provided in Appendix A. Full data tables for Cohort 2 are provided in Appendix B, and Cohort 3 data tables are in Appendix C.

Exhibit 2. Data Collection Activities for the ESCO Implementation Evaluation

Data Collection Activity	Participants	Timeline
Abt-Led Activities		
Instructional Leader Surveys	ECSO- and EEP-identified leadership teams at each EEP	Cohort 3: Fall 2022 and Spring 2023 Cohort 2: Fall 2021 and Spring 2023
Educator Surveys	ECSO- and EEP-identified lead/co-educators at each EEP	Cohort 3: Fall 2022 and Spring 2023 Cohort 2: Fall 2021 and Spring 2023
Implementation Fidelity Matrices	ECSO leadership	August 2023
Classroom Observations	Abt-collected observation data in a subset of classrooms	Cohort 3: Fall 2022 and Spring 2023 Cohort 2: Spring 2023
ECSO-Supplied Data		
Classroom Observations	ECSO-collected observation data in a subset of classrooms	Cohort 2: Fall 2021
ECSO Support Delivery	Monthly ECSO-provided supports data	July 2022 – July 2023
Boston Public Schools (BPS) Support Delivery	Monthly BPS-provided supports data	July 2022 – July 2023

Analytic Approach

We present two main types of analyses throughout this report:

- We use **descriptive analyses** to provide average outcomes by condition (treatment and comparison) and to look at differential patterns by ECSO.
- We use single-level **regression analyses** to test whether differences in leader, educator, or classroom quality outcomes emerged based on condition (treatment versus comparison). All analyses of impact at the aggregate ECSO level involved regression models that controlled for baseline scores, program Social Vulnerability Index (SVI), and program subsidy rate, as well as educator years of experience for educator-level analyses. We did not conduct significance testing at the individual ECSO level because of small sample sizes. For many analyses, we examined several variations in outcome scoring methods (for example, looking at the average leadership score across items and looking at the number of leadership practices rated positively) and we imputed missing baseline data using full information maximum likelihood, but in all instances, these model variations did not change the pattern of impacts observed.

In addition to the interest in the impact of the initiative, we also investigated which contextual variables may be correlated with outcomes in ECSO EEPs and/or may be moderating the impact of ECSO supports. Within the treatment group, we considered dosage, or the amount of leader and educator supports per program, and how those amounts relate to changes we saw in key outcomes in ECSO-supported EEPs. However, dosage is highly related to ECSO so as to be nearly duplicative and did not vary much within ECSO. As such, the descriptive look at changes by ECSO can be thought of as equivalent to changes by dosage. We also looked specifically at EEP SVI, EEP subsidy rate, and EEP capacity as potential moderators for all outcomes, and teacher years of experience and teacher support on curriculum use for educator (moderators at the individual level) and classroom (moderators at the aggregate EEP level) outcomes. We only report instances where we found evidence of a statistically significant relationship and suggestions of a pattern of differential impact.

Implementation of the ECSO Initiative

A unique feature of the ECSO initiative is its primary focus on providing direct support to instructional leaders with secondary supports, differing by ECSO, directly to educators. Initiative-derived change flows from the ECSOs to EEPs through instructional leaders and down to educators, classrooms, and children. During Year 3 of the initiative (July 2022 – June 2023), ECSOs provided over 1,000 hours of supports to Cohort 3 EEP leaders and an additional 1,380 hours of support to educators. This equates to approximately 96 hours of annual support per EEP, or between 3 and 12 hours of monthly support per EEP, depending on ECSO.

Though all ECSOs seek to improve program quality and outcomes through the support of instructional leaders and primarily focus on the provision of job-embedded professional learning for educators and the use of continuous quality improvement processes, each ECSO implements a unique program model with different approaches and foci. The three models are described briefly in the text box on the right.

There are also model distinctions in how ECSOs directly support educators. CLI's model involves the provision of substantial hours of coaching and training/professional development directly to infant, toddler, and pre-k educators. In pre-k classrooms, CLI supports the use of their own *Blueprint for Early Learning* curriculum but also supports instruction/curriculum use in infant and toddler classrooms. Flamingo utilizes Boston Public Schools (BPS) support for a small sample of the pre-k classrooms in two of its Cohort 3 programs, and they also offer optional online coursework for educators in all of their EEPs; the majority of the BPS educator supports are geared towards pre-k classrooms as opposed to younger ages. UMB only has support from BPS, also primarily focused on older-age classrooms, though none of their Cohort 3 programs received that support. BPS educator supports focus on implementing the *Focus on Pre-K/Focus on 3s* curricula.

Three ECSOs

Children's Literacy Initiative (CLI)
CLI's model involves alternating monthly training and professional learning community meetings for instructional leaders as well as bi-monthly coaching for leaders and weekly in-person coaching for educators. Leaders begin covering leader identity, move to putting structures in place that support educator practice (like planning time, observation, etc.), then discuss supporting educators' curriculum implementation fidelity, making structural changes to support the use of continuous quality improvement and improved organizational climate, supporting professional learning for educators, and supporting the integration of child assessment data. Most of these topics are then revisited toward the end of the annual supports.

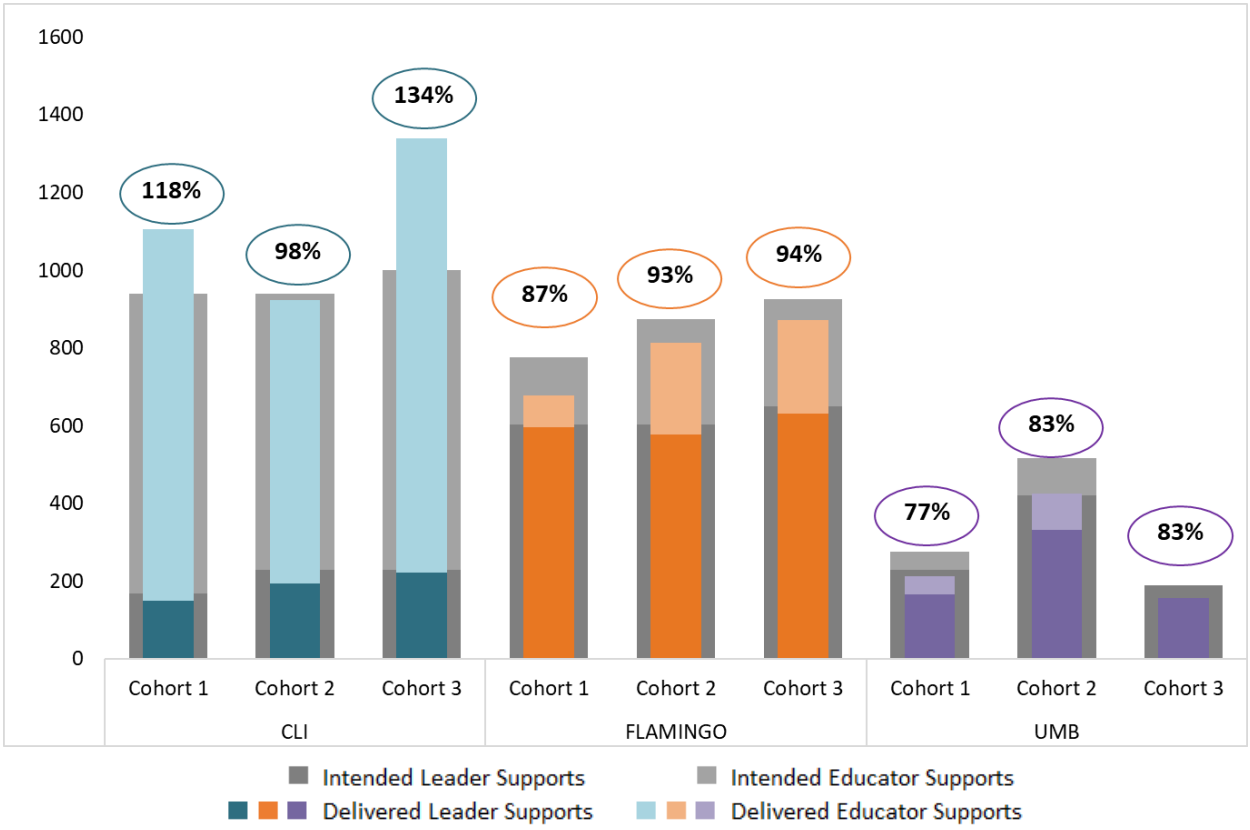
Flamingo Early Learning (Flamingo)
Flamingo's model focuses on leadership *teams* and involves monthly community of practice meetings, a six-month online instructional leadership course, one-on-one coaching, and coaching certification for EEP leadership teams, as well as online coursework for educators. The content that is covered through these activities generally begins with focusing on leadership characteristics and effective leaders, moves to the role of curriculum and staff support around curriculum, next covers aspects of data reflection and use like observation, extending teacher thinking, and use of data, and finishes with supporting teachers' professional development.

University of Massachusetts Boston (UMB)
UMB's model involves intensive coverage of the Essentials 0-5 Survey through five work sessions around getting to know the survey and data dialogue, root cause analysis, checking in on the plan-do-study-act cycle, and planning for sustainability along with end-of-year reflection and celebrations. UMB also supports leadership teams through monthly coaching sessions; topics for those sessions are tailored to suit individual team needs. Finally, UMB hosts monthly professional learning community meetings with leadership teams, culminating in an end-of-year Leadership Forum.

ECSOs Came Very Close to Meeting Their Goals for the Amount of Support Provided and Implemented Most Key Components of Their Models with Fidelity

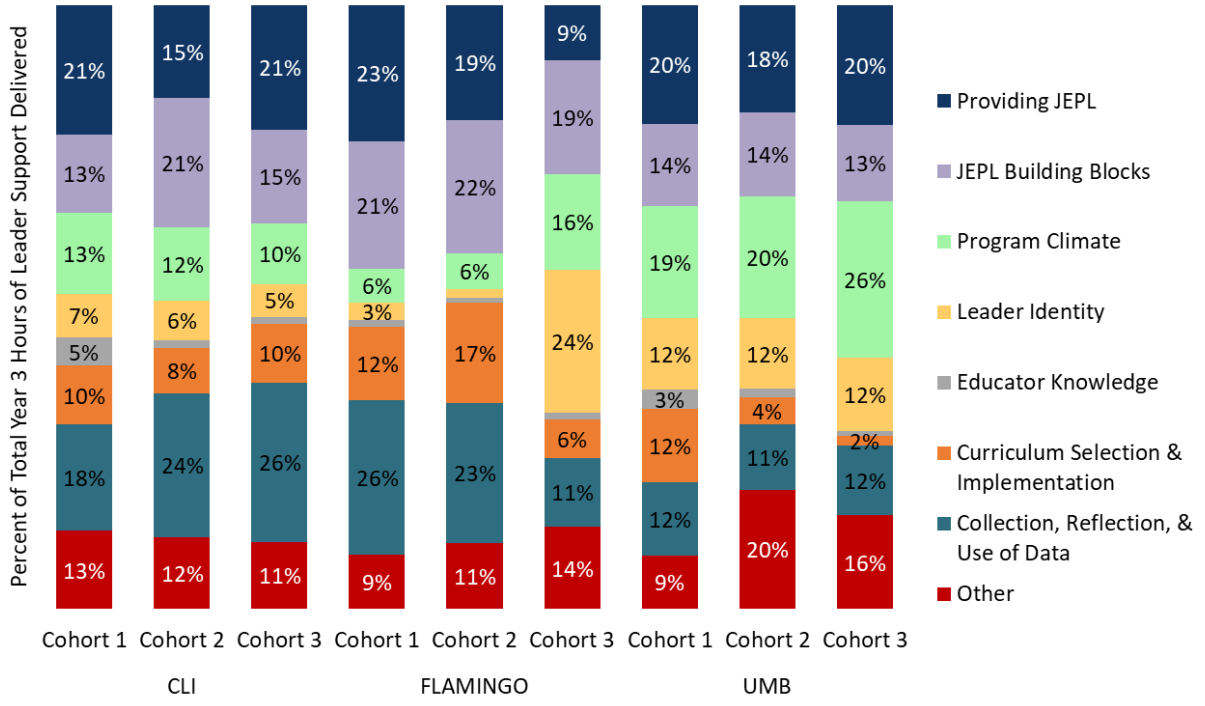
Exhibit 3 shows the number of leader and educator supports delivered and intended/planned in the 2022-23 school year (the third year of supports for Cohort 1, the second year of supports for Cohort 2, and the first year of supports for Cohort 3). Overall, an average of 94% of intended leader supports was delivered to Cohort 3 EEPs in their first year of participation in the initiative; that percentage ranged from 83 to 97% depending on ECSO (97% for CLI, 97% for Flamingo, and 83% for UMB). When educator *and* leader supports are combined, ECSOs delivered an overall 112% of intended Cohort 3 supports, ranging from 83% to 134% (134% for CLI, 94% for Flamingo, and 83% for UMB). High percentages for CLI were primarily due to their provision of direct educator supports. Of note along with the percentages is the variation in total hours of support provided by ECSO, reflecting model differences described earlier in this report. ECSOs also came close to or exceeded their target goals for supports for Cohorts 1 and 2 leaders and educators.

Exhibit 3. Hours of Support Intended and Delivered in 2022-23, by ECSO and Cohort



The topics that ECSOs focused on most were among the largest theorized levers of change for the ECSO initiative (Exhibit 4). All three ECSOs dedicated similar percentages of total support hours to supporting the provision of JEPL. UMB focused much more on program climate, particularly with Cohort 3 leaders, and less on program management structures (JEPL building blocks) and curriculum implementation and data use than the other ECSOs. UMB also focuses heavily on the *Essentials Leadership Model* (ELM), and their 'Other' supports involve work sessions, collaboration, and planning associated with that. It is important to note the key strategies in the Theory of Change are not entirely conceptually distinct from one another but often overlap.

Exhibit 4. Percent of Delivered Hours of Leader Supports, by Topic, ECSO, and Cohort



ECSOs Implemented Core Aspects of the ECSO Model with Intended Fidelity

With Abt's support, each ECSO revisited their model-specific matrices developed for measuring and assessing implementation fidelity, which they developed with Abt in Year 2 of the initiative. ECSOs independently defined key model components and established expected thresholds to determine implementation fidelity. These key model components focused primarily on elements that the ECSOs controlled directly, such as whether they delivered coaching sessions as planned. Though all ECSOs did not deliver all of their key components with expected fidelity (see Exhibit 5), key levers including coaching were implemented with fidelity across ECSOs and cohorts. While some ECSOs chose to represent their model with fewer key components but multiple indicators under each, as was the case with CLI, other ECSOs organized their matrix differently; more key components is not indicative of a more intensive model, and grouping multiple indicators under the same key component may make it more challenging to reach fidelity goals for the key component as a whole.

Exhibit 5. Key Components of Implementation Fidelity in 2022-23, by ECSO and Cohort

Key Component	Implemented with Fidelity in Cohort 1	Implemented with Fidelity in Cohort 2	Implemented with Fidelity in Cohort 3
CLI			
Teacher Professional Development *(teacher coaching + teacher training)*	Yes	Yes	Yes
Leadership Training and Development *(leader coaching + PLCs + collegial visits to other sites)*	No	No	No
Financial Incentives/Materials *(training stipends + literacy materials + curricular materials)*	Yes	Yes	Yes

Key Component	Implemented with Fidelity in Cohort 1	Implemented with Fidelity in Cohort 2	Implemented with Fidelity in Cohort 3
Flamingo			
Community of Practice Sessions	Yes	Yes	No
One-to-one Leader coaching *(quantity and fidelity)*	Yes	Yes	Yes
Leader development course *(access and mastery)*	*N/A*	*N/A*	Yes
System of data collection and analysis *(sharing and discussing classroom observations)*	*N/A*	Yes	Yes
Facilitation of Leader Coaching Certification *(access and participation)*	*N/A*	Yes	*N/A*
ECSO connection between programs and BPS-provided teacher training	Yes	Yes	Yes
Educator coursework	Yes	Yes	Yes
UMB			
Essentials 0-5 Survey Use Training *(introduction, orientation, webinar, and work sessions)*	*N/A*	*N/A*	Yes
Survey Administration *(educator and parent survey participation)*	Yes	Yes	Yes
Training *(ELM Training modules)*	*N/A*	Yes	*N/A*
Coaching (Technical Assistance)	Yes	Yes	Yes
Peer Learning Communities	No	No	Yes
Transfer to Practice *(ELM Implementation)*	Yes	No	*N/A*

A Focus on Leaders

At its core, the ECSO initiative focuses on program leadership. We do see evidence of positive change in program leaders – both in their feelings of self-efficacy and in their practices.

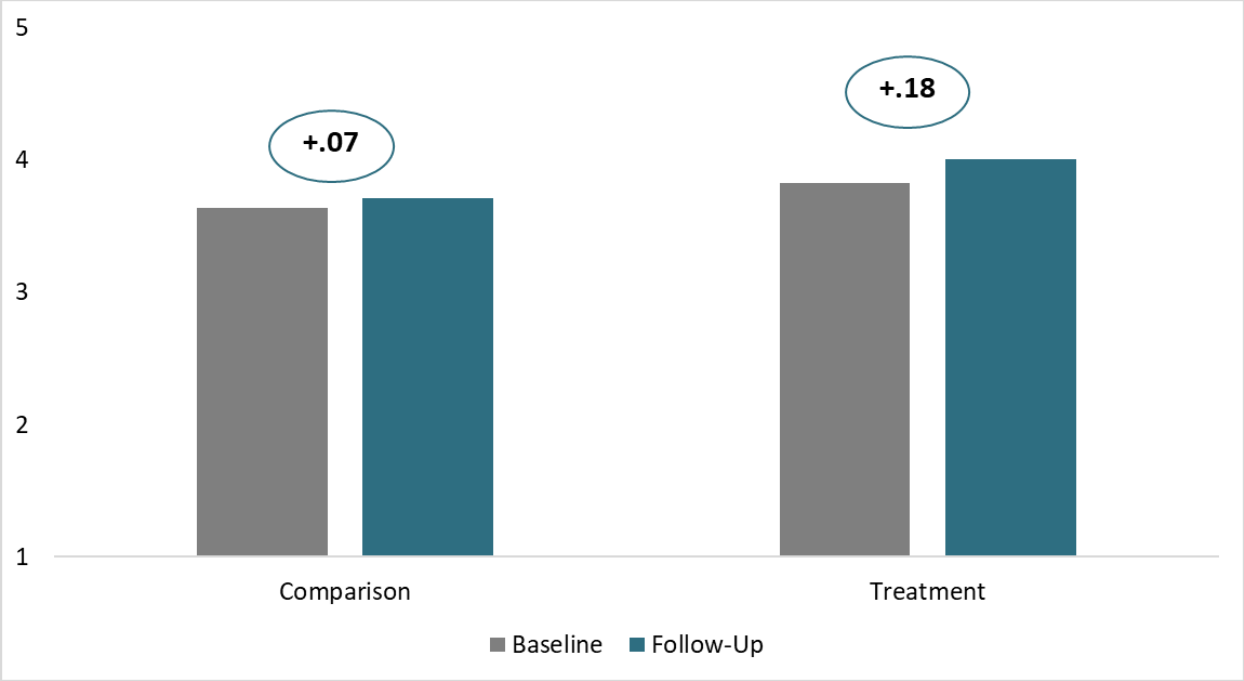
An educational leader's sense of self-efficacy is a key component of successful leadership (Dwyer, 2019). We asked program leaders *how confident they felt* in their ability to engage in positive leadership practices central to the ECSO initiative's theory; practices like supporting educators to use observation data, supporting educators in their use of curriculum and providing constructive feedback to staff based on observations.

We also asked leaders about the frequency with which they engaged in positive leader practices like talking with teachers about developments in the field, observing instruction in classrooms, spending time helping teachers understand the value of professional standards, and making time for teachers to reflect together on classroom assessment data. All of these items came from the Preschool Instructional Leadership Scale (PILS; Horsely & Fong, 2017).

Instructional Leaders in ECSO-Supported Programs Were More Confident in Their Leadership Abilities by the End of the First Year of Supports than Leaders in Similar Non-Supported Programs

Leaders in ECSO programs were more confident in the fall than leaders in the comparison sample (Exhibit 6), and they remained higher in the spring, controlling for differences in where they began. The overall difference was not statistically significant, but it was true for all three ECSOs. The largest increase in leader-reported confidence was seen for UMB, who actually began the year much lower than leaders in CLI or Flamingo.

Exhibit 6. Leader Confidence Change, by Condition



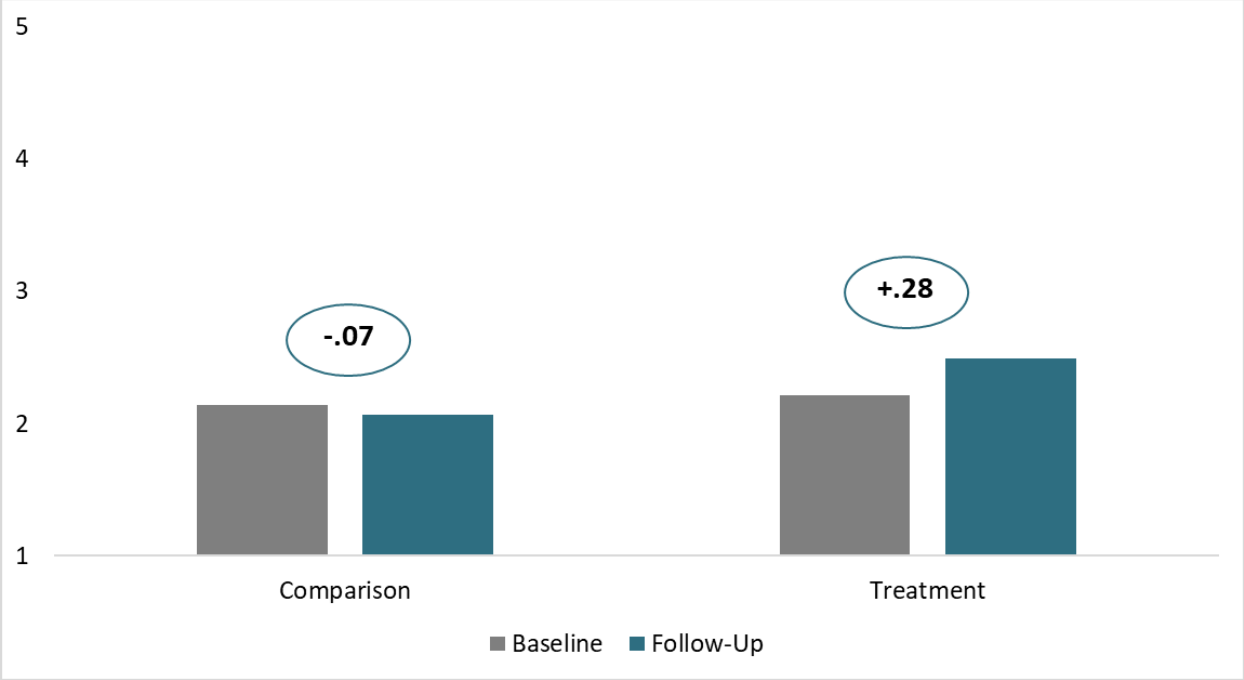
*Scale is a 5-point scale ranging from 1 (Not at all confident) to 5 (Extremely confident).

We see even larger increases in leader confidence in Cohort 2 after two years of initiative supports. Though Cohort 2 leaders were less confident when they began than Cohort 3 ECSO leaders were, we saw improvements in their confidence by more than double the increase we saw in Cohort 3 (+0.48 change compared to +0.28 change). As was true of Cohort 3, we saw the largest increase in UMB-supported leaders.

Instructional Leaders in ECSO-Supported Programs Engaged in Significantly More Positive Leadership Practices by the End of the First Year of Supports than Leaders in Similar Non-Supported Programs

Controlling for program characteristics along with baseline scores, Cohort 3 leaders in ECSO-supported programs engaged in positive leadership practices significantly more often on average than leaders in comparison programs (Exhibit 7).

Exhibit 7. Leader Positive Practice Change, by Condition



*Scale is a 5-point scale ranging from 1 (Never) to 5 (Every day).

Interestingly, we did not see *overall* growth around more frequent engagement in positive leadership practices in Cohort 2 leaders after two years of ECSO supports, though there was significant positive change among UMB leaders (+1.08 change).

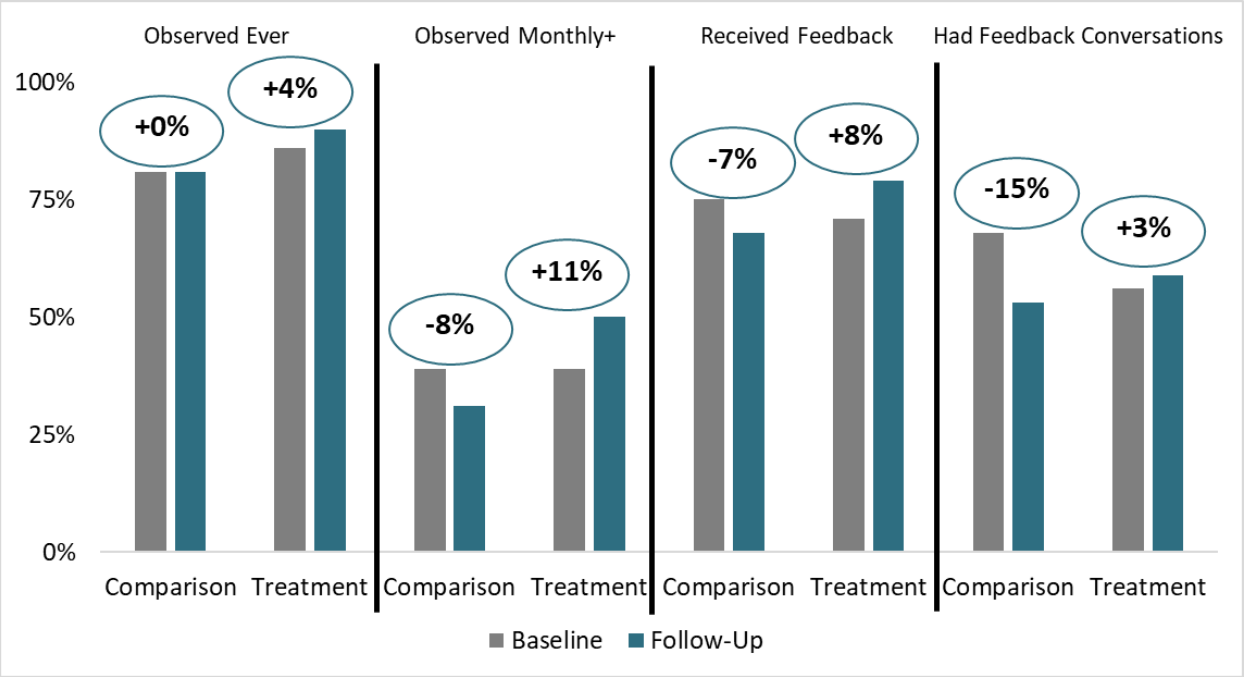
Instructional Leaders in ECSO-Supported Programs Observed Their Educators More and Were More Likely to Provide Educators with Feedback than Leaders in Non-Supported Programs

A primary focus of the ECSO model is to enable leaders to more effectively use information from classroom observations to support educators in making informed, data-driven improvements in classroom instruction. The first steps in that process involve actually conducting observations in classrooms and providing educators with feedback from those visits. Because educators are likely a more reliable reporter for what they were provided by their leadership, we asked educators whether they are observed, how often, and what kind of feedback they receive from those observations if any.

The ECSO initiative has been successful at increasing these positive practices. Educators in Cohort 3 ECSO-supported programs were significantly more likely to *be* observed by their leadership, to be observed at least monthly, and to receive observation feedback than educators in comparison programs in the spring (Exhibit 8) when controlling for where they began in the fall. Leaders in ECSO programs also were more likely to provide (or facilitate the provision of) observation feedback through *one-on-one or group conversations* with educators rather than just reports, though the difference was not statistically significant. We saw the largest increases in CLI and UMB with a fairly substantial *decrease* in Flamingo educators around the two feedback-specific metrics.

> *"I have been using the [ECSO]observation tools and they have been powerful in my observation practice. I choose one page at a time, but write a narrative/letter style to the teacher. I typically focus on what they are doing well and then add a next step or two for them. I then email them my letter to them along with the blank [ECSO] observation sheet so they can see what I am looking for." --Cohort 3 ECSO Educator*

Exhibit 8. Educator Observation Change, by Condition



Of note, we saw a trend of *decreases* in the comparison sample across the year. This is where we begin to see suggestions that the ECSO initiative might help *maintain and, in this case, increase* high-quality practices that may be challenging to keep up in programs without those supports as the year progresses.

Similar to what we saw with leader confidence, we find even larger increases in these positive observation-related practices in Cohort 2 after two years of initiative supports. Though Cohort 2 began the initiative somewhat lower than Cohort 3, we saw much larger improvements in these practices as reported by educators than we saw in Cohort 3, though the largest improvements were often in Flamingo as opposed to UMB (which had hefty average decreases after two years on some of these outcomes).

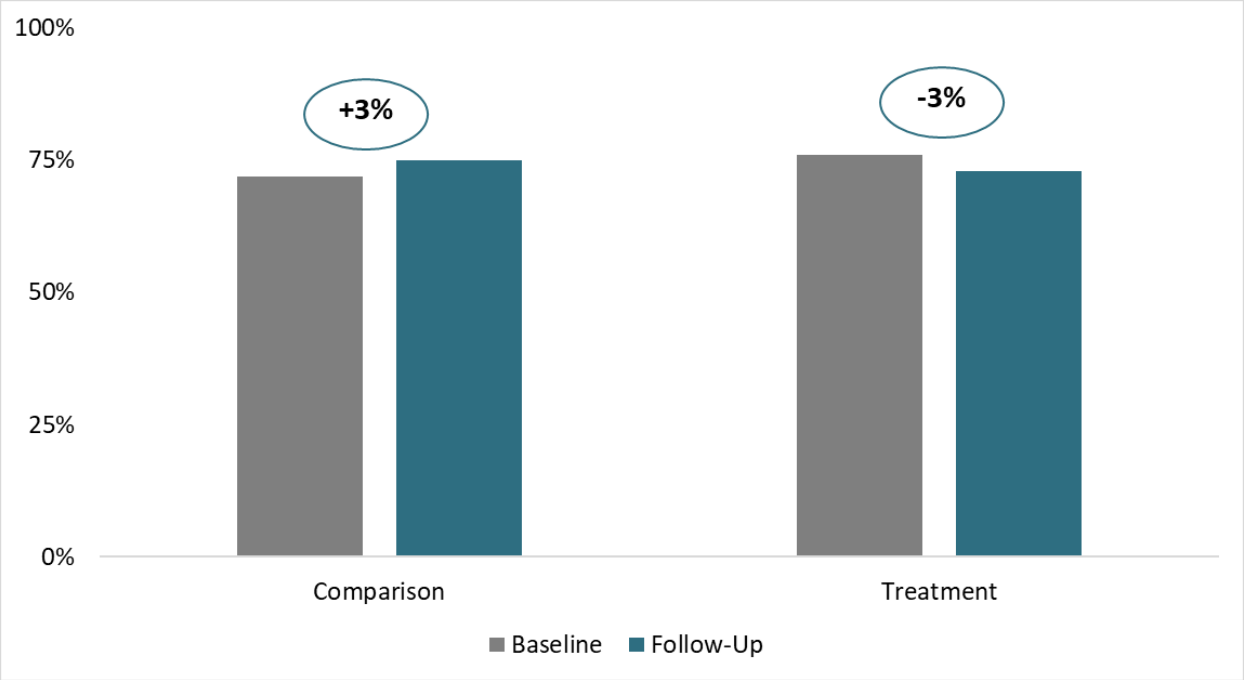
The ECSO initiative specifically targets EEPs who serve children and families in needier communities, but there is still variation in program characteristics within the sample, and those characteristics can influence the impact of the intervention. The ECSO initiative appears to be having a stronger impact on observation practices in programs that have lower SVIs and proportions of accepted childcare subsidies.

For example, among Cohort 3 programs with lower SVIs, the treatment-comparison difference between the percentages of educators ever being observed by leadership in the spring was 18 percentage points (73% for comparison and 91% for treatment), compared to a difference of 0 percentage points among programs with higher SVIs.[1]

We Saw No Difference in Leader Provision of Planning Time for Educators in ECSO-Supported Programs Compared to Those in Comparison Programs

Another key focus of ECSO supports is to encourage leadership to provide their educators with dedicated time to plan for instruction. We asked educators whether they had time any time built into their regular working hours for planning. Educators in ECSO-supported programs were slightly less likely to report having planning time in the spring, but this was not different from the comparison program educators (Exhibit 9). It is worth noting that the ECSO decrease was driven by a pattern in CLI, specifically.

Exhibit 9. Percent of Educators with Planning Time Change, by Condition



In contrast, we saw substantial improvement in the percentage of educators in Cohort 2 ECSO-supported programs whose leaders provided them with planning time by the end of the second year of the initiative (from 58% of teachers at baseline to 70% of teachers at follow-up saying they received planning time), and Flamingo and CLI were responsible for that improvement.

[1] SVI ranges from 0 to 100, with 100 indicating extremely high levels of community vulnerability. In our analysis, low SVI corresponds to approximately 60 (1 standard deviation below the sample SVI mean), and 19 percent of educators worked in a program at or below this threshold. High SVI corresponds to approximately 90 (1 standard deviation above the sample SVI mean), and 18 percent of educators worked in a program at or above this threshold.

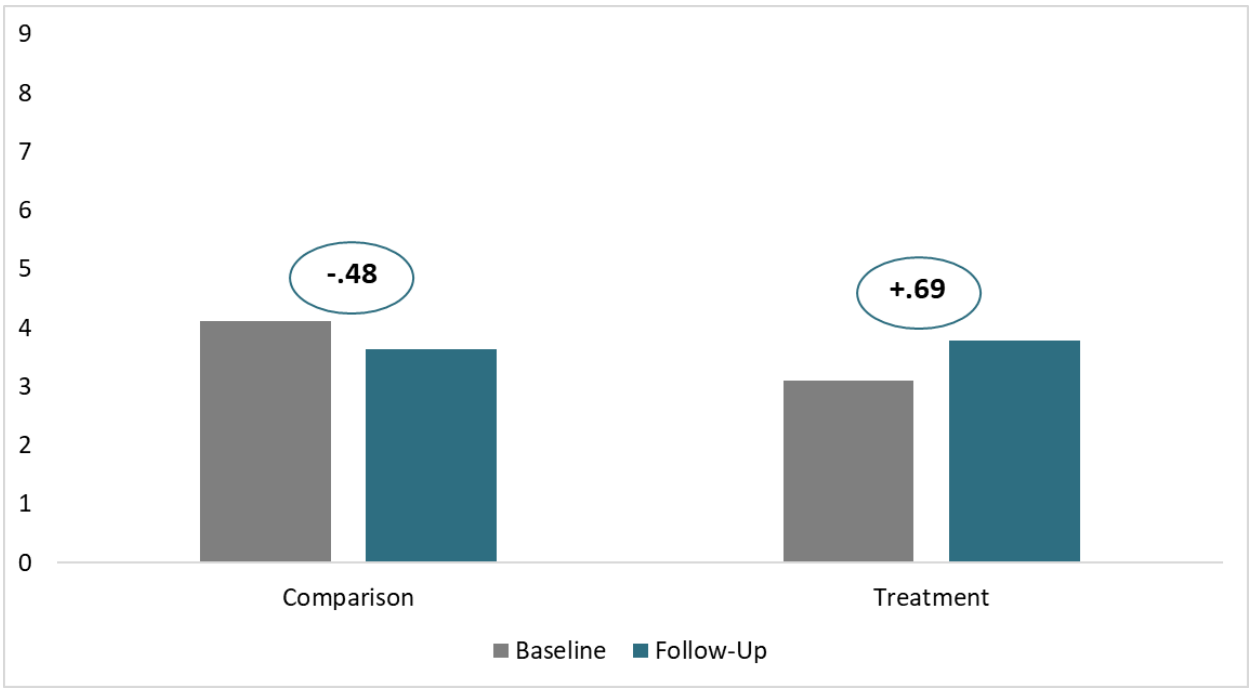
Changes for Educators

The ECSO initiative is designed to facilitate leaders to support their educators, thereby improving the organizational climate of the EEPs as well as educator retention. Though we did find that educators were provided with more supports because of the initiative, the impacts on program climate and educator intentions to stay in the field/at their program are less strong. There are suggestions that the ECSO initiative may serve to *maintain* positive climate, and that impacts on educator intentions to stay may begin to emerge after two years of the intervention.

Educators in ECSO-Supported Programs Received More Supports from Leadership during the Year than Did Educators in the Comparison Programs

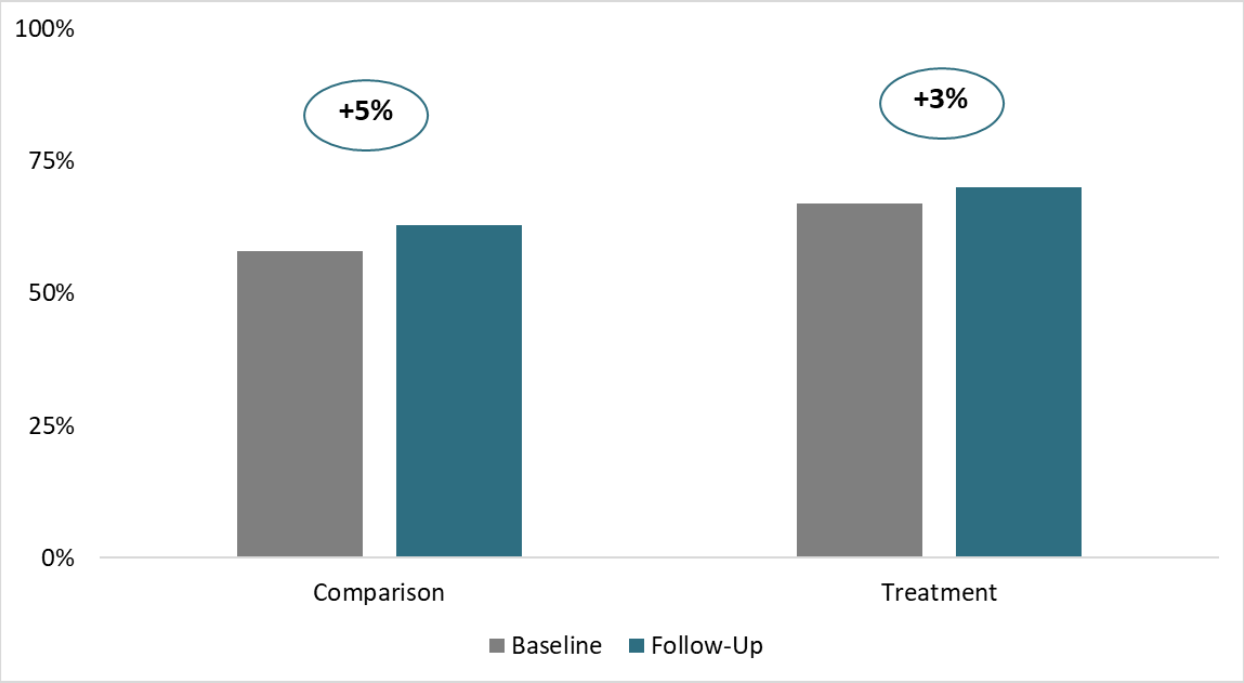
We know that ECSOs are delivering substantial supports to leadership (and in some cases educators, as well), but we have less data around whether leaders then, in turn, provide educators with additional and improved supports. We asked educators specifically about whether they received supports from leadership on specific elements of continuous quality improvement like using classroom observation data, establishing and revising planning goals, and thinking about how to improve the quality of the classroom as well as supports focused on curriculum use and adaptation in the classroom. Controlling for the fact that the comparison educators reported more supports in the fall than educators in ECSO programs, the mean number of supports received in the spring was significantly higher for ECSO educators than the comparison group (Exhibit 10). The increase was largest in CLI and smallest in UMB. Though ECSO educators received more supports than the comparison group, they did not appear to find them any more effective at improving their practice than comparison group educators found the supports they received.

Exhibit 10. Educator Receipt of Supports Change, by Condition



One of the ways in which the ECSO initiative seeks to improve the quality of EEPs is by strengthening leaders' ability to support the use of instructional curriculum and child assessments. To that end, we asked educators whether they received support specifically on the curricula that they used in their classrooms. Though more ECSO educators received support on the curricula that they were using in the classroom than comparison educators, the difference was not statistically significant, nor was there substantial *change* from fall to spring (Exhibit 11). CLI educators did exhibit a larger improvement than Flamingo or UMB, an understandable pattern given CLI's curriculum focus.

Exhibit 11. Educator Receipt of Curriculum Support Change, by Condition



After *two* years of ECSO supports, more Cohort 2 educators reported receiving support on the curricula they used than had at the beginning of their involvement in the initiative (70% in Fall 2021 versus 83% in Spring 2023); this positive difference was largely driven by UMB educators, though CLI saw improvement, as well.

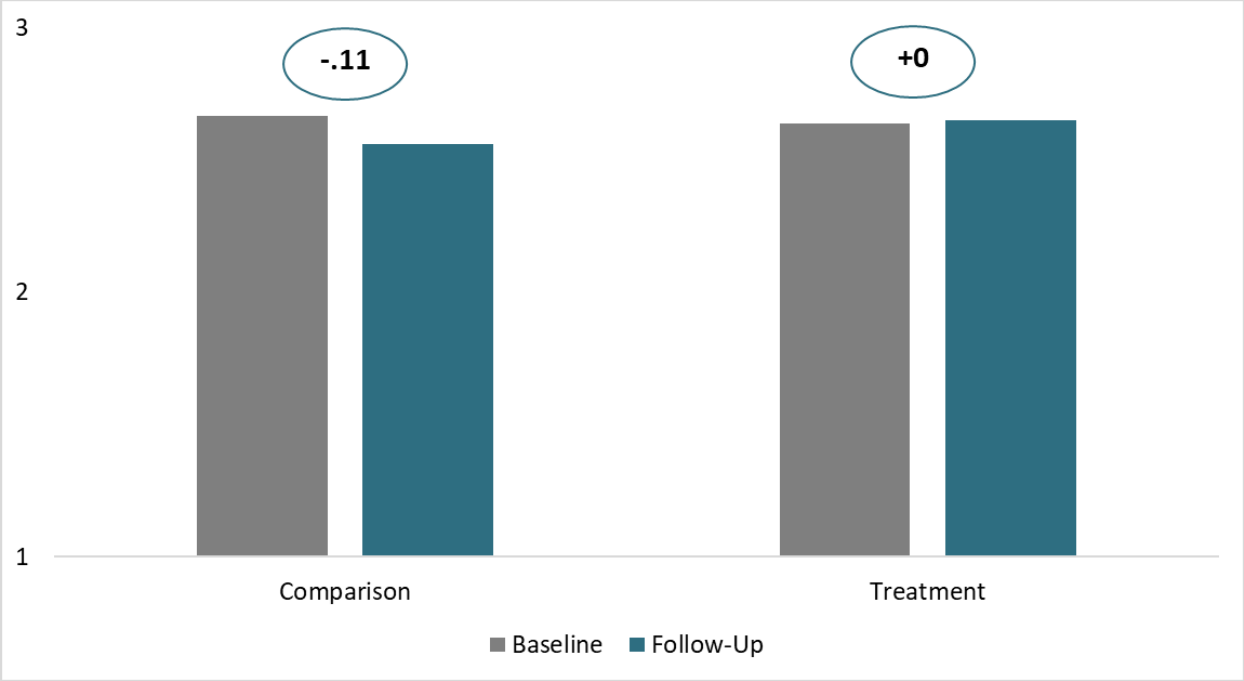
Across all of these support-related outcomes (how many supports they received from leadership, how effective the supports were at helping them to improve their practice, and what curriculum-specific support they received to better implement their curricula), the impact of the ECSO initiative was larger for novice teachers, or those educators with fewer years of experience, than for more experienced educators.

The ECSO Initiative May Help Maintain a Positive Program Climate

We asked educators to indicate the extent to which they felt like positive statements about their program climate were true or not; statements included things like "I feel respected by the leaders in my program" and "There is a true sense of community among staff and leadership at my program." Educators in ECSO programs had significantly more positive ratings of program climate at the end of the year than did comparison educators when controlling for baseline; though there was no change from fall to spring in ECSO programs, climate ratings decreased, on average, in the comparison group (Exhibit 12). We saw a similar static rating from Cohort 2 educators after two years of ECSO, which suggests that the initiative might be more effective at maintaining a positive climate than improving it. This maintenance may be

particularly important in the midst of widespread staffing shortages and high turnover rates, which have implications for educators' workloads, stress, and overall morale (Kim et al., 2022).

Exhibit 12. Educator Climate Ratings Change, by Condition



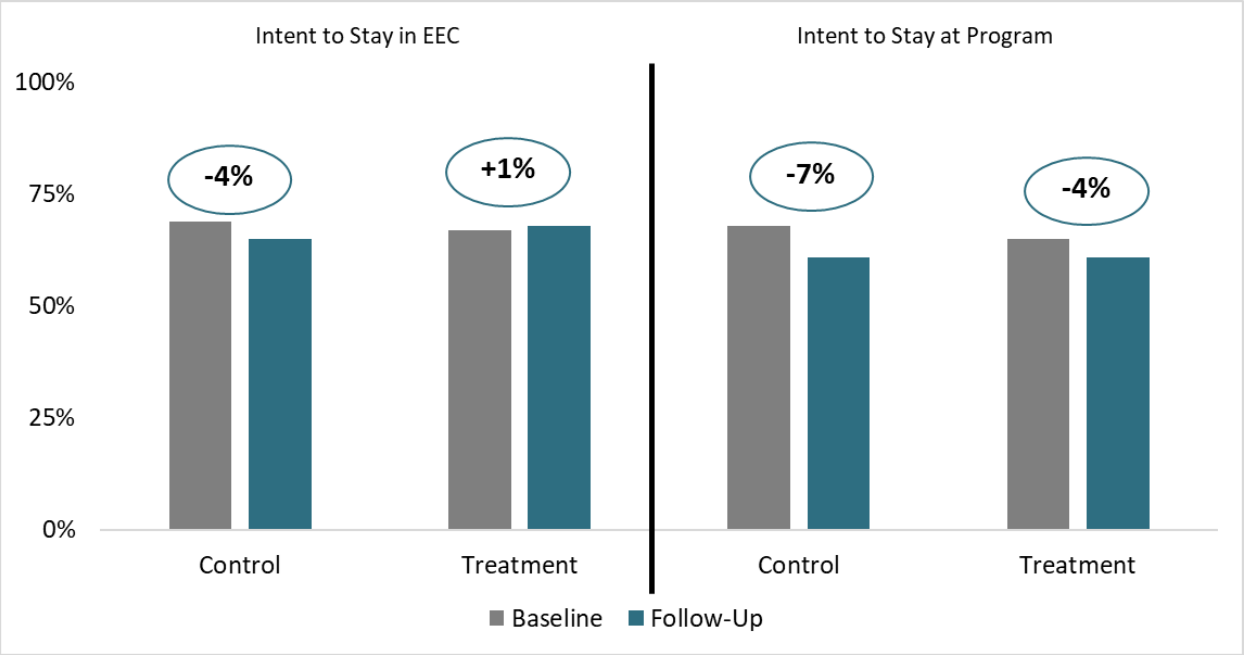
*Scale is a 3-point scale ranging from 1 (Not at all true) to 3 (Very true).

The ECSO Initiative May Encourage Educators to Remain Working at Their Programs, though this May Be Particularly True after Two Years of Exposure and for Novice Teachers

Among Cohort 3 educators in ECSO EEPs, their intentions to stay in the early care and education (ECE) field and/or remain at their current program did not increase over the course of the year, though their intent to stay in ECE was significantly better than that of comparison educators when controlling for baseline (Exhibit 13). On average, there was a slight increase in desire to stay in the field in the treatment group and a slight decrease in desire to stay at program. However, we saw large decreases in intentions to stay in both the ECE field and their current program from CLI educators. Educators across ECSOs provided specific challenges they had experienced over the past year as part of open-ended survey questions, including their desire to leave, lack of reward for extra dedication, lack of accountability, and working with children with challenging behaviors. Consistent with the broader child care context, educators in the study also mentioned low pay and compensation and poor overall turnover rates as additional challenges experienced. CLI educators also mentioned that they had little time for planning particularly when starting to use the *Blueprint* curriculum.

However, there was a much larger difference in the percent of *novice* ECSO educators wanting to stay in the field at the end of the year compared to educators in non-supported programs, and we saw a larger improvement in intent to stay among ECSO educators after two years of exposure to the initiative.

Exhibit 13. Percent of Educator Attrition Plans Change, by Condition



Classroom Improvements

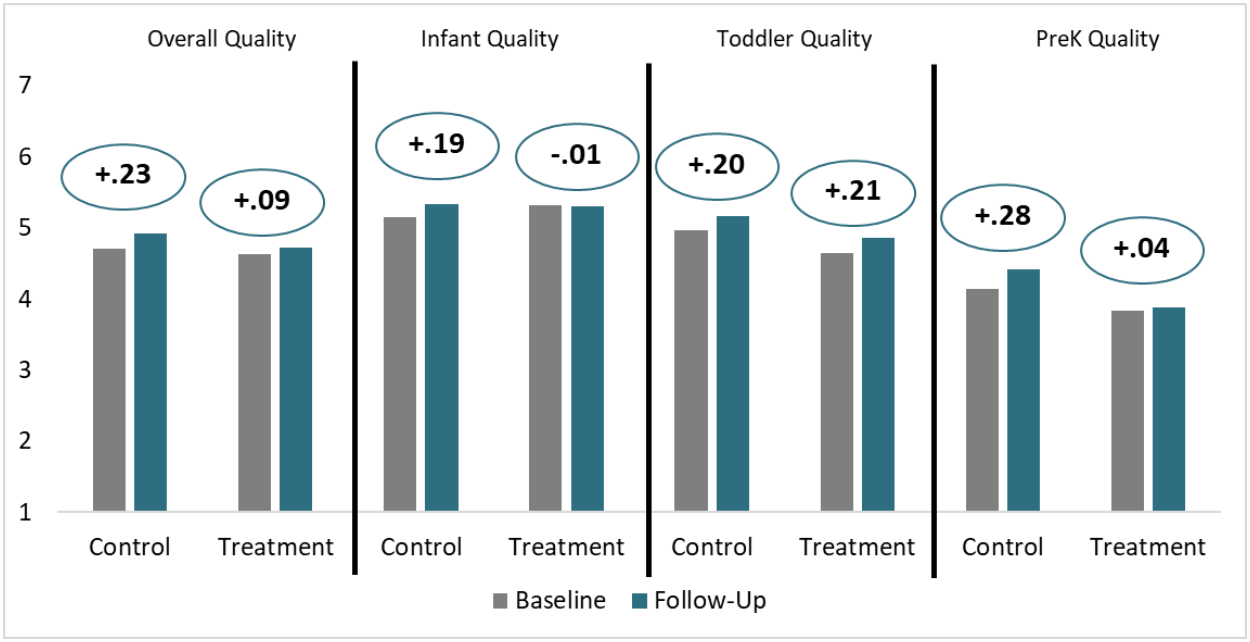
Supporting educators to scaffold curriculum and integrate child assessment information to inform instruction, along with providing them professional learning opportunities and dedicated planning time to improve their understanding and dedication to continuous improvement should result in increased classroom quality. Though we did not see consistent marked improvement in Cohort 3 classrooms, we did see suggestions of more promising improvement in EEPs that had been supported by the initiative for two years.

> *"I have been working at my center for many years. ESCO has refreshed my love for teaching children. It helps me to come up with new exciting curriculum and reminds me how important interactive classrooms are." --Cohort 3 ECSO Educator*

Classrooms in Cohort 3 ECSO-Supported EEPs Did Not Have Significantly Better Quality after a Year of Supports than Classrooms in Non-Supported EEPs

Though there was some improvement for certain age group and ECSO combinations, overall classroom quality as measured by the CLASS® did not improve so as to be significantly better than comparison classrooms after one year of participation in the initiative (Exhibit 14). Overall, toddler, and Pre-K quality improved in CLI classrooms, but there were also meaningful *decreases* in average scores in CLI infant classrooms and in UMB toddler classrooms. Notably, CLI classrooms were much higher on the prek Instructional Support domain than other classrooms on average. Comparison programs saw improvements in all age groups.

Exhibit 14. Standard Classroom Quality Change, by Condition



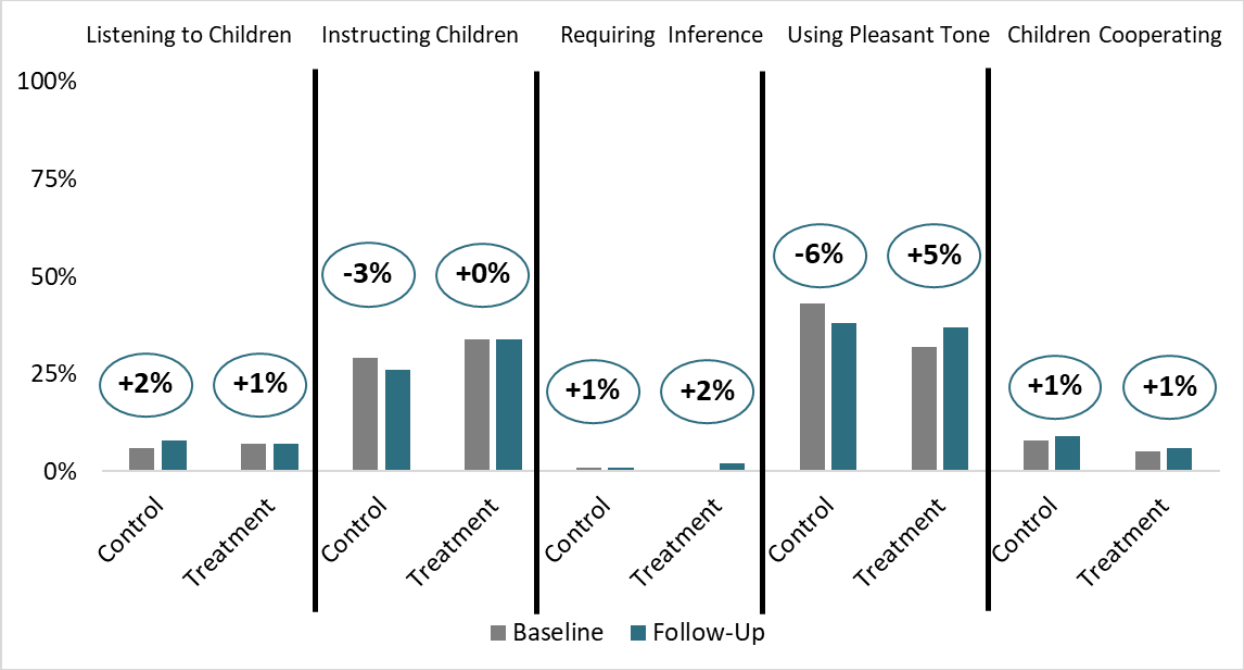
*CLASS scale is a 7-point scale ranging from 1 (Lowest quality) to 7 (highest quality).

Classrooms in Cohort 2 were able to make larger gains in classroom quality after two years of ECSO supports. Average gains of a point or more were made in infant classrooms in all three ECSOs. Toddler quality improved by over a point, on average, in CLI EEPs and by 0.42 in Flamingo classrooms. There was no improvement in average Pre-K classroom scores in any of the ECSOs.

Similar to CLASS® Scores, ECSO Classrooms Were No Better on More Nuanced Measures of Interactional Quality after One Year of Supports than Comparison Classrooms and Did Not Make Marked Improvement over the Course of the Year

Classrooms in ECSO EEPs did not improve on average any more than comparison classrooms on key instructional and interactional behaviors observed in the classroom with the Child Observation in Preschool/Teacher Observation in Preschool (COP/TOP; Farran & Son-Yarbrough, 2001 (COP); Bilbrey, Vorhaus, & Farran, 2007 (TOP)) after one year of supports, and in fact there was little growth at all for any of these groups (Exhibit 15). Controlling for where they began the year, ECSO teachers spent marginally significantly more time instructing children than teachers in the comparison group, though we did not see any growth in that key variable over the year. Areas of growth and decline differed by ECSO, though no real pattern emerged. However, classrooms supported by Flamingo tended to improve on all variables, even though improvement was slight, while improvement for the other ECSOs was less predictable across variables. Note that the COP/TOP was only used in Cohort 3 classrooms and, as such, we do not have any context from Cohort 2 to suggest what change we might expect after two years of ECSO supports. A description of the five variables depicted in this exhibit is provided in Appendix A.

Exhibit 15. Non-Standard Classroom Quality Change, by Condition



*Scale is the percent of instances that a behavior was observed out of the total number of times an individual was watched. We observed an average of 190 instances of child behavior per classroom (ranging from 97 to 294) and an average of 36 instances of educator behavior per classroom (ranging from 13 to 72).

Implications for the Future of the Initiative

The interim findings from the ongoing impact evaluation have demonstrated that, after the first year of the initiative, EEP leaders have improved their confidence, are engaging in more positive leadership practices, and are providing more targeted supports to their educators than leaders in similar programs who are not receiving ECSO supports. Though some of those shifts in leadership are helping programs maintain positive climates and positive educator mindsets, there are no consistent positive changes in educator practice. However, larger and more pervasive shifts seen in programs that have received the full two years of intensive initiative supports provide promise of what the full impact evaluation might find.

Several factors are emerging as correlates of larger improvements; multi-year supports and service composition, particularly direct educator coaching, as well as programs with more novice teachers, might have the potential for larger impacts; those factors will continue to be part of the ongoing implementation evaluation, shedding light on the key levers of the initiative.

Early learnings from the impact study have implications for what we know about how long it takes to generate measurable changes in classrooms, ultimately improving children's developmental progress. In the coming two years, we will continue to examine how the changes we see either confirm the theory of change or suggest adjustments. It is possible, for example, that rather than a somewhat linear progression of effects from leader to educator to classroom to child, we begin to see parallel pathways of effects that hinge on composition of services. As the evaluation allows for the investigation of impact of the full two-year intervention compared to what typically happens over that span of time in similar programs that are not supported by the ECSOs, EEC will be better equipped to assess the feasibility and desirability of scaling the ECSO initiative more broadly.

"As an Instructional Leader, I am fully committed to sustaining the practices and strategies I have learned through the ESCO initiative even after my participation is over. The knowledge and insights gained from the program have proven to be invaluable in improving our preschool's instructional practices and promoting high-quality early childhood education. I plan to continue implementing effective strategies, incorporating the best practices, and leveraging the tools and resources provided by the ESCO initiative. Additionally, I will encourage ongoing professional development for myself and my staff to stay updated with the latest research and advancements in the field. By embedding these practices into our daily operations and fostering a culture of continuous improvement, we can ensure a sustainable and impactful educational experience for our students and the overall success of our preschool community." —Program Leader in ECSO Site

Appendix A: Data Collection Details

Treatment and Comparison EEP-Level Characteristics

The key EEP-level characteristic distributions for the treatment and comparison sample are provided in Exhibit A-1.

Exhibit A-1. Cohort 3 ECSO Treatment and Comparison EEP Characteristics

	ECSO Cohort 3 EEPs	Comparison EEPs
Number	26	30
Capacity (Categorized)		
Small (<40)	5	7
Medium (40-79)	7	12
Large (80-120)	6	6
Extra Large (>120)	8	5
SVI x Region		
Central;medium high	2	5
Central;high	1	3
Metro Boston;medium high	3	4
Metro Boston;high	7	4
Western;medium low	1	0
Western;medium high	0	4
Western;high	4	5
Northeast;high	1	2
Southeast and Cape;medium low	1	0
Southeast and Cape;medium high	1	2
Southeast and Cape;high	5	1
C3 Funding		
Low (1-150)	4	6
Medium (151-200)	5	6
High (>200)	17	18

Instructional Leader Survey

In November/December 2022 and again in May/June 2023, Abt administered an online survey to EEP leaders. The sample and response rates are described in Exhibits A-2 and A-3. Note that 38 leaders responded to both the fall *and* the spring survey (20 treatment leaders, 18 comparison leaders), though the analysis sample was not limited to that subgroup.

Exhibit A-2. Cohort 3 Leader Survey Sample: Fall

Group	Number of Programs	Number of Programs Responding	Program Level Response Rate	Number of Leaders	Number of Leaders Responding	Leader Level Response Rate
By ECSO						
CLI	9	6	67%	10	6	60%
Flamingo	11	9	82%	20	11	55%
UMB	6	6	100%	14	6	43%
By Condition						
Treatment	26	21	81%	44	23	52%
Comparison	30	27	90%	39	35	90%
Total	**56**	**48**	**86%**	**83**	**58**	**70%**

Exhibit A-3. Cohort 3 Leader Survey Sample: Spring

Group	Number of Programs	Number of Programs Responding	Program Level Response Rate	Number of Leaders	Number of Leaders Responding	Leader Level Response Rate
By ECSO						
CLI	9	3	33%	10	3	30%
Flamingo	11	9	82%	20	14	70%
UMB	6	3	50%	14	7	50%
By Condition						
Treatment	26	15	58%	44	24	55%
Comparison	29	13	45%	37	14	38%
Total	**55**	**28**	**51%**	**81**	**38**	**47%**

Educator Survey

In November/December 2022 and again in May/June 2023, Abt administered an online survey to full-time lead/co-educators at ECSO-supported EEPs and comparison EEPs. Each educator received a $25 electronic gift card for completing the survey. The sample and response rates are described in Exhibits A-4 and A-5. Note that 174 educators responded to both the fall *and* the spring survey (105 treatment educators, 69 comparison educators), though the analysis was not limited to that subgroup.

Exhibit A-4. Cohort 3 Educator Survey Sample: Fall

Group	Number of Programs	Number of Programs Responding	Program Level Response Rate	Number of Educators	Number of Educators Responding	Educator Level Response Rate
By ECSO						
CLI	9	9	100%	108	51	47%
Flamingo	11	11	100%	110	43	39%
UMB	6	6	100%	108	53	49%
By Condition						
Treatment	26	26	100%	326	147	45%
Comparison	30	22	73%	237	100	42%
Total	**56**	**48**	**86%**	**563**	**247**	**44%**

Exhibit A-5. Cohort 3 Educator Survey Sample: Spring

Group	Number of Programs	Number of Programs Responding	Program Level Response Rate	Number of Educators	Number of Educators Responding	Educator Level Response Rate
By ECSO						
CLI	9	7	78%	106	39	37%
Flamingo	11	11	100%	115	53	46%
UMB	6	6	100%	107	43	40%
By Condition						
Treatment	26	24	92%	329	135	41%
Comparison	29	24	83%	239	100	42%
Total	**55**	**48**	**87%**	**567**	**235**	**41%**

Observation Data

Trained Abt staff conducted all of the Cohort 3 classroom observations in October-December 2022 and again in [months] 2023. Abt observed a randomly-selected group of classrooms. Classrooms that served primarily infants or toddlers were observed with the age-appropriate Classroom Assessment Scoring System (CLASS®) version. Classrooms that served primarily preschool-aged children were either observed with the Pre-K CLASS or with the Child Observation in Preschool/Teacher Observation in Preschool (COP/TOP). Numbers of observed classrooms that were included in the impact analysis are provided in Exhibits A-6 and A-7. Note that we limited the analysis sample only to these classrooms which were observed twice, once at baseline and once at follow-up, even if the educator staff in the room had shifted.

Exhibit A-6. Cohort 3 Observation Data Impact Sample: Fall

Group	Number of Infant Classrooms Observed	Number of Toddler Classrooms Observed	Number of Pre-K CLASS Classrooms Observed	Number of Pre-K COP/TOP Classrooms Observed	Total Number of Classrooms Observed
By ECSO					
CLI	3	14	5	21	43
Flamingo	7	15	5	25	52
UMB	5	13	4	16	38
By Condition					
Treatment	15	42	14	62	133
Comparison	10	23	16	52	101
Total	**25**	**65**	**30**	**114**	**234**

Exhibit A-7. Cohort 3 Observation Data Impact Sample: Spring

Group	Number of Infant Classrooms Observed	Number of Toddler Classrooms Observed	Number of Pre-K CLASS Classrooms Observed	Number of Pre-K COP/TOP Classrooms Observed	Total Number of Classrooms Observed
By ECSO					
CLI	5	12	10	8	35
Flamingo	9	13	9	10	41
UMB	7	7	6	6	26
By Condition					
Treatment	21	32	25	24	102
Comparison	8	14	13	25	60
Total	**29**	**46**	**38**	**49**	**162**

COP/TOP Variable Description

For the purposes of this report, we focused on a limited set of key variables from the COP/TOP that are associated with the "**Magic Eight**":

- ***How often educators listen to children:*** The percent of observed instances that we saw an educator listening to a child or group of children during the observation visit. The other instances when we watched an educator's *talking/listening behavior*, they might have been talking to children (as opposed to listening), talking to another teacher, or not talking nor listening to anyone at all.
- ***How often educators are instructing children:*** The percent of observed instances that we saw an educator instructing/teaching a child or group of children during the visit. The other instances we watched educator behavior, we saw them doing other activities like managing the classroom, dealing with behavior issues, attending to children's personal care needs, monitoring the class, etc.
- ***How often educators require children to use higher-level thinking:*** The percent of observed instances that we saw an educator instructing children with some attention to higher-level/inferential thinking during the visit. The other instances where we observed the cognitive demand of educator instruction, they were either not instructing at all or using instruction that was only at the level of basic skills or lower.
- ***How often educators use a pleasant or vibrant tone:*** The percent of observed instances that we saw an educator using a pleasant or vibrant tone in interactions with children. The other instances where we observed educators, they were displaying a flat/neutral or negative affect.
- ***How often children participate in associative or cooperative interactions with others:*** The percent of observed instances that we saw a child engaged in a task that required them to interact with others and work together during the visit. The other instances where we observed children, they were in other types of interactions including nonacademic tasks, social interactions, activities that they were working on alone, passively listening to teacher instructions, etc.

Appendix B: Cohort 2 Data Tables

In all Cohort 2 tables, baseline refers to Fall 2021, when Cohort 2 EEPs started the ECSO initiative, and follow-up refers to Spring 2023, the most recent time of data collection.

Leader Outcomes

Exhibit B-1. Level of Instructional Leader Confidence, by ECSO and Time

	Baseline	Follow-Up	Change
Treatment	3.69	4.17	0.48
CLI	3.54	3.79	0.25
Flamingo	3.78	4.23	0.45
UMB	3.79	4.79	1.00

Exhibit B-2. Frequency in Leadership Practices, by ECSO and Time

	Baseline	Follow-Up	Change
Treatment	2.94	2.89	-0.05
CLI	3.12	2.73	-0.39
Flamingo	3.10	2.52	-0.58
UMB	2.68	3.76	1.08

Exhibit B-3. Instructional Leaders' Observations Practices, by ECSO and Time

	Baseline	Follow-Up	Change (in percentage points)
Whether Educator was Observed			
Treatment	78%	90%	12
CLI	84%	100%	16
Flamingo	53%	86%	33
UMB	94%	83%	-11
Whether Educator was Observed at Least Monthly			
Treatment	28%	57%	29
CLI	47%	86%	39
Flamingo	13%	48%	35
UMB	19%	33%	14
Whether Educator Received Feedback from Observation			
Treatment	66%	83%	17
CLI	63%	91%	28
Flamingo	47%	78%	31
UMB	88%	79%	-9
Whether Educator Received Feedback from Observation via Conversation with Observer			
Treatment	50%	67%	17
CLI	52%	84%	32
Flamingo	27%	62%	35
UMB	69%	50%	-19

Exhibit B-4. Instructional leaders' administration of planning time, by ECSO and time

	Baseline	Follow-Up	Change (in percentage points)
Treatment	58%	70%	12
CLI	69%	77%	8
Flamingo	43%	71%	28
UMB	60%	59%	-1

Educator Outcomes

Exhibit B-5. Educators Receipt of Supports, by ECSO and Time

	Baseline	Follow-Up	Change
Number of Supports Received			
Treatment	3.06	2.73	-0.33
CLI	3.68	3.50	-0.18
Flamingo	2.19	2.25	0.06
UMB	2.19	2.41	0.22
Number of Supports Reported at Least Somewhat Effective			
Treatment	1.73	1.41	-0.32
CLI	1.89	2.12	0.23
Flamingo	1.50	0.88	-0.62
UMB	1.75	1.23	-0.52
Whether Educator Supported on Curriculum Used in Classroom			
Treatment	70%	83%	13
CLI	88%	95%	7
Flamingo	67%	67%	0
UMB	56%	88%	32

Exhibit B-6. Educators' Perceptions of Program Climate, by ECSO and Time

	Baseline	Follow-Up	Change
Treatment	2.65	2.61	-0.04
CLI	2.87	2.65	-0.22
Flamingo	2.59	2.54	-0.05
UMB	2.48	2.62	0.14

Notes. The items on the program climate scale range from 1 to 3, with 3 reflecting a more positive climate.

Exhibit B-7. Educators' Intentions to Stay in ECE and Current Program, by ECSO and Time

	Baseline	Follow-Up	Change
Intentions to Stay in ECE Field			
Treatment	68%	76%	8
CLI	75%	86%	11
Flamingo	53%	68%	15
UMB	75%	71%	-4
Intentions to Stay in Current Program			
Treatment	63%	73%	10
CLI	69%	81%	12
Flamingo	47%	78%	31
UMB	73%	59%	-14

Classroom Quality

Exhibit B-8. Program-Level Classroom Quality Using CLASS Scores, by ECSO and Time

	Baseline	Follow-Up	Change
Average Overall Quality (Range=1-7)			
Treatment	4.85	5.15	0.29
CLI	4.92	5.40	0.48
Flamingo	4.82	5.21	0.39
UMB	4.82	4.77	-0.05
Infant Quality (Range=1-7)			
Treatment	5.05	6.15	1.11
CLI	5.11	6.69	1.59
Flamingo	4.91	5.93	1.02
UMB	5.16	6.03	0.87
Toddler Quality (Range=1-7)			
Treatment	4.60	4.86	0.27
CLI	4.76	5.78	1.02
Flamingo	4.14	4.56	0.42
UMB	5.01	4.10	-0.90
Preschool Quality (Range=1-7)			
Treatment	4.91	4.64	-0.26
CLI	4.90	4.57	-0.33
Flamingo	5.41	5.13	-0.28
UMB	4.30	4.17	-0.13
Preschool Instructional Support Quality (Range=1-7)			
Treatment	3.26	2.96	-0.30
CLI	3.27	2.55	-0.72
Flamingo	4.02	4.16	0.14
UMB	2.29	2.18	-0.11

Appendix C: Cohort 3 Data Tables

In all Cohort 3 tables, baseline refers to Fall 2022, when Cohort 3 EEPs started the ECSO initiative, and follow-up refers to Spring 2023, the most recent time of data collection.

Leader Outcomes

Exhibit C-1. Level of Instructional Leader Confidence, by ECSO and Time

	Baseline	Follow-Up	Change
Comparison	3.64	3.71	0.07
Treatment	3.83	4.01	0.18
CLI	3.89	3.97	0.07
Flamingo	4.05	4.17	0.12
UMB	3.38	3.72	0.34

Exhibit C-2. Frequency in Leadership Practices, by ECSO and Time

	Baseline	Follow-Up	Change
Comparison	2.14	2.07	-0.07
Treatment	2.21	2.49	0.28
CLI	2.04	2.25	0.22
Flamingo	2.29	2.61	0.32
UMB	2.25	2.38	0.13

Exhibit C-3. Instructional Leaders' Observations Practices, by ECSO and Time

	Baseline	Follow-Up	Change (in percentage points)
Whether Educator was Observed			
Comparison	81%	81%	0
Treatment	86%	90%	4
CLI	90%	95%	5
Flamingo	81%	85%	4
UMB	85%	93%	8
Whether Educator was Observed at Least Monthly			
Comparison	39%	31%	-8
Treatment	39%	50%	11
CLI	50%	62%	12
Flamingo	43%	52%	9
UMB	26%	37%	11
Whether Educator Received Feedback from Observation			
Comparison	75%	68%	-7
Treatment	71%	79%	8
CLI	77%	95%	18
Flamingo	64%	63%	-1
UMB	70%	84%	14

	Baseline	Follow-Up	Change (in percentage points)
Whether Educator Received Feedback from Observation via Conversation with Observer			
Comparison	68%	53%	-15
Treatment	56%	59%	3
CLI	58%	69%	11
Flamingo	57%	42%	-15
UMB	55%	70%	15

Exhibit C-4. Instructional Leaders' Administration of Planning Time, by ECSO and Time

	Baseline	Follow-Up	Change (in percentage points)
Comparison	72%	75%	3
Treatment	76%	73%	-3
CLI	77%	62%	-15
Flamingo	66%	73%	7
UMB	83%	83%	0

Educator Outcomes

Exhibit C-5. Educators Receipt of Supports, by ECSO and Time

	Baseline	Follow-Up	Change
Number of Supports Received			
Control	4.11	3.63	-0.48
Treatment	3.10	3.78	0.69
CLI	2.87	4.40	1.53
Flamingo	2.38	2.98	0.60
UMB	3.93	4.17	0.25
Number of Supports Reported at Least Somewhat Effective			
Control	2.30	2.00	-0.30
Treatment	2.12	2.08	-0.04
CLI	2.16	3.05	0.89
Flamingo	1.63	1.47	-0.17
UMB	2.37	1.86	-0.51
Whether Educator Supported on Curriculum Used in Classroom			
Control	58%	63%	5
Treatment	67%	70%	3
CLI	70%	79%	9
Flamingo	62%	62%	0
UMB	68%	71%	3

Exhibit C-6. Educators' Perceptions of Program Climate, by ECSO and Time

	Baseline	Follow-Up	Change
Comparison	2.67	2.56	-0.11
Treatment	2.64	2.65	0.00
CLI	2.67	2.68	0.01
Flamingo	2.55	2.60	0.05
UMB	2.68	2.67	-0.01

Exhibit C-7. Educators' intentions to Stay in ECE and Current Program, by ECSO and Time

	Baseline	Follow-Up	Change
Intentions to Stay in ECE Field			
Control	69%	65%	-4
Treatment	67%	68%	1
CLI	74%	67%	-7
Flamingo	53%	68%	15
UMB	71%	69%	-2
Intentions to Stay in Current Program			
Control	68%	61%	-7
Treatment	65%	61%	-4
CLI	70%	53%	-17
Flamingo	54%	58%	4
UMB	69%	72%	3

Classroom Quality

Exhibit C-8. Program-Level Classroom Quality Using CLASS Scores, by ECSO and Time

	Baseline	Follow-Up	Change
Average Overall Quality (Range=1-7)			
Control	4.70	4.92	0.23
Treatment	4.63	4.73	0.09
CLI	4.66	5.09	0.43
Flamingo	4.51	4.53	0.01
UMB	4.83	4.59	-0.25
Infant Quality (Range=1-7)			
Control	5.15	5.34	0.19
Treatment	5.32	5.31	-0.01
CLI	5.25	4.28	-0.98
Flamingo	5.28	5.56	0.28
UMB	5.43	5.67	0.23
Toddler Quality (Range=1-7)			
Control	4.96	5.16	0.20
Treatment	4.65	4.86	0.21
CLI	4.40	5.32	0.92
Flamingo	4.65	4.61	-0.04
UMB	5.14	4.41	-0.73

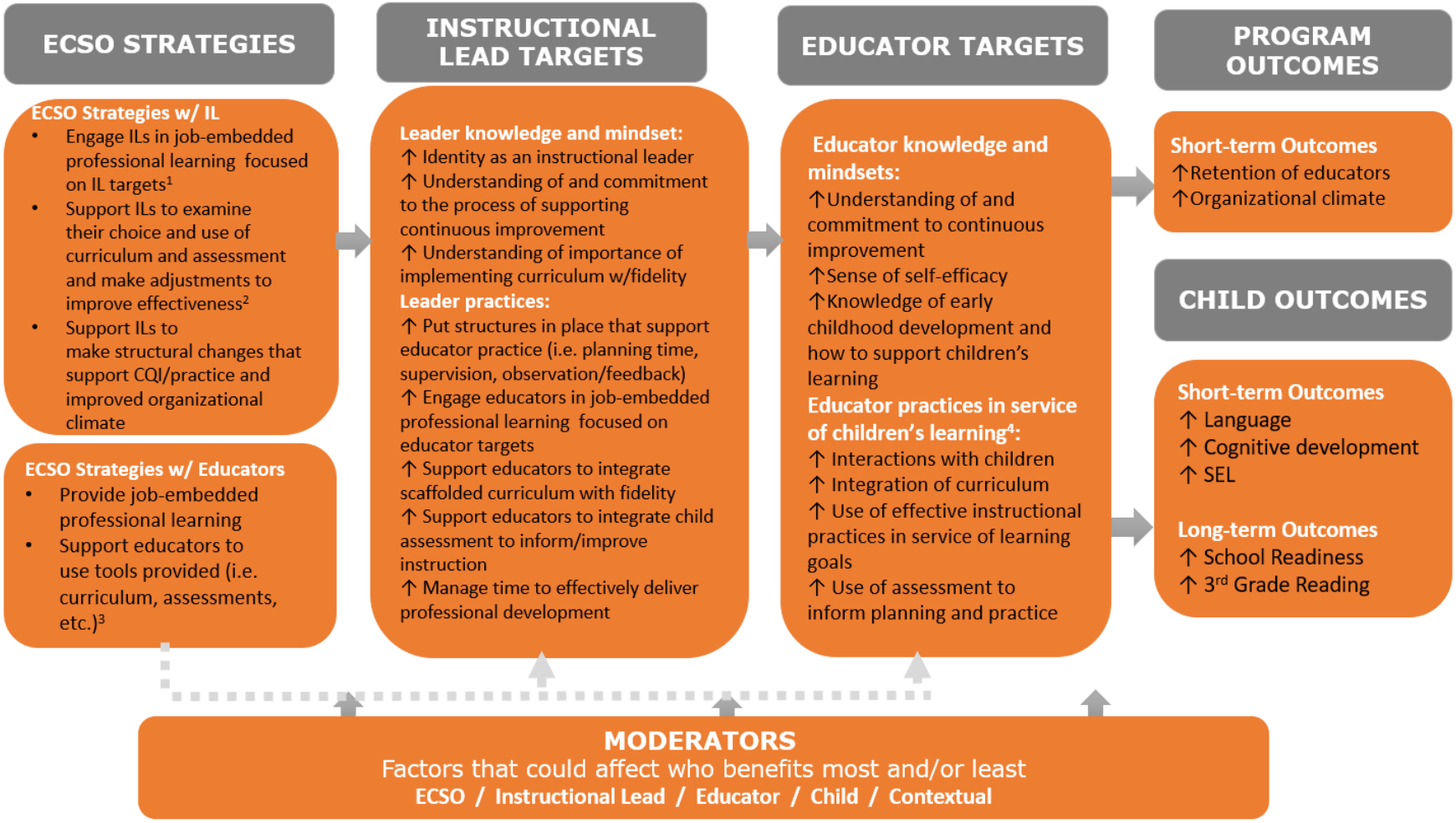
	Baseline	Follow-Up	Change
Preschool Quality (Range=1-7)			
Control	4.14	4.41	0.28
Treatment	3.84	3.88	0.04
CLI	4.58	5.07	0.50
Flamingo	3.48	3.32	-0.16
UMB	3.47	3.22	-0.24
Preschool Instructional Support Quality (Range=1-7)			
Control	1.78	2.02	0.24
Treatment	2.29	2.23	-0.06
CLI	3.48	3.73	0.25
Flamingo	1.58	1.35	-0.23
UMB	1.90	1.72	-0.18

Exhibit C-9. Program-Level Classroom Quality Using COP/TOP, by ECSO and Time

	Baseline	Follow-Up	Change
Listening to Children (Range=0-100)			
Control	6%	8%	2
Treatment	7%	7%	1
CLI	6%	8%	2
Flamingo	6%	8%	2
UMB	8%	6%	-2
Instructing Children (Range=0-100)			
Control	29%	26%	-3
Treatment	34%	34%	0
CLI	35%	29%	-6
Flamingo	35%	39%	4
UMB	33%	33%	0
Demanding Higher-Order Thinking (Range=0-100)			
Control	1%	1%	1
Treatment	0%	2%	2
CLI	0%	2%	1
Flamingo	0%	1%	0
UMB	0%	4%	4
Using Pleasant Tone (Range=0-100)			
Control	43%	38%	-6
Treatment	32%	37%	5
CLI	24%	21%	-3
Flamingo	35%	43%	8
UMB	35%	44%	9
Children Cooperating (Range=0-100)			
Control	8%	9%	1
Treatment	5%	6%	1
CLI	6%	8%	3
Flamingo	5%	6%	1
UMB	6%	6%	0

Appendix D: Initiative-Wide Theory of Change

Exhibit D-1. MA ECSO Initiative-Wide Theory of Change



Source: Harvard Center on the Developing Child, version date 10/5/21.

Appendix E: References

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