# A New Approach to Supporting the Quality of Early Care and Education Programs in Arkansas: Case Studies of Array

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Arkansas has been a national leader in supporting the capacity of early care and education (ECE) programs to promote children's social-emotional (SE) development and reduce the use of exclusionary practices. For over a decade, the Arkansas Department of Human Services, Division of Child Care and Early Childhood Education (DCCECE) has provided a wide range of opportunities for ECE programs to receive no-cost professional development (PD) focused on SE teaching practices. These opportunities range from stand-alone sessions to more in-depth, multi-session trainings with on-site coaching. Since 2011, DCCECE has implemented an early childhood mental health consultation program to help teachers address children's challenging behavior.

In 2016, DCCECE established a single point-of-entry system for ECE programs that need assistance when they are struggling to manage children's challenging behavior. This system, called BehaviorHelp, provides support tailored to the program's needs, including technical assistance, training, and early childhood mental health consultation. The same year, DCCECE developed a policy that requires ECE programs receiving federal child care or state funding to request agency approval before expelling or suspending a child because of behavior problems. To comply with the policy, programs are instructed to contact BehaviorHelp for assistance.[1] (In 2023, DCCECE became the Office of Early Childhood within the Arkansas Department of Education and continues to support the work described in this report.)

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[1] For additional background on this policy and BehaviorHelp, see: Conners Edge, N. A., Rose, A., Honeycutt, D., McKelvey, L., Swindle, T., Courson, D., & Fox, L. B. (2018). Implementation of Arkansas's initiative to reduce suspension and expulsion of young children. *Journal of Early Intervention, 40*(4), 317–334. https://doi.org/10.1177/1053815118789177.

## ARRAY: A NEW INITIATIVE THAT FURTHER STRENGTHENS ARKANSAS' SUPPORTS FOR ECE PROGRAMS

While early childhood mental health consultants and PD specialists worked together to implement BehaviorHelp, they came to see the need for an initiative that could complement BehaviorHelp and leverage their experience collaborating to support ECE programs. In 2019, DCCECE launched Array, a new initiative designed to proactively identify ECE programs that could benefit from SE-focused training and support, and offer assistance tailored to a program's particular needs. Because Array is designed to initiate contact with ECE programs, it has the potential to intervene early and prevent serious escalations of teachers' frustration in response to children's challenging behavior.

Array is a partnership led by Arkansas State University (A-State) Childhood Services and University of Arkansas for Medical Sciences (UAMS) Department of Family and Preventive Medicine, with collaborators from around the state. The partnership is funded by DCCECE. Array draws on a continuum of training and supports, from foundational to more advanced, by bringing together the state's multiple PD providers and BehaviorHelp consultants from A-State, UAMS, University of Arkansas Early Care and Education Projects, and Curricula Concepts. Across this continuum, Array aims to promote young children's positive mental health and behavioral outcomes by promoting nurturing teacher–child interactions along with teachers' use of effective classroom management strategies and practices that foster inclusion of children with experiences of trauma.

### How is Array unique?

Several features distinguish Array PD and its delivery from the more typical PD that teachers in Arkansas ECE programs receive:

· Array **proactively** identifies and offers PD and other supports to programs.

· The PD and supports are provided to **all staff** in a program (teachers and the director).

· Array offers assistance that is **intentionally tailored** to the needs of a program.

· Array PD is **more in-depth** (e.g., involving multiple sessions, coaching) than much of the PD that ECE providers typically receive.

· Array's PD models are highly focused on **classroom practices** that promote nurturing teacher–child relationships and children's positive mental health and behavior.

### How does Array work?

Array currently operates in two regional Hubs (Central and Northwest Arkansas), with plans to expand to five regions of the state. About once or twice a month, each Hub convenes the region's collaborators, including PD providers, licensing specialists, Child Care Resource and Referral staff, and consultants from BehaviorHelp. At each Hub meeting, participants identify one or more ECE programs to be considered for Array assistance based on interactions with the programs that suggest they could benefit from whole-staff, tailored PD. If Hub participants agree to consider a program,

and a program director has interest, an on-site "strengths and needs" assessment is conducted. After discussion at a subsequent Hub meeting, decisions are made about whether to move forward with the delivery of Array supports to the program and what type of PD model is the best fit. If the program director agrees to participate in Array, the PD specialist assigned to the program and the director work out the logistics of scheduling the PD. In the remainder of this report, PD specialists are referred to as professional support specialists (PSS).



## PURPOSE OF THIS REPORT

This report examines results from case studies in three ECE programs that received PD from Array between June and December 2022. The Northwest Hub served two of these programs, and the Central Hub served the other. (A description of these programs is in the Participating Programs section below.) Following a description of the programs, a results section examines features of Array implementation, including methods and resources used in Array PD, strengths and challenges of delivering Array PD, and perceived benefits to programs. Based on these findings, the report outlines recommendations for the ongoing expansion and refinement of Array. A description of methods used in the case studies is provided at the end of the report.

## PARTICIPATING PROGRAMS

Brief descriptions of the ECE programs participating in the case studies are provided below.

### Hillside Center*

On a quiet road in a small Arkansas city sit two light colored structures about 20 feet apart, one noticeably older than the other. A playful welcome sign rests atop the older structure to welcome children and families to Hillside. The quiet simplicity of the exterior is in sharp contrast to the spaces found inside. In each building, long corridors are covered with positive messages and children's work and run from the entrance to the newly renovated playground. Classrooms of varying sizes, a kitchen, and staff work spaces fan out on either side of the hallway.

It is clear from the moment you enter the building that the director is the engine that drives Hillside. She has been connected to the center for decades and served in multiple roles before becoming the director of Hillside a few years ago. Staff describe her as supportive and trustworthy. As she walks the research team down the

hall, she seamlessly coordinates staffing coverage for an unexpected absence, talks to a teacher about a challenging situation with a student, takes a phone call from a concerned parent, and directs the repairs her husband is making to the afterschool space. She lists many successes during her brief tenure (including surviving the uncertainty of the COVID-19 pandemic and the expansion of the program from one to two buildings) and points to improvements that are next on her list.

At the top of her list is working to ensure Hillside children receive strong supports for their SE development. Like many centers in Arkansas, Hillside has experienced a lot of teacher turnover in the last few years. The daily struggles of managing classrooms and change throughout the pandemic led the director to seek support for her staff from Array.

### Little Learners*

Little Learners serves families in one of the state's fastest growing cities located in Northwestern Arkansas. This program occupies a one-story, peaked-roof building in a quiet neighborhood. Beyond a waiting area and the director's office is a corridor with doors to the program's six classrooms on each side. Classrooms along one side of the corridor have direct access to the well-equipped outdoor playground running the length of the building.

The warm, enthusiastic director guided the research team to a classroom of 3-year-olds, with walls filled with children's art. The children were highly engaged in Circle Time songs and movement activities, led by a teacher who laughed with the children and clearly enjoyed sharing in their delight. In a second classroom with 4-year-olds, the teacher encouraged the children's participation in a lively large-group discussion about a book. Next, the children enjoyed a literacy activity in

* The names of the programs are fictitious to preserve anonymity.

which the teacher encouraged their efforts to say the sounds of beginning letters of words shown in pictures on a wall. As an aside, the teacher smiled and said, "Aren't these children wonderful!" During Centers time, which followed, several children moved between a "party" being hosted by a child in the kitchen area and a "train" constructed in the blocks Center. While a few arguments erupted among the children during Centers time, they were usually able to resolve conflicts on their own, which the teacher gave them space to do. In a third classroom, lunch was served to toddlers by a "floating" teacher who filled in for an absent lead teacher that day. This teacher and an assistant teacher gently encouraged the children to eat and stay seated at their tables.

In a brief conversation with the director, her appreciation for the staff at the program came through strongly. A trainer who had previously provided PD to teachers in the program knew of the director's strong interest in continued quality improvement in practices that promote children's SE growth and positive behavior, and connected her with Array.

## Red Robins Child Care Center*

The Red Robins program is housed in a spacious, repurposed building in a university town in Northern Arkansas. Beyond a lobby and an office area for teachers and administrators, the classrooms branch from a central space. The research team spent time in a large, bright 4-year-old classroom where children first gathered for Circle Time, and then enjoyed Centers. In addition to a kitchen Center, books corner, blocks, and space for a target throwing game, the teacher had set up drawing and art materials on tables. While many children became happily engaged in play, a few showed very frequent frustration, distress, and even behavior that threatened others' safety. The teacher skillfully and warmly comforted children who became upset and supported their efforts to resolve arguments, while also trying to assist other children involved in art and other activities.

When it was time for outdoor play, the teacher led the children across the parking lot to the center's playground for activities that included playing hide-and-seek, riding tricycles, and climbing on the play structures. Once back inside, the researchers talked with the teacher in the center's infant classroom while she fed a child and others napped. This teacher talked about her love of working with babies and expressed her wish to have more stable help in the classroom so that everyone working with the infants knows them as well as she does and can meet their needs.

In a conversation with the researchers, the director expressed pride for the program and the teachers who care so much about the children. Although she is not certain how her program was selected to participate in Array, she voiced her strong appreciation for the support and desire to do everything possible to help her teachers develop as professionals.

\* The names of the programs are fictitious to preserve anonymity.

# RESULTS

## How programs are identified and offered tailored PD

Hub members reported that ECE programs are identified as candidates for Array both through direct interactions with program staff and through recommendations from others in their network. For example, a BehaviorHelp specialist reported that during her visits to programs she encounters teachers who do not know what practices to use and directors who do not know where to find training for staff. A licensing specialist identifies candidates for Array when ECE program staff ask for assistance during licensing visits, and the specialist also lets other licensing specialists know about Array so they can suggest programs. Similarly, a technical assistance specialist who works on a team with other technical assistance and assessment specialists invites members of her team to identify programs that might benefit from Array. Several Hub participants stressed the advantage of a process that engages individuals with different roles and backgrounds. One Hub member noted, "I think [having people in different roles] is a really big strength; there are so many different perspectives. So we can see different things." Another explained that it is also helpful to have someone at Hub meetings who can quickly access information about a program, such as the program's receipt of past PD and BehaviorHelp support.

Array PSSs serving two of the case study ECE programs felt the PD offered to the programs was a good fit, although one PSS had not received the results of the strengths and needs assessment. The PSS noted that there is also room within the different PD models to respond to interests and needs of teachers. For example, one PSS used Zoom breakout rooms during training sessions to allow teachers to select topics for discussion in which they had a particular interest.

## How Array supported the ECE programs

### PD models

Each ECE program received PD based on a different model. One program participated in "REACH," which provided a series of in-person trainings and a classroom coaching visit after each module. Another received "Making First Connections Count," which was delivered mainly through online modules and live Zoom trainings, with limited on-site coaching. Group CLASS training[2] was the model used in the third site, which had significant delays in starting the training. *(See Figure 1 for additional information about these PD models.)*

### PSS methods and training supports

Teachers described a variety of methods PSSs used, all of which reflected the "practical" nature of the PD models used in Array, which are geared toward improving classroom practices. Teachers recalled the PSS encouraging them to reflect on children's experience in order to modify classroom routines that cause stress for children, presenting hypothetical situations to prompt problem-solving, and suggesting activities to promote SE learning. For example, one teacher found it very helpful when the PSS prompted them to think

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about their own experience of finding it difficult to wait in line: She reminded the teachers that "we don't like waiting in line at the grocery store. They don't like waiting in line for Centers or transitioning or for lunch … put yourselves in the shoes of the kids … that helps you." Another teacher recalled that the PSS presented scenarios, such as two children not wanting another to join their play, and asked "How would you handle that?" to generate ideas about practices that meet children's SE needs. Similar scenarios were provided in online training modules, giving teachers a chance to consider SE learning practices and discuss these in the group training.



The PSS and materials they gave to teachers also suggested activities that teachers could use in the classroom. One teacher recalled an activity in which she took pictures of children making faces that matched different emotions and asked children about their experiences with these emotions. Teachers also valued posters given to them by PSSs to guide their behavior in the classroom. One used a poster to train new teaching assistants in a step-by-step process of having extended conversations with children.

When asked about coaching in the classroom, the director of one site noted the PSS did not have time for classroom visits because she drove to their community from some distance for a Friday evening and Saturday morning training. In the other sites, the teachers explained the PSS sometimes visited classrooms but did not often give them direct feedback or model teaching practices during these visits. An exception was a teacher who was reading to 2-year-olds who were getting restless waiting for lunch that was late. The PSS observed for a while and then suggested music and an active game to help the children wait. Although teachers noted the PSS did not usually model practices, one PSS showed the teachers videos that illustrated important practices, such as a teacher playing with a child in a way that helps the child feel he has the teacher's full attention. At one site, the PSS wrote notes to the director about positive features of the classroom she saw during classroom visits, and the director sent these notes to teachers, who were reportedly very happy to hear about the observations.

Directors also expressed appreciation for practice-focused features of the PD. One director was struck by how engaging the PSS made the training through the presentation of scenarios that invited teachers to actively solve problems and identify useful SE teaching practices, and engagement in games about emotions that could also be used by teachers in the classroom. The director at another site especially appreciated the online module's focus on routines, structure, and communication with children; suggestions from the PSS about effective transitions; posters and handouts focused

on classroom practices; and the blackboard for communication between trainings in Zoom meetings. A third emphasized a workbook that went with the training and helped teachers think about the application of what they learned:

> *After each module we could reflect on what we talked about – what we're currently doing, what do you want to do differently. [The teachers] … took time after training to fill it out and shared back when back together. Staff were really into it; they shared ideas, made suggestions; it hit a lot on teamwork even though that wasn't the focus.*

It is notable that several of these methods (e.g., use of scenarios, games, group reflection), which allow program teachers to exchange ideas, are possible because Array delivers PD to the entire staff.

The PSS worked most closely with the director in one site, meeting with the director after each classroom visit provided every other week:

> *I'll sit down with her and just start talking about any room for improvement, anything that we need as a center to provide … additional help or resources. And definitely I reach out for her for any advice. I reach out to her when I see a situation that needs some professional attention.*

In the other sites, individual interactions with the director focused mainly on the logistics of scheduling or virtual delivery of parts of the training.

## Benefits of Array

Teachers and directors identified multiple benefits provided by Array PD including an increased ability to understand children's behavior and experience, the opportunities the PD created for teachers to talk with and support each other, access to practical materials that help them use new SE teaching practices, and feeling supported in their work. One teacher reflected on teachers' increasing awareness of children's experience:

> *[We] play games [in group PD sessions] to learn how it feels like to wait for turns and as adults we are really impatient, so you can imagine the attention span of a two year old. Makes you stop and think and put yourself in a child's place, you know?*

Another teacher highlighted the chance to talk with other teachers to learn from them:

> *Well … we never get to talk. So anything we talk about it is … something. [We ask each other] how you would handle different situations? … And different parents? Because we have different families that are dealing with different things and they might have different kids in different rooms so [teachers] could talk about … well what are you doing?*

A director stressed the experience of feeling supported as the most helpful aspect of Array:

> [When] she stepped in the building we really felt supported. We felt that there is a professional there, if I have a question, I trust to ask. And I had someone to help me figure out something going on. That's a major part of it. … And that has been amazing. Just the fact that … she's here to help, here to listen. … That's a big deal.

As with the methods discussed above, the benefits of Array described by staff highlight the features of Array's distinct approach—the experience of hands-on PD activities with fellow teachers, the presence of the PSS "in the building," and the chance for staff to interact with each other.

In addition to these aspects of the Array training experience, positive changes in classroom practices and interactions with children were also reported by teachers, directors, and the PSS as key benefits of Array. Several reported changes showed an increased capacity to reflect on children's behavior and sensitively respond to their needs. For example, a teacher explained,

> One practice is listening a little stronger 'cause what comes across isn't really what they're conveying and having more patience … you know kids can't communicate what's going on … or they might have had a rough day before they come to school or anxiety leaving their parents or maybe there's changes at home or something.

Directors also noted increased efforts to better understand children's behavior and respond in a nurturing manner. In one classroom, a director and teacher worked together to understand a child's "meltdown" and concluded the child might be hungry; a snack provided by the teacher helped soothe the child.



Another director described calming a distressed child who had experienced trauma by recognizing his love of playing with blocks and inviting him to play with her one-on-one in the blocks center. A teacher reported that she takes more time to comfort the infants in her care, recalling, "So there was this little girl … She wouldn't stop crying and normally they just fall asleep. … But I just took a moment with that child and I rocked her … she just probably needed that cuddle, you know."

Other examples of increased nurturing and engagement with children reflect Array's focus on the teacher–child relationship and promoting children's development of social skills. A director observed:

> And I have another teacher, a 3-year-old classroom where she talks about emotions. … She loves them and she cares for them and … you see her kiddos listening and following her and that's also because of … REACH teaching about emotions and understanding kiddos. So I know that there been a change.

Another director observed a change in the teachers' "tone," and "talking to them more, like talking about their day or you know, 'are you ready for your bottle?'" Similarly, a PSS reported,

> I think probably one of the most impactful strategies for this center is an increase in what we call joining the children in play...wherever they have chosen to play, whatever center, or if they're doing manipulatives at the table or art ... it is encouraging [to see] the teachers ...float around and be right there with the children because... if a disagreement breaks out between a couple kids, a teacher is right there to help them with their social emotional and their friendship skills.

Another area of changed practices was in basic classroom routines. Several teachers talked about using suggestions from the Array PD, including a visual schedule for children to make transitions smoother and less stressful for teachers and children. One director described a striking change in how transitions between activities were managed:

> All the teachers struggled with transitions. We were managing chaos. We got in the routine of thinking this is just how it is ... before/after using the potty, cleaning up before lunch; it was a cluster of screaming, rowdy kids. [The PSS] went over transitions from infants to toddlers to older kids – bringing books into the hallway, wordplay, songs, movement so that kids are not just waiting.

## Challenges in implementing Array

Many of the challenges concerning Array implementation that ECE staff and PSSs described were related to the high demands placed on program staff and the limited resources of ECE programs. PD sessions at the case study programs were scheduled outside of regular work hours, including early evening and Saturdays. An Array Hub member observed,

> They have to have time where the teachers can attend these trainings away from children. And so ... it often has to occur after the center closes and people have families, they can't commit to 10 sessions from five to ... seven. ...It is just not something ... a mom working at a child care facility can do. Or on the other side, [the program] may not have the funding to have the teachers stay those extra hours.

Teachers also remarked on the challenge of attending training after a long work day. Several teachers at the programs were involved in higher education degree programs, which required course-related study and assignments, adding to teachers' overall workload.

Perhaps related to this high workload, staff and PSSs reported inconsistent engagement of teachers and directors in the PD. One PSS

noticed that a PD resource with cards on a key ring describing important practices was not used much by most teachers. She also explained that the training included time after each Zoom training for teachers to identify a few children to target with particular strategies, but teachers did not seem to use these plans. A director and a teacher both expressed "a need for more accountability" in Array PD to address the problem of low engagement among some staff. The director observed,

*I have ... my main group of ones that are doing it ... I know that they're gonna do well at it. The ones that actually need the help are the ones that I need to have the accountability of completing the trainings because then they're the ones that we're seeing, not trying and not making an effort to learn what they're being taught and implementing it in the classrooms. And you know, they can say, well I did the same trainings, but ...well yeah you may have, but there's no real way to show if they actually really did.*

While not referring to a particular case study site, an Array HUB member suggested that directors are also sometimes not adequately engaged:

*Having the director really learn how to be a coach themselves and being a partner in with the teachers in that training that they've received would be key. ... But obviously if the director doesn't show up, we're not gonna just stop training. We keep going, but we do make it known to them that their participation is important.*

One director who was highly engaged in the PD expressed concern that her staff did not have more time to work together on strong implementation of the practices they learned about in Array PD:

*I wish we have more time to get our team ... actually working together to implement this strategy ... focus on this and just to get together and let's just role play role behavior challenges and let's see how it's gonna be, what's step one, step two, step three. And this is something I'm trying to [arrange]. ... I'm gonna try to have an hour or two just to let the pre-K or infant or toddlers, pull from REACH and put all the resources together to just basically implement that.*



A final challenge in Array implementation that was voiced by Hub members is the fairly common occurrence of programs declining an offer of Array PD. Hub members speculate that one reason a director might decline support from Array is the director's concern about having "unwelcome eyes and ears" on a program. Another, they suggested, is possible worry that staff would not show up for training.

# CONSIDERATIONS FOR ONGOING EXPANSION AND REFINEMENT OF ARRAY

Array shows great promise as a regionwide PD strategy that can offer ECE programs tailored assistance to improve practices that promote young children's SE development and positive behavior. Because Array proactively identifies programs and offers tailored assistance, it seems likely that Array engages programs that might not otherwise seek or have the opportunity to participate in SE-focused PD. By delivering PD to the entire staff, Array also fosters a program-wide understanding and increased use of effective SE practices that may help sustain positive change.

Some of the implementation challenges identified in the case studies are largely related to the strained resources that characterize ECE programs across the country. High staff turnover, staff absences, and a shortage of substitute teachers place considerable demands on ECE teachers and directors who must comply with teacher–child ratios and strive to meet the needs of young children and their families every day. In addition to these demands, many teachers' significant family responsibilities and pursuit of higher education credentials make it challenging to engage in Array PD outside of regular work hours. Below, we suggest options for addressing implementation challenges identified in the case studies, recognizing that structural issues creating strains on the ECE workforce may continue to create barriers to the optimal delivery of Array supports.

1. *Increase the use of practice–based coaching to support teachers' efforts to apply newly learned practices in their classrooms.* While this suggestion is meant to address the overall limited use of intentional observation and feedback on teachers' use of SE practices, the use of increased coaching in Array could also be tailored to teachers' needs. Teachers observed to need the greatest assistance in using effective SE practices could receive the most coaching time in order to maximize benefits of this limited resource.

2. *Provide consistent support for the director to help ensure that the director can be a full partner in Array PD and play an effective role in sustaining improvements.* This support might include individual sessions with the director to discuss progress, as happened in one of the case study programs, along with coaching to help directors provide effective feedback to teachers. The PSS could also help the director consider the format and content of ongoing meetings with staff to engage them in reflection and planning for continuous quality improvement. One case study program director expressed interest in organizing this type of session.

3. *Consider possible incentives to encourage the engagement of all staff in the PD.* Given the structural barriers that may make full engagement in Array PD challenging to staff, it may be useful to consider possible incentives for the demonstration of active participation and learning. Examples of incentives include monetary bonuses, "counting" Array PD toward required hours for

the subsequent year if a teacher has already met the current year's required hours, and awarding a "certificate" to recognize successful completion of Array PD. The use of incentives would require Array to develop criteria for awarding them (e.g., a demonstration of learning or active engagement in online modules or trainings). These criteria, in turn, could help address the need, voiced by some staff, for Array participants to demonstrate their engagement (e.g., through completed assignments or active participation in discussion during a PD session).

4. *Provide substitute teachers, when possible, to allow Array to occur largely during work hours.* Given the challenge of finding and paying for substitute teachers, this option might be reserved for limited amounts of all–staff training that would benefit most from the entire staff being present together, and using coaching and remote training to deliver the balance of the PD.

5. *Conduct ongoing "marketing" of Array while using methods to strengthen relationships between ambassadors of Array and ECE programs.* It may be helpful to develop positive messages about Array and encourage HUB members to use these messages in their interactions with programs, along with friendly visits to strengthen relationships. As suggested by a Hub member, this type of visit might lessen resistance to participating in Array:

*You know. I'll pop in and say hi. Sometimes I take a little goody bag of some reading material, just, you know, 'Hey, how's it going? I'm with [her organization's name].' Everybody loves free stuff. And so, you know, doing that, following up with them … just letting them know we care and we want to see them be successful.*

6. *Identify options for supporting ECE programs that do not show a "readiness" for Array PD when they are initially invited to participate.* ECE programs that are considered for Array, but do not engage with Array PD, are likely to have significant gaps in quality. For this reason, Array might consider using "readiness" strategies with programs that either decline Array PD or appear unready to participate. For programs that decline an offer of PD, Array might develop a protocol of asking the director if the PSS could stop by to drop off some gifts for the staff and children (e.g., books, PD posters), and check in again after a few months. For programs that are not ready for Array PD because of high staff turnover or a licensing violation, Array might consider providing more targeted assistance to address these problems so that the program could engage in Array PD in the future.

## CONCLUSION

Across the country, most PD for ECE programs is delivered to individual teachers and directors who seek out an available PD opportunity, often to satisfy the state's required "PD hours." This system does not promote engagement in more intensive models of PD or in PD that could transform practices program-wide. In contrast, Array identifies and approaches programs that could benefit from SE-focused PD, offering PD to the entire staff, and tailoring this PD to meet the program's needs. The case studies documented teachers' and directors' positive responses to this approach, reflected in their appreciation of its unique features (e.g., the "whole-staff" PD sessions) and quality of the content and delivery of the PD. They also reported on meaningful changes in their practices, including positive changes in everyday routines that reduced stress for children and teachers, and more frequent and nurturing interactions with children. The further expansion and refinement of Array could greatly benefit the state's ECE programs and the children and families they serve, and provide a valuable model for other states.

## CASE STUDY METHODS

The case studies were conducted as part of a 2019–2022 Child Care Policy Research Partnership carried out by researchers at SRI International (SRI) and the National Center for Children in Poverty (NCCP) at Bank Street Graduate School of Education, in partnership with DCCECE.

Prior to formal data collection, the researchers joined several Hub meetings to learn more about Array practices, including steps in identifying ECE programs and assessing their needs. This exposure to Hub discussions helped the project team identify key areas of Array implementation to investigate.

With assistance from Hub members, three ECE programs were identified as candidates for participation in the case studies, in part because they agreed to participate in Array PD at a time that coincided with the project's timeline for beginning the case studies. The programs were also selected because each was offered a different PD model, permitting the case studies to examine Array PD in the context of varied models. *(See Figure 1 for a description of the PD models.)*

Data collection included semi-structured interviews with ECE program directors, classroom teachers, and program support specialists (PSSs) (e.g., trainers, coaches, consultants) and site visits at three ECE programs that received supports from Array. At two programs, hour-long interviews with the director, two lead teachers nominated by the director, and the PSS assigned to deliver PD were conducted at three time points. These interviews occurred at approximately the beginning, middle, and end of each program's involvement in Array PD. In a third program, only initial interviews with the director and two teachers and a final interview with the director were conducted because of a long delay in the delivery of the PD, which extended beyond the planned period of the case studies. The interview questions focused on features of Array implementation (e.g., methods and resources used in the training and coaching) and aspects of participants' experiences (e.g., perceptions of benefits and challenges, responses to features of Array PD such as "program-wide" training).

Researchers held a focus group via Zoom with the Northwest Array Hub members during one of their scheduled meetings. In this focus group, participants were asked about key aspects of Array implementation and views about the benefits and challenges of the Array approach.

Researchers also made site visits to the three ECE programs after two of the programs had completed their engagement with Array PD. While no formal observations were conducted, the visits allowed the researchers to see the programs' classroom environments firsthand and personally meet the directors and teachers, rounding out the impressions provided by the interviews.

All interviews with staff from the three ECE programs, interviews with PSSs, and the Array Hub focus group were recorded and later transcribed by a private company. Three researchers read and coded all transcripts. Each transcript was coded by a primary coder and later cross-checked by a secondary coder. Transcripts were coded

by question, site, and type of participant. Tables were created to organize coded data by site and by research question. The research team summarized findings from the tables to provide a narrative organized by research questions.

In addition to the case studies, a separate evaluation, focused on gains in teacher knowledge and observed changes in the classroom environment among Array participants, is being led by Dr. Nicola Edge at UAMS.

### Figure 1: PD Models Used in Case Study Programs*

| MODELS/ LEVEL | REACH (foundational) | MAKING FIRST CONNECTIONS (foundational) | PREK CLASS (Advanced) |
|---|---|---|---|
| **Staff** | All Teachers/Director | All Teachers/Director | All PreK Teachers/ Director |
| **What it is** | On-site training and coaching to increase teacher ability to support social-emotional development and reduce problem behaviors. Virtual training option. | Training and coaching. An introduction to brain growth and development and eight essential experiences that adults can provide for children. | Training and coaching to support teachers to interact intentionally with children, support social-emotional functioning, provide high-quality learning, feel more connected to colleagues, and increase job satisfaction. |
| **Content focus** | Nurturing Relationships, Supportive Environment, Targeted Social-Emotional Supports, Introduction to Intensive Intervention. | Nurturing Relationships, Supportive Environment. | Nurturing Relationships, Supportive Environment, Targeted Social-Emotional Supports |
| **Duration/ resources** | 6-month partnership, two director workshops, six teacher workshops. Coaching visits. Monthly toolkit with books, CDs, posters, and puppets to practice concepts and skills. | 10 hours of professional development includes four workshops and coaching. Resource materials provided for programs that sponsor the training. | 24 hours professional development credit. Group coaching. Participant manual, CLASS Dimensions Guide, access to the online teacher course. Opportunity to collaborate with other early educators. |

*\* Array may adapt and tailor content and structure to meet a program's needs.*

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