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# Training Together: State Policy and Collective Participation in Early Educator Professional Development

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*This study used one state's early care and education work-force registry and professional development attendance data to examine early educator patterns of professional development participation and the extent of collective participation. The article presents the concept of collective participation in professional development, discusses its potential benefits, and highlights the utility of statewide digital tracking of early educators' patterns of professional development for informing policy. Results show that collective participation is uncommon in early education and care but can be increased through professional development policy decisions. The article concludes with implications for research and policy.*

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In the fall 2014 *New England Journal of Public Policy* special issue on education, Ronald Thorpe articulates a vision and an action plan for sustaining the teaching profession.[1] While the focus is on K–12 education, his vision is even more critical in the context of early care and education (ECE). ECE is the care and education sector serving children birth to age five and includes child care centers, family child care, Head Start, and preschool programs in public and community-based settings. Troubling inequities persist between the salaries, benefits, and professional development supports of ECE educators compared with those for K–12 educators.[2] In their recent report on the ECE work force, Whitebook and her colleagues conclude, "Early care and education programs have the potential to ameliorate child poverty, but as it now stands, they also generate poverty among adults in the predominantly female early childhood work force and their families." Supporting educators' acquisition of credentials and competencies, tied to equitable compensation, and retaining and advancing them in the education work force is essential.

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The scale of the ECE field and its potential impact is immense. ECE employs more educators than the K–12 education system in the United States. These educators make up 30 percent of the entire US instructional work force from early childhood to postsecondary education.[3] Early educators serving children birth to five are the most racially, ethnically, and linguistically diverse sector of the education work force birth to postsecondary. The quality of the ECE work force and ECE programs is critical for healthy child development, positive early learning outcomes, and young children's long-term success in school and in life.[4]

ECE teacher quality has now finally moved to center stage in the national discussion of early learning in the United States. Building and sustaining an effective ECE work force is a top priority for efforts to strengthen ECE quality and improve young children's readiness for school.[5] Head Start, professional, and many state child care quality rating and improvement system standards, as well as President Barack Obama's recent early education plan, all call for well-trained, high-quality educators in each ECE classroom. As Pittard and her colleagues point out, "Professional development, including providing training and formal education for individual providers and programs, as well as strengthening Professional Development Systems, is a major component of states' quality activities."[6] These state activities are in large part funded by the $5.2 billion federal Child Care and Development Fund investment (fiscal year 2012) that included $291 million for child-care quality improvements.[7]

Early childhood research and policy are increasingly focused on strategies for improving the impact of professional development investments on teaching practices, program quality, and child outcomes. This focus has also drawn attention to how ECE professional development resources are allocated, tracked, and measured. Researchers are finding more and more that professional development has little impact when it is disconnected from other change efforts or the everyday practices where educators work.[8] Studies indicate, for example, that the most prevalent form of ECE professional development, one-shot workshops, is not effective in improving skills. As a result, attention has turned to identifying, investing in, and testing new or promising professional development strategies to improve teaching quality.[9] Collective professional development has emerged as one strategy for increasing the impact of training on teacher practices. In collective participation, educators and program leaders who work together participate in the same training, thereby creating a shared experience or shared knowledge on that training topic.

In this article, we explain why collective participation in professional development is thought to be one promising strategy and how we used existing state data to analyze collective participation within one state's ECE professional development system. We asked to what extent early educators attended the same training as their co-workers or supervisors during the one-year period of this study. Our analyses capitalize on the selected state's decision to deliver one particular training statewide with a requirement that educators participate with at least one other staff member from their program and preferably with a team of up to four that could include teachers, supervisors, and administrators. This requirement enabled us to compare professional development participation patterns between training that required team participation and all other training.

State professional development systems are responsible for preparing and supporting a high-quality work force. Until very recently, few data existed about the ECE work force and their professional development experiences.[10] Early childhood work-force registries are a key component of rapidly developing cross-sector integrated state professional development systems.[11] The majority of states now have an early childhood education work-force registry.[12]

These registries provide valuable data for and about the ECE work force and can be used to track professional development services and participation. This study highlights how research using existing data from a new state work-force data system can provide knowledge to inform policy and practice.

We begin with a review of the research on professional development effectiveness in the context of ECE quality improvement in the United States today. Then we describe the current study and discuss the results in terms of their significance and implications for ECE research, policy, and practice.

## Research on the Effectiveness of Professional Development Training and Coursework

Real quality improvement depends on professional development that works. Teachers must be able to apply new knowledge and skills to their classrooms in ways that improve teaching quality. Winton and McCollum reviewed the research on professional development and found that "information dissemination and training alone are ineffective in creating changes in programs or practices."[13] As Ackerman notes, ''Policymakers and the ECE field tend to direct their efforts solely toward improving the credentials and/or knowledge base of individual teachers rather than also targeting teachers' proximal and distal work contexts."[14] Current research suggests that professional development may be more useful when all staff within early childhood programs participate collectively.[15] Darling-Hammond identifies a set of key characteristics of high-performing educational systems, which includes fifteen to twenty-five hours a week of teacher collaborative learning and planning for continuous quality improvement.[16] Yet teachers working in ECE programs often have little to no paid planning and collaboration time because they are assigned to work directly with children all day.

What does research tell us about why collective participation may be an important factor in enabling and supporting changes in teacher practices? The organizational and social context of early childhood programs plays a key role in educators' ability to put what they have learned in training into practice in the classroom.[17] Hemmelgarn and his colleagues found that the culture of an organization is the key factor determining effective implementation of new practices.[18] Studies suggest that a promising approach to professional development is to broadly engage members of an early childhood program, including the program administrator, to create an organizational culture that enables change.[19] Rous and her colleagues found that when educators felt supported by directors in their professional development, they were more likely to access professional development opportunities.[20] Furthermore, the participation of administrators along with educators in professional development helps ensure that "early educators do not receive contradictory messages about what practices to implement or emphasize."[21]

Additional program-level or contextual factors thought to influence teachers' application of new knowledge to practice have emerged from several recent studies and include supportive collegial environment, shared goals, development of group norms for action, and opportunities for challenging and reflective dialogue.[22] Douglass and Klerman describe how a professional development initiative in one state led to change by mobilizing and training large numbers of educators within individual programs, and by targeting multiple levels of the context in and around child care programs.[23] Collective participation may offer benefits for any of several reasons: (1) it creates time for shared dialogue and planning among colleagues for implementing new practices, (2) it engages directors in providing concrete and emotional supports to teachers for the implementation of new practices, (3) it fosters an organizational culture that is geared to

changing practices in the targeted area, and (4) it creates formal and informal opportunities for shared reflective practice and for observational modeling and learning that can reinforce new learning.

Focusing on the classroom level, Leana and her colleagues showed that collaborative work-process dynamics within teaching teams are a critical factor for quality. They studied "collaborative job crafting" with over 330 preschool teachers in 158 classrooms at 79 ECE programs (center-based, public preschool, and Head Start).[24] Job crafting refers to the discretion or autonomy educators have to implement their work as they see fit—to actively shape their job to reflect their values and goals and make a desired impact.[25] Collaborative job crafting, as Leana and her colleagues point out, "involves joint effort among employees in the service of changing work processes."[26] The researchers found that when teachers engaged in collaborative job crafting to customize their care of children, quality was significantly enhanced. They attribute this finding to the inherent interdependence of ECE work. In contrast to K–5 teachers, ECE teachers typically work in highly interdependent teaching teams within their classrooms. Leana and her colleagues conclude that a focus on individual teacher knowledge, competencies, or educational qualifications is not sufficient to ensure high quality or improvement in the ECE context. They highlight the importance of collaboration and collective learning at the level of the teaching team.

This research confirms the importance of the organizational and social context for quality improvement and explains how collective participation in professional development might result in improved transfer of learning to classroom practices. Collective participation can be considered a moderator of professional development effectiveness or a factor that influences the strength of the effectiveness of professional development in improving teacher practice.[27] Thus, collective participation in professional development is an important construct to define, test, and measure.

## Collective Participation in the Context of State Early Childhood Education Systems

Emerging state systems for ECE provide both a context and an opportunity for new policy approaches to professional development. States are building and aligning early childhood professional development systems and quality rating and improvement systems (QRISs).[28] QRISs have created new incentives for professional development that are driving changes in the ways ECE programs may interface with the professional development system. QRISs are designed to assess and improve the quality of ECE programs and to communicate information about program quality to stakeholders, such as parents.[29] In the QRIS-driven context of ECE today, the consumers of professional development are no longer just individual educators but, increasingly, ECE programs and their administrators, who view professional development as a tool for improving program quality and moving up in QRIS.

QRISs typically establish standards for educator knowledge, qualifications, and credentials. Their doing so can provide incentives for individual educators to participate in professional development to earn needed credentials and for program administrators to encourage and incentivize the participation of employees. For example, in the state studied here, knowledge of the state's early learning standards is required of all early educators. Similarly, QRISs typically include measures of classroom quality that reflect educator competencies in a range of classroom practices. These quality standards may motivate professional development participation intended to advance professional knowledge and specific professional competencies. When specific

knowledge or changes in practice are required of all educators within early childhood programs, collective professional development may be ideal. Appropriately targeted and accessible professional development is essential to a QRIS's potential to serve as a change agent driving improvements in quality.[30] Thus, in an aligned early childhood system, professional development services provide targeted supports for educators to meet quality standards.

The development of an aligned state professional development system provides an opportunity to systematically track professional development services and participation and to test innovations in the design and delivery of professional development services. The state studied here is one of a small number of states that require registration in their professional qualifications registry by all educators who work in a regulated or licensed early childhood facility, including Head Start and state pre-K programs.[31] An estimated 75 percent of this state's work force was registered at the time this study was conducted. In addition to tracking work-force data, state professional development systems can establish policies to improve the availability of high-quality, evidence-based training. In the state studied, a recent transformation of the professional development system resulted in several desired outcomes, including (1) elimination of "one-shot" two-hour workshops for most types of training and replaced with the requirement that all training be in-depth and credit-bearing with a minimum of five contact hours and either continuing education unit (CEU) or college credits attached, (2) individual professional development pathway planning for all participating educators, and (3) alignment of all professional development services with the goal of educator competency development or degree attainment.

In addition, during the year prior to this study, this state used a technical assistance grant to support a collective training initiative that was implemented with one particular evidence-based training model. This particular training, which was offered throughout the state, required that educators participate as teams from their workplace. In contrast, other trainings offered through the state professional development system were open to all early educators and carried no requirement for team participation. This state's implementation of the collective training initiative allowed researchers to compare collective participation in this initiative to collective participation in all other professional development offered through the state system.

## Research Methods

This study used work-force registry and professional development attendance data to examine early educator patterns of professional development participation in one state. Three research questions guided the study:

1. To what extent do educators who work together participate in the same professional development training?
2. When they do participate collectively, is the participation with a program administrator/supervisor (vertical) or with other educators (horizontal)?
3. Do we see increased collective participation in the training initiative that required educators to participate along with a team from their workplace?

This analysis focused on center-based ECE programs, not family child care, in order to explore the extent to which programs sent groups of employees to professional development activities.

### Participants

Participants consisted of all ECE professionals in the selected state who were (1) registered in the state professional qualifications registry (PQR) and (2) working in center-based, public preschool, or Head Start programs and (3) for whom we were able to obtain professional development attendance records (n = 1,671). While the study participants are not representative of all educators in the state PQR (see Table 1), the purpose of this study was to explore professional development participation patterns and how collective participation could be measured with existing state data.

**Table 1. Demographic Characteristics of Early Educators in the Full Professional Qualifications Registry (PQR) and in the Subsample Used in This Study.**

| | Full PQR (N = 55,768) | Study subsample (n = 1,671) | Study sample versus full *t* or $\chi^2$(df) |
|---|---|---|---|
| Mean age (SD) | 37.9 (13.65) | 41.0 (12.35) | 10.1* (1,781) |
| Percent male | 5.9% | 2.7% | 30.9* (1) |
| Education | | | 193.4* (5) |
| Less than high school | 4.8% | 1.0% | |
| High school grad/GED | 20.0% | 10.4% | |
| Some college, earned certificate, or CDA | 26.0% | 25.3% | |
| Associate's degree | 12.8% | 17.3% | |
| Bachelor's degree | 26.4% | 34.0% | |
| Graduate degree (e.g., Master's, PhD) | 10.0% | 11.0% | |
| Race/ethnicity | | | 32.25* (6) |
| Black, African American | 6.9% | 6.8% | |
| Hispanic | 13.2% | 13.6% | |
| White | 64.5% | 69.0% | |
| Asian | 2.4% | 1.3% | |
| American Indian, Alaska Native | 0.2% | 0.1% | |
| Multiracial/multiethnic | 1.2% | 1.2% | |
| Refused to report | 11.6% | 8.0% | |
| Primary language | | | 2.42 (2) |
| English | 85.7% | 85.8% | |
| Spanish | 9.7% | 10.3% | |
| Other | 4.5% | 3.9% | |
| Percent administrators | 11.0% | 18.5% | 84.37* (1) |

*$p < .0001$

## Procedures

To address the research questions that guided the study, we cleaned and merged three independent databases. First, we obtained the educators' registry identification number, employer/workplace, and job title data from a relatively new statewide professional qualifications registry. Second, we obtained individual professional development attendance records (with educator registry number) from the professional development system coordinators at the state and regional levels. Attendance records that could be linked by educator registry numbers were obtained for the period July 2011 through May 2012 for state-funded professional development trainings offered through the state professional development system, which included a special state-funded professional development initiative to deliver one particular training that carried the requirement to attend with at least one other employee from the early educator's program, and ideally with a program team. Finally, we linked data about professional development activities to the state's professional development "course catalog," which provided descriptions of the content, format, and schedule of trainings offered through the professional development system.

Before merging these data, we deleted duplicate cases, reviewed frequencies and descriptive statistics for all fields in each of the data sources, recoded data where more detailed information was available in a separate database, and used trainings descriptions, and expert judgment as needed, to classify each training in the course catalog according to its content area (e.g., social/emotional development, literacy, and numeracy). Descriptive information for the frequency of different types of participation is presented along with the results of chi-square analyses, which we employed to compare the significance of different rates of participation across subgroups of early educators. All data analysis was done using IBM Statistical Package for the Social Sciences version 20.

## Measures

Demographic information about early educators and their employment history was derived from the PQR database in which educators had provided information about highest level of education obtained, gender, race/ethnicity, age, current position type (e.g., administrator, teacher), current employment setting (e.g., public school, Head Start, private center-based child care, family childcare), and primary language.

Professional development participation reflects attendance at trainings by an early educator whose employment setting and role within this setting was identifiable through the PQR database (i.e., employer number or name was listed) and who could be linked to professional activities through his or her individual PQR identifier in the professional development attendance records because the PQR identifier was unique across these two systems. Professional development trainings included both trainings and college courses offered through the state professional development system, all of which contained a minimum of five training hours on a specified topic linked to state professional core competencies.

Collective professional development was counted whenever multiple individuals (more than one) from the same workplace attended the same training but not necessarily at the same time. When a program had one or more educators who attended a professional development training, we called that a professional development utilization. For the purposes of this study, collective professional development measures the percentage of professional development utilizations in which more than one educator attended from the same program. In addition, collective participation was further subsetted into vertical and horizontal collective participation.

Horizontal refers to occurrences of collective participation in which early educators within a shared employment setting attended the same training or training with the same focus or content. Vertical refers to occurrences of collective participation in which one or more administrators (program director, educational coordinator, or program administrator) and one or more early educators within a shared employment setting attended the same training or training with the same focus or content.

## Results

Using frequency tabulations and chi-square analyses, we examined the extent to which educators who work together participated in the same professional development trainings, either at the same time or at different times (e.g., two educators are enrolled in the same training but at different locations or during different semesters).

The results show that collective participation in professional development, or the percentage of professional development utilizations in which more than one educator attended from the same ECE program, was uncommon, occurring for approximately one-fourth of the professional development utilizations (26.5 percent). Almost three-fourths of the time (73.5 percent) that a program had anyone participate in a specific training, the programs had just one person participating. Further analysis revealed that on average, when more than one educator from a program attended a professional development activity, approximately three educators attended the same professional development activity (mean = 3.1, SD = 2.93), though there was considerable variability in the number attending. Individual attendance was much more common.

Next, we subsetted the collective events into vertical and horizontal participation. Of the trainings in which there was any collective participation, it was uncommon for one of those educators to be a director, administrator, or educational coordinator. An administrator attended professional development with one or more educators from the same program 11.7 percent of the time; 88.3 percent of the time, collective participation reflected two or more early educators with no administrator present.

Finally, as explained previously, because one of the trainings offered across the state that year required early educators to register with one or more other educators (administrator or teacher) from their program, we were able to examine whether mandating collective participation shifts early educator professional development participation patterns. As expected, we found a significant increase in collective participation for the training that required program teams to attend together. Almost half (45.4 percent) of the professional development requiring team participation included collective participation, compared with approximately one-fifth (19.6 percent) of all other professional development ($\chi^2_{(1)}$=67.737, $p$ < .001). Consistent with this finding was the discovery that program administrators were more likely to attend the same training as teachers when participation by program teams was required. Vertical density was higher in the team professional development than in all other professional development (4.4 percent vs. 2.6 percent), suggesting that the policy also resulted in increased vertical density ($\chi^2$ = 68.7 (2), $p$ < .001). As a check to determine whether the increased density associated with the requirement to participate in teams might have been a function of the content of the course, which was social-emotional, rather than with the requirement to participate in teams, we examined whether density was associated with the specific training that required team participation when compared only to other trainings in the same social-emotional content area. As expected, in contrast to the 45.4 percent collective participation in the trainings that required

team participation, only 18.8 percent of participation was collective among all other professional development utilizations with social-emotional content ($\chi^2_{(1)}$=18.37, $p < .001$).

## Discussion

This study makes three contributions. First, we propose a way to think about and measure the delivery of professional development at the system level in terms of collective participation. Using existing data, we identified patterns of professional development participation, finding that most of the time, educators participated in professional development in isolation relative to those with whom they worked. Collective participation that included a supervisor or administrator was particularly uncommon. Collective professional development participation can be measured through appropriately designed state work-force and professional development systems. Several states have made recent, promising advances in linking multiple administrative data systems that could make it possible to track professional development participation density. Such tracking would enable studies of the impact on quality of various levels and types of professional development participation. Qualitative studies can help us to better understand the dynamics underlying how collective participation influences the transfer of learning into practice.

Second, study results show that state policies can affect professional development participation patterns. Because collective participation in professional development can be achieved more quickly than increased education level of educators, for example, and if collective participation is indeed associated with quality improvement, then professional development policy that promotes collective participation may be one key strategy for supporting quality and movement up the QRIS. The research by Leana and her colleagues suggests an even more targeted approach that would engage all the members of a classroom team to support collaborative job crafting.

Tracking professional development participation patterns can shed light on collective participation as a potentially important influence on the effectiveness of professional development for improving practice. Most important, we show that collective professional development participation is a factor that may be influenced by policies for the delivery of professional development. A system-level approach to the delivery of professional development requires taking into consideration the context in which educators work and the opportunities in those work environments to make change. Facilitators or barriers to that change will likely determine the impact of the professional development on practice. The professional development delivery system can thus design and deliver services in ways that may be more likely to have a positive impact.

Third, we suggest that recognizing how frequently educators attend professional development in isolation from others with whom they work can inform policy and research. For example, states might encourage early childhood programs to map the individual professional development plans of all their educators onto a program-wide improvement plan, identifying overlapping areas and supporting collective professional development in these areas to further both individual goals and program goals. Professional development must be re-envisioned as a joint commitment of the educator, the program in which he or she works, and the professional development service delivery system. Finally, professional development curricula should include designs for delivery to diverse groups of participants—for example, directors attending with their educators, and teaching teams that include lead teachers and assistant teachers.

Further research is needed to explore such innovations and the impact of collective participation on professional development outcomes for educators and for quality improvement.

Progress has been made defining key constructs related to the individual's experience of professional development, such as dosage, intensity, frequency, duration, and depth. Further research should identify how programs with high levels of collective participation in professional development implement quality improvement compared with others, and whether there is a "tipping point" within programs where a particular degree of collective participation results in a nonlinear change in implementation. This research should consider the mechanisms hypothesized to contribute to gains from collective participation.

In addition, collective participation may be best measured at the ECE program level (not just at the professional development system level) as the degree of *professional development participation density*. We conceptualize professional development participation density as the percentage of all educators within a particular early childhood program that participated in the same professional development activity. Our initial plan was to also measure participation density at the program level in this study. We were unable to do so, however, because of the lack of available data on the number of employees in each ECE program. Rather than showing the percentage of professional development trainings that reflected collective participation, participation density at the program levels indicates the degree of penetration of a particular training within an ECE program. This measure can be used to better understand how higher levels of density, and what possible thresholds, result in greater impact on quality indicators.

## Limitations

A limitation of this study is that the state databases that were merged were quite new and will likely become more complete and representative of the early educators and professional development activities in this state. We also know that centers may run privately funded professional development activities (e.g., staff in-service trainings) that were not documented in the professional development records that were employed. In addition, the operationalization of our collective participation concept is limited in not taking into consideration program size (i.e., the number of administrators and teachers who were available to participate in professional development activities) or intensity of participation density as described earlier, which would reflect the number of early educators who attended the same professional development activity within a program. Our current operationalization of collective participation counts events in which six early educators participated the same way it counts those in which only two early educators participated.

## Conclusion

If we expect teachers who perform their work in highly interdependent teams to change and improve their teaching practices, we must provide professional development in ways that enable teaching teams, supervisors, and co-workers to learn together and implement change collaboratively. While the environment in which the educator works has been recognized as a moderator to the relation between dosage of professional development and impact on quality, it has received little attention in ECE research or professional development systems. The growing research evidence for the importance of the social and organizational context for quality improvement and change implementation suggests that attention to collective participation in professional development is an important area.

In the state and national context of ECE today, new ways of thinking about structuring, accessing, and participating in professional development are needed to serve both individual

goals and program goals. As Schleicher asserts, "You change the system by building capacity at the frontline."[32] State policy can increase collective professional learning opportunities for early educators and build capacity at the frontline. This is a key point of intersection between the professional development system and QRIS. In a QRIS-driven system, professional development is no longer just an individual educator's concern but a program concern as well. Shifting ECE professional development policy can support the development of professional learning communities and organizational cultures that result in continuous quality improvement and professional growth.

It is critical to increase our understanding of effective strategies for delivering ECE professional development to ensure they result in changes in practice. We know that a focus on individual teacher knowledge, competencies, and educational qualifications is not sufficient to ensure change and improvement. The professional development system can deliver services in ways that encourage collective participation. Tracking professional development participation patterns through state data systems is an important first step. The critical question now is how best to use these systems, and their alignment, to foster change that results in high-quality learning and caring environments, the best possible working conditions for educators, and positive outcomes for children, families, and communities.

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