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The Infant and Toddler Teacher and Caregiver Competencies Project: A Conceptual Model, Key Lessons, and Areas for Future Research

There is growing recognition among practitioners, policymakers, and researchers that the first three years of a child's life are a distinct developmental period, characterized by rapid brain development, reliance on relationships with adults, and extreme responsiveness to environmental variation.¹ Research shows that high quality infant and toddler (I/T) programs can support positive outcomes for all children, especially those from disadvantaged backgrounds.²

There is great interest in improving the quality of care and education for infants and toddlers, but there are challenges to accomplishing this goal. Quality improvement efforts must be attentive to the backgrounds and needs of the I/T workforce compared to the broader early childhood workforce. For example, the I/T workforce tends to have fewer years of experience than the preschool workforce, and they are less likely to have a degree or credential.³ Further, teachers and caregivers of infants and toddlers have limited access to resources for professional development (PD)

Key definitions

The ITCC project defines competency, competency framework, competency domain, and proficiency levels in the following way:

Competency: A piece of knowledge (K), a skill (S), or an attribute (A) essential to the practice of teaching and caring for infants and toddlers

- Knowledge is information that may be applied to practice.
- Skills are strategies or abilities that may be applied to practice.
- Attributes are attitudes, beliefs, or other characteristics that may influence the application of knowledge and skills to practice.

Competency framework: A compilation of competencies intended to convey the range of knowledge, skills, and attributes essential to a particular area of practice, job, or profession.

Competency domain: Competency frameworks often group competencies (that is, KSAs) by domain. That is, individual KSAs focused on a similar topic may be clustered within a framework by competency domain. Examples of competency domains include “support for language and literacy, support for social-emotional development,” “health and safety,” “working with families,” and “arts and creativity.”

Proficiency levels: Some competency frameworks identify competencies (that is, KSAs) that are essential for practice at various career stages (for example, entry, mid-career, advanced).

ITCC study activities and products

The project included several foundational tasks:

1. A scan of existing competency frameworks, to examine approaches to implementation and assessment as well as alignment across various competency frameworks. Read [Competency Frameworks for Infant and Toddler Teachers and Caregivers](#).
2. A scan of measures aligned with competencies, to examine potential tools for assessing competencies for research or practice. Read [Competencies of Infant and Toddler Teachers and Caregivers: A Compendium of Measures](#).
3. A literature review, to examine and depict the associations between competencies and key program, teacher or caregiver, family, and child outcomes. Read [Competencies of Infant and Toddler Teachers and Caregivers: A Review of the Literature](#).
4. An examination of other fields that have successfully developed and implemented competency frameworks, to identify key lessons that can be applied to I/T care and education

Building on this foundational work, the project has developed several products that describe different approaches to the implementation of competency frameworks and identifies promising practices and lessons learned related to the implementation of I/T teacher and caregiver competency frameworks:

- A scan of online competency-based PD systems that include I/T teachers and caregivers as an audience. Read [An Exploration of Online Professional Development Systems Supporting the Competencies of Infant and Toddler Teachers and Caregivers: Key Findings and Next Steps for Learning](#).
- An interactive map that provides information on state competency frameworks relevant to I/T teachers and caregivers. Explore [State Frameworks for Infant and Toddler Teacher and Caregiver Competencies](#).
- A session at the National Research Conference of Early Childhood on [State Efforts to Support the Competencies of the Infant and Toddler Workforce](#).
- Profiles of five states that have developed and implemented competency frameworks. Read about competency frameworks for infant and toddler teachers and caregivers in [California](#), [Illinois](#), [Maine](#), [Oregon](#), and [Texas](#).
- A multicase study report that provides a comprehensive picture of competency framework implementation and presents overarching lessons learned across five states. Read [Supporting Competencies of the Infant and Toddler Workforce: Case Studies of Competency Frameworks in Five States](#).

compared to those who care for preschoolers. As noted in an Institute of Medicine (IOM) and National Research Council (NRC) report, the I/T workforce has “historically had the weakest, least explicit and coherent, and least resourced infrastructure for professional learning and workforce supports” (p. 504).⁴ Moreover, research on PD for those already working in the field shows a lack of focus on I/T content or opportunities for sustained or systematic PD.⁵ Black, Latina, and immigrant women—who comprise a large proportion of teachers and

caregivers working with infants and toddlers—face particularly pronounced barriers to accessing educational opportunities and professional supports as a result of systemic inequality and racism.⁶

Competency-based approaches have emerged as a promising strategy for improving the quality of I/T care and education by defining what teachers and caregivers need to know and be able to do, establishing a common language for assessing job performance, providing a clear structure for

PD, and offering a step in professionalizing the I/T workforce. The Office of Planning, Research, and Evaluation (OPRE) in the Administration for Children and Families undertook the [Infant and Toddler Teacher and Caregiver Competencies \(ITTCC\) project](#) to examine existing efforts related to competencies for I/T teachers and caregivers who work in group care settings (center-based and family child care) across states, institutions of higher education, professional organizations, and programs.⁷ The project aimed to learn about the processes and practices that facilitate successful use of competency frameworks and how competencies in those frameworks are assessed. Ultimately, the lessons from this project aim to support the I/T care and education workforce and the programs and system that support them in their efforts to improve the quality of care.

The ITTCC project has operated at a remarkable time for the early care and education (ECE) field. Currently, there are multiple nationwide competency-based efforts that reflect tremendous opportunity and collaboration. There are notable national efforts toward identifying essential competencies nested in larger efforts to professionalize the ECE field. The IOM and NRC report on transforming the workforce and the National Association for the Education of Young Children (NAEYC) Power to the Profession (P2P) Initiative each put forth recommended competencies. ZERO TO THREE (ZTT) and the Collaborative for Understanding the Pedagogy of Infant/Toddler Development (CUPID) have also developed competency frameworks specific to the I/T workforce.⁸

Such competency-based efforts are in line with the focus of current policy and programmatic efforts. For example, at the federal level, the Head Start Program

Performance Standards call on Early Head Start programs to ensure teachers and caregivers have the necessary competencies for meeting quality standards, and the Early Head Start–Child Care Partnership program sought to export these standards and quality to community-based child care. The Child Care Development Block Grant (CCDBG) Act and Child Care and Development Fund (CCDF) Final Rule identify training and professional development as a requirement for basic health and safety and an activity for improving the quality of child care services, and there is additional emphasis on improving the supply and quality of child care programs and services for infants and toddlers through training and professional development. Further, the CCDF Final Rule indicates that state frameworks for training, professional development, and postsecondary education must address professional standards and competencies, among other topics. Competency frameworks can serve as a foundation for such activities.

Efforts toward development of competency frameworks progressed in the midst of the COVID-19 pandemic, which had traumatic impacts on the ECE field related to reduction of the workforce, implications for quality, and effects on teachers' and caregivers' well-being.⁹ Moreover, the impacts of COVID-19 have magnified long-standing structural inequities in ECE. Thus, the call to address structural inequities in ECE by focusing on the ECE workforce has grown louder.¹⁰

In this synthesis, we highlight key lessons and areas for future research given findings from the ITTCC project, considering the opportunities and challenges currently faced by the ECE workforce. We have framed these findings in the context of the ITTCC conceptual model, developed based on the activities described in Box 2 and with the guidance of research and practice experts in I/T care and education.



A conceptual model for the implementation of competency frameworks to improve I/T teacher

and caregiver, program, and system outcomes

We intend for the conceptual model to inform future research about how competency frameworks can be used effectively to improve outcomes for teachers and caregivers of infants and toddlers, programs serving infants and toddlers, and ECE systems, with the ultimate goal of supporting optimal child development and meeting families' needs. The conceptual model also serves as the organizational structure for this synthesis.

The ITTCC conceptual model shows the process of using competency frameworks to improve outcomes, which begins with the development, adaptation, and refinement of competency frameworks and then flows through use at multiple levels to guide and improve practice. A key feature of the model shows "Diverse teachers and caregivers with unique backgrounds, experiences, strengths, and needs" at the top to highlight how teachers and caregivers bring their own strengths and experiences into the system. The model shows how teachers and caregivers are "entering" but also are supported by various systems of use. Use of competency frameworks can directly affect system, program, and teacher/caregiver outcomes, which in turn reinforce one another. Together, strengthened program and teacher/caregiver outcomes ultimately improve children's outcomes. Characteristics of the broader context at multiple levels influence this process, as does whether there are systems in place to monitor and evaluate use of the frameworks.

In the following sections, we describe different components of the conceptual model, drawing on lessons from across the project tasks and identifying future steps for research. Across the areas for future research, it is critical to understand how the implementation of competency frameworks can best support I/T teachers and caregivers given their diverse characteristics and experiences, and

their own professional pathways and goals. This is critical for addressing inequities in the ECE system for infants and toddlers and the teachers and caregivers who support them.

Key Lessons from the ITTCC Project and Areas for Future Research



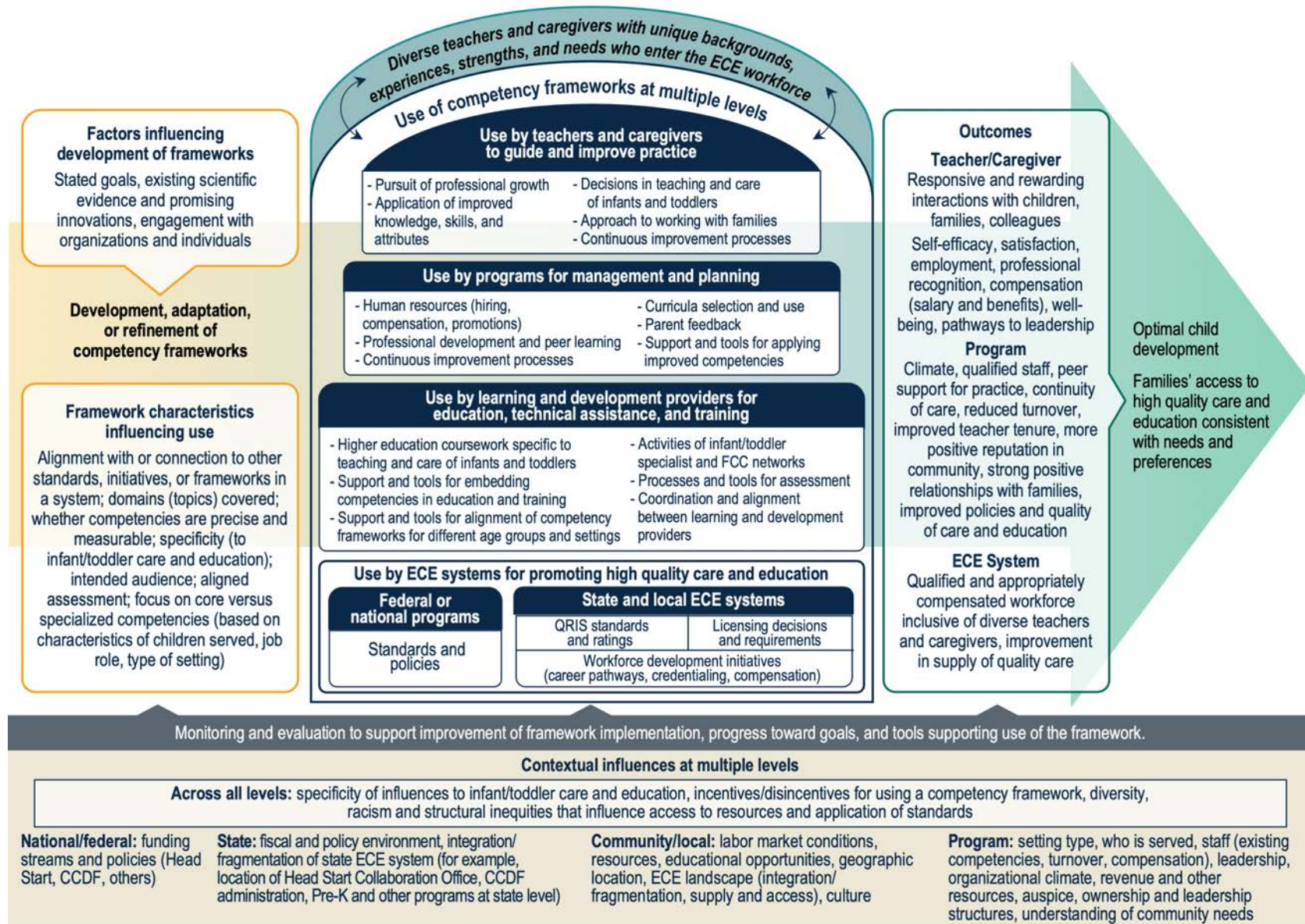
Contextual influences on implementation of competency frameworks

In the bottom panel of the conceptual model, we show contextual influences that can affect the development, use, and subsequent outcomes of competency frameworks. Contextual influences are present at various levels: federal (such as funding streams and policies), state (such as how a framework's use is incentivized and the integration or fragmentation of the ECE system), community and local (such as the current working environment), and program (such as specific needs of a center).

Key lessons on the contextual influences on implementation of competency frameworks

- / States varied in terms of how many I/T teachers and caregivers there are and their distribution among different types of settings, including Early Head Start, community center-based settings, and family child care (FCC) homes. This was true among the five states that were part of the ITTCC multicase study. The five states also varied in terms of availability of early childhood-related coursework and whether there are specific requirements for I/T teachers and caregivers.¹¹
- / States varied in the level of resources available for implementation. Among the five states in the ITTCC multicase study, some had funding to develop a competency framework, but not to support implementation.¹¹
- / The five states in the ITTCC multicase study had a similar overarching goal of providing targeted PD opportunities for I/T teachers and caregivers, despite differences in the state contexts. The approaches states have taken were a function of their existing systems and priorities at the time

Conceptual model for the implementation of competency frameworks to improve I/T teacher and caregiver, program, and system outcomes



ECE = early care and education; QRIS = quality rating and improvement system; CCDF = Child Care and Development Fund

that competency frameworks were developed. Approaches continue to evolve as new research emerges and state fiscal and policy environments shift and priorities change.¹¹

Areas for future research on the contextual influences on implementation of competency frameworks

Future areas for research suggested by this project include:

- / Understanding and breaking down barriers to engaging in competency-based initiatives for teachers and caregivers across setting types (for example, center-based or FCC) and funding streams (for example, Early Head Start or community-based)
- / Understanding the continuum of framework implementation across states, and how the stage or level of implementation relates to infrastructure and other contextual factors that drive capacity for implementation



Development, adaptation, or refinement of competency frameworks

Starting at the left, the conceptual model shows that competency frameworks have typically been developed based on existing theory, empirical evidence, and the ECE knowledge base. Several characteristics of frameworks influence their use, such as the domains covered; whether competencies are precise and measurable; the level of specificity (related to care of infants and toddlers, job role, and types of settings); the intended audience for the framework; and whether there is an assessment specifically aligned with the competencies included.

Key lessons on the development, adaptation, or refinement of competency frameworks

- / Competency frameworks have been developed with the goal of supporting the PD, educational attainment (for example, frameworks tied to credentials and/or higher education), and professionalization of the ECE field. States in the ITTCC multicase study developed or brought in

I/T-specific frameworks to facilitate more PD, resources, and supports for the I/T workforce.¹¹

- / Developing competency frameworks has typically involved multiple partners (organizations and individuals) such as state ECE system leaders and agency staff; practitioners such as coaches, program directors, and teachers or caregivers; representatives of professional organizations; researchers; and advocates.¹¹
- / Most frameworks for ECE teachers and caregivers who work in group settings were aligned with other frameworks or standards (such as the NAEYC Standards for Initial and Advanced Early Childhood Professional Preparation Programs). Some also relied on specific research-informed expert recommendations (such as the competencies recommended by the IOM and NRC for educators and professionals working with children from birth to age 8).¹²
- / Most competency frameworks focused on early childhood do not include competencies specific to the teaching and care of infants and toddlers. Most frameworks aimed to apply to both center- and home-based settings.¹²
- / Frameworks that included content specific to I/T teachers and caregivers (at least three competencies specific to the care or education of infants and toddlers) generally included multiple domains. However, the available research specific to I/T teachers and caregivers in group settings does not yet fully support the content included in existing competency frameworks designed for this population.^{12, 13}
- / One state in the ITTCC multicase study was shifting toward national competency frameworks. It developed an initial framework to guide early learning professionals' training and ongoing professional development and to serve as the foundation of the state's career lattice for individuals serving children birth to age 8. However, the state later began drawing on national resources. To bring a specific emphasis on I/T teachers and caregivers, the state began drawing on the ZTT Critical Competencies. Additionally, the state intends to replace its own state framework

with the NAEYC P2P competencies due to a perceived movement of the ECE field toward a national alignment of competencies. Multicase study participants also believed that the transition to the NAEYC P2P competencies will provide a more comprehensive way to assess teachers' and caregivers' knowledge, skills, and attributes than their existing framework.¹¹

Areas for future research on the development, adaptation, or refinement of competency frameworks

Future areas for research suggested by this project include:

- / Understanding how ongoing research can be used to inform ongoing refinements to competency frameworks, and how to strengthen connections between competencies included in frameworks and ongoing learning about what competencies matter most for infant and toddler outcomes
- / Exploring how national efforts related to competency-based approaches can complement and support state-specific implementation, and how competency frameworks and other resources from these different sources (and with potentially different audiences) can be successfully used in an integrated way to support competencies



Use of competency frameworks at multiple levels

Competency frameworks can affect outcomes only if various components of ECE systems actually use them. This ongoing use ultimately leads to and reinforces the improvements in teachers' and caregivers' knowledge, skills, and attributes. The model represents five levels of use by boxes at its center: (1) use by teachers and caregivers to guide and improve practice; (2) use by programs for management, planning, and oversight; (3) use by learning and development providers for education, technical assistance, and training; (4) use by ECE systems at the federal or national level; and (5) use by ECE systems at the state and local levels.

Key lessons on use by ECE systems for promoting high-quality care and education

- / Competency frameworks need to be integrated into ECE systems in a way that eases or minimizes the training burden of teachers and caregivers in order to promote their use. State ECE systems used competency frameworks by integrating them into requirements or standards for quality rating and improvement systems (QRISs); licensing requirements; and workforce development initiatives such as career pathways, credentialing, and compensation.¹¹
- / Linking competency frameworks to credentials or career pathways and QRISs was more common than linking to licensing standards. Competency frameworks typically covered a wider range of knowledge, skills, and attributes than state licensing standards require.¹¹
- / There were different mechanisms for and levels of coordination related to the use of competency frameworks in the states. These strategies depended on the structure of the system and the role of the organization overseeing implementation in each state. Ongoing coordination is important for promoting integration.¹¹

Key lessons on use by learning and development providers for education, technical assistance, and training

- / Establishing robust partnerships with institutions of higher education is helpful to support use of competency frameworks in teacher preparation programs. These partnerships help improve consistency in requirements, increase the number of institutions that offer competency-based education, and open up additional pathways to the higher education system for the I/T workforce.¹¹
- / Training and education on the competencies are critical but insufficient to produce the intended outcomes. Trainings provide the foundation for conversations between coaches and teachers and caregivers about their practice and for setting

measurable and attainable goals. Pairing coaching and training also helps trainers and technical assistance providers assess if the recipients internalize and put into practice material from the trainings.¹¹

- / Efforts to show how and why the competencies are relevant for teachers and caregivers can help promote participation in education and training opportunities.¹¹
- / Many public and private organizations offered online PD systems for teachers and caregivers. These online PD systems vary in whether there are costs for using them and whether they offer other supports such as coaching or professional learning communities. Access to support in a language other than English is also limited.^{11, 14}
- / Minimizing costs for teachers and caregivers in terms of time and resources required to participate in education and training is important. Some states have addressed these concerns by breaking down trainings or courses into shorter modules or creating micro-credentials staff can earn for individual competencies.¹¹

Key lessons on use by programs for management and planning and use by teachers and caregivers to improve practice

- / Competency frameworks can help program leaders identify PD opportunities that are particularly important for staff working with infants and toddlers and that can help staff build toward a credential.¹¹
- / Across states, broader challenges related to hiring, staffing, and compensation can overshadow PD initiatives, including competency-based efforts. Although program staff see value in the competency frameworks, they acknowledged that the content and process can be overwhelming.¹¹

Areas for future research, across all uses of competency frameworks

Future areas for research suggested by this project include:

- / Understanding the level of detail needed by different users to fully engage with the competency frameworks and supporting materials, given the wide range of users of competency frameworks who potentially have different goals
- / Identifying pathways for building competencies that enable teachers and caregivers to draw on multiple approaches for learning that reflect their motivations, account for the expertise and experience they already have, and that address the constraints they face in accessing learning
- / Identifying effective approaches for making sure that coaches and other PD providers (for example, I/T specialists) have the knowledge, skills, and tools necessary for supporting I/T teachers and caregivers in building their competencies
- / Exploring how to effectively use online learning as a complement to other forms of support, such as training and technical assistance; and understanding which competencies online learning can best address and the extent to which I/T content (such as video exemplars to support understanding of how each competency looks in real practice) is integrated in online PD systems
- / Understanding the relationship between compensation (salary, benefits, other financial incentives) and I/T teacher and caregiver engagement in efforts to improve their competencies and longevity in I/T care and education



Assessment of competencies

Assessment is embedded throughout the distinct features of the conceptual model. Assessing competencies facilitates using competency frameworks at multiple levels by providing a way to determine what competencies a teacher or caregiver has demonstrated and how a teacher or caregiver can further advance in their profession. For example, assessment can support programs by providing more specific information about qualifications of current and potential program staff. Assessing competencies can be useful for tracking whether members of the ECE workforce meet requirements or standards set forth by QRISs, licensing, or state or national workforce development initiatives.

Key lessons on assessment of competencies

- / There were limited measures available for assessing competencies, especially for I/T teachers and caregivers. Among the 43 measures identified in the ITTCC scan of competency-aligned measures, 16 were designed specifically for use with I/T teachers and caregivers. Thirteen of the 43 measures were associated with a particular competency framework.¹⁵
- / Competency assessments used a wide range of formats, including observation, surveys, multiple choice questions, and self-assessments.¹⁵
- / Reliability and validity information is limited, particularly for measures associated with a particular competency framework.^{11, 15}
- / Among the five states in the ITTCC multicase study, the purposes of assessment were primarily for planning PD, to assess training or education completion, and to facilitate attaining credentials.¹¹
- / States acknowledged the need for assessment approaches they can use for multiple purposes. For example, Texas is working to create a micro-credentialing system that would enable teachers and caregivers to obtain micro-credentials using assessments coaches already conduct as part of their regular continuous quality improvement activities. However, building formal, centralized

assessment processes that can ensure consistency and meet various purposes requires resources that are not always readily available.¹¹

Areas for future research on assessment of competencies

Future areas for research suggested by this project include:

- / Examining optimal approaches for assessing different types of competencies (whether knowledge, skills, or attributes, and given the substantive focus of the competencies)
- / In order to inform the future use of self-administered assessments and rating scales in coaching and/or evaluating competency efforts, exploring whether and how competency-aligned, self-administered assessments or rating scales are associated with observational assessments of competencies and in what ways
- / Developing and validating innovative assessment approaches staff can use for both continuous quality improvement and evaluation; for example, exploring if integrating video-based assessment into training and development efforts (including online PD systems) improves the ability to provide feedback and increases the likelihood of improved practice



Monitoring and evaluation of competency-based efforts

Spanning the bottom of the conceptual model is a box to show how monitoring and evaluation can inform all parts of the process of using competency frameworks and, ultimately, improve outcomes. To successfully implement monitoring and evaluation, federal and national programs, state ECE systems, and local programs need to integrate these activities into ongoing use of the competency frameworks.

Competency frameworks are hypothesized to support improvements in system, program, and teachers' and caregivers' outcomes. By clearly defining what teachers and caregivers need to know and be able to do, competency frameworks

should ultimately improve families' access to high-quality care and child growth and development. The conceptual model depicts this hypothesized relationship with the arrow showing improved teacher and caregiver knowledge, skills, and attributes pointing to outcomes at the teacher and caregiver, program, and system levels. The boxes at the right of the model list specific potential outcomes at each level.

Key lessons on monitoring and evaluation of competency-based efforts

- / In the ITTCC literature review, we found the types of outcomes described in the conceptual model had been hypothesized to relate to training on competencies; however, we found limited evidence substantiating these hypotheses. Few studies examine these outcomes in a way that allows for establishing causal links.¹³
- / The five states in the ITTCC multicase study currently focus their monitoring efforts on implementation and take-up of training and education related to competencies. The states track competency-based training, education completion, and credential status through their PD registries. The states gather feedback about teachers' and caregivers' experience and satisfaction with the current processes that are in place through surveys and interviews.¹¹
- / States increasingly try to track access and participation in PD offerings for teachers and caregivers by region, race and ethnicity, languages spoken, and other characteristics. However, improving capacity to assess needs at those levels of detail, an essential step toward addressing the disparities that exist, requires more work.¹¹
- / In the ITTCC multicase study, we found efforts to relate competencies to teacher's or children's outcomes were very limited; only one state had attempted to do so.¹¹

Areas for future research on monitoring and evaluation of competency-based efforts

Future areas for research suggested by this project include:

- / Development of tools for understanding progress in competency framework implementation at all levels of use for use in both research and practice (for example, to inform ongoing improvement and refinement of implementation efforts)
- / Developing and refining data systems to facilitate examination of the use of competency frameworks and linkages to outcomes at multiple levels; understanding the infrastructure that needs to be in place at a system level to support the collection of high quality data and efficient and effective approaches for engaging programs, teachers, and caregivers in data collection efforts

Conclusion

At a time of crisis for the ECE workforce, the goal of providing high quality care for infants and toddlers remains. Across the range of activities implemented, the ITTCC project found that competency frameworks hold promise as a resource for documenting and supporting the knowledge, skills, and attributes teachers and caregivers need to effectively provide that care. Notably, competency frameworks have the potential to be used in a way that meets individual teachers and caregivers where they are in terms of strengths and experiences and can be flexibly integrated into ECE systems to align with local priorities. However, as depicted in the ITTCC conceptual model for the implementation of competency frameworks, the level of success in using competency frameworks to elevate teachers' and caregivers' competencies varies depending on the resources and infrastructure in place, and contextual factors that influence decisions about and efforts to use them. As efforts to develop, refine, and use competency frameworks to support the quality of care for infants and toddlers continue to evolve, the ECE field will benefit from additional research across the areas depicted in the ITTCC conceptual model. Further examination of the areas for future research suggested here will enhance understanding of and improve support for implementation of competency frameworks at multiple levels of use and outcomes across ECE systems.

Endnotes

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Submitted to:

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Office of Planning, Research, and Evaluation
Administration for Children and Families
U.S. Department of Health and Human Services

Contract Number:

HHSP233201500035I/HHSP23337021T

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Suggested Citation: Moiduddin, E., P. Caronongan, F. Hurwitz, D. Straske, and S. Atkins-Burnett (2023). The Infant and Toddler Teacher and Caregiver Competencies Project: A Conceptual Model, Key Lessons, and Areas for Future Research. OPRE Report #2023-068, Washington, DC: Office of Planning, Research, and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

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