



April 2023

TO: 2024 Young Scholars Program Applicants

RE: Examples of strong responses to Full Application questions

Dear Prospective Applicant,

Thank you for your interest in the Young Scholars Program (YSP). Please use the following packet as an additional resource when developing your proposal for the 2024 YSP LOI and Full Application processes. This packet is a compilation of exemplary responses to the following sections:

- 1) Research Project Basis and Research Questions
- 2) Current State of Knowledge and the Significance of the Present Study
- 3) Public Policy and/or Practice Relevance
- 4) Methodologies and Measures
- 5) Data Analysis Approach

The examples that follow are excerpted written responses from various, previously awarded proposals. With each example, an overview of the project, the form question, the applicant's response, and annotations are provided. The responses in this packet are highlighted as strong examples at the *Full Application stage*.

For additional questions regarding YSP, please contact: [ysp@fcd-us.org](mailto:ysp@fcd-us.org).

Good luck, we are looking forward to receiving your application!

Research Project Basis and Research Questions, Current State of Knowledge, and Methodology and Measurement Example

**Evandra Catherine, Ph.D.**  
Arizona State University

**Research Project Basis and Research Questions, Current State of Knowledge, and Methodology and Measurement Example**

**Project Overview:**

In this mixed methods project, early childhood mental health consultants (ECMHCs) will provide ECE teachers with culturally appropriate classroom approaches with the goal of enhancing the quality of their interactions with racially and culturally diverse children. First, in order to assess the ECMHC's cultural knowledge, each consultant will complete a survey capturing their expertise and training. Next, teachers will participate in focus groups and independent journaling in order to describe the novel cultural approaches they have just been taught and are now using, and how they're implementing these approaches in their classrooms. Lastly, teachers and ECMHCs will complete a questionnaire to assess the extent to which certain characteristics predict positive classroom interactions, and to determine if any matching characteristics between ECMHCs and teachers predict changes in teacher practice to advance equity.

**Research Project Basis and Research Questions**

*Describe the theoretical or empirical foundation(s), the specific research question(s), and the working hypothesis(es) which underlie the proposed work. This question may require a more in-depth response than in the LOI. In this instance, it is recommended that you build from your previous LOI response.*

*Please note there is an opportunity to upload the bibliographic citations for the application in Section VII. Data Analysis Approach.*

**Theoretical Foundation**

Early childhood mental health consultation (ECMHC) aims to build the capacity of the early care and education workforce to develop comprehensive perspectives and strategies to enhance their interactions with young children (Cohen & Kauffman, 2000; Kniegge-Tucker et al., 2020). The ECMHC theory of change emphasizes the role of the consultant-teacher relationship as the mechanism for changes in teacher-child interactions, teachers' self-awareness, and how teachers act and think about young children (Davis, 2018; Davis, Perry, & Rabinovitz, 2020). Given the emphasis on teachers' interactions, the proposed study will be guided by the ECMHC theory of change.

**Commented [AK1]:** The proposed research is well supported by the literature reviewed. A well-stated rationale is provided for the study aims and questions and hypotheses are explicitly explained.

## Research Project Basis and Research Questions, Current State of Knowledge, and Methodology and Measurement Example

The ECMHC theory is also supported by the Consultative Stance framework (Johnston & Brinamen, 2006). The Consultative Stance is a framework that helps to understand the mechanisms through which MHCs build relationships with ECE teachers and/or are perceived by teachers. This framework consists of three elements 1) avoiding the position of sole expert 2) understanding another's subjective experience, and 3) considering all levels of influence (Johnston & Brinamen, 2006). Additionally, MHCs who embody the Consultative Stance engage in culturally sensitive ways that encourage teachers to 1) demonstrate empathy, 2) explore contextual factors that may influence children's behaviors, 3) incorporate culturally sensitive instructional materials, 3) use positive discipline practices, 4) engage in perspective-taking, and 5) cultivate cultural awareness of culturally diverse children (Davis et al., 2020a; Davis et al., 2020b; Shivers et al., 2021). The literature also indicates that when MHCs engage in culturally sensitive ways with teachers, there are changes in teachers' perceptions and attitudes of young children (Davis et al., 2020b). Further, for the purpose of this study, these ways of being will be referred to as cultural approaches.

Although the study is primarily guided by the ECMHC theory of change, the study will also draw from Garcia Coll and colleagues (1996) Integrative Model for the Study of Developmental Competencies for Minority Children to emphasize the importance of bias and anti-Black racism on the development of culturally diverse children. To further support Garcia Coll's integrative model, the proposed study will also draw on broader theories of anti-bias and anti-Black racism in ECE (Brown et al., 2010; Iruka, 2019; Souto-Manning & Cheruvu, 2015) . This is important given the ECE's fields use of theories based on middle class white experiences and lack of research on the role that bias and racism play in child development.

### Role of Race and Culture in ECMHC

Given the growth of the theoretical and empirical literature on the role of race and culture in ECE, the emerging research has recently focused on mechanisms of change associated with enhanced teachers' interactions with culturally diverse children, especially Black children (Davis et al., 2018; Shivers et al., 2021). The ECMHC theory of change suggests that MHCs who build strong relationships with ECE teachers tend to have teachers who report less conflict and more closeness with culturally diverse children. One of the first studies to examine this intersection used multilevel modeling to assess whether race and culture variables affected the consultant-teacher relationship and teacher-child interactions (Davis et al., 2018). The researchers found that stronger consultant-teacher relationships predicted greater gains in teacher-child interactions with Black children, especially Black boys compared to their white peers. Findings were nonsignificant for other children (Davis et al., 2018).

Research Project Basis and Research Questions, Current State of Knowledge, and Methodology and Measurement Example

The study also revealed that MHCs who self-reported expertise in cultural diversity were more effective in using the strength of the consultant-teacher relationship to enhance teacher-child interactions (Davis et al., 2018). This is important to note, particularly due to the overwhelming white ECMHC workforce. Davis and colleagues (2018) also found that when MHCs and teachers were racially/ethnically matched there was a significant positive link between the consultant-teacher relationship and improvements in teacher-child interactions (Davis et al., 2018). Again, this is important as the ECE field seeks to diversify the workforce.

This study provides a preliminary understanding of how MHCs use of the consultant-teacher relationship and awareness in cultural knowledge can enhance the quality of teacher-child interactions, specifically with Black children. In a subsequent study, Shivers and colleagues (2021) conducted a longitudinal program evaluation of a statewide ECMHC model, linking the model to the analysis of race and gender (Shivers et al., 2021). The researchers conducted a series of multilevel growth models and reported that although models associated with race showed that teachers reported closer relationships with white children than Black children at baseline, at six months there were no significant differences reported in those relationships (Shivers et al., 2021). The models also showed that teachers' interactions with Black boys improved more rapidly than with white boys from baseline to six months. The findings from this study indicate that when ECE teachers have access to ECMHC they can improve the quality of their interactions with culturally diverse children.

Although these findings are promising for advancing equity and enhancing professional practice, our understanding is limited due to the researchers' use of quantitative measures and methodologies. The proposed study seeks to address these limitations by using both qualitative and quantitative methods to describe the mechanisms of change associated with improved teacher-child outcomes and to integrate these findings to gain a more robust understanding of the role race and culture play during ECMHC. To meet this objective the study has the following aims.

Research Aims

Aim 1: To describe (a) the breadth of cultural approaches used during classroom-focused ECMHC and (b) how ECE teachers respond to and implement cultural approaches to enhance the quality of their interactions with culturally diverse children.

Based on existing theory to address Aim 1a, the researcher predicts that MHCs will describe cultural approaches that create nonjudgmental space for teachers to engage in reflective questions, discuss issues of race/ethnicity, gender, and language use, cultivate cultural awareness, and broaden teachers' understanding of culturally diverse children (Davis et

**Commented [AK2]:** PI explains how the proposed study addresses the limitations that exist in the current research

**Commented [AK3]:** The research aims are clearly stated and the theories supporting these aims are clearly explained

Research Project Basis and Research Questions, Current State of Knowledge, and Methodology and Measurement Example

al., 2020). The researcher predicts that the types of cultural approaches that MHCs use will vary based on aspects of the consultant-teacher relationship and the race/ethnicity or language use of teacher and children in the classroom. The researcher further predicts that MHCs will encourage teachers to implement cultural approaches that encourage culturally relevant pedagogy and positive discipline practices with culturally diverse children.

For Aim 1b, the researcher predicts that the consultant-teacher relationship will influence how ECE teachers' respond to cultural approaches. The researcher predicts that teachers will describe more positive responses to cultural approaches when there is a strong positive relationship. The researcher predicts that teachers will describe positive responses to cultural approaches that creates nonjudgmental space and opportunities to raise issues of race and culture. Further, the researcher predicts that teachers will describe various contextual factors including programmatic and child and family characteristics that affect the implementation of cultural approaches.

Aim 2: To examine whether teacher's implementation of cultural approaches is associated with changes in sociocultural interactions and the extent to which certain consultant and teacher match characteristics predict changes in sociocultural interactions.

The researcher expects that teacher's implementation of cultural approaches will enhance the quality of their interactions with culturally diverse children from pretest to posttest. Given prior evidence that shows that race/ethnicity match between consultant and teacher is associated with enhanced teacher-child interactions, the researcher expects that when there is a race/ethnicity or language use match between consultant and teacher, teachers will have higher scores.

Aim 3: To integrate the findings from Aim 1 with the predictors identified in Aim 2. It is expected that such an integration will provide a robust and comprehensive understanding about influences on the implementation of cultural approaches and teachers' sociocultural interactions.

The researcher predicts that the ways in which consultants and teachers describe and implement cultural approaches will predict the pattern of findings obtained from classroom observations (i.e., teachers that describe using culturally sensitive discipline practices will score higher on dimensions of equitable discipline).

**Current State of Knowledge and Significance of the Present Study**

*Please discuss the significance of the proposed project, how it relates to the current state of research knowledge and specifically how it contributes to the research field.*

**Commented [AK4]:** The project aligns with the Foundations' goals, and can have a significant impact in the field by exploring cultural approaches that mental health consultants encourage early care and education teachers to implement and the effect of these cultural approaches on the quality of teachers' interactions with culturally diverse children

Research Project Basis and Research Questions, Current State of Knowledge, and Methodology and Measurement Example

Both nationally and at the state level, policymakers and decision-makers are increasingly engaging in conversations about whether early childhood mental health consultation (ECMHC) advances equity in early care and education (ECE) settings (Davis et al., 2020). There is emerging research that suggests that ECMHC is more effective with children of color when compared to white peers (Shivers et al., 2021). This research provides insight into the potential of ECMHC to advance equity, yet the reality is that ECMHC programs vary widely in their approach as well as the strategies that consultants use and the impact they have.

To accurately address the equity question, it is important that the ECE field hear directly from the workforce, specifically mental health consultants (MHCs) and teachers, to understand the mechanisms of ECMHC that produce positive outcomes with children, especially culturally diverse children. The existing research emphasizes the role that the consultant-teacher relationship plays in improving teacher-child outcomes with culturally diverse children, especially teacher-child interactions (Shivers et al., 2021). This study seeks to use the voices and experiences of MHCs and teachers to describe the types of cultural approaches they implement to enhance the quality of teachers' interactions with young culturally diverse children.

#### Early Childhood Mental Health Consultation (ECMHC)

A primary focus of ECMHC is to build the capacity of the early care and education workforce to develop comprehensive perspectives and strategies to enhance their interactions with young children (Cohen & Kauffman, 2000; Kniegge-Tucker et al., 2020; Shivers et al., 2021). This is a critically important focus given the current demographics of the ECE workforce and ECE programs. The majority of the ECE workforce is white and female, yet recent data show that the majority of children birth to five in the U.S. are children of color (Johnson-Staub, 2017). The current evidence strongly suggests that ECMHC is a promising approach to support ECE teachers who work with culturally diverse children and assist with changing teachers' perceptions and behaviors (Davis et al., 2020b).

The existing evidence shows on ECMHC has paid little attention to race/ethnicity and culture (Albritton et al., 2009). In fact, the research shows that culturally diverse children are least likely to participate in studies on ECMHC (Albritton et al., 2009). The scant attention paid to issues of race/ethnicity and culture in ECMHC is troubling considering that researchers in the 1990s were calling for culture to be a central component in consultation theory, practice, and research (Behring & Ingraham, 1998; Ingraham & Behring, 1996). Only more recently has ECMHC research shifted to include analysis of race and culture and teacher-child outcomes (Davis et al., 2020; Shivers et al., 2021).

**Commented [AK5]:** The PI clearly explains how this project will build on the existing research

**Commented [AK6]:** This project is filling a gap that currently exists

Research Project Basis and Research Questions, Current State of Knowledge, and Methodology and Measurement Example

Much of the evidence-base has primarily focused on reducing challenging behavior and the use of exclusionary discipline practice and classroom quality. (Albritton et al., 2019; Connors-Burrow et al., 2012; Davis et al., 2020; Gilliam & Shahar, 2006; Grannan et al., 1999; Perry et al., 2008; Shivers et al., 2021; Upshur et al., 2009). In general, studies show that teachers who have access to ECMHC tend to report decreases in children's challenging behavior, improved classroom quality, and enhanced teacher-child interactions (i.e. increases in closeness and decreases in conflict; Albritton et al., 2019).

**Aim 1**

Over the past decade, the field of ECMHC has begun to evolve in its understanding of race and culture. For example, Davis and colleagues (2018) examined whether variables related to race and culture affected the consultant-teacher relationship and ECMHC outcomes (i.e., teacher-child closeness and conflict, classroom climate, teacher self-efficacy, child attachment behaviors, child self-control, and child initiative). Findings identified under three conditions that strengthened the consultant-teacher relationship and produced positive changes in ECMHC outcomes, 1) when consultants self-reported expertise on cultural diversity, 2) when there was a racial/ethnic match between consultant and teacher, and 3) when the focal child was a Black boy.

In 2021, Shivers and colleagues, examined racial and gender disparities in teacher-child interactions. Findings revealed that teachers' relationships with Black children and Black boys improved significantly throughout the consultation. As previously noted, the findings also revealed while teachers reported closer relationships with white children than Black children at baseline, there were no significant differences between teachers' interactions with Black and white children at six-months (Shivers et al., 2021). These findings are promising for the future of ECMHC and its ability to build teacher's capacity to develop comprehensive perspectives and strategies to enhance their interactions with young children.

To continue advancing the ECE field's understanding of ECMHC and its ability to advance equity, future research must continue to include analysis of race/ethnicity, gender, and language use. Currently, there is a significant lack of evidence to describe what consultants do with teachers that result in positive teacher-child interactions and outcomes. However, existing literature points to the role of the consultant-teacher relationship as a key mechanism of change in ECMHC outcomes (Davis, et al., 2020b). The evidence also points to predictors related to consultant's prior knowledge on issues of cultural diversity and consultant-teacher racial/ethnic match (Davis et al., 2020a)

**Aim 2**

**Commented [AK7]:** PI fully and completely describes each of the study's aims

Research Project Basis and Research Questions, Current State of Knowledge, and Methodology and Measurement Example

A goal of the proposed study is to describe the effect of the implementation of cultural approaches on the quality of teachers' interactions with culturally diverse young children. Growing evidence suggests that when there is a teacher-child race/ethnicity match that teachers report more positive teacher-child interactions (Dee, 2005). It is likely this is the case due to teachers' shared experiences with children that may lead to more empathy or perspective-taking. Understanding the critical role of teacher-child interactions in ECE is important when implementing ECMHC, particularly with culturally diverse children. In fact, researchers have found that quality of teacher-child interaction may have similar effects on learning and development as teachers' beliefs and perceptions about culturally diverse children (Murray & Murray, 2004; Pianta et al., 2002; 2005; Saft & Pianta, 2001).

Further, the research shows that teachers report more problematic relationships and higher levels of conflict with Black children (Murray & Murray, 2004; Saft & Pianta, 2001). The research also reveals that teachers report less positive perceptions of their relationships and more conflict with young culturally diverse children (Saft & Pianta, 2001). Additionally, teachers rate their relationships with children more positively if they shared the same race/ethnicity as the child (Jackson, 2002; Murray & Murray 2004; Saft & Pianta, 2001). Saft and Pianta (2001) found that teachers' positive impressions of their relationships with children were associated with a child's race/ethnicity and age. In particular, they rated more challenging relationships with culturally diverse children (Saft & Pianta, 2001).

In sum, the literature reveals the powerful role of race/ethnicity and culture in early care and education. Young culturally diverse children benefit greatly from teachers who have access to ECMHC (Shivers et al., 2021). ECE teachers also show changes in behaviors that lead to positive interactions with culturally diverse children. Therefore, the robust link between teachers' beliefs and child race/ethnicity suggests the importance of further study.

The proposed study seeks to contribute to current knowledge by describing how ECMHC advances equity by enhancing the quality of teachers' sociocultural interactions or interactions with young culturally diverse children. We also seek to explore how teachers respond to and implement cultural approaches to enhance the quality of their sociocultural interactions. The information derived from this study will advance the ECE field's understanding of how consultants, especially culturally and linguistically diverse consultants, and those who self-report prior knowledge of cultural diversity, are encouraging ECE teachers to implement cultural approaches.

Furthermore, the few existing studies in the area have relied on global measurements of teacher-child interactions and did not focus explicitly on teacher's interactions with culturally diverse children (Connors-Burrow et al., 2013; Shivers et

**Commented [AK8]:** Impactful use of the literature to underscore the importance of this work



Research Project Basis and Research Questions, Current State of Knowledge, and Methodology and Measurement Example

al., 2021; Virmani et al., 2012). Thus, in addition to qualitative data gathered from teachers, the research will conduct classroom observations to examine whether the implementation of cultural approaches is associated with changes in teacher's interactions with culturally diverse children. This study will also integrate the qualitative and quantitative data to gain a more comprehensive understanding of the implementation of cultural approaches and teacher's sociocultural interactions than could be derived by either alone. As such, the proposed study has much to offer in terms of enhancing the quality of professional practice and promoting a culturally sensitive ECE workforce.

**Methodology & Measurement Procedures**

*Describe the qualitative and/or quantitative methodologies and measures. Include a discussion of how they relate to the study questions and how they are developmentally, linguistically and culturally sensitive and appropriate.*

*Where both qualitative and quantitative approaches are proposed, describe the ways in which the combination enhances the proposed study.*

*If your proposed study is longitudinal in design, please specify how you will sustain the participation of those involved, including plans for sample attrition.*

*If the proposed research involves working with community-based organizations, schools and/or school districts, describe the planned process for gaining permission/access, whether the process has been initiated, and how far it has progressed. A letter of support confirming cooperation from each entity must be uploaded in [Section IX. Time Commitment and Effort](#) of the application.*

The overall purpose of this study is to describe the cultural approaches that mental health consultants encourage early care and education teachers to implement and whether implementation enhances teachers' sociocultural interactions during classroom-focused early childhood mental health consultation. To meet this objective, the researcher will use an exploratory sequential mixed-methods design to address each of the research aims.

This design is the best approach because, while qualitative methods allow for the direct solicitation of participant's personal experiences and perspectives, substantiating these findings with systematic observations provides a comprehensive understanding of the findings.

As such, the study will rely on data from multiple sources to gain a deeper understanding of cultural approaches implemented during classroom-focused ECMHC. Collecting multiple forms of data will address common data limitation through triangulation. This integrated approach promotes information and understanding that can lead to targeted and equitable policy and practice recommendations (Fetters, 2020).

**Commented [AK9]:** PI starts with providing a rationale for some of the design choices. In a mixed-methods design, both qualitative and quantitative approaches are described in an accessible way and are appropriate for the data being used.

Research Project Basis and Research Questions, Current State of Knowledge, and Methodology and Measurement Example

Qualitative Measures

Aim 1

To address Aim 1a, the researcher will conduct four to five focus groups comprised of five MHCs each from across the state of Arizona. Due to the ongoing pandemic, and due to logistical issues related to location, the focus groups will be conducted virtually using online meeting software (i.e., Zoom, Google Meet). We will use a semi-structured interview protocol with questions derived from the research questions and literature. Questions will focus on how consultants describe and encourage ECE teachers to implement cultural approaches. We will also create questions around themes including asking reflective questions, discussions about race/ethnicity, culture, language, cultivating cultural awareness, creating space, and contextual factors (see Appendix A for example questions).

To gather gather real-time data on daily activities, MHCs will also maintain written or audio journals. MHCs will be asked to document aspects of their relationship with teachers (e.g., ways of being, creating nonjudgmental space). They will also be asked to reflect on how they encourage teachers to demonstrate empathy and engage in perspective-taking with culturally diverse children.

To address Aim 1b, the researcher will conduct another set of four to five focus groups comprised of six teachers each from consultant's caseloads. We will also use a semi-structured interview protocol with questions that focus on how teachers respond to and implement cultural approaches with culturally diverse children. The researcher will ask questions about knowledge of issues on race/culture or language, being self-reflective, cultivating cultural awareness, positive discipline strategies, and questions derived from items included in the classroom observation tool used during quantitative data collection.

Quantitative Measures

Aim 2

To address Aim 2, with each ECE teacher, the researcher will conduct classroom observations that focus on their sociocultural interactions with culturally diverse children during various classroom activities (i.e., large group, small group, and transition times). The researcher will also examine whether certain demographic match variables predict changes in sociocultural interactions.

Commented [AK10]: Measures tied neatly to study aims

Commented [AK11]: PI includes detailed information regarding responsiveness to the current context

Research Project Basis and Research Questions, Current State of Knowledge, and Methodology and Measurement Example

The researcher will use the Assessing Classroom Sociocultural Equity Scale (ACSES; Curenton et al., 2019). ACSES was selected instead of other widely used classroom observation tools (i.e., CLASS and ECERS) given its racial/ethnic and linguistic sensitivity and focus on sociocultural interactions or interactions that acknowledge the sociocultural experiences of culturally and linguistically diverse children. ACSES is a classroom observation tool that measures equitable sociocultural interactions in pre-kindergarten (PK) to third-grade classrooms. The tool includes 39 items within two domains (Challenging Inequity and Bridging Sociocultural Connections) and five dimensions (Challenging Status Quo, Equitable Learning Opportunities, Equitable Discipline, Connections to Home life, Personalized Learning Opportunities). Three ACSES dimensions will be observed and assessed during the study, two from the Challenging Inequity domain (Equitable Learning Opportunities, Equitable Discipline) and one from the Bridging Sociocultural Connections domain (Personalized Learning Opportunities).

The ACSES has evidence of divergent and concurrent validity with the widely used global classroom rating scale, Classroom Assessment Scoring System (CLASS; Pianta et al., 2008). ACSES was validated with 140 teachers and classrooms in federally-funded Head Start and public and private PK programs. During ACSES validation, classrooms were business as usual, meaning they were not assigned a consultant. The teachers were mostly female and white, with 30% teachers of color. On average, the classrooms were majority children of color, and the largest group was Black (33%), followed by multiracial (10%) and Latino (8%). Children were four to five years old. Scoring for each dimension is based on the frequency of occurrence and number of children impacted using a Likert-type scale 1 (never) to 5 (nearly always). Higher scores indicate more equitable learning opportunities. The internal consistency for each dimension ranges from a Cronbach's Alpha of .74 to .90 indicating good reliability.

To address whether certain demographic match (i.e., race/ethnicity and language use) between consultant and teacher, the researcher will use data collected from a Demographic and Experience Questionnaire. MHCS and ECE teachers will complete the questionnaire during focus groups. The questionnaire will include items such as MHCs' or ECE teachers' race/ethnicity, gender, home language, geographic location, type of setting and program, knowledge on topics of race and culture, education, years of experience, number of teachers and programs served. We will also collect some demographic data on classroom composition, including number of children, race/ethnicity, language use, and ability status of children.

Integration of Qualitative and Quantitative Measures

Aim 3

**Commented [AK12]:** PI discusses reliability and validity of measures chosen

**Commented [AK13]:** The PI showcases the cultural and linguistic sensitivity of the work

## Research Project Basis and Research Questions, Current State of Knowledge, and Methodology and Measurement Example

To address Aim 3, the researcher will use data gathered from journals and during focus groups to assess the degree to which these relate to and help explicate the data collected during classroom observations. The researcher will also use data collected from the Demographic and Experience questionnaire to contextualize the experiences of MHCs and ECE teachers as well as to help describe teachers' interactions with culturally diverse children.

The methods and the measures were selected because qualitative methods will provide the opportunity for participants to share experiences that are directly related to how race/ethnicity, culture, and issues of equity intersect during classroom-focused consultation. Additionally, because we will oversample for consultants and teachers of color, the researcher will capture the voices of those often absent in research. The methods also allow for periodic member check-ins with participants. This will ensure the trustworthiness and transferability of the data. Lastly, we will collect quantitative data using a measure that is focused on equitable sociocultural interactions with culturally and linguistically diverse children. The existing research on teacher-child interactions has largely used global classroom rating scales that do not pay specific attention to issues of equity.

Research Project Basis and Research Questions and Policy-Practice Relevance Example

**Zoelene Hill, Ph.D.**

New York Academy of Medicine

**Research Project Basis and Research Questions and Policy-Practice Relevance Example**

**Project Overview:**

The proposed two-part mixed methods study will use a pre-existing national dataset to create a descriptive national profile of unlisted home-based providers. A resident-led Research Policy and Power (RRPP) framework will then be utilized to reach a local sample of such providers, and interviews and focus groups will be used to gather their perspectives on how to improve related early care and education (ECE) policies. The local and national findings will be compared.

**Research Project Basis and Research Questions**

*Describe the theoretical or empirical foundation(s), the specific research question(s), and the working hypothesis(es) which underlie the proposed work. This question may require a more in-depth response than in the LOI. In this instance, it is recommended that you build from your previous LOI response.*

*Please note there is an opportunity to upload the bibliographic citations for the application in Section VII. Data Analysis Approach.*

**Empirical Foundations**

Unlisted, home-based workers are an essential, yet often neglected part of the early care and education (ECE) ecosystem. Home-based ECE workers are those who provide regular care (i.e., over 5 hours per week) in a home-based setting to one or more child under the age of 5 years old, who is not their own (NSECE Project Team, 2015). This type of care is sometimes referred to as family, friend or neighbor, informal, or kith and kin care. Unlisted home-based providers do not appear on state or national lists of ECE services such as licensed or regulated providers (NSECE Project Team, 2015). Reports using a 2012 nationally representative dataset, the National Survey of Early Care and Education (NSECE) share that there were approximately 3.9 million unlisted home-based ECE workers compared to only 1 million center-based ECE workers and 100,000 listed home-based ECE workers (Paschall, Madill & Halle, 2020; NSECE Project Team, 2016).

In addition to comprising the majority (>75%) of the ECE workforce, unlisted home-based workers care for the almost half of children under age five who receive non-parental care (NSECE Project Team, 2015). A report using data from the newly released 2019 NSECE datasets shares that 2.8 million children under age 3 received care from an unlisted

**Commented [AK1]:** The PI organizes the following section very well, starting with the empirical foundations for the work, and then describing the theoretical foundations.

The proposed project examines two main research questions related to the ECE workforce.

**Commented [AK2]:** The literature reviewed provides a strong foundation for the work that follows

## Research Project Basis and Research Questions and Policy-Practice Relevance Example

home-based provider, while only 300,000 received care from a listed home-based provider (Datta, Milesi, Srivasta, & Zapara-Geiti, 2021). Similarly, for children between ages 3 and 5 (not yet in kindergarten) the number of children in the care of unlisted home-based providers was ten times the number of children in the care of listed home-based providers, 3 million, compared to 300,000 (ibid).

The unlisted home-based workers are often excluded from programs and policies that distribute public resources to workers who care for and educate young children. The Child Care Development Fund (CCDF) is the primary federal program devoted to providing families with child care subsidy and funding supports to states to improve quality. In 2019, of the approximately 4 million unlisted home-based workers, only 2% received any support through CCDF subsidies (ACF, 2021\_A). Consistent with being disconnected from resources that support other ECE workers, whereas upwards of 88% of center-based and 80% of listed home-based workers reported participating in professional development, less than 20% of unlisted home-based providers reported participating in professional development (Authors calculation, 2021; Warner-Richter et al., 2020). Moreover, unlisted home-based workers are often excluded from discourse or conceptualization of who is considered to be a part of the ECE workforce. A recent Early Care and Education Workforce Demographic Series developed by the Office of Planning, Research and Evaluation categorically exclude unlisted providers (Hill, Ekyalongo, Paschall, Madill, & Halle, 2021; Paschall, Madill & Halle, 2020\_A; 2020\_B). Approximately 70% of unlisted home-based workers report that they are not paid for their work with young children (Datta, Milesi, Srivastava, Zapata-Gietl, 2021). Unlisted home-based workers are disproportionately women who, compared to center-based and listed home-based workers, have completed less of formal education (National Center on Early childhood Quality Assurance, 2015).

### Theoretical Foundations

The research questions and methodological approaches of this study are informed by the theoretical framework of black feminism (Collins, 1996). Black feminism centers the experiences of Black women as the vantage point from which to critically examine economic, political and social structures and practices (Collins, 1996). This vantage point includes an intersectional view of gender, race, and class. Thus, black feminism elucidates underlying philosophies and biases that shape the current structure and organization of early care and education, and also offers guidance on how to undo some of the structural biases inherent in ECE systems.

In popular, policy, and academic discourses, early care and education is considered a means to prepare young children for school and a critical support that allows families, particularly women, to work. Black feminist theory describes that the feminist agenda for women to enter the labor force and gain economic standing and freedom was predicated on the transfer of domestic and child care responsibilities to other women who are often members of subordinated racial ethnic

## Research Project Basis and Research Questions and Policy-Practice Relevance Example

groups (Tuominen, 2003). ECE workers are disproportionately women from racially and ethnically subjugated groups and from low-income backgrounds, who receive low wages for their work (ibid). This organization of the ECE workforce in part reflects the philosophy of child care as unvalued women's work that moved from households to the market economy with privileged women as the benefactors (ibid). This philosophy of transferring child care responsibilities to other, subordinated women has been translated into public policy and structures of the ECE system as seen in public policies bestow incremental benefits (e.g. wages and benefits) to ECE workers who move away from the home into center-based settings and school-based settings, while workers in home-based settings continue to receive the least public support (ACF, 2020\_B).

Black feminism suggests that through their distinct positions in society, Black women, and other women who are "outsiders within" can offer intimate, insider knowledge about how to remediate broken and biased systems (Collins, 1986). This study recognizes that women who provide unlisted home-based child care are the best positioned to inform program and policies of the types of supports that they want to support their work with young children. The research questions and the methodologies applied in this work center the voices of Black and Latina women to improve ECE systems.

### Research Questions:

Aims This study has two main aims:

Aim 1: To uplift the collective professional identity of unlisted home-based workers by providing a national descriptive profile of this often neglected segment of the ECE workforce.

Aim 2: To learn from cohorts of unlisted home-based workers what programs and policies they want to support their work with young children.

Research Questions: This study has two main groups of research questions which contain sub-questions:

RQ1: Describe the national profile of unlisted home-based workers along the six dimensions of:

- 1) provider characteristics (e.g., race/ethnicity; age; language; nativity; education; years of ECE experience);
- 2) enrollment (e.g., number, age, race/ethnicity of children in their care; children with special needs);
- 3) care provided and time spent with children (e.g., main responsibilities when caring for children, time spent on various activities);
- 4) fees and schedule
- 5) provider beliefs and attitudes (e.g., modernity, HAMRE, and depression)
- 6) professional development activities

**Commented [AK3]:** The PI clearly lists the projects aims and research questions, which are then mapped onto the hypotheses

Based on the theoretical framework of Black feminism, this research will pursue two aims that address several questions.

Research Project Basis and Research Questions and Policy-Practice Relevance Example

RQ2: What programs and policies do unlisted home-based workers want to support their work with young children? (sub-questions are based in the five-part Resident-led Research Policy and Power framework, described in the Methodologies Section)

- 1) What are unlisted home-based workers' hopes and dreams for their work with young children?
- 2) What are their strengths for achieving their hopes and dreams for their work with young children?
- 3) What changes do they need to achieve their hopes and dreams?
- 4) What measures do they want to use to assess progress towards their hopes and dreams?
- 5) How do workers want to speak or act in support of their hopes and dreams?

Hypotheses

Hypotheses for RQ1

Using the newly released 2019 NSECE Home-based Provider Dataset, this study will provide the most recent, if not the first, comprehensive national descriptive profile of the unlisted home-based ECE workforce. Given black feminist theory on the philosophies and biases underlying child care work, and given existing data on the unlisted home-based workforce, I hypothesize that 2019 national data will show that unlisted home-based workers disproportionately belong to racial and ethnic subjugated groups, and they will disproportionately have other identities that are associated with challenges entering the labor force, for example, low levels of formal education, not born in the United States, speak a language other than English. Given the higher supply of center-based care for children age 3 to 5, and findings from other studies, I also hypothesize that the majority of workers will care for infant and toddlers. Finally, given low public policy supports for unlisted home-based workers, coupled with low wages, I hypothesize that very few will participate in professional development activities.

Hypotheses for RQ2

Consistent with the black feminist theoretical foundation which asserts that the women who work as informal home-based providers are in the most knowledgeable, inside position to inform the types of programs and policies they need, and consistent with the grounded theory methodological approach of allowing findings to emerge from the interview and focus group transcript data, I am consciously and effortfully avoiding entering analyses of RQ2 with hypotheses which may bias my interpretation of the data. However, as I analyze transcript data, I will seek to identify which program and policies may be best implemented through local, state or federal policies.

**Policy-Practice Relevance**

*The research must have clear connections to policy and/or practice that have the potential to bring about positive change for the ECE workforce and YSP's priority populations in the implementation of a program and/or policy at the federal, state, local, and/or organizational/institutional level. Please describe how the proposed research could be used*



## Research Project Basis and Research Questions and Policy-Practice Relevance Example

*by the appropriate decision-makers in the course of their work. Also, briefly describe how results/recommendations could be communicated beyond scholarly outlets.*

Policies to increase the proportion of young children in high-quality early learning environments must meet children and families where they are: almost half of all young children who receive non-parental care are in the care of unlisted home-based child care workers (NSECE Project Team 2015; Paschall et al., 2020).

Understanding who the unlisted home-based workforce is, who they care for, and the type of care they provide is an integral first step in developing programs and policies that support this group of ECE workers (Aim 1). This study provides the most recent, if not the first, national profile of unlisted home-based workers and uplifts the approximately 3 million unlisted home-based workers as integral members of the ECE workforce, deserving of policy and programmatic support. The descriptive profile will include six dimensions: 1) provider characteristics; 2) enrollment; 3) care and services provided; 4) fees and schedule; 5) provider beliefs and attitudes; and 6) professional development, dimensions commonly used to describe center-based and listed home-based workers. Using these dimensions of data, this study will answer a comprehensive set of questions to inform policy-making including: What motivates unlisted home-based workers' work with young children?; What languages do they speak?; What types of professional development do they know about or use?; and How do these answers differ by individuals who care for infants and toddlers compared to those who care for children ages three to five? These and other findings will shed light on the motivational factors on to which policymakers can harness further professional support efforts; inform the languages in which support resources should be made available; and allow policymakers to build on existing professional development resources.

Developing programs and policies based on recommendations from unlisted home-based workers is a way to develop equitable policies and programs that reflect what workers want. Too often, programs and policies are developed by researchers or policymakers who have little to no experience caring for young children and who often impose their own ideas of what workers should be doing (i.e., attain licensing; use curriculum; provide pre-academic training). This study collaborates with three cohorts of unlisted home-based workers to learn from them the programs and policies they want to support their work with young children (Aim 2). Policymakers can use the programs and policies identified by the unlisted home-based workforce to validate the desirability of existing programs for expanded funding and accessibility and inform their development of new programs.

Shifting popular and policy discourse to acknowledge that unlisted home-based workers should be considered and supported as part of the early care and education ecosystem could have significant impacts on how local, state, and even federal policy makers design future ECE policies. Through the American Rescue Plan (2021), unprecedented

**Commented [AK4]:** Provides statistics to underscore the relevance of this work

**Commented [AK5]:** Clearly outlines how the proposed research can influence policy formation and improvement

## Research Project Basis and Research Questions and Policy-Practice Relevance Example

amounts of funds are being distributed to states with little guidance on how to best spend these funds in support of young children. This research could inform states' spending. Amendments to the Child Care Development Block Grant Act in support of informal home-based workers during reauthorization could have significant, lasting impacts on how states distribute their child care development funds. Findings from this study can also encourage Family Child Care Networks to take a more inclusive view of the ECE workforce and to expand their existing services to unlisted home-based providers; and to even expand the types of services they provide.

### Relevance in the Time of COVID-19

COVID-19 has forced the temporary and permanent closing of many child care centers (NAEYC, 2020). In addition, many parents wishing to have their young children cared for in settings with limited exposure to others have turned to formal and informal home-based ECE providers (Hughes, 2020; Vagianos, 2021). With this increased demand for home-based care, there is an urgent need to better support home-based ECE providers, especially unlisted providers who have few connections to institutional supports.

### Scholarly Dissemination

I will develop three manuscripts for submission in peer-reviewed journals. One manuscript will share findings about the descriptive profile of the unlisted ECE workforce (Aim 1); a second manuscript will share findings about the types of programs and policies that unlisted ECE workers want (Aim 2); and a third manuscript will share the community-led approach to policy development and participants' feedback on the experience. I will seek to present findings at national conferences such as the Society for Research and Child Development and Association of Public Policy and Management.

### Community Dissemination

I will develop and disseminate materials for two specific audiences – the community members (i.e., a lay audience) and program and policy administrators (i.e., a technical audience). The proposed budget includes funds to work with a communication specialist to support wide dissemination.

My final community dissemination plan will be informed by participants; however, I currently plan to work with EHAC, and other community-based partners to share a summary of findings through their listserv, which will include NYC and Boston community members, program leaders, and local politicians. I will also work with the NYAM Communications team to develop a 300 to 400 word op-ed piece and seek their support in placing the work in newspaper outlets in NYC and Boston, the cities where the study will be conducted.

### Program and Policy Dissemination

**Commented [AK6]:** PI includes the current context as an example of practical relevance of the work

**Commented [AK7]:** The PI explains how the work will be disseminated in a very clear and thought-out way

## Research Project Basis and Research Questions and Policy-Practice Relevance Example

I will work to identify Family Child Care Networks and distribute one-pagers with the full articles linked. I will use my affiliation with Child Trends, a leader in ECE research, to share a blog post through their website and link to the articles. I will seek to attend the ACF National Research Conference on Early Childhood to share findings with a policy audience. Local dissemination will include sharing findings with administrators of the NYC Informal Family Child Care Project and other similar organizations that support unlisted home-based workers.

Research Project Basis and Research Questions, Current State of Knowledge, and Policy-Practice Relevance Example

**Vanessa Rodriguez, Ph.D.**  
New York University School of Medicine  
**Research Project Basis and Research Questions, Current State of Knowledge, and Policy-Practice Relevance Example**

**Project Overview:**

The proposed research study is a mixed-methods design looking at social emotional learning (SEL) in preschool classrooms, focusing on the early care and education (ECE) teachers themselves as well as on their instructional practice. In the proposed study, 500 preschool teachers from 81 high-need, NYC public school districts within the Family Children and Teachers Thriving Together (FCTTT) study will be surveyed. Interviews will be completed with a subset of 60 of these teachers. The study will also utilize secondary data from the larger FCTTT study, including teacher self-report, observational, implementation fidelity, and administrative data.

**Research Project Basis and Research Questions**

*Describe the theoretical or empirical foundation(s), the specific research question(s), and the working hypothesis(es) which underlie the proposed work. This question may require a more in-depth response than in the LOI. In this instance, it is recommended that you build from your previous LOI response.*

*Please note there is an opportunity to upload the bibliographic citations for the application in Section VII. Data Analysis Approach.*

The ECE workforce is at the forefront of strengthening school readiness which is a critical strategy for reducing income and racial disparities in academic and life success (Blair & Raver, 2015; Pianta, Hamre, & Stuhlman, 2003). Substantial evidence indicates that the nature and quality of classroom interactions between teachers and young students predict a range of important child outcomes (Pianta, Barnett, Burchinal, & Thornburg, 2009) such as growth in academic achievement from Pre-K through Kindergarten (Mashburn et al., 2008), self-regulation (Raver et al., 2011) and social-emotional skills (Pianta, Mashburn, Downer, Hamre, & Justice, 2008).

SEL enables children to understand and manage their emotions, build healthy relationships, set positive goals, and make responsible decisions (CASEL, 2019). Numerous PD programs and classroom-based curricula have been shown to strengthen positive teacher-student interactions and teacher practice for promoting student SEL. Yet, little is known about how PD programs may support the teacher practices and interactions necessary for promoting student SEL or implementation of SEL interventions (Domitrovich et al., 2016).

**Commented [A1]:** The proposed research is well supported by the literature reviewed and the research questions are well stated. There is some rationale for each of the three hypotheses.

The study focuses on understanding teacher SEL, understanding in various ways its relationship to student SEL, and evaluating differential impacts of an underlying RCT.

## Research Project Basis and Research Questions, Current State of Knowledge, and Policy-Practice Relevance Example

According to the PCM (Jennings & Greenberg, 2009), teachers' SEC and well-being are hypothesized to influence a teacher's ability to develop healthy teacher-student relationships, effectively manage classrooms, and implement student SEL interventions. Together these capabilities create a healthy classroom climate which ultimately impact student SEL and academic outcomes. Teacher SEC and well-being is particularly important for those who work with young children as they learn SEL primarily through observing adult models, rather than curricular content (Jennings & Frank, 2015). Further, when teachers lack adequate SEC to perform their roles, they experience high levels of stress which also has negative impacts on their students (Oberle, & Schonert-Reichl, 2016).

SEL interventions have demonstrated benefits on student SEL and indirectly on teacher SEC and well-being, particularly when the teacher is implementing an SEL intervention for students (Domitrovich et al., 2016). However, to our knowledge no studies have examined SEL in ECE teachers (as opposed to a teacher's competency in understanding student SEL domains e.g. SEC) in the context of implementing a student SEL curriculum. Such information is necessary to understand, inform and improve implementation of PD for teachers and student SEL interventions implemented by ECE teachers (particularly with YSP priority populations).

The FCTTT studies use the Stage-Based Framework for Implementation of Early Childhood Programs and Systems (Metz et al., 2015) to guide its efforts in systematically using data and feedback loops to drive decision-making and promote continuous improvement for PD implementation. The CEHD-DOE partnership is grounded in implementation frameworks drawing on the science of improvement, an emerging approach to improve mental health and education (e.g., Bryk, Gomez, Grunow, & LeMahieu, 2015). The process serves as a guide for how the insights from the proposed YSP study can be rapidly incorporated into improving implementation of ECE PD programs.

The proposed study aims to characterize Pre-K teacher SEL; examine relationships between Pre-K teacher SEL and classroom observations and implementation of a student SEL intervention; and evaluate the differential impact on Pre-K teacher SEL of 3 randomly assigned PD interventions. To achieve this, the YSP study will take advantage one FCTTT study, a hybrid implementation-effectiveness RCT examining the impact of PD and related resources on teachers/classrooms. The study is conducted in 81 high-poverty district schools with Pre-K programs and ~500 Pre-K teachers teaching >4500 children annually. Schools were randomized (in 2017) to one of three interventions: 1) Thrive PD-7 days focused on supporting student SEL through self-reflection and experiential activities that have the potential of building teachers SEL capacity; 2) Thrive+PC- the Thrive PD plus a one-day group training and 14 one-on-one coaching sessions to support implementation of ParentCorps, a 14-session student SEL classroom intervention; and 3)

**Commented [A2]:** PI provides strong rationale for the research and how it is relevant to the Foundation's goal of strengthening the ECE workforce.

PI grounds the research in PCM framework.

## Research Project Basis and Research Questions, Current State of Knowledge, and Policy-Practice Relevance Example

Inspire PD- 7 days focused on supporting classroom management and instruction. FCTTT uses classroom environment data (CLASS, A-TSRS) already collected at scale by the NYCDOE as part of standard practice and quality monitoring.

Based on the PCM (Jennings & Greenberg, 2009), the YSP study utilizes a mixed methods, explanatory sequential design (Creswell & Guetterman, 2019) informed by the Stage-Based Framework for Implementation of Early Childhood Programs and Systems (Metz et al., 2015). It includes quantitative and qualitative assessments of teacher SEL (2019/20 school year), after 2 years of PD implementation and in parallel with the second year of a teacher implemented student SEL intervention.

### The study has the following Aims and Hypotheses:

Aim 1: To characterize SEL among Pre-K teachers (lead, assistant, paraprofessional, teacher's aide) through self-reports (N = 250, based on a 50% consent rate from the 500 available teachers) and cognitive interviews (N= 60). Quantitative direct measures of teacher SEL do not currently exist. However, teacher SEC and well-being, a complementary construct, will be indirectly measured through self-report in the following domains: mindfulness in teaching, teacher efficacy, comfort teaching diverse students, emotion regulation, perceived stress, sleep quality and burnout. These measures have been examined in several previous studies of teacher SEC and well-being and found to be sensitive to intervention effects (Jennings, et al., 2017; Jennings et al., 2019). We will also assess teacher demographics with a newly tested series of questions specifically designed to be culturally and linguistically sensitive for supporting ECE teachers in describing themselves. Cognitive interviews (Rodriguez & Mascio, 2018) designed to examine teacher awareness (awareness of: self-as-a-teacher, teaching process, learner, interaction, and context) allow for further exploration of the putative domains of teacher SEL beyond teacher SEC and well-being; affording an in-depth investigation into how these ECE teachers think about their own process of teaching and how that varies amongst them. Teachers will be strategically selected for cognitive interviews to ensure representation of FCTTT's 3 PD tracks as well as across racial/ethnic groups and years of teaching experience.

We hypothesize that by combining ECE teachers' self-reported SEC and well-being along with their qualitatively described teaching awarenesses we will be able to characterize their overarching teacher SEL.

Aim 2: To examine the relationship between Pre-K teacher self-reported SEC, well-being, and teaching awareness with directly observed classroom practices (CLASS) and teacher-student interactions (A-TSRS) in 125-250 classrooms. We will also examine associations between Pre-K teacher SEC, well-being and teaching awareness with implementation

**Commented [A3]:** Using a mixed methods, explanatory sequential design, this study addresses important gaps in this research area using the aims listed here.

PI explicitly ties the research to the Foundation's priority populations.

Research Project Basis and Research Questions, Current State of Knowledge, and Policy-Practice Relevance Example

quality of the student SEL intervention among teachers in the 20 schools (60 classrooms) randomly assigned to Thrive+PC track.

We hypothesize that teachers with higher scores on SEC and well-being domains will be observed to use more practices in support of student SEL and self-regulation and will have more positive teacher-student interactions. Although we will examine relations by PD condition, we do not make any specific hypotheses about differences in strength of relations. Within the Thrive+PC track, we hypothesize that teachers with higher scores on SEC and well-being domains will implement the student SEL intervention with greater fidelity. We further hypothesize that the qualitative examination of teacher awareness will corroborate observed relationships between teacher SEC and well-being with classroom practices, teacher-student interactions and implementation fidelity. We also hypothesize that the cognitive interviews may elicit new potential domains of teacher SEL that are not currently assessed by the established indirect measures of teacher SEC and well-being.

Aim 3: To evaluate differential impact on Pre-K teacher SEL (250 teachers from 81 schools) from 3 randomly assigned (at the school level) PD interventions.

After 2 years of PD, we hypothesize that teacher SEL (a combination of SEC, well-being and teaching awarenesses) will be greatest among teachers in the Thrive+PC condition, followed by teachers in the Thrive condition, followed by teachers in the Inspire condition. Given the nature of self-reflection in Thrive PD, teachers who participated in the 7-session experiential PD are expected to strengthen teacher SEL especially in domains of mindfulness, and comfort teaching diverse students. Teachers in Thrive+PC (who receive student SEL intervention training and one-on-one coaching in implementation) are expected to have higher levels of SEL, especially in domains of teaching efficacy, and emotion regulation.

In summary, the YSP study takes advantage of an existing FCTTT study in 81 schools labeled as high-poverty with Pre-K programs, to advance our understanding of teacher SEL, PD and SEL intervention implementation. This study has great potential to answer critical policy and practice questions faced by school districts and ECE systems throughout the country because it will take place in the context of an existing successful research-practice partnership guided by education and implementation science.

**Current State of Knowledge and Significant of the Present Study**

*Please discuss the significance of the proposed project, how it relates to the current state of research knowledge and specifically how it contributes to the research field.*

**Commented [A4]:** The current research is well grounded in relevant theory about teacher SEL and cognition.

The study aims to make a significant contribution to the field of EC education and social emotional development and learning.

The applicant proposes to combine qualitative and quantitative data analysis to create classifications of teacher SEL. This is a unique contribution to the field.

## Research Project Basis and Research Questions, Current State of Knowledge, and Policy-Practice Relevance Example

The proposed study will produce findings that are ultimately relevant for supporting the mental health and development of children of color from historically disinvested neighborhoods. It focuses on understanding the SEL of Pre-K teachers who are responsible for supporting student SEL in schools. This project uses mixed methods to refine our understanding of the salient factors that comprise the SEL of racially and culturally diverse Pre-K teachers from schools labeled as high-poverty. The YSP project will consider how teacher's own SEL relates to teacher-student interactions, practices in support of promoting student SEL and implementation of a student SEL intervention. Finally, it will consider the impact of 3 PD tracks, implemented by CEHD-DOE, on Pre-K teacher SEL. The study will take place with ~250 teachers in 81 district schools. Lessons learned from this project will be relevant to developing and improving PD for ECE teachers supporting minoritized children living in poverty.

**Commented [A5]:** The PI explains how the study will be beneficial for the Foundation's priority populations.

### ECE Teachers in Context.

Much of the current state of knowledge regarding ECE teachers who support children living in poverty and relevant PD, is in the context of Head Start (Head Start CARES Project, 2019). Much less is known about Pre-K teachers teaching in minoritized and underserved public schools. This project will contribute to the research field by studying teachers and teaching practices across >80 public schools supporting >4,000 Pre-K students annually.

### Pre-K Teacher SEL.

Regardless of setting, there is limited knowledge about Pre-K teacher's own SEL. According to the PCM (Jennings & Greenberg, 2009), teacher's SEC and well-being influences their ability to create a healthy classroom climate: a key factor in supporting student SEL and academic outcomes (Jennings & Frank, 2015; Pianta et al., 2008). The model posits that teacher's SEC and well-being influences teacher-student relationships, effective classroom management and SEL implementation. This combines to create healthy classroom environments. The PCM uses the broadly accepted definition of student SEL developed by the Collaborative for Academic, Social, and Emotional Learning (CASEL, 2019). This definition comprises 5 domains by which to achieve competency: self and social awareness, responsible decision-making, self-management, and relationship management (Zins, Weissberg, Wang, & Walberg, 2004). It is important to note that the definition and measurement of Teacher SEC (as described in the PCM) is based on studies of Student SEL (as described by CASEL). Teacher SEC is derived from those competencies required to understand and support student SEL. This restrains our ability to improve practice and outcomes for children by narrowing our understanding of a teacher's own SEL.

The YSP project takes a unique approach to understanding teacher SEL; rather than exclusively characterizing teacher's competencies to support student's SEL, the study uses mixed methods to extend our understanding of a teacher's own social emotional cognition and the SEL domains that constitute that skill development. In my dissertation,

**Commented [A6]:** The study focuses on differences across teachers to be able to implement student SEL curriculum. It is making no assumptions about teachers.



Research Project Basis and Research Questions, Current State of Knowledge, and Policy-Practice Relevance Example

I used cognitive interviews with expert teachers to explore teachers' awareness of their teaching process. The Five Awarenesses of Teaching framework emerged from the data (Rodriguez, 2016; Rodriguez & Solis, 2013). Subsequent research observed a potential linkage and extension of the PCM to include this framework as an approach to explore teacher SEC and well-being utilizing a developmental lens to examine teachers as learners. In this study, 18 ECE teachers from 9 programs participated in cognitive interviews coded with the Five Awarenesses of Teaching framework. The study identified teachers' awareness of 1) Self-as-a-Teacher, 2) Teaching Process, 3) Learner, 4) Interaction, and 5) Context. Results supported the ability of the framework to capture ECE teacher cognition in relation to their SEC and well-being as well as highlighting tensions between teacher's robust awareness of student SEL but active suppression of their own SEL and well-being (Rodriguez et al., 2019).

This project will contribute to the field by expanding the consideration of teacher SEL beyond the specific competencies developed based on what is known about student SEL. By employing validated survey measures of SEC and well-being articulated by the PCM AND cognitive interviews coded according to the Five Awarenesses of Teaching framework, this project will expand our understanding of teacher SEL which will be relevant to all ECE teachers and specifically to Pre-K teachers supporting children living in poverty.

Classroom Quality.

It is essential that ECE teachers be prepared to consistently provide high quality education through positive teacher-student interactions. Regulatory and emotional aspects of teachers' interactions with children are strongly linked to how children learn (Hamre & Pianta, 2005; Mashburn et al., 2008) and positive teacher-student interactions can mitigate factors that put children at risk of poor school performance (Rimm-Kaufman, La Paro, Downer, & Pianta, 2005). High-quality ECE programming can attenuate the relation between poverty and school readiness skills (McCartney, Dearing, Taylor, & Bub, 2007). The CLASS is an observational measure of classrooms that includes three domains intended to capture positive teacher-student interactions and classroom climate: emotional support, classroom organization, and instructional support. Although CLASS has advanced research on classroom quality and student outcomes, some argue that it has been misused to indicate teacher quality and drive PD. As part of FCTTT, the DOE conducted CLASS 3 times and A-TSRS (a measure of teacher practice developed in Head Start Cares; Abenavoli et al., 2019) 2 times over a 3 year period. Importantly, the A-TSRS includes a unique subscale that assesses teacher practices that promote student SEL.

Professional Development for Pre-K Teachers supporting minoritized students living in poverty.

The provision of high quality ECE is emotionally demanding (Keller, Chang, Becker, Goetz, & Frenzel, 2014). These demands have increased substantially as local, state and federal mandates have increased programming hours for

## Research Project Basis and Research Questions, Current State of Knowledge, and Policy-Practice Relevance Example

young children (“extended duration”, Consolidated Appropriations Act of 2016, Pub.L. 114-113); high stress, burnout and turnover are higher among ECE teachers relative to teachers of older children (Faulkner, Gerstenblatt, Lee, Vallejo, & Travis, 2016; Whitaker, Dearth-Wesley, & Gooze, 2015), and these problems are further compounded in historically disinvested neighborhoods (Allensworth, Ponisciak, & Mazzeo, 2009; Ingersoll, 2001; Provasnik & Dorfman, 2005). Poor emotion management and stress contribute to teacher attrition (Darling-Hammond, 2001; Montgomery & Rupp, 2005) and there is growing recognition on the accumulation of teacher stress and turnover on student well-being (Oberle & Schonert-Reichl, 2016; Milkie & Warner, 2011) and educational quality (Travers, 2001). Taken together, these findings underscore the critical importance of providing supportive environments for ECE teachers and opportunities for teachers to build their own SEL skills to support them in managing the stressors associated with teaching young children.

Unfortunately, PD approaches typically focus on relaying information about child development and practice-based strategies for supporting development – that is, increasing knowledge – with little attention to the changes in skills and dispositions required to make and sustain change in teachers’ provision of high quality, emotionally-supportive classrooms. The National Center for Research on Early Childhood Education suggests that this practice is not effective at changing teacher behavior. PD aimed at changing classroom behavior must focus on changes in skills and dispositions, such as self-awareness skills, in addition to knowledge (Ambrose, Bridges, DiPietro, Lovett, & Norman, 2010). Teachers describe the need for PD to address their own social-emotional health (Shernoff, Mehta, Atkins, Torf, & Spencer, 2011). Moreover, focusing on their emotional responses to their work is associated with greater student engagement, more so than simply learning to manage classroom problems (Parker, Martin, Colmar, & Liem, 2012). Given the high social emotional demands of teaching, particularly in supporting students from underserved communities, it is unfortunate that most PD experiences do not provide opportunities for teachers to self-reflect and develop their own SEL skills, even though this is likely necessary for positive teacher-student interactions (Sutton & Wheatley, 2003).

In summary, little is known about how ECE teachers’ SEL supports student SEL and academic outcomes. This project takes advantage of a large ongoing RCT of 3 PD conditions carried out in partnership with the largest school district in the country. By infusing cognitive interviews into the protocol, leveraging my unique perspective as a teacher of color, and considering teacher SEL through my Five Awarenesses Framework, this project will advance science in numerous areas. Importantly, as articulated in the Stage Based Frameworks for Implementation of ECE programs (Metz et al., 2015), this study will provide a more complete understanding the teacher’s role in implementing a student SEL intervention. Such information is necessary for future improvement efforts. The DOE and the developers of ParentCorps will look to the findings and learnings from this project to improve PD and program implementation.

Commented [A7]: PI provides a summary of the relevant literature and the directions for further research.

Research Project Basis and Research Questions, Current State of Knowledge, and Policy-Practice Relevance Example

**Policy-Practice Relevance**

*The research must have clear connections to policy and/or practice that have the potential to bring about positive change for the ECE workforce and YSP's priority populations in the implementation of a program and/or policy at the federal, state, local, and/or organizational/institutional level. Please describe how the proposed research could be used by the appropriate decision-makers in the course of their work. Also, briefly describe how results/recommendations could be communicated beyond scholarly outlets.*

The proposed work has numerous clear and direct connections to both policy and practice that have the potential to bring about positive change for practicing ECE teachers and racially and culturally diverse children enrolled in Head Start and Pre-K programs. This work may also have implications for teacher preparation programs.

This mixed methods project includes the voices of hundreds of Pre-K teachers from >80 Pre-K programs in historically disinvested communities teaching thousands of racially and culturally diverse children living in poverty. The specific aims are informed by regular conversations and questions posed by leadership of the NYCDOE's Division of Early Childhood Education (DECE). The DECE is responsible for >1800 Pre-K programs supporting ~70,000 four year olds annually.

CEHD is a contracted vendor to provide PD services to Pre-K teachers and part of this contract led by Dr. Brotman includes evidence-based consultation to DECE about policy and practice decisions. Together, CEHD and DECE are partnering on the 3 RCTs to "help make Pre-K as strong as possible". Therefore, as a co-investigator on these studies and principal investigator on the proposed study, I am already part of several well-established mechanisms that will ensure that this work is policy and practice relevant. The conversations with DECE will also help me to consider the policy and practice connections for Head Start programs and school-district run Pre-K programs nation-wide.

Findings from this study will inform content and best practices for PD to support healthy child development, and for strategies to support teachers with a range of SEL skills to implement student SEL interventions with fidelity. DECE is especially interested in understanding the differential impact on teacher SEL of 3 different PD tracks (varying in approach and content) that they have invested in disseminating broadly. As part of the partnership work with the DOE the investigative team prepares regular reports with policy and practice implications for DECE and City Hall. I plan to develop a series of policy and practice briefs that will be modeled on these reports that can be disseminated broadly.

Findings from these studies will have clear connections to improvements of the CEHD-DOE developed Thrive PD (focused on student SEL) and Training and Coaching for Pre-K teachers implementing the ParentCorps SEL classroom

**Commented [A8]:** PI describes how the proposed YSP research will contribute to an understanding of mental health and education policies/practices relevant for early care and education (ECE) teachers and students from low resourced neighborhoods. PI explicitly relates policy implications to YSP priority populations.

**Commented [A9]:** PI describes plans for dissemination of findings.

## Research Project Basis and Research Questions, Current State of Knowledge, and Policy-Practice Relevance Example

intervention. CEHD-PC leadership, under the direction of my primary mentor Dr. Brotman, plan to incorporate findings from this work as they continue to scale PD and ParentCorps in NYC and cities across the country (currently in Detroit Head Starts and Corpus Christi Independent School District). The process for making improvements to PD and programming will serve as a model for other PD and program developers. We will collaborate on disseminating this information through scholarship and in practice and educational outlets.

The YSP study aims are particularly relevant for teacher preparation. A more holistic understanding of teacher SEL helps make explicit and transparent to those entering teacher preparation, what skills and aptitudes are central to the profession. Teacher preparation curricula can be used to revise coursework to include a focus on teacher SEL development – analogous to existing courses on learner’s development. Teacher SEL assessments may also be used by leaders of educational practice and training to evaluate gaps in teacher SEL and tailor curricular or practice experiences to enhance their development. For example, in recent conversations with Teach for America, they expressed enthusiasm for this proposal as a way to evolve their training of instructional coaches for in-service and pre-service teachers to better account for teacher SEL development and attend to the cultural and racial identity of their workforce.

In addition to the venues for dissemination and communication described above, I will plan to speak at various ECE relevant conferences (SRCD, AERA, Education First’s SEL in Action, National HeadStart Expo) and make myself available to speaking with policy makers (Dr. Brotman is an Ascend fellow at the Aspen Institute which affords me access to an influential leadership group).

The Five Awarenesses of Teaching framework and related theories have been presented at practitioner oriented symposia such as the widely attended Learning and the Brain symposium series which I recently co-chaired and was a featured keynote. I have also worked with the event organizers to establish a standing workshop on race and equity in teaching practice. These forums are a natural outlet for the study results and have the potential to influence large groups of teachers and decision makers with respect to the intersection of teacher SEL and equity. The teacher awareness concept has also been incorporated into teacher training at innovative educational organizations such as the Momentous Institute and the Peter Clark Center for Mind, Brain and Education, creating another powerful outlet for sharing the data and insights from the proposed YSP research. The Momentous institute alone supports ~5500 predominately Latinx families and children living in poverty annually through their therapeutic services program. Their mental health and instructional coaches support ~10,000 teachers across 20 states in outreach training. It also hosts an influential practice based conference with >1,000 attendees each year. This creates another powerful channel to translate my findings into action among the YSP’s priority populations.

Commented [A10]: PI ties study aims to policy/ practice relevance.

## Research Project Basis and Research Questions, Current State of Knowledge, and Policy-Practice Relevance Example

In summary, the collaboration with DOE-CEHDs established distribution channels for policy briefs, the access to influence widely used evidence-based PD programs, plans to present the study results to academic, policy and practice-based audiences, and the inherent linkage with the Five Awarenesses of Teaching framework, provide a robust platform to use the study findings to influence ECE workforce decision makers.

**Commented [A11]:** In addition to local impact, the findings can also be applied to develop PD for EC teachers in other contexts.

Research Project Basis and Research Questions, Policy-Practice Relevance, and Data Analysis Example

**Bonnie Solomon, Ph.D.**  
Child Trends, Incorporated

**Research Project Basis and Research Questions, Policy-Practice Relevance, and Data Analysis Example**

**Project Overview:**

This primary research, mixed methods implementation study examines the extent to which, and how, the state of Maryland and its districts have supported early educators to improve their discipline practices in compliance with a new mandate banning suspension and/or expulsion as a discipline method in early care and education (ECE) community-based center, public school, and family child care settings. Using interviews as a primary data source and administrative data on disciplinary removals for secondary data analysis, this study will examine the perspectives and experiences of related individuals in the implementation of the policy, as well as develop a pre/post perspective after the ban was enacted.

**Research Project Basis and Research Questions**

*Describe the theoretical or empirical foundation(s), the specific research question(s), and the working hypothesis(es) which underlie the proposed work. This question may require a more in-depth response than in the LOI. In this instance, it is recommended that you build from your previous LOI response.*

*Please note there is an opportunity to upload the bibliographic citations for the application in Section VII. Data Analysis Approach.*

I will apply an ecological systems perspective (Bronfenbrenner, 1992) to examine the implementation of Maryland's ban on suspension and expulsion in ECE, by exploring individual, program, district, and state influences on, and supports for, ECE educators' transition to alternatives to exclusion.

The proposed study is also guided by the model of Active Implementation Drivers developed by the National Implementation Research Network (Fixsen et al., 2015). This framework conceptualizes successful implementation as changes in practice and recognizes that changes do not automatically follow the rollout of new innovations. The framework identifies three overarching drivers of successful implementation, discussed below, and additionally recognizes that organizations (e.g., ECE programs) operate within broader systems (e.g., state and district contexts) that must actively support implementation to achieve changes in practice.

**Commented [A1]:** The proposal is centered around an understudied topic that is both interesting and valuable.

This is a largely a theoretical project that is well designed to look at several dimensions of the implementation of a new behavior management policy. The multiple perspectives and multiple methods help to strengthen the study.

The proposed study aligns with FCD's workforce goals and focus on implementation research.

**Commented [A2]:** The study has a very well-defined purpose---to study the implementation of a MD state bill SB651.

**Commented [A3]:** PI describes a theory of successful implementation.

## Research Project Basis and Research Questions, Policy-Practice Relevance, and Data Analysis Example

(1) Competency Drivers reflect how new practices are taught and learned. In the proposed study, I will explore the extent to which, and how, state, district, and program supports address educator competence with respect to alternative discipline practices. For instance, I will ask ECE educators about the types of training, coaching, and other supports they have received to help them implement alternatives to exclusion. I will also ask about their confidence in implementing such alternatives, as challenging child behavior is a key reason cited for suspending or expelling young children (Irvin-Vitela, 2010). Additionally, because research points to implicit bias as a cause of discipline disparities in ECE (Downer et al., 2016; Gilliam et al., 2016), I will examine how educators perceive child behavior and discipline disparities, as well as steps programs have taken to reduce implicit bias, such as training staff on cultural awareness.

(2) Organization Drivers include robust data systems and other organization structures and practices that support decision-making. In the proposed study, I will examine how ECE programs have addressed contextual factors known to influence the use of exclusionary discipline, such as access to behavioral health supports for children. Limited access to mental health consultants has been found to be associated with higher rates of expulsion in ECE (Gilliam & Shabar, 2006), suggesting that children who are suspended or expelled may be those most in need of intervention (U.S. Department of Health and Human Services & U.S. Department of Education, 2014). I will also examine efforts to establish new program discipline policies and/or processes, including data systems. Access to smaller class sizes and professional development opportunities, and the existence of formalized discipline policies and processes, are among the contextual factors that may influence the use of exclusionary discipline (Gilliam & Shabar, 2006; U.S. Department of Health and Human Services & U.S. Department of Education, 2014).

(3) Leadership Drivers are often conceptualized as leaders who can navigate resistance, are engaged, and can readily identify and resolve problems that arise during implementation. In the proposed study, I will examine ECE program leadership attitudes toward discipline and the discipline-related expectations that have been communicated to ECE educators, either directly or indirectly. I will also examine other aspects of program leadership that ECE educators perceive to have facilitated or hindered shifts in discipline practice. School leadership attitudes toward exclusionary discipline have been found to predict the use of suspension and expulsion (Skiba et al., 2014).

My research questions, below, are designed to examine the extent to which competency, organization, and leadership drivers are present to support ECE educators to change discipline practice across a range of Maryland ECE settings consistent with SB 651.

(1) To what extent, and how, have state and district officials supported ECE programs and educators to reduce reliance on exclusionary discipline?

**Commented [A4]:** The PI lists a broad array of research questions.

The set of questions is comprehensive and attempts to capture policies or plans, and how they are interpreted in programs and classrooms.

The PI lists appropriate hypothesis in coordination with each research question.

## Research Project Basis and Research Questions, Policy-Practice Relevance, and Data Analysis Example

Based on a review of publicly available guidance issued by MSDE, I expect that the state has largely left implementation in the hands of districts and thus ECE program/educator supports may vary by district. For instance, I expect that some districts may have revised their policies and procedures to align with state law and/or begun providing training to ECE educators on alternatives to exclusion; however, I expect that other districts may still be preparing to implement the ban. This hypothesis is based on the stages of implementation outlined by Fixsen and colleagues (2005), which suggest that it often takes four years or longer to reach full implementation of an innovation.

(2) How do state and district supports vary by type of ECE setting and/or baseline district discipline prevalence?

I expect greater investment of state resources in communication and supports targeting districts with higher levels of baseline discipline prevalence. I also expect greater investment of state and district resources targeting public ECE settings, given more robust data systems that enable the state and its districts to monitor discipline practice in public settings.

(3) What approaches have ECE programs used to support changes in discipline practice that are aligned with the ban?

I expect variation with respect to the steps ECE programs have taken to support changes in discipline practice. In districts that have revised their student code of conduct, clearly communicated the requirements of SB 651 to ECE programs, and provided more high quality supports to ECE programs and/or educators (i.e., have made the ban a district priority), I expect more programs may have taken initial steps to shift discipline practice (e.g., by establishing new policies, providing access to additional behavioral health supports for children, and/or training staff on alternative approaches). The ecological systems perspective and model of Active Implementation Drivers both point to the influence of district context on implementation at the program level.

(4) How do the approaches used by ECE programs vary by type of setting?

I expect that public ECE settings may have taken more steps towards shifting discipline practice compared to other settings – again due to more robust data systems that enable the state and its districts to monitor discipline practice in public settings.

(5) How do ECE educators understand the requirements of the new law?

I expect that ECE educator awareness and understanding of the requirements of SB 651 will vary by program and by district, depending on efforts undertaken to raise awareness among ECE educators. The ecological systems perspective and model of Active Implementation Drivers both point to the influence of program leadership and district context on implementation at the educator level.



Research Project Basis and Research Questions, Policy-Practice Relevance, and Data Analysis Example

(6) How do ECE educators perceive the supports they have received, and how do they perceive that SB 651 has affected discipline processes and practices within their program?

I expect that ECE educator satisfaction with the supports they have received, confidence for implementing alternatives to exclusion, and perceptions of program changes in discipline practice will vary by program and district implementation efforts—particularly efforts focused on competency and organization drivers. For instance, I expect higher levels of satisfaction and confidence, and more movement away from exclusionary discipline, in districts that have provided: professional development for ECE administrators, educators, and staff; district-wide resource guides and/or clearly written plans of action to address challenging child behavior; and community mental health consultants. The ecological systems perspective and model of Active Implementation Drivers both point to the influence of district context and program leadership on implementation at the educator level.

(7) What are ECE educators' perspectives on discipline and child behavior?

I expect that ECE educator perspectives on discipline and child behavior will vary widely, in part depending on district and program efforts undertaken to raise awareness about these issues. The ecological systems perspective and model of Active Implementation Drivers both point to the influence of program leadership and district context on implementation at the educator level.

(8) How do ECE educator knowledge of the ban, perceptions of support, and perspectives on discipline and child behavior vary by type of ECE setting?

I expect greater awareness and understanding, more favorable perceptions of supports, and less favorable attitudes toward exclusionary discipline in public ECE settings. This is based on my hypothesis for RQ #2—that the state and its districts may have invested more resources in communication and supports targeting public ECE settings compared to other settings, given more robust data systems that enable the state and its districts to monitor discipline practice in public settings.

(9) What trends can be identified in disciplinary removals over time, from before to after the enactment of SB 651?

Based on my hypothesis for RQ #1—that some districts may still be preparing to implement the ban—I expect that trends in disciplinary removals may differ by district. I expect sharper declines in disciplinary removals in districts that have made the ban a district priority and have invested in supports that target competency and organization drivers.

**Current State of Knowledge and Significance of the Proposed Study**

*Please discuss the significance of the proposed project, how it relates to the current state of research knowledge and specifically how it contributes to the research field.*

## Research Project Basis and Research Questions, Policy-Practice Relevance, and Data Analysis Example

### Significance:

Suspensions and expulsions negatively affect children's development (Gregory et al., 2010) and are especially harmful to students of color given reduced opportunities for instruction and for developing skills needed for school success (Reyes et al., 2013). There is evidence to suggest that children who are suspended or expelled early in their education may be more likely to be suspended or expelled later (Raffaele Mendez, 2003). Consequences for families may include missed work time or even job loss for parents and added family stress (U.S. Department of Health and Human Services & U.S. Department of Education, 2014; Van Egeren et al., 2011), as well as negative effects on parents' attitudes toward school and/or their child (Meek & Gilliam, 2016). Furthermore, exclusionary practices may undermine opportunities to identify and intervene with undiagnosed disabilities or mental health issues (U.S. Department of Health and Human Services & U.S. Department of Education, 2014).

Meanwhile, lifetime suspension rates are 48% for black children, 23% for Latinx children, and 21% for white children (Musu-Gillette et al., 2016), and these disparities emerge as early as preschool (Gibson et al, 2014; Gilliam et al., 2016). In 2005, research at Yale (Gilliam & Shabar, 2006) revealed that preschoolers are expelled at three times the rate of K-12 students.

Federal data, coupled with research showing disparities in suspensions and expulsions based on race and gender, has prompted policymakers to reexamine discipline policy and practice in both ECE and K-12 settings. Lawmakers have responded with legislation to restrict suspension and expulsion and encourage alternative discipline strategies (Rafa, 2019). However, limited research has been conducted on preschool suspension and expulsion, specifically around how new state discipline policies have been implemented in the early childhood space and how ECE educators are supported to shift discipline practices following policy change and implementation.

### Research Exploring State Discipline Policy Implementation:

There are few emerging studies examining the promise of policy change to shift discipline practices. Further, current research in this area has largely excluded any examination of how discipline policy changes are implemented in ECE settings and the implications for practice.

One exploratory study examined K-8 disciplinary practices in Philadelphia, which shifted its code of student conduct to mandate less punitive consequences (e.g., parent contacts, detention) for certain offenses in place of suspension (Gray

**Commented [A5]:** PI provides detailed information on the significant of this field of study.

**Commented [A6]:** PI provides contextual information regarding why conducting a study on this topic is important.

**Commented [A7]:** PI summarizes relevant literature.

## Research Project Basis and Research Questions, Policy-Practice Relevance, and Data Analysis Example

et al., 2017). While studied schools made an effort to reduce suspensions and expulsions, they reported both organizational and leadership barriers to implementation, including resource limitations (i.e., staffing, space, services) and different teacher and administrator perspectives regarding when suspensions were appropriate. Further, while school administrators reported clear communication from district leaders regarding the need to reduce suspension, administrators interpreted these messages differently—with some schools asserting that suspensions are ineffective, and others asserting that suspensions should only be used when necessary. Authors also found higher rates of suspension in schools that relied heavily on punitive discipline, where teachers believed in efficacy of suspension, and in schools that lacked resources, suffered from low teacher morale, and had inconsistent discipline practices. In a separate Philadelphia study, authors found that most schools, particularly those serving mostly children of color, did not comply with the new discipline policy, and found no changes in suspensions for low-level offenses (Steinberg & Lacoë, 2017).

Beyond these two studies, there are simple data analyses examining trends in discipline practice pre- and post-policy implementation. After Los Angeles Unified School District banned all suspensions for willful defiance, local schools saw a drop in the number of suspensions, from 17,595 to 2,796, in 6 years (Swaak, 2019). As a result of these trends, California enacted a statewide ban on willful defiance suspensions for children in grades K-8, expanding previous restrictions for children in grades K-3 only. While these studies provide the first step to understanding how we can move away from punitive practices, the rigor of these studies is not known.

### Research Exploring Strategies to Shift Discipline Practice:

As lawmakers work to encourage alternatives to exclusionary discipline, the strength of the evidence supporting different practices and frameworks varies. Further, popular strategies in discipline reform—e.g., building students' social and emotional competencies, using restorative practices to build relationships and repair harm, coaching with mental health consultants, and positive behavioral interventions and supports (PBIS)—vary in their attention to the leadership, competency, and organizational drivers that may influence the implementation of new discipline practices.

Research shows that strategies focused on building the competencies of preschool teachers (e.g., social and emotional learning, restorative practices), and providing them greater support in the classroom (e.g., mental health consultation) may improve child behavior and educator response to behavior. In a randomized control trial, researchers tested a social-emotional learning curriculum, paired with in-class support from a mentor teacher, in Head Start classrooms (Domitrovich et al., 2009). Results indicated that teachers who received additional in-class support talked with children more frequently, established a more positive classroom climate, and used more preventive behavior management

Commented [A8]: PI provides another summary of relevant literature.

## Research Project Basis and Research Questions, Policy-Practice Relevance, and Data Analysis Example

strategies. In a separate study, where Head Start teachers received classroom management training, and weekly coaching from mental health consultants, researchers found reductions in both internalizing and externalizing behaviors among low-income children (Raver et al., 2009). The evidence base supporting restorative practices in schools is the most nascent (Passarella, 2017), and research in preschool settings has not been undertaken. However, a preliminary, small-scale study in K-12 settings found reductions in out-of-school suspensions when three schools used circles to develop student empathy and repair harm (Stinchcomb et al., 2006).

PBIS, however, is notable for its attention to organizational drivers, including the use of a public health approach and data-driven decision-making to organize how services and supports are distributed to students. One study of PBIS in preschool settings found improvements in student on-task behavior (Jolstead et al., 2016). Experts have asserted that a combination of the above strategies, along with an explicit emphasis on addressing implicit bias and culturally responsive teaching practice, is necessary to reduce racial disparities in discipline (LaForett & De Marco, 2019). Gilliam et al. (2016) suggested that teacher education and in-service professional development can reduce implicit biases toward young children and reduce the risk for these children to be suspended or expelled. In K-12 settings, researchers have found that strengthening teacher-child relationships can help teachers manage child behavior and shift reliance on exclusionary practices, particularly with black students (Skiba & Losen, 2015). These perspectives align with research suggesting that implicit racial bias may influence preschool teachers' interpretation of their students' behaviors (Gilliam, 2005; Gilliam et al., 2016). Expectations for challenging behaviors seem to escalate with more students of color in the classroom, as a higher proportion of Latinx children in the class predicted an increased likelihood of suspension (Gilliam & Shabar, 2006), suggesting that teachers may be more likely to "see" challenging behaviors among students of color. This research echoes findings in K-12 settings. Mason et al.'s (2014) systematic review showed evidence of K-12 teachers' racial bias on behavior ratings in five of nine studies. Tenenbaum and Ruck (2007) conducted four meta-analyses and found that teachers held more positive expectations, made more positive and fewer negative disciplinary referrals, and used more positive or neutral talk toward white students compared with black or Latinx students, though these effects were small.

### Research Contributions:

The proposed study will make three contributions to expand the field's knowledge about discipline policy shifts and efforts to support programs and educators through the implementation process. First, we will conduct a study that specifically examines discipline policy change in ECE settings, including implementation facilitators and challenges (RQs #1, #3, #5, #6) and trends in disciplinary removals over time, from before to after policy enactment (RQ #9). Second, the study will provide the field with greater knowledge about the readiness of ECE educators to implement new

**Commented [A9]:** PI provides specific research contributions that the proposed study is intended to have, and how they align with each research question (or aim).

Research Project Basis and Research Questions, Policy-Practice Relevance, and Data Analysis Example

policies restricting suspension and expulsion (RQs #5, #7), as we will investigate the range of supportive disciplinary approaches implemented across different program types (RQs #2, #4, #8). Third, our study will expand the field's knowledge with respect to the perspectives of ECE educators on their preparation to manage child behavior without exclusion (RQ #7), and their assessment of the adequacy and quality of the professional development and training they receive to transition to alternatives to exclusion (RQ #6).

**Policy-Practice Relevance**

*The research must have clear connections to policy and/or practice that have the potential to bring about positive change for the ECE workforce and YSP's priority populations in the implementation of a program and/or policy at the federal, state, local, and/or organizational/institutional level. Please describe how the proposed research could be used by the appropriate decision-makers in the course of their work. Also, briefly describe how results/recommendations could be communicated beyond scholarly outlets.*

Policy & Practice Relevance for ECE Stakeholders:

My research questions are designed to support decision-making for three groups of ECE stakeholders: state legislators, state and local education agencies, and ECE professional development providers.

State Legislators. As of 2019, 10 states (plus the District of Columbia) have passed legislation to strictly limit the use of discipline in preschool settings, including Arkansas, California, Colorado, Connecticut, Maryland, New Jersey, Ohio, Oregon, Texas and Virginia (Education Commission of the States, 2018). These legislative initiatives are driven by data and research. However, the range of research cited by legislators is thin—they generally quote simple statistics that illustrate the extent of disciplinary removals within the state and highlight persistent disparities by race and gender. While these data make a case for legislative action, they do not assist fellow legislators to properly weigh the likely benefits and challenges of a particular policy approach. When Colorado initially attempted a legislative ban on ECE suspensions and expulsions in 2017, the effort failed due to concerns raised by rural schools that preferred more flexibility for school administrators (Fish, 2019). By exploring educator perspectives on an ECE ban's influence on discipline processes (RQ #6) and examining how rates of disciplinary removals change post-enactment of an ECE ban (RQ #9), the proposed study can help legislators in the remaining 40 states to better understand the implications of using similar legislation to address their discipline policy goals.

State and Local Education Agencies. I anticipate that the state and districts have strong roles in clarifying the provisions of the ban for program providers and educators and supporting ECE programs to prepare for implementation. I will identify (under RQ #1) the range of strategies the state and districts have used to communicate the new restrictions and

**Commented [A10]:** The perspective to frame this study is strong from the policy side, however, it could build an even stronger case if ethnicity becomes part of the focus.

**Commented [A11]:** PI describes in detail how the research will influence three different groups of stakeholders.

## Research Project Basis and Research Questions, Policy-Practice Relevance, and Data Analysis Example

support implementation and compare these with educator and program administrator perspectives (under RQs #3, #5, #6) of the clarity, adequacy, and quality of state and local communications and supports, the approaches ECE programs have implemented, and the implications of both for shifts in discipline practice. This comparison will provide Maryland and its districts with a better understanding of the extent to which competency, organizational, and leadership drivers of successful implementation have been addressed in state-level, district-level, and program-level activities. Using implementation science as a guiding frame, we will help Maryland and its districts to identify gaps in implementation activity and areas where implementation supports may need retooling to have their desired impact. Heavy attention will be paid to the competency driver—and the range of approaches considered and used to improve educator knowledge, skills, and practice—as well as state and district efforts to improve competency in ways that would reduce discipline disparities by race and income.

ECE Professional Development Providers. While much of this project is designed to provide policymakers and practitioners with useful information about the implementation of state discipline policy, I suspect that the most valuable contribution to policy and practice may come from practitioner perspectives on discipline and child behavior (RQ #7) and the training and preparation they receive to shift practice (RQ #6). With stronger awareness of how practitioners view their responsibility for managing child behavior, the causes of discipline disparities, the collateral consequences of disciplinary exclusion, and their preparation to respond effectively to misbehavior, entities involved in developing and delivering professional development for ECE educators (e.g., state and local education agencies, non-profit and membership organizations, national technical assistance centers) will have rich information with which to consider the range of professional development opportunities available, properly frame the need for changes in practice and competency for educators, and improve the quality and delivery of professional development.

### Communication & Dissemination:

Maryland State Department of Education Briefing. Maryland's officials have repeatedly expressed their support for this research, as it will support their efforts to improve the implementation of the ban. Prior to the release of the final report, I will organize a briefing with the three leaders I have engaged to prepare this proposal: Maryland's Deputy Superintendent for Teaching and Learning, Assistant State Superintendent for Early Childhood, and Assistant State Superintendent of Student Support, Academic Enrichment, and Educational Policy.

Broad Public Communications and Dissemination. We will disseminate the final report through Child Trends' website, social media accounts, and E-News. More than 1.5 million people visited [www.childtrends.org](http://www.childtrends.org) in 2018 to access our research, and our website regularly receives over 100,000 pageviews each week. Our E-News reaches an audience of

**Commented [A12]:** Given how varied state policies are in this area, there might not be immediate broad impact, but the idea of understanding policy/practice dissemination is an important one.

Information on the dissemination of a policy change can be informative and useful beyond just this specific policy.

## Research Project Basis and Research Questions, Policy-Practice Relevance, and Data Analysis Example

nearly 40,000 policymakers, administrators, funders, researchers, and news reporters. We have a large social media following: Facebook (over 8,000 fans) and Twitter (over 24,000 followers). In 2018, with support from our communications team, Child Trends' experts were featured in leading national publications, including the New York Times, the Associated Press, NPR, the Washington Post, the Atlantic, and CNNMoney. Our research is regularly featured in leading trade (including Chalkbeat, the Chronicle of Social Change, and the Hechinger Report) and regional publications (including Atlanta Journal-Constitution, the Philadelphia Inquirer, and the Seattle Times), ensuring that our findings reach the people they directly affect.

Engaging Policymaker and Practitioner Intermediaries. Prior to the release of the final report, I will engage priority intermediaries—including, at a minimum, the National Conference of State Legislatures, and the National Association for the Education of Young Children—to share the findings and enlist their assistance in disseminating the report among their members. Each organization will receive a communications package, including the report, sample social media posts, and listserv blurbs, to support their dissemination.

### **Data Analysis Approach**

*Please describe in detail the specific analytic approaches for the proposed qualitative and/or quantitative data. The analytic plan should align with the research questions, the proposed methodology and measures, and the working hypothesis(es). If appropriate, include a discussion of power analysis results and plans for establishing inter-rater reliability.*

QUALITATIVE ANALYSIS: All focus group and interview data will be transcribed verbatim and the transcripts will be uploaded into Dedoose for analysis. Dedoose is a secure, inexpensive, web-based qualitative data analysis platform that offers a broad range of analytic tools (e.g., including a weighting function for data that has quantitative components) and is highly conducive to team-based coding and analysis. The research team will use a directed approach to content analysis (Hsieh & Shannon, 2005), which involves both deductive (a priori) and inductive (emergent) coding. Specifically, we will create an initial coding scheme based on the research questions. We will then add to and elaborate on this coding scheme based on the content of the interviews and focus groups. For instance, we may add codes related to lack of buy-in or increased classroom disruption, if participants discuss these as key implementation challenges. Similarly, we may add sub-codes related to specific types of alternative practices used by programs, if participants discuss these.

Coding will be approached as an iterative process; the coding team will review the data multiple times, refining the coding scheme until it can be used to categorize all the information contained in the raw data in a way that is both

**Commented [A13]:** Both qualitative and quantitative approaches are described in an accessible way and seem adequate for the data being used.

**Commented [A14]:** Pi describes adequate a priori and emergent coding schemes.

## Research Project Basis and Research Questions, Policy-Practice Relevance, and Data Analysis Example

meaningful and accessible. Throughout this process, we will hold regularly scheduled debriefing meetings to ensure alignment of our understanding of the evolving coding scheme, reconcile any discrepancies, and discuss emerging themes.

The coding team will double-code approximately 25 percent of the interview and focus group transcripts. The first five percent of double-coded transcripts will be used as the basis for initial discussions about similarities and differences in how different coders understand and are applying the codes. Any discrepancies will be reconciled through a process of consensus. Once alignment in understanding is reached, an additional five percent of transcripts will be double-coded to formally assess inter-rater reliability before continuing with independent open coding. Dedoose has built-in features for testing inter-rater reliability. We will seek to establish a strong level of inter-rater reliability—a minimum of 80 percent agreement between coders on at least 90 percent of codes, as recommended by Miles and Huberman (1994). The coding team will engage in a process of codebook revisions (e.g., to clarify definitions, eliminate redundant codes with overlapping definitions) and recoding in order to improve reliability if we do not initially achieve the target level. Once achieved, an additional 15 percent of transcripts will be double-coded at various points in time throughout the coding process, to protect against potential unintentional drift in the manner in which the coding team applies the codes.

Once coding is complete, we will approach analysis following a three-step process. First, we will delve into each code individually, by reviewing the data (i.e., the sections of interview and focus group transcripts) that have been linked to each code and summarizing that information. For instance, we will examine individual codes related to competency, organization, and leadership drivers to summarize what the data tell us about the presence of each to support ECE educators to change discipline practice. Next, we will explore patterns in the data that are central to our research questions—for instance, by examining ECE educator knowledge, perceptions, and perspectives by type of ECE setting, level of district implementation, and program supports. We will also examine program implementation efforts by district, to explore any patterns related to district- and program-level implementation, as well as patterns based on participant role (e.g., the extent to which state officials, district officials, program administrators, and educators perceive the same implementation challenges). Finally, we will examine code co-occurrence frequencies to see which codes have been most frequently applied together, to explore unexpected themes related to implementation and supporting ECE educators to shift school discipline practice.

**QUANTITATIVE ANALYSIS:** We will conduct descriptive, exploratory analyses of publicly-available, statewide, district administrative data to examine trends in disciplinary removals around the implementation of the policy. In Maryland, preschool in-school suspension, out-of-school suspension, and expulsion data are available for all 24 districts annually beginning in 2009-2010. We have already accessed these data for years 2009-2010 through 2017-2018, which reflect



## Research Project Basis and Research Questions, Policy-Practice Relevance, and Data Analysis Example

eight years' worth of data prior to the effective date of the ban and one year following the effective date. By the second year of the proposed study, data will be available for years 2018-2019 and 2019-2020, so we will be able to examine a total of three years' worth of data following the effective date of the ban. To the extent possible, we will examine trends for exclusionary discipline overall as well as for different types of disciplinary removal, in order to gauge potential tradeoffs between discipline types (e.g., using in-school suspension instead of expulsion).

**COMBINED QUALITATIVE-QUANTITATIVE ANALYSIS:** Once all data have been collected and separately analyzed, we will conduct additional exploratory analyses to examine district implementation activities and processes by trends in disciplinary removals. This will allow us to explore whether districts with more supports for implementation seem to have sharper declines in suspension and expulsion. Although we will examine trends in disciplinary removals for all 24 districts statewide, these follow-up analyses will be limited to the nine districts in which we will conduct interviews with district officials.

We will first code the nine districts for trends in preschool suspension and expulsion based on the findings of the quantitative analysis. I propose to use similar categories to those developed by Steinberg and Lacoë (2017) if they adequately reflect the variation across Maryland districts: (1) "comparison" districts, which have no disciplinary removals before or after the policy change; (2) "full compliers," or districts that appear to have eliminated disciplinary removals as required by the policy; (3) "partial compliers," or districts that appear to have reduced—but have not eliminated—disciplinary removals following the policy change; and (4) "non-compliers," or districts that appear to have increased disciplinary removals or in which disciplinary removals appear to remain unchanged. These codes will be entered into Dedoose as district-level "descriptors" and then linked to all district interviews from the respective district. Then we will compare district implementation themes based on this code, similarly to how we will compare themes based on type of ECE setting. Although these analyses will be purely exploratory, they may help shed light on key implementation activities and processes that are needed to effectively support the ECE workforce to shift discipline practice following a change in state discipline policy.

Commented [A15]: PI describes coding scheme in detail.

Methodology and Measurement Procedures, and Data Analysis Approach Example

**Angie Zapata, Ph.D.**  
**The Curators of the University of Missouri**  
**Methodology and Measurement Procedures, and Data Analysis Approach Example**

**Project Summary**

This primary qualitative, research study examines the critical components of a university researcher-early educator collaborative inquiry model designed to improve multimodal literacy instruction for racially, linguistically, and ethnically diverse children in Missouri Kindergarten-3rd grade classrooms. Qualitative data will be collected across 3 years from 10-12 program administrators, teachers, and literacy coaches; teachers participating in the collaborative inquiry model will also serve as in-depth case studies.

**Methodology & Measurement Procedures**

*Describe the qualitative and/or quantitative methodologies and measures. Include a discussion of how they relate to the study questions and how they are developmentally, linguistically and culturally sensitive and appropriate.*

- Where both qualitative and quantitative approaches are proposed, describe the ways in which the combination enhances the proposed study.
- If your proposed study is longitudinal in design, please specify how you will sustain the participation of those involved, including plans for sample attrition.
- If the proposed research involves working with community-based organizations, schools and/or school districts, describe the planned process for gaining permission/access, whether the process has been initiated, and how far it has progressed. A letter of support confirming cooperation from each entity must be uploaded in Section IX. Time Commitment and Effort of the application.

*If applicable, please upload diagrams and/or tables that support the "Methodology and Measurement Procedures" section. If the diagrams and/or tables consist of multiple pages, please convert/save the pages as a single pdf and upload the pdf. Please add your name and request identifier to each page before uploading the required attachment.*

This design-based research (DBR) study is focused on examining the critical components of a collaborative inquiry model that can improve the ongoing professional learning of ECE in order to enhance the schooling experience of RLEL. To meet this objective, the aims of the study are to (1) advance theoretical and practical models of ECE development that serve RLEL; (2) generate policy/practical implications for ECE development through profiles & principles of teacher learning; and (3) extend the current research on MML instruction in the ECE settings. In Year 1 with

**Commented [A1]:** The sample for this study is small, but the in depth data being collected will provide information relevant for ECE professionals throughout the state

The PI shows strong attention to cultural and linguistic issues.

**Commented [A2]:** The collaborative inquiry approach lends itself well to the cultural and linguistic diversity of the potential sample.

**Commented [A3]:** In terms of cultural and linguistic sensitivity, the research project is presented and guided at various levels from a theoretical and resource perspective on Multilingualism and Multimodality (which is rare in professional development programs).

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the support of 2 GRAs, we will use the first 4 months as a preparation period to 1) confirm inquiry partner participation and 2) prepare protocols to pilot in the following 6 months.

The cumulative Year 1 data sources and analysis allows the collaborative inquiry model to be refined over a 1-year cycle before collection of student data, maximizing refinement of the model based on data of teacher knowledge first. Year 2 will similarly include observations, interviews, and collection of relevant outputs as well as observation of 4 focal teachers' culturally- and linguistically-responsive MML practices, baseline and end of year interviews of teacher talk and text processes and productions as related to their stimulated recall interviews. To support interrater reliability across field notes, protocol implementation, and analysis, we will pilot field notes, observation protocols, and analytic procedures and peer debrief outcomes to ensure fidelity to a shared methodology during Year 1. The cumulative Year 1 data sources and analysis allows the collaborative inquiry model to be refined over a 1-year cycle before collection of classroom observation data, maximizing refinement of the model based on data of teacher knowledge first. The third year will focus on analysis and publishing of findings.

### STUDY PREPARATION AND MEASUREMENT

To understand the critical components of the model (Aim 1), I will investigate the qualitative shifts in ECE' understandings (Aim 2) and instruction (Aim 3) reflected in their talk and text productions and teaching. Data will be produced through ethnographic methods including participant observation, stimulated recall interviews, and the collection of MML related outcomes and further examined through the following measures: quarterly ECE questionnaires, pre/post focus group interview protocols and inquiry group and classroom observation protocols.

**Feasibility & Recruitment:** Dr. Mileidis Gort, with expertise developing and using such measures has agreed to be a mentor (see letter of support). Also, building upon an already established research partnership with a Midwest Elementary School, we already have more than 15 ECE interested in participating who meet the sampling criteria described previously. (See current IRB and already established MOU with Partner site). Should RLE diverse educators join the campus at any time during the study, I will actively recruit their participation to provide needed perspectives to our learning.

### DESIGN-BASED RESEARCH

I propose a DBR investigation to study a collaborative inquiry model of professional development focused on RLE linguistic and multimodal practices as learning resources. DBR is typically characterized by a collaborative partnership between researcher and school partners to maximize practical impact. DBR serves this proposed research as a methodology grounded in understanding both model design and how a model plays out in practice when enacted in real school contexts. Through micro (ongoing) and macro (yearly) cycle processes of analysis and data-based refinement,

**Commented [A4]:** PI organizes this section well and makes it clear what each piece of data being collected will be used for, when it will be collected, and how.

**Commented [A5]:** Describes piloting of data sources and discusses reliability.

**Commented [A6]:** Though the sample is small, there is a high probability that the methods and analyses will yield important findings.

**Commented [A7]:** The analysis follows a design-based research (DBR) approach; the PI is able to include an ongoing process of inquiry with research participants.

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DBR examines how a model evolves through multiple iterations. DBR can be assessed on a wide variety of indices using multiple research methods, including qualitative, ethnographically informed approaches (Bradley & Reinking, 2008). I have utilized DBR in previous research to document implementation to capture all relevant, but unanticipated, consequences of the design upon enactment.

To advance theoretical and practical models of ongoing ECE development for RLE (AIM 1), two primary measures will be used in year 1 and 2:

### INQUIRY GROUP FIELD NOTE AND OBSERVATION PROTOCOLS

In the case of DBR, the researcher is both a participant and an agent for designing and enacting a model. Therefore, two bilingual graduate research (to capture movement across languages/language varieties) assistants familiar to the inquiry group partners will engage in participant observation and take ethnographic field notes during the monthly face-to-face, 2-hour meetings. I will also document my own field notes after each session as an additional source of data as informed by the observation protocol. In field notes, we will document the time, commitment, and contingencies involved in the creation, implementation, and refinement of the collaborative inquiry model in the context of interactions and discussions over two years. With sensitivity to the anonymity of the children referenced in the group, we will ask teachers to use pseudonyms when sharing classroom experiences and data about children. To support interrater reliability across field notes and analysis, we will pilot field notes, protocols, and analytic procedures and peer debrief outcomes to ensure fidelity to a shared methodology.

Guided by an observation protocol to study the relevance of the model's components, we will document as relevant data ECE' observed MML questions, hypotheses, confusions, understandings, appropriations of content, personal connections, and challenges to components such as readings, student data samples, and discussion (as examples) in professional interactions across face-to-face inquiry meetings using an observation protocol. How teachers participate in the model provides a rich context for data focused on how teachers respond to the inquiry model. This protocol will be developed during the preparation phase of this study and then refined after year 1 data analysis.

### FOCUS GROUP INTERVIEW

To further study the construct of teachers' perception of the model, I will conduct 30-minute semi-structured beginning and end-of-year interviews with teachers in small groups to gather data about their experiences learning and participating in the model. Although we will use a predetermined protocol to guide these interviews that will be refined during the preparation phase of this study, we will also use Grand Tour (Spradley, 2002) questions, invitations to talk extensively about a phenomenon, that will emerge from ongoing analysis during data production. Questions will elicit reflections on development of understandings and instruction, discuss favored and not favored aspects of the model,

**Commented [A8]:** The "open" nature of the data will not force participants into a limited view of diverse students' strengths and the MML model definitely is conceptualized to capture students' many abilities.

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and review insights for next steps for the model and the classroom. All interviews will be video recorded and will be conducted in English or Spanish as determined by participants' preference.

To generate policy and practical implications for ongoing ECE development through profiles and principles (AIM 2), two primary measures will be employed in year 1 and 2:

### DEMOGRAPHIC QUESTIONNAIRE

To gather data on relevant ECE histories, all participating school partners will complete a questionnaire concerning demographic data such as gender, race, ethnicity, languages spoken, years of teaching, relevant professional development engagements, and experience with teaching in culturally and linguistically complex classrooms.

### QUARTERLY QUESTIONNAIRE

Teachers will be asked to complete quarterly questionnaires to follow up on preliminary findings and lines of inquiry that are identified from data analysis. Recognizing the common disconnect between what we say and what we do, this questionnaire will measure how ECE make sense of and rationalize their MML understanding and work with RLEL. Specifically, we will, for example, ask more general questions related to their own MML productions and processes and their understandings about those texts. As with the focus group interview, specific questions across the quarters will be partially informed by analysis during data production and guided by an interest in gaining insight into ECE MML negotiations.

To extend the current research and inform policy on MML instruction in the early childhood classroom (AIM 3), one primary measure will be used in year 2:

### CLASSROOM OBSERVATION PROTOCOL

We will also utilize classroom observation protocols during beginning and end of year observations in four focus classrooms for 2 hours, 3x a week for 3-5 weeks to note any connections between MML understandings and instruction in year 2. We rely on The Sheltered Instruction Observation Protocol (Echevarria & Short, 1999) and its critiques as a model to mentor the production of our own protocol. This protocol will be developed and piloted in the first year. All observations will be video recorded to capture both the verbal (multilingual) and nonverbal (multimodal) data produced.

As a complement to the protocol, we will also conduct stimulated recall interviews (Gass & Mackey, 2000) in each classroom to elicit teacher understandings of MML instruction. These interviews do not provide primary data but will provide complementary data that will give depth to the findings. During the brief interview, we will present teachers with

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data on their instruction (point to the text being produced in the moment or related video data) and ask them to engage in “participant retrospection” (Rampton, 2003) by commenting on and explaining their process in their own words.

### Data Analysis Approach

*Please describe in detail the specific analytic approaches for the proposed qualitative and/or quantitative data. The analytic plan should align with the research questions, the proposed methodology and measures, and the working hypothesis(es). If appropriate, include a discussion of power analysis results and plans for establishing inter-rater reliability.*

I follow Miles & Huberman (1994) in defining qualitative data analysis as “consisting of three concurrent flows of activity: data reduction, data display, and conclusion drawing/verification” (p. 10).

To advance theoretical and practical models of ongoing ECE development for RLE (AIM 1), two primary analytic processes will be used:

#### ONGOING AND YEARLY DATA REDUCTION

In micro(ongoing) and macro(yearly) cycles, data reduction will consist of video logging, transcription, coding, analytic memo writing, and multimodal discourse analysis of recorded model implementation and classroom instruction. Field notes and monthly analytic memos will document micro refinements to the model as well as the protocols for interview and observation. This data will serve to inform yearly macro revisions to the model.

**Video Logging.** We will view and log all video-recordings of monthly inquiry group meetings, classroom observations and interviews, highlighting key activities featured in each video file, and flagging segments of video-recorded data for subsequent transcription. This will facilitate subsequent retrieval for further analysis.

**Transcription.** GRAs will transcribe all video-recorded interviews with teachers, as well as all segments of video-recorded inquiry group interactions (AIM2) and classroom observations (AIM 3) that have been flagged in video logs. She will take a reflexive approach to transcribing data, knowing that the practice of transcription is necessarily embedded in larger power relations and that, as such, always involves interpretive and representational decisions that are fundamentally subjective in nature (Bucholtz, 2000; Ochs, 1979). When transcribing segments of video-recorded classroom interaction, she will use conventions based on the system developed by Bezemer and Mavers (2011) in the field of social semiotic analysis for multimodal discourse analysis to support more fine-grained analysis.

**Coding.** We will code all data sources, including field notes, interview transcripts, relevant artifacts, and questionnaires, observation protocol data and identify qualitative shifts in teachers’ MML talk and text productions and relevant instruction in order to refine and identify the components of the model. Coding will consist of two cycles. First Cycle (ongoing) coding (Saldaña, 2012) will focus on “breaking down data into discrete parts, closely examining them, and

**Commented [A9]:** Analyses are carefully constructed and with attention to details of how to get from qualitative data to multimodal discourse analysis, analytic induction, and theory building/generation via multimodal discourse analysis and analytic induction.

PI approaches data analysis in a theoretically informed and sound way. The analyses include: multimodal discourse analysis, analytic induction, and theory building/generation. Although small in scale, the significance of this approach is the rich quality in qualitative data analysis.

PI goes into detail on how each data source will be analyzed.

Strong organizations of this section, relating each piece of analysis the study aims.

**Commented [A10]:** PI describes in detail the various levels where they will code for teacher MML understandings, misconceptions, questions, personal connections, and pedagogies to inform micro-refinements to the model itself.

The coding procedures and data reduction methods are well described and align with research questions.

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comparing them for similarities and differences” (p. 81). I will begin by using an inductive approach to analysis, generating codes that are grounded in the data. I will develop a preliminary coding scheme, refine my codes as I repeatedly apply them to the data sources, and then construct themes related to each data source. Once I have coded inductively, I will code specifically for themes drawn from the perspectives mentioned above. When analyzing field notes of collaborative work with teachers, teacher interview transcripts, and relevant samples, I will code for teacher MML understandings, misconceptions, questions, personal connections, and pedagogies to inform micro-refinements to the model. When analyzing transcripts of focus group interviews and multimodal transcripts of inquiry group interaction, I will code to identify various ECE uptake of MML as outcome data. Second Cycle (yearly) coding (Saldaña, 2012) will be aimed at reorganizing and reanalyzing data. During Second Cycle coding, all codes generated during First Cycle coding will be “reorganized and reconfigured to eventually develop a smaller and more select list of broader categories, themes, and/or concepts” (Saldaña, p. 149). During this Second Cycle, more attention will also be given to identifying patterns across data sources and connecting codes to the theoretical frameworks guiding my inquiry.

Analytic Memos. Throughout data analysis, we will regularly write analytic memos (Emerson, Fretz, & Shaw, 2001) to reflect on questions that emerge at different stages in the process, emergent patterns and themes that we begin to notice, the preliminary and refined codes we generate, the relationship among codes and categories of codes, and the relationship between the codes/themes/categories and theoretical frameworks. Memos will provide a space to integrate and synthesize codes alongside measure data, building theory as we analyze the data. Memo writing will generate additional codes to be incorporated into my coding scheme (Saldaña, 2012) and inform ongoing refinement of the model.

### DATA DISPLAY

Concurrently with the data reduction described above, I will display data in ways that allow me to begin to draw conclusions and engage in further analysis. Miles and Huberman (1994) define data display as the “organized, compressed assembly of information that permits conclusion drawing and action” (p. 11). Such data display will be critical near the end of year data reduction described above. I will create various charts, graphs, and matrices to look at compressed representations of data (e.g., codes, themes, and shorter verbatim data excerpts) simultaneously as opposed to just sequentially. Such displays from the questionnaires and protocols might include frequency counts related to codes, themes, and micro-level details identified in earlier analysis. An example might be a simple frequency count of the number of times ECE challenge deficit views of RLE in their talk or the number of times ECE refer to MML in their instruction. The systematic data display will allow me to develop a more global understanding of patterns and “repeatable regularities” (Kaplan, 1964) both within and across data sources, and to identify segments of data that merit additional analysis to better understand shifts in ECE MML understanding and instruction.

**Commented [A11]:** PI provides sufficient detail in the analytic approach and the data visualization approaches for the relatively small sample, which is a relevant approach given the sample size.

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To generate policy and practical implications for ongoing ECE development through profiles and principles of teacher learning (AIM 2), I will rely on CONCLUSION DRAWING & VERIFICATION.

Having reduced and displayed data, I will begin to draw and verify conclusions based on preliminary analysis to refine the model. A key step will be to triangulate multiple data sources. For example, after examining data from observation protocols, model implementation may be revised or readings may be shifted to follow the focus of the emerging themes. In sum, through ongoing (micro) and summative (macro) conclusion drawing, we will make needed refinements to the finer qualities of the model, leading to contextually-sensitive design principles and theories (AIM 1), profiles and principles of ECE development (AIM 2) and sample MML instruction (AIM 3) that can be interpreted by other sites and directly inform policy. Attending to both the micro and the macro differences in the model iterations will inform the broader research objective of identifying the critical components of an ongoing professional learning model.

I will provide evidentiary warrant for all claims that I make and all hypotheses that I propose (Erickson, 1984). Drawing and verifying conclusions will involve systematically identifying disconfirming evidence (i.e., so called “negative” or “discrepant” cases) and constantly revising and refining my ongoing analyses by proposing potential counter-hypotheses. The goal of searching for discrepant cases and proposing alternative hypotheses is to avoid what Erickson (2005) calls “premature analytical closure and hypertification” (p. 1206). Committing to a thorough systematic search for disconfirming evidence will discourage me from ignoring outliers and other salient exceptions to patterns that I begin to identify throughout the ongoing data analysis.

To advance theoretical and practical models of MML instruction (AIM 3), I will use MULTIMODAL DISCOURSE ANALYSIS.

Because I am interested in how a collaborative inquiry model can support MML for RLE in the classroom, I will utilize the multimodal transcripts of video-recorded classroom interaction that reflect teacher MML instruction to conduct a multimodal discourse analysis (Norris, 2004; Scollon, 2001). Drawing on multimodal discourse analytic methods from the field of social semiotic analysis (Kress, 2009), I will examine transcribed segments of interaction that have been coded for MML productions as well as embodied or material MML processes in the classroom. Focusing on the details of language and multimodality in interaction, I will explore the relationship among conversations, utterances, and individual words and phrases and material or embodied text processes. Informed by Goodwin’s assertion that “any rigorous account of human interaction must pay close attention to the detailed structure of talk that occurs within it” (1990, p. 2), I will conduct a systematic, turn-by-turn analysis of these examples of MML classroom instruction. This fine-grained multimodal discourse analysis of the sequential organization of MML communication will help me begin to understand how RLE and their teachers draw on MML and embody everyday MML practices. It should be emphasized, however, that a close analysis of the micro-details of interaction is insufficient to fully understand everyday language



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practices or the meanings that ECE ascribe to those MML practices (Duranti, 2005). Given that interactions “acquire their meaning from inside as well as from the outside of the exchanges themselves” (Duranti 1997, p. 278), I will analyze critical case samples of transcribed segments of classroom interaction in relation to the larger ethnographic context in which they were situated and from which they emerged in order to develop ECE profiles.