TEACHING PYRAMID INFANT–TODDLER OBSERVATION SCALE

TPITOS™

for INFANT-TODDLER CLASSROOMS

MANUAL

RESEARCH EDITION

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Teaching Pyramid Infant–Toddler Observation Scale (TPITOS™) for Infant–Toddler Classrooms Manual, Research Edition

by

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Case studies are composites based on the authors' experiences.

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About the Authors

Kathryn M. Bigelow, Ph.D., is Assistant Research Professor at the Juniper Gardens Children's Project in the Life Span Institute at the University of Kansas. Her research focuses on interventions for culturally and linguistically diverse children and families experiencing multiple risks. Specifically, her work has addressed early childhood language and social-emotional development and the translation of evidence-based interventions for parents, care providers, home visitors, and early intervention providers within both center-based and home-based early childhood education programs. Dr. Bigelow's work in these areas maintains an emphasis on implementation fidelity and how technology can promote engagement and enhance the implementation of evidence-based interventions. She has been the principal investigator (PI) or co-PI on projects focusing on child language promotion and parent engagement in home visiting. Currently, she directs, with Drs. Carta, Irvin, and Hemmeter, an Institute of Education Sciences (IES)–funded research project focused on developing the Infant–Toddler Pyramid Model, a three-tiered model to promote social-emotional outcomes for infants and toddlers, based on the Teaching Pyramid Infant–Toddler Observation Scale (TPITOS™).

Judith J. Carta, Ph.D., is Senior Scientist in the Life Span Institute, Professor of Special Education, and Associate Director of the Juniper Gardens Children's Project at the University of Kansas. Her research focuses on developing strategies to minimize the effects of poverty on children's outcomes and designing practices that teachers and parents can use to promote children's early learning and social-emotional development, methods for monitoring the progress of young children, and strategies for promoting family engagement in early intervention programs. She has been the principal investigator of several multisite research projects and centers funded by the National Institutes of Health, the Institute of Education Sciences (IES), and the Administration on Children and Families. She currently co-directs an IES–funded project to develop the Infant–Toddler Pyramid Model, a three-tiered model to promote social-emotional outcomes for infants and toddlers, based on the Teaching Pyramid Infant–Toddler Observation Scale (TPITOS™). She was a member of the Federal Advisory Panel on Head Start Research and Evaluation and the Division for Early Childhood's Commission on Recommended Practices. Dr. Carta also has served as Editor of *Topics in Early Childhood Special Education* and on the boards of numerous scientific journals. She received the Mary E. McEvoy Service to the Field Award from the Division for Early Childhood.

Dwight W. Irvin, Ph.D., is Assistant Research Professor at the Juniper Gardens Children's Project in the Life Span Institute at the University of Kansas. He was a Response to Intervention in Early Childhood Postdoctoral Fellow at Juniper Gardens Children's Project and a postdoctoral scholar in Department of Education Leadership at the University of Kentucky. His research focuses on the use of wearable sensors to better understand the link between adult–child and child–peer interactions and the social competence of young children at risk for or with identified disabilities in the classroom, home, and community.

Mary Louise Hemmeter, Ph.D., is Professor in the Department of Special Education at Vanderbilt University. Her research focuses on effective instruction, social-emotional development, and challenging behavior and on coaching teachers. She has been a principal investigator (PI) or co-PI on numerous projects funded by the U.S. Departments of Education and Health and Human Services. Through her work on the National Center on the Social Emotional Foundations for Early Learning and Institute of Education Sciences (IES)–funded research projects, she was involved in the development of the *Pyramid Model for Supporting Social Emotional Competence in Young Children* and Practice-Based Coaching, a model for supporting teachers in implementing effective practices. She is currently the PI on an IES–funded development project on programwide supports for implementing the *Pyramid Model,* a co-PI on an IES development project on implementing the Pyramid Model in infant–toddler settings, and a co-PI on an IES efficacy study examining approaches to supporting teachers in implementing embedded instruction. She was a co-editor of the *Journal of Early Intervention* and President of the Council for Exceptional Children's Division for Early Childhood. She received the Mary McEvoy Service to the Field Award from the Division for Early Childhood.

△TPITOS™

Introduction to the Teaching Pyramid Infant–Toddler Observation Scale

The *Teaching Pyramid Infant–Toddler Observation Scale (TPITOS™) for Infant–Toddler Classrooms Manual, Research Edition*, is an assessment instrument designed to measure the fidelity of implementation of practices associated with the *Pyramid Model* in center-based infant and toddler care settings. The TPITOS provides a classroom snapshot of the adult behaviors and classroom-environment variables associated with supporting and promoting the social-emotional development of infants and toddlers (birth to 3 years). The *Pyramid Model* is a multi-tiered framework that organizes empirically supported teaching practices for promoting social-emotional competence and addressing challenging behavior (Fox, Dunlap, Hemmeter, Joseph, & Strain, 2003; Hemmeter, Ostrosky, & Fox, 2006).

The development of the *Pyramid Model* was influenced by public health models of promotion, prevention, and intervention practices (Gordon, 1983; Simeonsson, 1991) and schoolwide multi-tiered systems of positive behavior intervention and supports (Horner et al., 2005). The *Pyramid Model* (Fox et al., 2003; Hemmeter et al., 2006) includes universal, secondary, and tertiary teaching practices. Tier 1 (see Figure 1.1) provides *universal promotion* for all children, Tier 2 provides *secondary prevention* to address the intervention needs of children at risk for social-emotional delays, and Tier 3 provides *tertiary interventions* needed for children with persistent challenging behavior.

The first tier of the *Pyramid Model* involves two sets of practices: 1) nurturing and responsive caregiving relationships and 2) high-quality, supportive environments. In this universal tier, *Nurturing and responsive relationships* refers to the relationship between the teacher and the child, the developing partnerships with families, and collaborative relationships among classroom team members and other allied health professionals. *High-quality, supportive environments* refers to the design of safe environments, activities, and schedules that promote active engagement, learning, and appropriate behavior. The TPITOS is a measure of teacher implementation of the universal tier focusing on nurturing and responsive caregiving relationships and high-quality, supportive environments.

THE IMPORTANCE OF SOCIAL-EMOTIONAL DEVELOPMENT

In the United States today, growing numbers of children are attending quality preschool programs (Child Trends Databank, 2014). Attending sound early educational
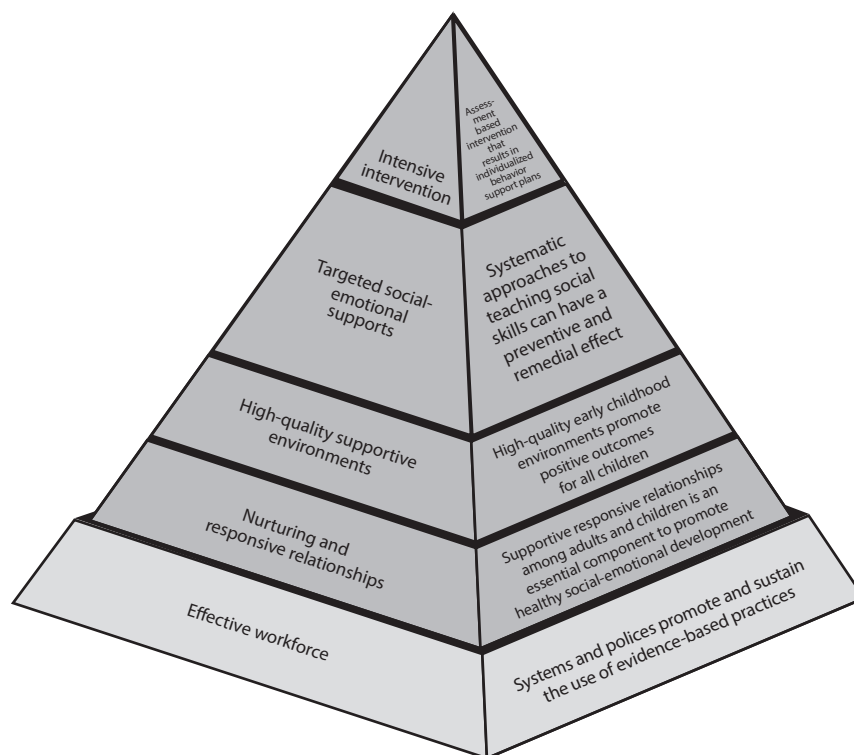
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Figure 1.1.   The *Pyramid Model*. (From Center on Social and Emotional Foundations for Early Learning at Vanderbilt University. [2003]. *Pyramid Model for promoting social and emotional competence in infants and young children.* Nashville, TN: Author.)

programs greatly enhances children's likelihood of success when they enter primary school (Campbell, Pungello, Miller-Johnson, Burchinal, & Ramey, 2001; National Research Council and Institute of Medicine, 2000). Unfortunately, thousands of preschoolers are suspended or expelled from preschool each year and miss the opportunity to benefit from preschool (U.S. Department of Health and Human Services & U.S. Department of Education, 2015). Furthermore, many young children receive their early care in settings that are sorely lacking in the type of nurturing, responsive interactions known to foster social-emotional development and later self-regulation and executive functioning. It has never been more important to help teachers in early education programs learn how to support young children's social-emotional development. Teachers equipped with the knowledge and skills to provide children with strong social-emotional foundations are much more likely to *prevent* challenging behaviors from occurring and more likely to understand how best to *intervene* when challenging situations occur.

Many early childhood programs adopting the *Pyramid Model* serve infants and toddlers (Fox et al., 2003; Hemmeter et al., 2006). However, there is currently limited information available on how to adapt and align the pyramid approach to meet the needs of children younger than 3 years. We developed the TPITOS to provide a tool that can be used to measure how well practitioners implement the foundation of the *Pyramid Model* with infants and toddlers—the universal practices that teachers and caregivers can use to foster responsive and nurturing relationships with children and provide supportive classroom environments. Data gathered by using the TPITOS are then used to provide feedback to teachers or caregivers, to classroom teams, or to entire programs.

ORGANIZATION OF THE TPITOS

The TPITOS Scoring Form is made up of three types of items: 1) Observational Items, 2) Interview Items, and 3) Red Flags. An *Item* is a category of teacher behavior and represents practices associated with the *Pyramid Model*. Each Item includes two to nine *Indicators* that describe a specific aspect of teacher behavior. Observers score each Indicator based on their observation of the teacher demonstrating the practice during the 2-hour observation or from the teacher's interview responses. The TPITOS also includes Red Flags, which pinpoint specific concerns that may compromise children's social-emotional development. Red Flags are organized into four categories: 1) Responsive to Individual Children, 2) Promoting Emotional Expression and Social Interaction, 3) Responsive to Children's Distress and Challenging Behavior, and 4) Environmental Support for Social Engagement. Observers score Red Flags based on their occurrence during the observation period.

Observational Items

There are 13 Observational Items, or categories of teacher behavior, that represent practices that support and promote social-emotional development. For example, Item 5 states, "Teacher is responsive to children's expression of emotions and teaches about feelings." Observational Items are measured through direct observation. For each Item, there are two to nine Indicators that describe a specific aspect of the teacher's behavior. For example, an Indicator for Item 5 states, "Teacher uses opportunities during activities to teach about feelings." These Indicators are defined in greater detail in the indicator elaborations in Chapter 4.

The Observational Items are scored based on the presence or absence of specific practices carried out by the teacher being observed. This means that the observer gives the teacher a score of *Yes* when the behavior is present, *No* if the behavior does not occur, or *N/A* if the Item or Indicator is not applicable. An observer carrying out a TPITOS observation will follow and record the behavior of one specific teacher on these practices within at least three of four of the following routines for a 2-hour period: free play (e.g., child selects toys from a shelf), structured group activity (e.g., circle time), care routines (e.g., diapering or toileting), and outdoor activities (e.g., sandbox play). Definitions for these routines are included in Chapter 4.

Interview Items

The TPITOS includes an interview that follows the 2-hour observation. Certain items are scored based on the teacher's responses to interview questions. There are also some Indicators that are scored by either observation or interview, as indicated by boxes that show *Obs.* and *Int.* in the Notes column of the TPITOS Scoring Form. For these Items, observers should first try to provide a score based on the classroom observation. If the observation does not provide enough information or evidence to score that Indicator, then the observer can ask the related interview question and use the teacher's response to score that Indicator as *Yes*, *No*, or *N/A*.

Red Flags

During the 2-hour observation, the observer will also record the presence of Red Flags, which are practices that are not consistent with *Pyramid Model* practices and that identify specific concerns that may compromise children's social-emotional development.

Such behaviors may be earmarked as "top priority" for coaching or professional development. An example of a Red Flag is, "Teacher rarely speaks to and/or engages children." The descriptions of the 11 Red Flags are found in Chapter 4. Observers should be familiar with the Red Flags and consider them throughout the observation. Most Red Flags focus on the teacher being observed, though a few are scored for the overall classroom.

ORGANIZATION OF THE TPITOS MANUAL

The TPITOS manual includes background information on the *Pyramid Model for Promoting Social Emotional Competence in Infants and Young Children* and the use of the TPITOS to measure the fidelity with which teachers of infants and toddlers implement the *Pyramid Model* practices. The manual provides users with guidance on how to administer and score the TPITOS and how to interpret TPITOS results. Case studies help make this information come alive by providing real-life examples of the ways in which teacher-specific TPITOS data can be used to coach individual teachers. Case studies also illustrate the approach for using programwide data to guide professional development for an entire program. Finally, the manual includes a section on Frequently Asked Questions.

ADMINISTRATION OF THE TPITOS

An observer carrying out a TPITOS observation will follow and record the behavior of one specific teacher on the practice items within four different routines for a 2-hour period: free play, structured group activity, care routines, and outdoor activities.

When administering the TPITOS, the observer will use a scoring form. The TPITOS Scoring Form includes brief instructions for completing the assessment, followed by the Items and Indicators (Observation, Interview, and Red Flags) that will be scored through observation or interview, a place to note the start and ending time of the observation, a place to make notes about the children and adults present in the classroom during the observation, a chart for tracking the classroom schedule, and each part of the TPITOS to be completed during the observation and interview. Space for making notes during the observation and writing answers during the interview is also provided on the TPITOS Scoring Form. It also includes a Scoring Summary for summarizing the scores for Observational Items, Interview Items, and Red Flags.

Summary scores are obtained for each item by calculating the percentage of indicators present for each item. A TPITOS Excel Scoring Spreadsheet is available for calculating summary scores and graphing TPITOS data at one point in time or across up to three observations for individual teachers, teaching teams, or programs. Additional scoring guidance is included in Chapters 4 and 5.

POTENTIAL USES OF THE TPITOS

One of the fundamental goals of programs for infants and toddlers is promoting children's social-emotional growth and well-being. This goal is incorporated into policy regulations in national programs such as Head Start, as well as organizations providing care to children through early educational centers or child care. TPITOS data may be used to support professional development for early educators or child care practitioners in the following ways: 1) identifying and making explicit the specific competencies that promote social-emotional development, 2) providing team and individual teacher feedback to reinforce teacher strengths, 3) guiding individual and

team targeted goal-setting to strengthen teacher competencies, and 4) monitoring growth relevant to teacher competencies or quality-improvement initiatives.

The TPITOS can also be used in research studies to measure implementation fidelity and change over time. The TPITOS may be used, for example, to describe the fidelity of implementation of the first tier (universal practices) of the *Pyramid Model* when implemented in a specific classroom, a group of classrooms, or a group of programs. The TPITOS can also be used to measure whether teachers' implementation of specific practices changes after an intervention focused on changing teacher behaviors.

RESEARCH BACKGROUND OF THE TPITOS

The first few years of a child's life are a critical time. In years 1–3, children develop a foundation for healthy social-emotional development or, alternately, begin a trajectory for social and academic delays and disabilities (National Research Council & Institute of Medicine, 2000). Approximately 10%–15% of children between birth and 5 years of age experience social-emotional difficulties that negatively affect their functioning and school readiness (Brauner & Stephens, 2006; Brown, Copeland, Sucharew, & Kahn, 2012). Of particular concern are children from low-income neighborhoods with multiple risk factors—these children are much more likely to experience behavioral problems early in life (Cooper, Masi, & Vick, 2009; Duncan, Brooks-Gunn & Klebanov, 1994). In addition, children whose families experience environmental risks, such as domestic violence exposure, substance use, and mental health issues, are more likely to experience social-emotional difficulties (Cabaj, McDonald, & Tough, 2014). Especially noteworthy is the fact that interventions focused on children's early caregiving interactions can typically alleviate or reverse about 50% of the adverse effects of poverty on children's social-emotional development (Duncan & Brooks-Gunn, 2000).

There are no existing studies that have tested the effectiveness of an entire tiered model to prevent challenging behavior and promote the social-emotional development of infants and toddlers. However, considerable research exists on the effectiveness of the *components* of such a model, such as scaffolding, establishing routines, and supporting infants' peer interactions (Copple & Bredekamp, 2009; Landry, Smith, Swank, & Guttentag, 2008). Many of these specific practices have been highlighted as Recommended Practices by the Division of Early Childhood (DEC; Division for Early Childhood, 2014). One category of the DEC Recommended Practices focuses specifically on interactional practices between the caregiver and child, such as "observing, interpreting, and responding contingently" to children's emotional expressions or encouraging children, "to initiate or sustain positive interactions with other children and adults during routines and activities through modeling, teaching, and feedback" (p. 27). These practices have been identified in the literature as essential for promoting infant–toddler social-emotional and communication development (Guttentag et al., 2014; Landry et al., 2008). Another category of DEC Recommended Practices addresses specific instructional practices measured by the TPITOS, such as, "embedding instruction within and across routines, activities, and environments to provide contextually relevant learning opportunities" (p. 11) and, "using explicit feedback and consequences to increase child engagement, play, and skills" (p. 11). The TPITOS focuses on these critical elements for supporting and guiding children's social-emotional growth and distills them into observable teacher behaviors.

In the next chapter, we provide more information about the development of TPITOS and key practices assessed using TPITOS, including descriptions of TPITOS Items and Indicators.

"An innovative and invaluable tool for teachers in infant–toddler classrooms to create a warm and responsive environment and to improve children's social-emotional skills. The Observation Scale provides a blueprint with specific strategies and suggestions for making a positive, predictable learning environment for our youngest children."

—Jane Squires, Ph.D., Department of Special Education and Clinical Sciences, University of Oregon; co-developer of *Ages & Stages Questionnaires®, Third Edition,* and *Ages & Stages Questionnaires®: Social-Emotional, Second Edition*

"The TPITOS tool's focus on relationships, warmth, responsivity, and emotions is wonderful. It will help early childhood programs with infant and toddler classrooms to develop meaningful professional development for teachers to support our youngest children's social emotional development."

—Elizabeth A. Steed, Ph.D., University of Colorado Denver; co-developer of *Preschool-Wide Evaluation Tool™ (PreSET™)*

A child's early teachers and caregivers play a vital role in supporting social-emotional development—and that's why more and more center-based infant and toddler programs are adopting the evidence-based *Pyramid Model for Promoting Social Emotional Competence in Infants and Young Children.* If your program is one of them, the TPITOS™ is the essential tool you need to ensure that infant–toddler teachers are using the *Pyramid Model* practices with fidelity.

Modeled after the *Teaching Pyramid Observation Tool (TPOT™) for Preschool Classrooms,* the TPITOS is for early childhood center-based programs caring for infants and toddlers from birth to 3 years of age. Focusing on teacher practices and classroom environment variables, the TPITOS measures how well your program's staff is fostering responsive, nurturing relationships with children and promoting strong social-emotional development in their earliest years.

In this reader-friendly manual you will find
- A complete introduction to the TPITOS and how to implement it
- Instructions for scoring the TPITOS accurately and summarizing the results
- Guidelines for how to use the TPITOS to support implementation of effective practices
- Real-world case studies that demonstrate how other programs used the TPITOS
- Answers to frequently asked questions

Add the TPITOS to your program to find out which *Pyramid Model* practices are being implemented effectively—and what teachers need to focus on to ensure positive social-emotional outcomes for infants and toddlers.

The **TPITOS**™ helps programs
- Ensure effective implementation of the PBIS-based *Pyramid Model*
- Support professional development efforts in center-based infant–toddler settings
- Strengthen the practices of individual teachers, teams, and entire programs
- Monitor the success of quality improvement initiatives

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