

# Connect the Dots: Improving Kindergarten Assessment, Teaching, and Learning



## Project Connect 2021-22

*"Project Connect became so much bigger and more important than the [KIDS] assessment. It was about the observations and the ability to understand the developmental levels of the students in depth and what they're doing. Teachers know so much more about their students now from doing the [Project Connect e-learning] modules and practicing that. Instead of wanting to know more about the assessment, now they just love knowing more about their kids."*

**Erikson Institute**

Early Teaching and Learning Academy

## Photo + Chat = Oral and Mathematical Skills

*A kindergarten teacher shows her students a photo of a robin holding a worm in its beak above two baby birds in a nest.*

*“It’s time for Photo Chat!” she says. “What do you notice?”*

*Ivette raises her hand. “Wide beaks,” she says.*

*The teacher makes a “beak” with her hand, then opens her hands wide.*

*Carl raises his hand. “One worm and two babies!”*

*The teacher nods and says, “I wonder what the mama robin will do?”*

*She then splits the group into pairs and gives each pair of children a chance to share their thoughts with the class. As the children talk, she records what she hears a nearby pair of children say to one another. Once all the children have spoken, she asks, “Does anyone want to build on the idea that the robin will feed only one baby?”*

*Hugo makes the “me, too” gesture by forming a Y with his hand and sliding it back and forth between himself and the teacher. “She’ll feed one baby now. But she’ll get more worms.”*

*Jasmin makes the “build upon” signal by placing one fist on top of the other. “Then she can feed both babies!”*

*The teacher sets down the photo and smiles. “I can see you are listening to one another,” she says. “Today, no one repeated what someone else had already shared.”*



## Play + Rigor = Deeper Understanding

This Photo Chat scenario is an example of an instructional routine that helps children improve their oral and mathematical language skills simultaneously through open-ended conversations about fun photos. It’s just one of the rigorous, play-based learning activities that Erikson Institute provides through its Project Connect professional development (PD) program. **This virtual PD helps Illinois teachers connect the dots from state-mandated assessments to kindergarten-focused instruction that will foster a deeper understanding of mathematics, language, and literacy concepts.**

### Project Connect Program Design

Watch this [video](#) to learn more about how Project Connect helps Illinois kindergarten teachers improve their assessment and instruction skills. This virtual PD program includes convenient e-learning modules and remote professional learning community meetings that allow teachers from across the state to connect and collaborate.

## Project Connect Creates Agents of Change

The early years of children's lives impact their educational success and long-term wellbeing. Effective kindergarten teaching plays a critical role in improving children's chances of future positive outcomes. Good teachers are good diagnosticians. They are capable of developing insights into how children are learning and what might be done to help children reach their full potential.

Although teachers are always observing students, most need guidance on how to document, interpret, and make use of data to inform instruction. **Project Connect helps kindergarten teachers increase their understanding of children's educational needs by improving their ability to observe, document, and interpret children's behavior and thinking.**

This PD program is built on Erikson Institute's trademark pillars of PD education: learn, practice, and reflect. **This strong foundation helps teachers become their own agents of change in the classroom.** Nearly 150 Illinois teachers are already learning best practices for kindergarten assessment as well as mathematics, language, and literacy instruction for nearly 3,500 children through Project Connect.

Project Connect gives schools the tools to:

- **connect PD to state kindergarten readiness goals.**  
This first-ever partnership between Erikson Institute and the Illinois State Board of Education (ISBE) helps teachers make the best use of a required kindergarten assessment.
- **connect assessment to teaching and learning.**  
Project Connect provides *kindergarten-focused* instructional routines to help teachers observe and document children's behavior and thinking as they develop mathematics, language, and literacy concepts.
- **connect knowledge, practice, and reflection to teacher empowerment.**  
Teachers have protected PD time during the school day to learn, practice, and reflect on how to best use new instructional routines to support teaching, learning, and assessment in the classroom.
- **connect play-based learning to rigorous content.**  
Project Connect stresses play-based learning and teaching for understanding by introducing the big ideas of content areas through e-modules and engaging teachers and children in playful instructional activities.
- **connect kindergarten teachers to mentors statewide.**  
In addition to making connections among kindergarten teachers across the state, Teacher Researchers act as mentors by helping create best practice case studies for a digital library to share with other Illinois kindergarten teachers.

This paper will explain how Project Connect can help Illinois teachers better assess and address the needs of the "whole child" to improve kindergarten teaching and learning across the state.

## ● Connecting PD to State Kindergarten Readiness Goals

**Project Connect helps Illinois kindergarten teachers make meaningful change through an assessment they are required to complete.** As part of a nationwide push to improve kindergarten readiness, Illinois teachers started assessing kindergarten students in the 2017-2018 school year. ISBE hired KIDS Coaches to help train teachers to use the state’s assessment tool—the Kindergarten Individual Development Survey (KIDS).

Kindergarten teachers are required to use this tool to observe students for the first 40 days of school and rate them on 14 indicators in four domains: approaches to learning and self-regulation; social and emotional development; language and literacy; and math. In 2019, ISBE released an alarming report based on early data: **More than two-thirds of kindergarteners in Illinois are not starting school with a firm foundation to learn from age-appropriate curriculum** (<https://www.isbe.net/Documents/RMF19-001-KIDS%20Report.pdf>).

### Supporting the State’s Goals

In 2020, Erikson Institute took an opportunity to help bolster the state’s efforts to improve kindergarten readiness. The institute had just created a cohesive, cross-content hub by combining its highly regarded PD offerings—Language and Literacy Partners, the Early Math Collaborative, and the Social and Emotional Learning Initiative—into an Early Teaching and Learning Academy (the Academy). **Thanks to grant funding, the Academy partnered with ISBE for the first time to create a pilot Project Connect program backed by over 50 years of Erikson’s PD expertise.**

At the onset, Project Connect staff collaborated with ISBE, KIDS Coaches, and a small group of kindergarten teachers to address what they saw as a primary challenge: **Although public school kindergarten teachers are required to conduct the KIDS survey, many lack the skills to effectively observe, document, interpret, and use the data** (Academy meeting with IL KIDS coaches, 3/7/2021). Project Connect built on its successful pilot to launch an even stronger program statewide in 2021—the same year the state solidified its commitment to kindergarten readiness through House Bill 2170, which made annual kindergarten assessment a law in Illinois.

### Strengthening Teachers’ Skills

**Project Connect helps teachers get the most out of the required KIDS survey while learning best practices for improving kindergarten teaching and learning throughout the year.** The PD program consists of three integrally related pieces designed to provide convenience for teachers and schools:

1. **asynchronous e-learning modules**, a flipped classroom model through which teachers learn content knowledge related to required KIDS measures through access to interactive PD materials anytime, anywhere, and on any device through a mobile browser
2. **synchronous, virtual PLCs**, through which teachers have dedicated time to collect data, develop assessment skills, and engage in reflective practice in the context of SEL, productive play as well as culturally and linguistically responsive teaching
3. **synchronous, virtual administrator seminars**, through which school and district leaders form a network of support to learn about developmentally appropriate practice as well as the meaning and usage of KIDS data for teaching and learning

## ● Connecting Assessment to Teaching and Learning

To help teachers effectively assess their students and measure their progress, Project Connect provides *kindergarten-focused instructional routines* designed to improve children’s understanding of mathematics, language, and literacy concepts. **These best practices help teachers understand the big ideas of these content areas no matter what curriculum their school adopts.**

Instructional routines are specific, repeatable, and research-based activities that give teachers an on-the-ground method to monitor teaching and learning as frequently as the activities are implemented. **These routines include fun, low-stakes, and engaging activities that use the most basic materials to either supplement or coincide with regular classroom activities.** Teachers also learn how to better connect with their students through the program’s emphasis on English learners and cultural relevancy. The Photo Chat activity that was introduced at the start of this paper is just one example.

### The Case of Photo Chats

Photo Chat is a language-building classroom routine designed to incorporate both oral language and mathematics skills. It begins with a compelling photograph or image that acts as a catalyst for a classroom community to chat. In the process, Photo Chat as an instructional routine serves as a powerful tool to feed three birds—assessment, teaching, and learning—with one worm.

**Project Connect recommends that teachers begin the photo chat with two powerful, open-ended questions, “What do you notice?” and “What do you wonder?”** What students notice reveals a window into their thinking and use of language to communicate ideas and describe surroundings. Oracy, or oral language development, blossoms when children have many opportunities to talk and be heard. The questions also invite children to name the attributes of the objects in the photo—such as size, color, number, and special features—which is a foundational concept and skill of early mathematical learning.

Once the practice of noticing and wondering becomes routine in the classroom, teachers ask more focused questions such as, **“How are these two things the same AND different?” or “How many of what do you see?”** Using a variety of questions builds a range of vocabulary and language structures needed to express comparisons and justify reasoning. Over time, children pay more attention to the attribute of quantity and the use of precise language (Dodia, R. 2022)

Because instructional routines such as Photo Chats offer a playful, open-ended activity with multiple entry points, **they are optimal for eliciting children’s behavior and revealing their thinking at a range of levels.** Specifically, the open-ended nature of the Photo Chats allows children to talk about a variety of topics and express themselves in their home language. The low floor/high-ceiling activities also invite children to work on expressive language and math concepts at different levels of competency at different paces over time. Finally, the familiarity of the content in the photos bring children’s funds of knowledge to the conversation. The Photo Chats activity creates a connection between **children’s learning of oracy and numeracy skills, the teacher’s teaching through this talk routine, and assessment, which aligns with three required KIDS measures** (LLD 3: Communications and Use of Expressive Language, LLD 4: Reciprocal Communication and Conversation, and COG/Math2: Number Sense of Quantity).

## Connecting Knowledge, Practice, and Reflection to Teacher Empowerment

The remote PLCs give kindergarten teachers a day of protected time to pursue the following PD steps:

1. **Learn:** From 8:30 a.m. to 10:45 a.m., teachers meet online with an Erikson facilitator and their PLC to discuss a new instructional routine and make connections to the big ideas introduced in the e-module.
2. **Practice:** From 10:45 a.m. to 1:30 p.m., teachers return to their classroom to engage children in the activity and collect data.
3. **Reflect:** From 1:30 p.m. to 3:30 p.m., teachers regroup with their PLC to discuss their experience implementing the routine through student work samples, in reference to the KIDS measures.

### Pandemic Challenges and Opportunities

The remote PD is convenient for teachers and necessary due to the COVID-19 pandemic and the spread of the teachers across the state. However, it poses a host of challenges to teachers. For example, sometime two or more teachers from the same school need to share the same room for participating in the PLC, which causes issues with interference, and teachers must mute themselves when the other person was talking. Some children do not understand why they have a substitute when their teacher is still at school. In response, teachers explain that just like children are in school to learn new things, teachers need to continue learning as well.

Teacher burnout and substitute shortages are two other big challenges for Project Connect. **But the team transformed this challenge into an opportunity for kindergarten teachers to conveniently connect and collaborate statewide.**

1. **Teacher burnout**  
Project Connect hosts all five PLC meetings during the school day, instead of after hours, to give teachers protected PD time while ensuring greater time for self and family care.
2. **Substitute shortages**  
Each PLC meeting is repeated seven times across two weeks. Thus, teachers have options to join one of the seven PLC cohorts, including one offered in Spanish. *While teachers are encouraged to stay in the same cohort for the entire year, they have the flexibility to switch to another should there be a substitute teacher coverage issue or some personal matter to address.* This arrangement is particularly welcome for schools at which a group of kindergarten teachers is participating because it's nearly impossible to find several substitute teachers on the same day. This approach contributed to attendance rates that averaged over 90% during the 2021-2022 program.

*Some schools have even opted to forego substitute teachers.* Instead, students in the classroom of the teacher attending the PLC go to other kindergarten classrooms for the day. Then the PLC teacher calls back some of the children to facilitate the instructional routine for data collection. Teachers have handled the disappointment of any children who don't get to work with their teacher on a PLC day by promising they would be the first to be included the next time.



## ● Connecting Play-Based Learning to Rigorous Content

Play is at the heart of the program design in Project Connect. **As part of its program, Project Connect engaged kindergarten teachers in creating the types of play-based learning environments the KIDS survey encourages for collecting and documenting rich evidence of children’s behavior and thinking.**

Play in Project Connect PD is both a means and an end. As a means, it serves as a context or method for intentional teaching with clear objectives. Play is also an end because children are born eager to learn and they take delight in exploring their world and making connections. During play, children learn with joy—and it is such a positive effect that it propels their self-esteem and self-confidence, which are critical for the development of the whole child (NAEYC, 2021).

**In teachers’ comments, this play-based approach fortifies their understanding of the big ideas in language, literacy, and math while pushing them to trust children to engage themselves in their own learning.** When they engage children in play-based instructional routines such as Counting Collections, teachers are then excited to discover that children can contribute to their own learning by both doing the math and explaining their thinking to their classmates. **In this way, Project Connect creates a parallel learning process: teachers contribute to each other’s understanding through the PLC, and, in turn, teachers help children contribute to each other’s understanding through the new instructional routine.**

### Deep Understanding of Number Sense of Quantity

**Number sense of quantity is the knowledge of “how many” of what,** which is central to the math work of kindergarten. Children need to build this concept for themselves through experiences, and direct instruction does little to help them construct their understanding. Traditional teaching of counting focuses on counting skills. Consequently, although many children may seem to have mastered counting, they have only done so at a procedural level.

The Number Sense of Quantity module invites teachers to explore this concept through six sections: the attribute of quantity, counting to find how many, count word sequence, one-to-one correspondence, cardinality, and counting equal groups. Teachers also complete interactive activities; analyze classroom videos; and assess their understanding through questions, games, and quizzes. The module ends with implications for teaching and learning. **Teachers learn and understand through interactive online engagement.**

Teachers complete Number Sense of Quantity before attending a PLC focusing on the same content. In the PLC, they learn another play-based instructional routine—Counting Collections—designed to engage children in coordinating the various aspects of counting to find out how many are in the given set of objects. **Counting collections translates the big ideas teachers are exposed to in the module into concrete steps to help children understand the cardinal value of a number or the quantity of things the number represents. This knowledge helps children answer the question, “How many of what?”**

This routine starts with children counting sets of objects the teacher has collected from their classroom, such as pencils, markers, shells, coins, or bottle caps. Teachers first ask children to choose a collection, count with a partner, and then represent the total number of objects in that set on a recording sheet. Children use drawings, tallies, and numerals to show teachers *how* they counted. **Counting collections also allows teachers to assess children’s different levels of counting skills and strategies.** This routine aligns with KIDS COG: MATH2: Number Sense of Quantity.

## ● Connecting Kindergarten Teachers to Mentors Statewide

The kindergarten year is unique because it is the precursor for formal schooling (Claessens & Engel, 2013). Compared to preschool, however, kindergarten curriculum is more structured with more precisely defined learning goals. Yet, kindergarten teachers rarely receive PD that targets their grade level and attends to their distinct needs. **Project Connect fills this gap by working with kindergarten teachers only.** Participating teachers value this one-of-a-kind opportunity to work together to improve.

As part of Project Connect, a subset of teachers applied to participate in an Action Research Study Group to further augment the program's assessment-focused PD. Action Research Teachers (ARTs) receive an honorarium to help implement instructional routines that make children's learning visible.

Erikson facilitators lead five, 90-minute action research study sessions that ARTs participate in throughout the year. Each ART has an Erikson facilitator as a mentor to provide individualized support for classroom practice and documentation for formative assessment. **The study sessions give ARTs the chance to further connect and network with other kindergarten teachers across the state to become early adopters and teacher leaders in formative assessment and kindergarten instruction.**

ARTs learn about instructional routines and documentation tools in the study groups before implementing the activities in their classrooms and gathering data for related KIDS measures. **They then act as mentors during the PLCs by sharing their own classroom practices along with their experiences using Project Connect routines.**

This group uses the action research process of studying a particular topic relevant to teachers or schools—in this case, assessment skills that help measure and promote kindergarten readiness—for the purpose of understanding and improving the quality of the educative process (Hensen, 1996; Johnson, 2012). **This systematic and participatory process offers multiple benefits for teachers, such as facilitating teacher professional development, empowering each teacher to take an agency in studying the teaching and learning process, and bridging the gap between research and practice** (Book, 1996; Mills, 2011; Stringer, 2008).

[sidebar quote] “We were given the same kind of training, so we could say, ‘You can do it, too.’ It kind of takes away stress, ‘This is impossible.’ Well, it is possible because these people have already done it.”

### Best Practice Case Studies

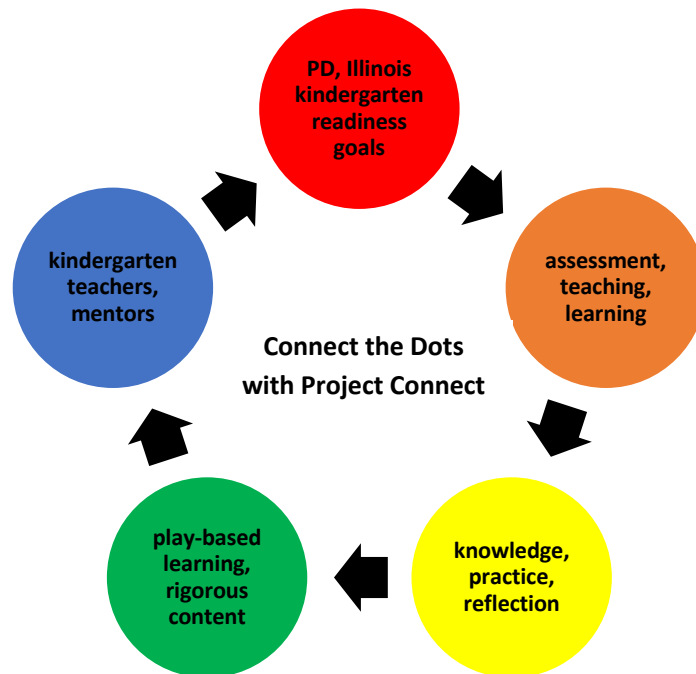
As noted, Project Connect's primary objective is to build and strengthen the assessment skills within the state's kindergarten teacher workforce. The PD provides an opportunity for kindergarten teachers from across Illinois to connect and collaborate when they otherwise might not have a chance to meet. **The goal of this work is to create *kindergarten-focused* case studies to support teacher development of formative assessment skills and a deeper understanding of developmental trajectories.**

After implementing the Project Connect instructional routines in the classroom, ARTs discuss successes and challenges along with Erikson facilitators during the virtual PLCs. This year, a subset of the ARTs will help Erikson develop best practice case studies based on this feedback. **These case studies will be part of a digital library that will be shared with kindergarten teachers statewide.** When video samples come from peers who serve a similar population of children, the examples are more convincing—teachers think, “If my colleague can do it, I should be able to as well.”



## It's All Connected

Project Connect's primary strength is that it provides an integrated approach to assessing and improving teachers' teaching and children's learning rather than treating each separately. This kindergarten-focused PD also allows teachers to acquire professional knowledge and engage in reflective practice in a convenient and flexible way through its e-learning modules and virtual PLCs. **Project Connect gives Illinois teachers the power to construct, internalize, apply, and share knowledge that will change kindergarten assessment and instruction for the better across the state.**



## Project Connect Team

Project Connect is comprised of 12 devoted early childhood specialists at Erikson Institute, Graduate School in Child Development. The expertise of the content team includes language and literacy, bilingual, math, and social and emotional development. The research team conducts program evaluation and provides the content team with ongoing feedback from the program's participating teachers. Collectively, the team has contributed more than 200 years of service to improving early education and promoting teacher development. Rebeca Itzkowich, an expert in teacher development, dual language education, emergent literacy, and early math education, is the Director.

## Acknowledgments

The work of Early Teaching and Learning Academy is supported by generous funds from an anonymous donor, the CME Group Foundation, and W. Clement & Jessie V. Stone Foundation.

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