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### REPORT HIGHLIGHTS

#### *Why this study?*

- Early childhood educators are encouraged to use data to inform practice.
- PEER members wanted to learn more about how early childhood educators in their region were using assessments and assessment data.

#### *Study Description*

- PEER administered an online survey in winter 2016 that asked early childhood teachers about their use of assessments and assessment data.
- Two hundred teachers from early childhood education programs in Bridgeport, Norwalk and Stamford were invited to participate. Sixty-five teachers (33%) participated in the survey.

#### *Key Results*

- Survey respondents reported using sixteen different assessments.
- Survey respondents reported using assessments and assessment data for multiple purposes.
- Survey respondents from Bridgeport, Norwalk, and Stamford reported using assessments in similar ways, with some differences.
- Survey respondents from school-based settings reported using assessments in similar ways to respondents from community-based settings, with some differences.

#### *Implications*

- Early childhood educators within the same community report using a variety of assessments, making comparisons among children from different classrooms difficult; likewise, it further complicates sharing data about incoming kindergarteners with kindergarten staff because kindergarten staff need to familiarize themselves with multiple assessments.
- Early childhood educators are using data to inform practice, which can have positive associations with child outcomes. Schools may be able to capitalize on teachers' use of assessment data to inform practice by providing professional development to improve these practices.
- Early childhood educators are using a wide variety of assessments, which may increase the burden of professional development related to administration of assessments and interpretation of assessment data.

## Background

Increasingly, early childhood educators are encouraged to use assessment data to inform practice and guide decision-making. Many federal and state agencies have implemented policies requiring the measurement of child-level outcomes to support accountability and program improvement,[1] and small-scale studies have shown that early childhood educators report using assessments and other data for multiple purposes.[2] Assessments are one way in which early childhood educators can collect data to inform important instructional decisions, such as by identifying children for further testing, making lesson plans, and choosing classroom activities.

The Partnership for Early Education Research (PEER) is a collaboration between researchers and education practitioners in the southwest region of Connecticut. The primary mission of PEER is to produce research that can inform early childhood education policy and practice at the local and state levels, increase access to high quality early childhood education, and reduce disparities in educational outcomes (to learn more about PEER, please visit, <http://PEER.yale.edu>). At its inception, PEER members had an interest in understanding how early childhood educators in their region report using assessments and assessment data. This study was designed to address this interest.

## Goals of the study

The purpose of the study was to understand the use of assessments and assessment data in early childhood education settings in the southwest region of Connecticut. Specifically, PEER aimed to answer two research questions:

- How are assessments used in early childhood education classrooms in the southwest region of Connecticut?
- Are there district and setting differences in how assessments are used in early childhood education classrooms in the southwest region of Connecticut?

## How the study was conducted

To learn how early childhood classroom teachers use assessments, PEER collected data using an online survey in winter 2016. The survey (available at <https://goo.gl/FYxH2K>) was an adaptation of a survey published by the Regional Educational Laboratory Northeast and Islands, and it covered topics related to assessment use, policy, and training. This report focuses on survey questions related to assessment use. Specifically, PEER answered the two research questions above by analyzing data from the questions that asked teachers which assessments they used, how they used the assessments, and how they use the data from the assessments.

Approximately 200 lead teachers from major early childhood education programs in Bridgeport, Norwalk, and Stamford were invited to participate in this survey, which was administered online via Qualtrics. These early childhood education programs provided email lists for their teachers, which allowed PEER to send the survey invitation and reminders directly to teachers via email. During the six-week survey window in February and March 2016, 65 early childhood educators responded, a response rate of approximately 33 percent. PEER conducted descriptive analyses (frequencies and cross-tabulations) of the respondent characteristics, assessments used, and assessment uses, which are presented below.

## What the study found

Study results show that early childhood teachers in Bridgeport, Norwalk, and Stamford all report using assessments for multiple reasons.

### Sample for this study

Of the 65 respondents, the majority ( $n = 49$ ) indicated that they were preschool teachers, seven were preschool special education teachers, seven were infant/toddler teachers, two were site managers, and four were instructional coordinators (respondents could choose more than one job category). Respondents worked for Bridgeport Public Schools, Norwalk Public Schools, Stamford Public Schools, ABCD, Inc. (Bridgeport), Cooperative Education Services (based in Trumbull and exclusively serving Bridgeport children), Norwalk Head Start, and Children's Learning Centers (Stamford). The majority of respondents work in Bridgeport or with Bridgeport children (see figure 1).



Photo by Scott Griffin, C.E.S.

Respondents were asked to indicate the type of early learning program for which they worked. Because the types of early learning programs generally represented how the programs were funded, respondents were allowed to indicate more than one program type. School Readiness and public school preschool programs were identified as the two most common program types for this sample (see figure 2).

Figure 1. The majority of survey respondents work in Bridgeport, Connecticut.  
Number of survey respondents from each community. N=65

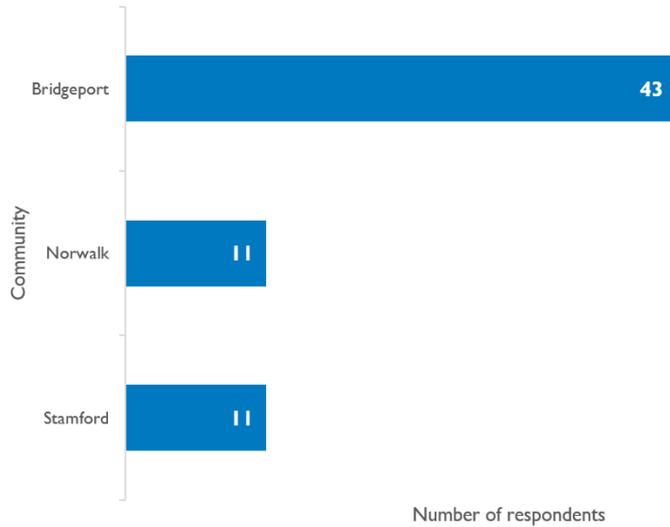
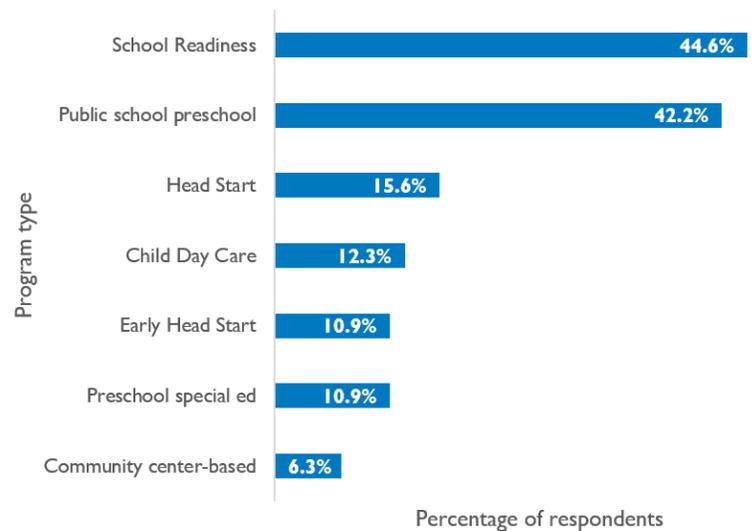


Figure 2. Respondents work for a variety of program types.  
Percentage of respondents working in each program type. Respondents could indicate more than one program type. N=65



Survey respondents were asked about their educational background and certification status. The majority of respondents indicated that they held a degree (level not specified) in early childhood education (see figure 3) and the majority are certified early childhood teachers in the state (see figure 4).

Figure 3. The majority of survey respondents hold a degree in early childhood.  
Percentage of respondents who hold some level of early childhood degree. N=65.

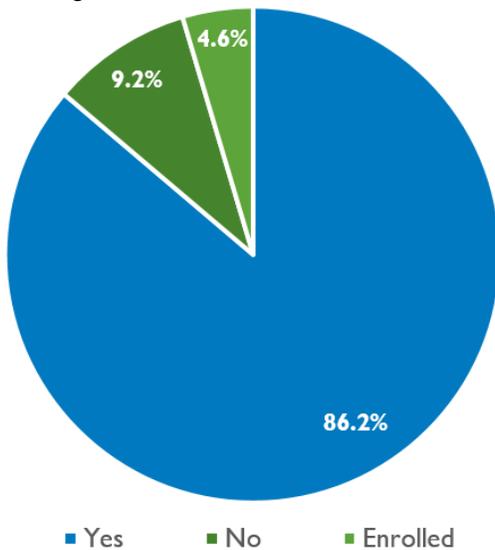
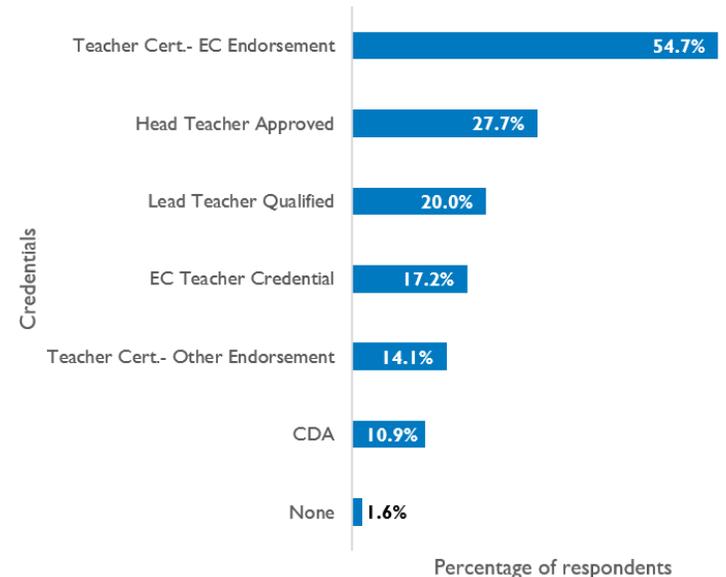


Figure 4. The majority of respondents are certified teachers.  
Percentage of respondents who hold specific certifications. Respondents were asked to indicate all of the credentials they hold. N=65.



Almost half of respondents indicated that they had more than 15 years of experience in early childhood education, with a small percentage indicating that they are new to the field (see figure 5).

Figure 5. Almost half of respondents have more than 15 years of experience. Percentage of respondents with different amounts of teaching experience. Respondents were asked to select one of the ranges listed below. N=65.

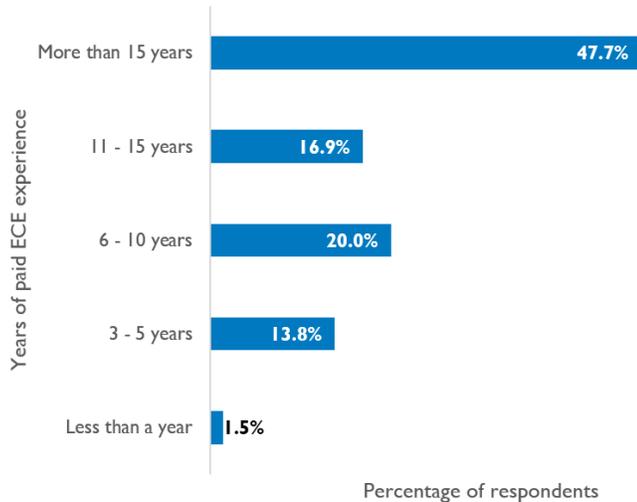
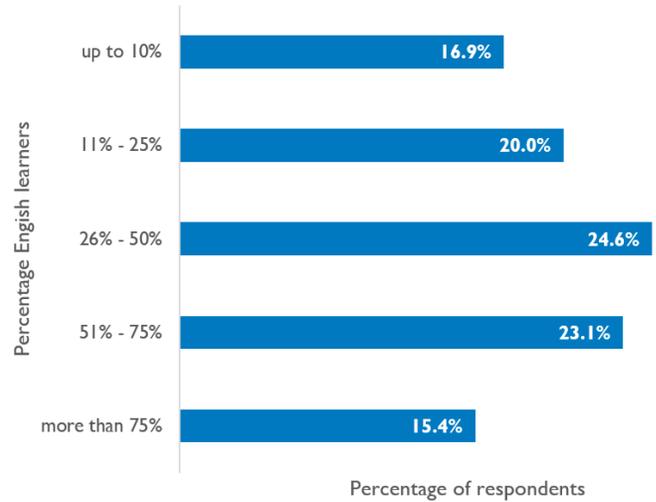


Figure 6. Classrooms had a wide range of children whose primary language is not English. Percentage of respondents with different proportions of children coming from homes where English is not the primary language. Respondents were asked to select one of the ranges listed below.



Respondents were also asked about characteristics of their classrooms. The majority of respondents (75 percent) indicated that they have an average of 16 – 20 children in their class each day. When asked about children in their classrooms who come from homes where English is not the primary language, responses varied widely. Over 60% of respondents stated that more than a quarter of their children had home languages other than English (see figure 6).

### Survey responses indicated that a variety of assessments are used

Respondents were asked to indicate which assessments they used in their classrooms. While the majority of respondents indicated using the Connecticut Preschool Assessment Framework ( $n = 50$ ) and the Brigance Inventory of Early Development ( $n = 38$ ), fourteen other assessments were also reportedly used (see table 1).



Photo by Scott Griffin, C.E.S.

Table 1. Respondents reported using a variety of assessments in their classrooms. Number of respondents from each community who reported using each assessment. N=60.

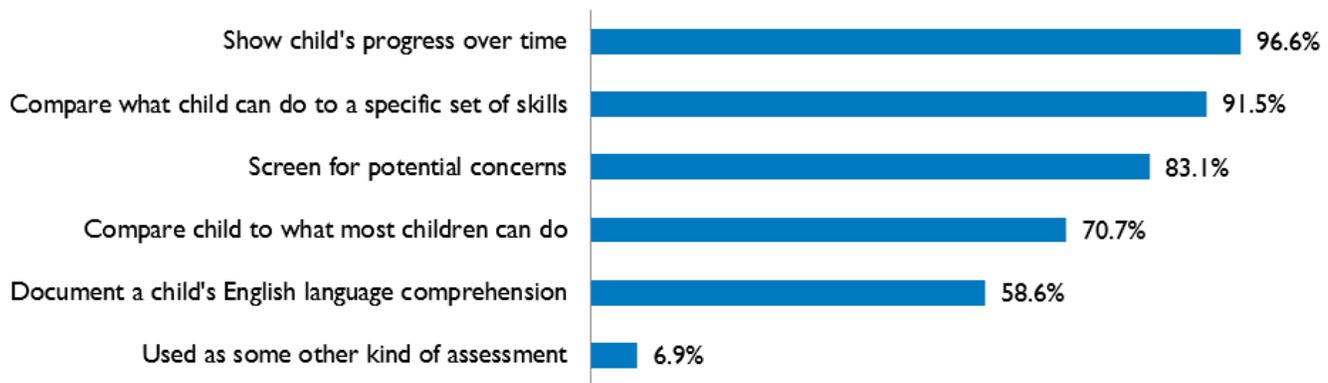
Assessment	Number of respondents
Connecticut Preschool Assessment Framework (CT PAF)	50
Brigance® Inventory of Early Development III	38
Ages and Stages Questionnaires® (ASQ)	10
The Devereux Early Childhood Assessment (DECA)	9
Teaching Strategies GOLD®	9
Preschool Early Literacy Indicator (PELI)	8
Locally designed assessment	7
Ages and Stages Questionnaires: Social-Emotional ® (ASQ-SE)	5
Early Screening Inventory- Revised (ESI-R)	5
Battelle Developmental Inventory™ (BDI-2™)	2
The Social-Emotional Assessment/Evaluation Measure (SEAM™)	2
Splash into Pre-K	2
Assessment, Evaluation and Program System for Infants and Children (AEPS)	1
The Carolina Curriculum for Infants Toddlers with Special Needs (CCITSN), 3rd Edition	1
Connecticut Kindergarten Entrance Inventory	1
Hawaii Early Learning Profile (HELP)	1
The Carolina Curriculum for Preschoolers with Special Needs (CCPSN), 2nd Edition	0
Developmental Indicators for the Assessment of Learning, Third Edition (DIAL™-3)	0

### Survey respondents indicated a multitude of assessment purposes and uses of assessment data

For each assessment that a survey respondent reported using, s/he was asked to indicate the ways in which s/he used the assessment. One survey question asked respondents about the purpose for each assessment—for example, was it used as a progress monitoring assessment, a screener, or as some other type of assessment. A second survey question asked about the ways in which the data from each assessment were used—for example, were they used to inform curriculum development, to form instructional groups, or in some other way.

For the initial analyses, we compiled responses regarding assessment purposes across all assessments. The most common assessment purpose reported was to monitor a child’s progress (as a progress-monitoring assessment). In addition, the majority of respondents also indicated using the assessment to compare what a child can do to a specific set of skills (criterion-referenced assessment), to screen for potential concerns (screener), to compare a child to what most children can do (norm-referenced assessment), and to document a child’s English language comprehension (see figure 7). The total number of different purposes indicated across all assessments was also calculated, with respondents indicating anywhere from one to six purposes for the assessments they use (mean number of purposes = 4.1, standard deviation = 1.2).

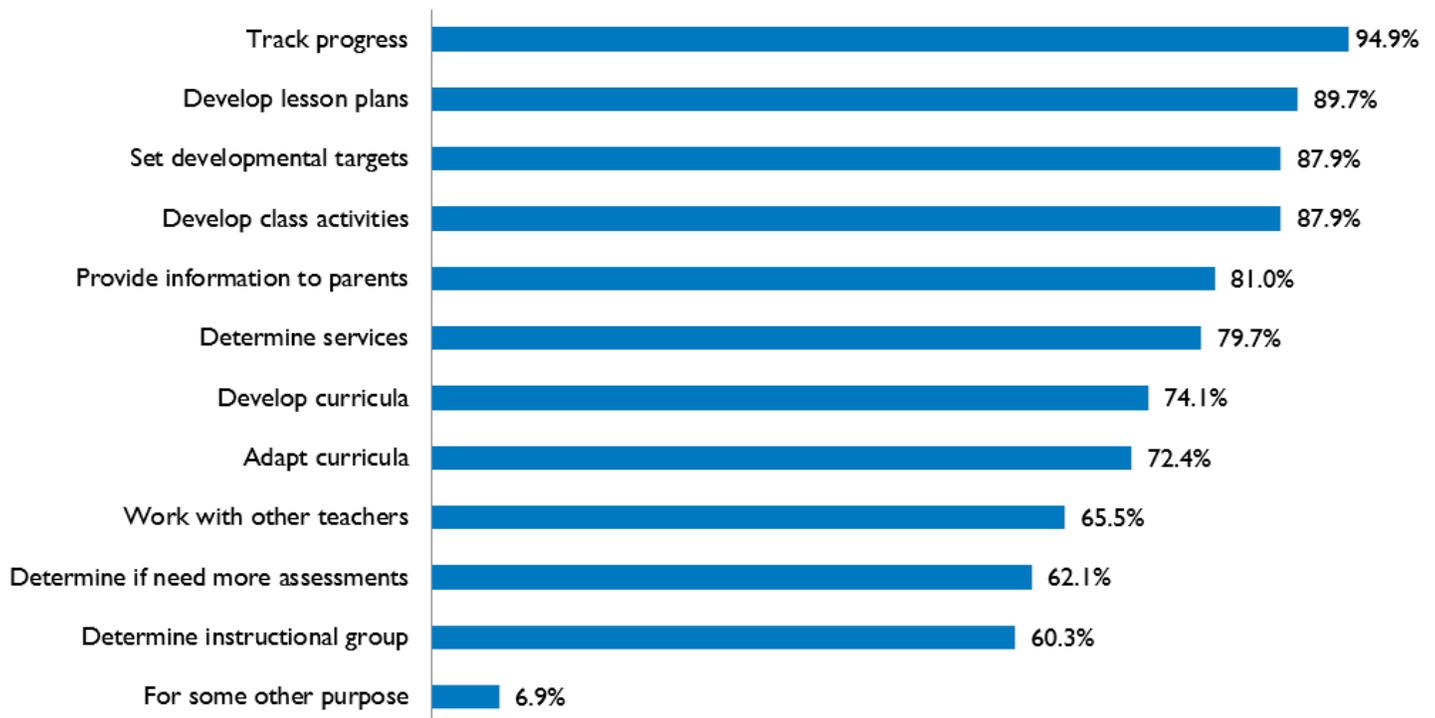
Figure 7. Over 96 percent of survey respondents reported using at least one assessment to monitor a child's progress over time. Percentage of respondents who reported using at least one assessment for each of the listed purposes. N=59.



Likewise, we compiled responses regarding the use of assessment data across all assessments. Tracking children's progress was the most common way that survey respondents indicated using assessment data (see figure 8), which corresponds to the most commonly reported assessment purpose. The total number of different ways survey respondents indicated using assessment data across all assessments was also calculated, with respondents indicating anywhere from one to twelve ways in which they use assessment data (mean number of uses = 8.6, standard deviation = 2.4). A few respondents specified what they meant when they indicated that an assessment was used for an "other" use, these included using the assessment data for student learning objectives and using the assessment because it was required.

Figure 8. Tracking progress, developing lesson plans, developing class activities, and setting developmental targets are the top ways that survey respondents report using assessment data.

Percentage of respondents who indicate using assessment data for each of the listed uses.



### There are similar patterns and possible differences in assessment purpose and use across communities

It is possible that teachers who work in different communities may use assessments for different purposes. For this reason, PEER was interested in exploring whether respondents from each of the three communities indicated different ways in

which they use assessments. While some differences were found, for the most part, teachers report similar uses across communities. (see table 2) One difference is that respondents from Norwalk and Stamford less frequently reported that they use assessments to document English language comprehension, compared to respondents from Bridgeport. Another difference is that Stamford teachers were less likely to use assessments to compare a child to what most children can do, compared to respondents from Bridgeport and Norwalk. It is important to interpret these results with caution, however, since Norwalk and Stamford had 10 or fewer respondents each for these items.

Table 2. Teachers across communities report similar purposes for the use of assessments.

Percentage of respondents from each community who reported using at least one assessment for each of the listed purposes. N=40 for Bridgeport, N=10 for Norwalk, and N=9 for Stamford.

Purpose of assessment	Bridgeport	Norwalk	Stamford	All
Show children's progress over time	97.5	90.0	100.0	96.6
Document what a child can do compared to a specific set of skills	95.0	80.0	88.9	91.5
Screen for potential concerns	85.0	80.0	77.8	83.1
Compare a child to what most children can do	75.0	77.8	44.4	70.7
Document a child's English language comprehension	70.0	22.2	44.4	58.6
Used as some other kind of assessment	7.5	11.1	.0	6.9

When considering patterns of how assessment data are used, responses seem to be similar across these three communities. As shown in table 3, survey respondents from Norwalk less frequently reported using assessments for working with other teachers, developing class activities, or determining if children need additional assessments, as compared to respondents from Bridgeport and Stamford. Survey respondents from Stamford more frequently reported using assessments for working with other teachers (see table 3), compared to Bridgeport and Norwalk respondents. Again, it is important to interpret these results with caution, because Norwalk and Stamford had 10 or fewer respondents for each for these items.

**Top 3 Purposes for Classroom Assessment**

1. Show children's progress over time
2. Document what a child can do compared to a specific set of skills
3. Screen for potential concerns



Photo by Scott Griffin, C.E.S.

Table 3. With some differences, teachers across communities seem use assessment data in similar ways.

Percentage of respondents from each community who reported using assessment data from at least one assessment for each of the listed uses. N=40 for Bridgeport, N=10 for Norwalk, and N=9 for Stamford.

Use of assessment data	Bridgeport	Norwalk	Stamford	All
Track progress	97.5	80.0	100.0	94.9
Develop lesson plans	92.5	88.9	77.8	89.7
Develop class activities	92.5	55.6	100.0	87.9
Set developmental targets	92.5	77.8	77.8	87.9
Provide information to parents	87.5	66.7	66.7	81.0
Determine services	85.0	70.0	66.7	79.7
Develop curricula	80.0	55.6	66.7	74.1
Adapt curricula	75.0	77.8	55.6	72.4
Work with other teachers	65.0	33.3	100.0	65.5
Determine if need more assessments	65.0	44.4	66.7	62.1
Determine instructional group	62.5	77.8	33.3	60.3
For some other purpose	5.0	22.2	.0	6.9

### There are similar patterns and possible differences in assessment purpose and use across settings

Early learning settings were categorized as two different types—school- and community-based settings. School-based settings are defined as programs that are physically located in schools and run by the local education agency, whereas community-based settings are those that are run by other agencies, such as a local agency that runs Head Start. As in the previous section, PEER explored whether respondents from the two types of settings indicated different ways in which they use assessments. While teacher-reported uses of assessments are similar across settings, there are some differences. Most notably, more teachers in school-based settings seem more likely than teachers in community-based settings to use assessments for comparing a child to what most children can do (see table 4).

Table 4. Teachers across settings use assessments for similar purposes.

Percentage of respondents from each setting who reported using at least one assessment for the listed purposes. N=39 for school-based respondents and N=20 for community-based respondents.

Purpose of assessment	School	Community	All
Show child's progress over time	97.4	95.0	96.6
Compare what child can do to a specific set of skills	89.7	95.0	91.5
Screen for potential concerns	82.1	85.0	83.1
Compare child to what most children can do	76.9	57.9	70.7
Document a child's English language comprehension	56.4	63.2	58.6
Used as some other kind of assessment	7.7	5.3	6.9

When considering how teachers use assessment data, a higher percentage of teachers in school-based programs reported that they use assessment data to provide information to parents and to determine instructional groups (see table 5), compared to teachers in community-based settings. In comparison, a higher percentage of teachers in community-based settings seem to use assessments to develop curricula, work with other teachers, or determine if a child needs more assessments.

Table 5. The use of assessment data is also similar across settings.

Percentage of respondents from each setting who reported using assessment data from at least one assessment for the each of the listed uses.

Use of assessment data	School	Community	All
Track progress	94.9	95.0	94.9
Develop lesson plans	89.7	89.5	89.7
Provide information to parents	89.7	63.2	81.0
Set developmental targets	89.7	84.2	87.9
Develop class activities	87.2	89.5	87.9
Determine services	79.5	80.0	79.7
Determine instructional group	71.8	36.8	60.3
Adapt curricula	71.8	73.7	72.4
Develop curricula	69.2	84.2	74.1
Work with other teachers	59.0	78.9	65.5
Determine if need more assessments	51.3	84.2	62.1
For some other purpose	7.7	5.3	6.9

Note. The sample for this item includes 39 school-based respondents and between 19 to 20 community-based respondents. Cells represent the percentage of survey respondents who indicated that they use data from at least one assessment tool in that way.

## Implications of the study findings

The study results indicate that early childhood teachers use a variety of assessments in a variety of ways. Furthermore, while teachers across settings and communities reported using assessments in similar ways, there are some differences. Below are three main implications of the study findings:

- **The use of a wide variety of specific assessments by early childhood education teachers can make it difficult to compare across classrooms or settings.** If districts and early childhood agencies are interested in using assessments to look at children across classrooms, it is imperative that they use common assessments. Furthermore, if districts encourage data sharing between early childhood programs and kindergarten, the use of common assessments across different early childhood settings would increase interpretability of results by kindergarten teachers.
- **The variety of specific assignments used by early childhood education teachers increases the burden of professional development.** Teachers should receive adequate professional development for each assessment that they use. If common assessments were used within a community, it could reduce the investment in professional development necessary to ensure the assessments are administered and used appropriately.
- **Teachers are using assessments and assessment data for a multitude of purposes.** The survey results imply that teachers are using data to inform their practice and work with children. This finding is encouraging given the research that suggests that data-informed practice can lead to improved student outcomes.[3]

## Limitations of the study

There are several limitations to the study:

- As mentioned above, although approximately 200 teachers were invited to participate in this study, approximately 33% completed the survey. As such, we do not know how well these results describe the assessment practices of

the larger population of early childhood teachers within and outside of these communities. The small sample size requires us to take caution when interpreting differences in assessment uses across communities. Several PEER stakeholders have indicated that they would find the results more valuable if a higher percentage of teachers had participated. Future studies should implement the survey with a larger, random sample of teachers.

- While it is encouraging that teachers indicate using assessments for various purposes, it is important that teachers are using assessments in ways that are consistent with their intended uses. In a follow-up study, PEER is exploring the degree to which teachers report using assessments in ways that are consistent with the test publishers' intended use(s) for the assessments.
- It is possible that teachers interpreted the questions about assessment uses differently than expected, and that interpretations may have varied across communities or settings. For example, it is conceivable that teachers in community-based settings were unsure what was meant when asked if they used assessments to determine instructional groups, where teachers in school-based settings may be more familiar with that term. Prior to using the survey in the future, PEER would conduct cognitive interviews to ensure the items are eliciting the intended information.



Photo by Scott Griffin, C.E.S.

## Conclusion

Despite these limitations, this study provides a foundation upon which future research can build. In the past year, all three PEER communities have expressed a growing interest in using assessment data from early childhood education settings to understand the growth and readiness of their children. Examining current assessment practices in PEER communities is the first step in supporting the effective use of assessment tools to improve instructional practice, service delivery to students, and student outcomes.

## Acknowledgements

This work was supported by grant R305H140142 from the U.S. Department of Education's Institute of Education Sciences (IES) under the Researcher-Practitioner Partnerships in Education Research program. The content of this brief is solely the responsibility of the authors and does not necessarily represent the official views of the Institute of Education Sciences (IES) or the U.S. Department of Education.

PEER would like to thank the teachers who participated in this study and the organizations that made this work possible, including Bridgeport Public Schools, Norwalk Public Schools, Stamford Public Schools, ABCD, Inc., Norwalk Housing Authority, and Children's Learning Centers. PEER would also like to thank Michelle Levy, Education Consultant, Connecticut Office of Early Childhood, Scott Griffin, Public Relations and Marketing Specialist, Cooperative Educational Services, and Silvana Alarcon, PEER Intern.

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Irwin, C. W., Strambler, M. J., Meyer, J. L., & Coleman, G. A. *Assessment use in early childhood: A study of public and private center-based classrooms in southwest Connecticut*. New Haven, CT: Partnership for Early Education Research (PEER). July 2017.

## References

1. Snow, C. and S. Van Hemel, *Early childhood assessment: Why what and how? Report of the Committee on Developmental Outcomes and Assessments for Young Children*. 2008, Washington, DC: National Academies Press.
2. Zweig, J., et al., *Data Collection and Use in Early Childhood Education Programs: Evidence from the Northeast Region*. REL 2015-084. Regional Educational Laboratory Northeast & Islands, 2015.
3. Stein, A., *The Educare Chicago Research-Program Partnership and Follow-Up Study: Using Data on Program Graduates to Enhance Quality Improvement Efforts*. *Early Education and Development*, 2013. 24(1): p. 19-41.