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CAPTURING A CHILD'S UNIQUENESS

Educators' and Parents' Insights on Designing Early Childhood Assessments

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Early childhood assessments are important for understanding how young children are learning and developing.[1] Policymakers, school district leaders, and educators rely on assessment data when deciding on, designing, and implementing early childhood policies and programs.[2] Teachers use assessment data to guide their instruction and support for individual learners, while families use the data to further support their children's learning at home.[3] Research indicates that having data on child skills can lead to improvements in child outcomes.[4] Yet there are concerns that existing assessment tools were not developed to capture the strengths and needs of all children and are burdensome to use, with resulting data that are difficult to interpret and act upon.[5]

For assessment developers seeking to address these concerns, discussions with educators and families who rely on these tools and the resulting data can bring about novel ideas and fresh approaches to assessment design.[6] Incorporating feedback from these key stakeholders into the development of new assessment tools could help ensure that assessment data are accurate and useful and that the tools do not impose a burden on stakeholders either at home or in schools.[7]

To that end, this brief shares educators' and parents' advice on creating assessment tools that are easy to navigate, useful, and designed to capture the skills of all early learners. The advice is drawn from focus groups conducted for the Measures for Early Success Initiative (Measures Initiative), an initiative led by MDRC that aims to develop scalable and comprehensive early childhood assessment tools that are usable

for all educators, children, and families in public pre-K settings. This brief aims to elevate the perspectives of educators and families with the goal of expanding the early childhood assessment field's understanding of how to design assessment tools to meet the needs of these stakeholders and the children they support.

Background on the Measures Initiative

The Measures Initiative aims to reimagine the landscape of early learning assessments for 3- to 5-year-olds in pre-K so that high-quality data can be used to meaningfully support and strengthen early learning experiences for all young children. MDRC is collaborating with assessment developers to design new, innovative assessment tools in alignment with this vision.[8] The developers are tasked with designing tools that reflect research-based best practices laid out in the User-Informed Principles — a guidance document that specifies design parameters for developing assessment tools that meet the needs of a broad range of families, children, and educators involved with publicly funded pre-K programs.[9] The belief that all children need assessments that are accurate and engaging underpins the work of the Measures Initiative. To advance toward this outcome, the Measures Initiative focuses on designing assessments that successfully support demographics that have historically been left out of the assessment development process.

The Measures Initiative aims to produce developmentally appropriate, technology-based direct assessments that take children approximately 10 minutes per assessment session to complete. (Early childhood assessments typically capture children's skills through one of three modes: *direct assessment*, where children respond to prompts and their responses are the resulting assessment data; *observations*, where teachers gather information about children during classroom activities and the observations are the resulting assessment data; and *portfolios*, where teachers' evaluations of children's work are used as the assessment data.[10]) Compared with observations and portfolios, an advantage of direct assessments is that they are typically standardized and can be administered broadly, yielding data that can be compared across groups of children and programs.[11]

Another advantage of direct assessments is the potential for automated administration. Traditionally, direct assessments have involved an educator or another assessor asking children to respond to questions or to perform a task. As technology has advanced, some direct assessments have moved to technology-based administration, such as on a tablet or other devices that capture children's responses.[12] This brief presents educators' and parents' advice for designing technology-based assessments.[13] For specific feedback offered by users who reviewed assessment tool prototypes, see the MDRC publication "Developing Engaging Ed Tech Products for Young Children: Insights from User Testing of Assessment Tool Prototypes."[14]

Methodology and Sample

To inform the design of the new assessment tools, MDRC and the assessment developers have conducted 88 focus groups with educators and parents from regions across the country.[15] Table 1 shows the focus group sample.[16]

Table 1. Focus Group Sample

CHARACTERISTIC (%)	EDUCATORS	PARENTS
Race or ethnicity		
Hispanic or Latine	33	42
Black or African American	30	35
White or Caucasian (not Hispanic or Latine)	28	13
Native American or Alaska Native	3	2
Two or more races	1	1
Unknown or prefer not to say	6	7
Preferred language		
English	85	71
Spanish	11	22
Both (English and Spanish)	4	8
Pre-K setting		
Head Start center	44	35
Community-based childcare center	34	40
Public school pre-K	16	18
Home-based care	2	3
Unknown	4	4
Sample size	197	130

SOURCE: Self-reported data from a questionnaire administered when recruiting for focus groups.

Focus groups lasted 60 minutes and took place either virtually or in person from December 2022 to April 2024.[17] In these groups, facilitators asked participants about their priorities for early childhood assessments, and assessment developers shared early prototypes of their assessment tools and asked for feedback. Participants weighed in on how children would respond to the new tools and gave suggestions for making the tools more engaging for all children. They also gave feedback on the functionality and usefulness of the tools' data dashboards for educators and parents.

Findings

This brief shares promising recommendations from educators and parents that assessment developers can consider when designing early childhood assessment tools to support all children, parents, and educators. The ideas fall into two categories: how to create assessments that enable all children to do their best, and how to design data dashboards that are usable and useful for educators and parents.

Box 1 summarizes the recommendations. Where possible, these recommendations are presented along with citations to the relevant sections of the User-Informed Principles in order to demonstrate the relationship between parent and educator feedback and corresponding evidence-based best practices.

The recommendations are presented with the goal of elevating the voices and preferences of the users of assessment data. Developers engaged in the Measures Initiative are developing assessment tools using the best practices from the User-Informed Principles as a guide and multiple rounds of testing. In general, educators' and parents' recommendations aligned with and confirmed the User-Informed Principles.

Designing Assessments That Enable All Children to Do Their Best

A primary consideration for educators and parents was how to design an assessment that helps all children perform to the best of their abilities. To accomplish this, they recommended making the content and context of assessment tasks relatable to children; incorporating child customization and choice, playful and interactive activities, and multimedia; and ensuring tool navigation is easy for 3- to 5-year-olds with varying technology experience and providing clear instructions, practice, and reminders. These recommendations are consistent with the best practice of creating assessments that are engaging and potentially self-guided.[18]

Box 1. Educators' and Parents' Promising Ideas for Designing Early Childhood Assessments

To design assessments that enable all children to do their best:

1. Make the content and context of the assessment tasks relatable to children based on their background and experiences.
2. Incorporate play-based and interactive activities, making use of child choice and customization and multimedia.
3. Ensure tool navigation is easy for 3- to 5-year-olds with varying technology experience and provide clear instructions, practice, and reminders.

To design data dashboards that are useful for all educators and parents:

1. Prioritize simplicity and clarity when designing the data dashboard.
2. Show the data of greatest interest to educators and parents and display performance in multiple ways.
3. Design the data dashboard to facilitate communications about assessment results.
4. Provide individualized guidance based on assessment results.

Make the Content and Context of the Assessment Tasks Relatable to Children Based on Their Background and Experiences.

Crafting the wording, context, and scenarios for assessment items to reflect children's home, community, and interest areas is one way to engage children in an assessment. Familiar context may also help children develop a better grasp of what a task is asking them to do and to perform more accurately.[19] Yet, many commonly used early childhood assessments were developed and validated using homogenous samples. Consequently, assessments seldom reflect the wide range of backgrounds and experiences of children in publicly funded preschools.[20]

During focus groups, parents and educators agreed that it is vital to make the content and context of assessment tasks relatable to children based on their backgrounds. "[Children from my community] don't see themselves in a lot of the [assessment] activities, so they're not able to connect.... I'd really like to see something that has some culturally relevant topics," an educator shared. Participants recommended embedding elements of children's experiences and communities into stories featured in assessment items; these elements could include names, foods, languages and dialects, and activities. In response to an assessment demonstrated during a virtual focus group session, an educator typed into the chat box:

> I appreciate [this assessment] offering stories that include vocabulary from different dialects/countries. Materials in Spanish (including books!) often have unfamiliar vocabulary. It is especially important for assessment materials to reflect the children's experiences and background.

A similar recommendation was to feature children from different backgrounds in assessment scenarios so children taking the assessment can see representation they do not normally get to see. Parents highlighted a story about a barbershop in one assessment as a good example. "The barbershop/beauty shop connects with African American kids because those are places that they go. [I] love how African American hairstyles were included," a parent explained. "I love the inclusion of fades and cornrows," another parent said. Educators proposed another way to incorporate children's communities: designing the visuals in the tool to match different types of neighborhoods so children can see aspects of their community such as the geography, climate, and urban character reflected in the activity.

An educator acknowledged the importance of offering assessments in different languages. However, this educator also pointed out that simply including an assessment in two languages is not enough. "Even though the tool is in Spanish, it doesn't really capture some cultural responses ... those very little things [that] are so unique to certain cultures," the educator said. Educators emphasized the importance of assessments capturing a child's uniqueness, which they said encompassed a child's individual circumstances, preferences, and interests.

Other aspects of children's personal contexts can similarly be integrated into assessment items to make assessments more widely relatable to all children. Examples mentioned included children's family makeup and history, children's interests, and children's communication styles and preferences. A parent recommended that more assessment items be focused on the family, given the central importance of family to young children. Others agreed and pointed out that assessment items depicting different family structures

can help children living within varying family structures connect to the task. A parent revealed a gap in what is typically portrayed:

> We don't really see, like, single dads with kids and single moms with kids. We don't really see grandparents with grandchildren, adoptive kids, foster kids, those types of [family structures] are definitely are underrepresented.

Incorporating other common elements of children's everyday lives into activities is another way to make the assessment relatable to children. For example, educators liked an activity that involved comparing heights across children, as they noticed children often compare heights with their friends. They also liked an activity that involved using objects for measuring that are relevant to children's lives. An educator explained, "I like how they used objects or animals to determine the size … you know, how many turtles is it?… That helps give a comparison to young children." Another educator suggested having topics that adapt to an ever-changing world, such as by changing to reflect current events.

However, one parent cautioned that the topics should be both relevant to children *and also* developmentally appropriate. For example, parents giving feedback on an assessment story about a child helping their family make soup pointed out that, realistically, a 3- to 5-year old is not likely to be involved in the steps required to make soup, such as chopping vegetables with a knife, cooking the soup on the stove, or handling the pot of hot soup. Instead, they suggested including stories that focus on more realistic examples of children taking on more responsibility, such as having a child take care of a pet.

Incorporate Play-Based and Interactive Activities, Making Use of Child Choice and Customization and Multimedia.

Children's experience taking an assessment can directly affect their performance. A best practice in early childhood assessment design is incorporating play-based elements with developmentally appropriate auditory, visual, and tactile experiences.[21] These features can make the assessment more enjoyable and fun for children, which in turn helps them pay attention to assessment items, focus throughout the tasks, and stay motivated. In keeping with this approach, educators and parents emphasized the importance of making assessments interactive and interesting to children and gave ideas for how to do so.

Structuring an assessment task around a story is one way to engage children, parents said, noting that most children enjoy stories. They liked one of the assessments demonstrated during focus groups that used this approach. Parents also reacted positively to an activity demonstrated during focus group sessions that involved discovering items hidden behind different doors, as they thought incorporating elements of discovery, bit by bit throughout the task, would engage their children.

Parents endorsed designing assessments that are "like playing a game," noting that assessments must compete against technology-based games for children's attention and should thus include similar interactive features. Parents recommended designing assessment tasks that are high-energy and dynamic, like racing games, with other familiar elements — for example, the "shake to undo" feature commonly used in

tablet apps. In response to a demonstration of a tablet-based assessment during a focus group session, a parent noted that her daughter would enjoy the assessment because the assessment design — in which children are shown pictures and choose an activity — was similar to tablet-based games that provide children independence.

Integrating a brief hands-on or physical activity break from the technology was one suggestion for making an assessment more interactive and sustaining children's engagement. An educator explained that children enjoy hands-on activities and working in collaborative settings. An assessment could include prompts during a task or at a break between tasks or "anything that gets the kids up and moving," an educator suggested. Integrating opportunities for children to use manipulatives or other physical materials could also help improve engagement, educators and parents thought. An educator suggested incorporating cameras into the assessment tasks and having children take and interpret pictures as a way to vary the mode of administration and make the assessment more exciting.

Building in child-led customizable elements and options for child choice is another method parents and educators recommended. Both give children agency and the opportunity to be independent, which could help with engagement in the assessment. Parents reacted positively to tool prototypes that included customizable, child-designed avatars and characters. They emphasized being able to customize the details — such as skin tone, hair style and texture, clothing, and accessories — as a particular benefit. "My son is missing a tooth, so he would love that custom part," a parent said. Parents also recommended including sounds as children build the avatar, allowing children to assign a name to the character, and providing options for clothing and accessories that align with various cultures and professions. Going further to incorporate child choice, a parent suggested allowing children to choose between topics within an assessment activity — such as counting trucks, dinosaurs, or animals — so they can choose the topic they are most excited about.

To sustain children's engagement, parents recommended embedding a mixture of multimedia elements such as videos, pictures, and audio. An educator emphasized the importance of adding colors, sounds, and noises, noting that "kids get bored easily." A parent shared why visuals and audio are especially important for children who are bilingual:

> I grew up [speaking] Spanish so, like, throughout early school, it was hard to catch English and to learn it, and at home my parents spoke Spanish. So it was hard to read [or understand] English … so the images were very supportive … [because] I could use my imagination, or just kind of figure out the storyline and what was going on.… [And] if there's audio involved, there'll be more … opportunity to be more engaged and [a] guide … on what's going on in the story.

When designing the visuals and graphics, parents advised considering children who are color-blind and selecting colors that work for those children.

Parents varied in whether they thought illustrations, such as cartoons, or real images are best for images in assessment items. However, they agreed that any illustrations used should not be overly stylized and should have facial expressions that are easy to read. Parents said they did not like a particular illustration

shown during a focus group session because the character's expression was ambiguous. For images in assessment items measuring social and emotional learning, parents advised depicting the whole body — rather than just the face — to help children identify emotions. For other images, they suggested prioritizing those with children who look happy, to lighten the mood.

Multimedia can also be used to help make assessment content more relatable to children, as discussed above. Parents recommended including images of children from a wide range of backgrounds so all children could find a picture that represents them. They also proposed including photos that are meaningful to children, such as photos of people or places in their community — for example, a mail carrier, doctor, or a store across the street that children see daily.

When incorporating audio, parents recommended varying the voice used for narration within the same assessment tool, while making sure the narrator's voice is child-friendly and energetic. For instance, parents did not think an assessment video demonstrated during focus group sessions would engage children because the narration was monotone and lacked expression. Including music as well as fun, silly noises were other strategies parents endorsed for engaging children in the assessment tasks. They also suggested using audio capabilities to have the tool give children words of encouragement to sustain their engagement. Ultimately, parents advised including and mixing up multiple types of audio — including narration, noises, and music — as a way to maximize child engagement; "kids love touching things, they love pushing things, they love noises," explained a parent.

Ensure Tool Navigation is Easy for 3- to 5-Year-Olds with Varying Technology Experience and Provide Clear Instructions, Practice, and Reminders.

Children ages 3 to 5 — who are developing fine motor skills — differ widely in how adept they are at clicking, pressing buttons, tapping, dragging and dropping, and performing other actions required to take a technology-based assessment. Therefore, the gestures and movements required to interact with the technology should be developmentally appropriate; for instance, for tablets, actions should not rely heavily on dragging and dropping objects.[22] This is important to ensuring that children can complete the tasks without external support.

Designing a tool that is easy for all children to use, regardless of exposure to technology, was a primary consideration for educators and parents. Educators acknowledged that many of the children in their class know how to use technology-based tools, but expressed concern for those who do not use technology at home and for younger 3-year-old children, who have less experience with technology. An educator explained the importance of designing tool navigation in consideration of a range of experience with technology:

> There are some children that are on [technology] all the time when they're at home and in school. And then there's some children that don't have that exposure except at school. So just to use that as one assessment wouldn't be a true picture of the child.

Educators and parents highlighted the necessity of giving children clear guidance on how to use the touchscreen features and opportunities to practice using them. Educators said children often have trouble

advancing to the next screen on a tablet; knowing that the arrow button brings them to the next page is not intuitive for them. They commended an activity shown during focus groups in which the audio explicitly directed children to "tap the green button when done." Parents recommended embedding video or audio reminders about where to tap to record an answer and move to the next screen throughout the assessment to help children move through the task. To help children understand their response options, a parent advised highlighting all available answer options on each new question. Because children — younger 3-year-olds, especially — struggle with dragging and dropping items on a touchscreen, another parent suggested including a video tutorial that shows how to drag and drop, and giving children time to practice. Incorporating features such as navigational controls from video games children play was another suggestion parents shared for helping children use the tool.

They also emphasized the importance of giving consistent guidance. Educators pointed out that one of the task prototypes displayed during a focus group reminded children what to tap for some questions but not others, and they expressed concern that the inconsistent directions might confuse children.

Participants also commented on the use of icons, noting that they should be visually simple. They suggested accompanying icons with audio to help children who do not use technology at home understand an icon's meaning. Opinions were mixed about a specific question involving which icon to use to indicate speaking — an icon of a microphone or a face. "[The] microphone could [indicate] recording instead of speaking" said a parent who preferred the face, while another voiced a different opinion — "I think for 'speak,' the microphone makes sense for 3- to 5-year-olds … [because] when a child sees a microphone, they automatically want to talk in it."

Educators and parents said another challenge of technology-based tools with physical components is that children often struggle to push buttons hard enough. Parents therefore advised designing physical features such as buttons to be easy for a small hand to manipulate, and color coding the buttons to help children remember which to push.

Designing Data Dashboards That Are Useful for All Educators and Parents

Along with students' experiences taking an assessment, the experiences of people who use the resulting assessment data also matter. Educators and parents rely on assessment results to support child development; the data can influence their decision-making related to early childhood programs and practices, teaching in the classroom and at home, and ways to best support individual children.[23] Assessment results are often shown on a data dashboard, or the section of the tool that displays the data in various ways, including numerically and visually in charts and graphs.[24]

In focus group sessions, educators and parents gave recommendations for designing data dashboards to optimize their usefulness. They advised making the data easily accessible to educators and parents by prioritizing simplicity and clarity; displaying the results in a way that is motivating and not negative; showing the data of most interest to educators and parents; using design to facilitate communication about the results; and providing individualized guidance based on assessment results.

Prioritize Simplicity and Clarity When Designing the Data Dashboard.

Educators and parents are best empowered to use assessment data when the data are easy to access and understand. It is all the more important that the data are easily accessible as educators typically have limited time to spend reviewing reports.[25] Ease of use relies on multiple factors including presentation of data in a user-friendly, visually appealing way; communication about the data in the user's home language; and inclusion of explanations that help with interpretation.[26]

Educators and parents gave suggestions for dashboard visuals and features that could enhance comprehension of assessment results. Though educators and parents often need different things from a data dashboard — for instance, educators need a vantage point that shows data for all children and comparisons across the class, while parents only need to see data for their children — the recommendations shared apply to both groups of users.

A simple data dashboard that is easy to navigate was a top priority for educators and parents. A parent emphasized that she "would appreciate something short and sweet and to the point." Including too much detailed data can complicate the dashboard and make the results difficult to comprehend. At the same time, focus group participants did not want to spend a lot of time clicking through several levels of menu options to get to the information they needed. Parents recommended including more information on the main page, rather than dispersing it onto different pages that require users to navigate a menu to find what they are looking for. Parents reacted positively to a tool examined in a focus group session that implemented this design approach. As a parent observed:

> It's very practical to have all the options on the same page. I'd like to use something like [this dashboard] because it's easier than having to find different options in a menu. It's much more available when it's all on the same page.

Therefore, providing the right amount of information in the clearest way, while requiring minimal navigation, emerged as one challenge for assessment designers to address.

Parents and educators also expressed an interest in being able to view data at varying levels of complexity and detail, with an initial summary view provided on the dashboard and the more detailed results a click away. Parents pointed to a dashboard with a spreadsheet showing a summary of information and a link to get more details as a good example. They liked how this spreadsheet clearly showed where a child struggled and improved, along with a timeline of the assessments and how the child progressed over time. An educator explained why she also liked this dashboard:

> It's easy to read, especially for families, and just to understand.... Instead of having it too comprehensive ... they get the overall picture of where [the children] are and where they need to be. When it's too complicated, you don't tend to pay attention or care about it or even listen, even if the teacher's trying to explain it.

To help viewers understand the assessment results, educators emphasized the importance of providing assessment results in families' home languages. They also recommended including a rubric on how to

interpret scores — for instance, identifying the score threshold that indicates that the child is meeting or exceeding goals. Similarly, a parent suggested including information on what it means for a child to master a skill. "The word 'mastering,' like, what exactly does that entail?... Is it that [the child has] done this a lot of times and they've mastered it or is [it] just that one time?" the parent wondered. Parents also recommended defining the skills displayed or using more plain language, as parents without a background in child development might not understand the terminology. In response to a dashboard shown during a focus group, a parent said, "It does look confusing. I wouldn't understand what 'subitize items' means."

Visually depicting the assessment results in charts and graphs was another strategy parents and educators endorsed for making data easy to interpret. A parent shared why she liked a dashboard with these visuals:

> The progress [shown] on the [dashboard] on where they're at ... [is] a visual so I'm actually able to see — especially when it comes to math or geometry — it broke down into different categories so I can understand where he's at.

Educators suggested using color bands associated with different skill levels, as they allow educators to quickly identify a child's skill level. They responded better to tools that used bright colors — but not red, which they said has a negative connotation. Parents also reacted positively to a report displayed during focus group sessions that used colors, especially in tandem with percentages.

Going a step further, educators envisioned a dashboard that visually displays the results aligned with child development levels, which would allow them to quickly see which children are on track for their development level and which need more support. An educator described how a commonly used observation-based formative assessment does this:

> We take our actual observations and documentation and put it into the [assessment] system. At the end [of the assessment period] ... it generates a report with color bands for us to kind of guide, you know, are they on track, where do we need to work.... It's a great report [for me] as a teacher ... [to] be able to figure out, "Yep, that's about where they should be."

However, parents cautioned against including overly complex graphics. They thought one visual displayed during focus groups was difficult to read: "[A]ll the colors [make it] a bit too chaotic," said a parent. Reacting to a different visual, another parent said, "[I]t's just so busy, [I wouldn't] be able to understand how my child is actually performing and what their goal should be to perform at."

Across all the recommendations from parents and educators on how to design a dashboard, there was some tension between the desire for a simple dashboard with an easy-to-navigate interface and the desire to see many detailed data points displayed in different ways, visually and numerically, alongside guidance for interpreting the results. While it may not be feasible to accomplish both goals, developers may consider a simple primary dashboard that includes the main points and simple visuals, while offering additional details via a double-click, for those who are interested.

Show the Data of Greatest Interest to Educators and Parents and Display Performance in Multiple Ways.

Educators and parents are most likely to read the assessment results if the data included are useful and important to them.[27] Study participants provided insights into which kinds of data they most want to see. As educators and parents have different needs, they did not always recommend the same data points for inclusion; this section indicates when a data point was requested by educators, parents, or both.

Both parents and educators said that having detailed information on children's skills and strengths — beyond score reports or areas of growth — was a top priority. They reported wanting to see the specific skills children mastered, in addition to an overall, compiled rating. Examples shared included specific new vocabulary words children learned and how children's reading ability has progressed as shown by their grasp of more difficult books. Parents explained that they can use knowledge of the areas where their child is excelling to encourage their child. Educators also wanted to see the skill mastered *and* the action the child exhibited that indicated they had that skill. An educator explained that it would be helpful "to have the detail of why [the assessment documented] that skill — what was the child doing that met that skill?" A simple list of the skills a child did and did not exhibit may not be particularly useful, especially for educators who have not worked directly with the child.

Parents also wanted to see the skills children will work on next and the expected skill progression. They reacted positively to a data dashboard shown in focus groups that presented the skills a child had attained alongside information about the skills children develop at different ages.

Understanding the areas where children are struggling and skills they need to work on was also of interest to educators and parents. Educators wanted the details of what a child did — or did not do — during the assessment that indicated that the child was struggling in a certain area; they wanted the evidence of why a child received a particular score to help them fill out other required reports on the child's progress. Parents' primary concern was getting the information they need to support their children at home and they requested having access to as many details as possible on the areas where their children struggled. Highlighting this point, a parent suggested:

> [Provide] a breakdown of everything showing … what [children] know and what they don't know. What did she miss? What question was she asked that she struggled with? And what question did she excel at? So as parents, we further know how to help her get ready for kindergarten or continue helping her while she's in kindergarten.

Educators and parents said they also want to see children's performance represented in multiple ways: growth over time (including the timeline for assessments), age-based scores comparing their child to what is expected for their age, and grade-level-based scores. Similarly, parents acknowledged that preferences may vary and suggested showing performance in multiple ways (for example, sorted by skill, domain, and performance level) and letting users filter to choose the view they prefer. To explain the interest in multiple types of scores, an educator said:

> From an early childhood perspective, you focus more on age and developmental readiness. But as a wider society and parents, what they're interested in is: Are they ready for

> kindergarten? So there's going to be that disconnect. Personally, I'd stick with age. But for parents, I know that they would want to know: Is my child ready for kindergarten?

Other educators and parents endorsed the idea of reporting on the extent to which children have developed the skills that will help them have a strong start in kindergarten. They reacted positively to a dashboard displayed during focus groups that included a "kindergarten-ready" line — a marker on graphical representations indicating where children should be by the end of pre-K — because they thought it would give parents a benchmark for understanding their children's progress. Expanding on this, another educator shared in the chat:

> I work with parents for kindergarten readiness and I think having parents see where their child lies will provide a proactive approach on what parents [and] educators need to focus on for the Kindergarten Readiness Assessment. So I appreciate that Kindergarten Readiness line [in an example dashboard]. Especially with the kids coming from [the] Covid era and [who] will be turning 4 and seeing where they score.[28]

Parents were particularly interested in understanding how their child's assessment results compared with what educators expect children to know at the time of the assessment. A parent stated that the most important information to have on a data dashboard is "where your child is at, or what are they supposed to know versus what they know … so you know where they are educational[ly]."

To help educators compare and contextualize the assessment results, educators recommended mapping the assessment data onto other assessment data, school reports, and state standards. Showing how the data align with these metrics would help them more readily see how a child is doing across measures and where a child might need support, while also saving them time when using the data to fill out other required reports. Educators also liked the idea of a feature that enables them to compare data over time for groups of individuals such as classes or grades — for example, comparing between and within classrooms over several years.

Inspired by the tools and discussion, some focus group participants shared ideas that perhaps extend beyond the scope of traditional direct assessments, but help to convey a clear picture of user needs. Educators presented an idea for a tool to capture a child portfolio that stays with the child year to year, as another way to track and support the child's growth and to help teachers who will work with the child the next year prepare. Meanwhile, parents saw an opportunity for a tool that shares information not just about children's academic progress, but also about their interests and behaviors at school. They were curious about whether their child enjoys reading and what kind of books their child likes to read, and wanted to know about their children's social and emotional development. A parent clarified:

> You tend to only find out when it's bad behavior, but I'd like to know, are they shy? Do they participate? Do they interact with everyone? Do they stay out of circle time? We don't ever really hear about how they are emotionally at school unless it's bad behavior. We can also help with this at home … if we had a better idea of how they are emotionally at school too.

Design the Data Dashboard to Facilitate Communication About Assessment Results.

Once assessment results are available, educators and parents will want to take action based on what they learn. They may need to share the results with other people who support children's development — for example, family members, school specialists, the child's future teachers, or the school district — or use the results to fill out other required reports. Data dashboards can be set up to facilitate these communications.[29]

Educators and parents emphasized the utility of a tool that facilitates communications, especially by enabling information-sharing within one platform or simplifying sharing data outside the platform, as both could reduce burden. They recommended setting up the dashboard to allow users to download data in different formats and export it to various applications (such as email or a pediatrician's web portal). Educators suggested designing the dashboard to be compatible with school databases, so they can upload the data from the tool directly to the database without having to re-enter the data or write a separate report.

Focus group participants also suggested ways to set up the data dashboard to make it easier to discuss the assessment results. Parents proposed organizing the results in a way that sets them up for a one-on-one meeting with their child's teacher — for example, organizing the results in the order they will be discussed during parent-teacher meetings or in alignment with schoolwide progress reports. Educators also recommended aligning the results with school reports to make it easier for them to communicate about the results with others at their school and to complete their school reporting requirements.

Assessment tools could also use alerts and push notifications to encourage action on assessment results, educators and parents pointed out. These alerts could let educators know when a child is ready to take the next assessment task, while also serving as timestamped documentation of a child's progress. An educator explained, "Some days are really hectic, and in your downtime, you can always go back and just look.... 'That message came through [on this date], let me go ahead and document [in the required school child report].'" Knowing when the child finished one task and is ready to move on to the next can help educators with their own documentation on child task progression. Parents were interested in the tool notifying them when assessment results were available.

To help users feel motivated by the results, parents advised communicating the data in ways that feel supportive and encouraging, rather than critical or overly negative. As mentioned above, parents suggested avoiding use of the color red because of its potential for communicating a negative message. They recommended showing the results as milestones or steps, rather than percentages, which they thought could have negative associations. They also noted that it can be discouraging when the data do not indicate any progress, and suggested displaying progress in small increments to maximize the possibility of a visible increase.

Checkboxes showing the skills in which children have become proficient and those they have yet to develop would be helpful, as they would encourage forward thinking and allow families to see what skills children are working on next. "I would ... start working on any of the skills that don't have a check mark next to it," a parent said to clarify how she would use the checkboxes. "[The report our center uses] doesn't give [the] things they *don't* work on, it just gives all the things they did work on," she explained.

Parents also considered the wording that can be used when displaying assessment results. Using words to describe the results — in lieu of or in addition to numbers — can help with interpretation and motivation. Parents reacted positively to a data dashboard exhibited during focus groups that used the terms "emerging" and "progressing" rather than negative words. "When I see 23 percent I think 'Oh my gosh, they failed,' but when I see that they're 'emerging,' that [is] a little bit more positive," a parent explained.

Provide Individualized Guidance Based on Assessment Results.

Ideally, an assessment should generate actionable information about children's learning, development, and competencies for multiple purposes, such as to help educators differentiate instruction for children based on children's abilities.[30] This was a central theme that emerged across focus groups: Educators and parents want more than just assessment data — they want clear guidance on what to do with the data. A parent explained:

> If there is an assessment on my child, not just getting results [would be helpful], but knowing what to do with them. You get the results and hear "You are in the X percentile," but if they are not average, what should I do with that?

To this end, educators and parents shared promising ideas for a tool to yield actionable results. To start, educators emphasized the importance of receiving more information when a child does not meet a certain skill: what the assessment evidence is that the child is not meeting the skill, and how an educator or parent can help the child improve in that area. An educator explained:

> Whenever a child fails and needs more support, our educators have a way to pull up a strategy page. So maybe if a child was not on level, maybe if there was a way that you could connect "Why is my child not meeting that?... What are things that I can do at home, like provide activities, or maybe more support I can do with her [in that area]?" So if they're not meeting that, maybe there could be an activity box that the parents could pull up. Or maybe it links to a more intensive part of the app.

Going a step further, educators envisioned the tool providing suggestions on how to individualize instruction and design small group activities based on assessment results, which would help educators with lesson planning. The tool could save educators time by automatically synthesizing the results and sharing feedback on how a child is doing and how the educator can support that child in the areas they are struggling, which would help the educator provide the child with more immediate assistance. Offering an example, an educator referenced the commonly-used observation-based formative assessment mentioned earlier, noting that it "gives us next steps, different ideas through the curriculum that we can utilize it with" based on assessment results. Educators envisioned receiving similar tailored feedback, but more rapidly, as technology-based assessment tools could allow for more frequent assessments and less time required from educators to review and plan next steps.

Educators and parents described different types of guidance they would find most beneficial. Educators requested resources that offer coaching and advice on how to improve their teaching. They proposed designing the tool to synthesize data across assessments and provide actionable feedback for educators in

the dashboard. Another resource educators said they would find helpful is a list of suggestions for open-ended questions educators can ask children to elicit educator-child conversations. They advised including questions about a specific topic (ideally related to a topic discussed that day, as a way to extend the lesson), as well as offering a range of questions and different ways to pose the questions to allow educators to tailor to a child's interests. Additionally, an educator suggested including a checklist on the data dashboard that shows what the educator should work on next with individual children.

Parents also expressed a strong desire for resources and guidance on supporting their children's learning. They reacted positively to a data dashboard displayed during focus group sessions that included a list of activities parents could do with their children, individualized according to a child's assessment performance. "I love the recommended activities," a parent said, "because sometimes … [teachers] say, 'This is where [the children] are, and this is what they don't know,' but then you don't come away with feedback on 'Okay, what can I do to help improve certain areas?'" A specific example mentioned was a list of vocabulary words a child needs to work on, with guidance on pronunciation and definitions, so parents could help their child with these words at home.

More specifically, parents requested information on how they can work with their children on specific skills in a way that aligns with how children are taught at school, so they can complement what the teacher is doing in the classroom. They recommended including information on how each skill displayed in the dashboard is being taught in the classroom (for example, what activities are used and which aspects of the skill the teacher focuses on). As with educators, as parents talked, they began thinking of ways in which the dashboard could serve a purpose beyond delivering assessment results. For example, parents liked the idea of suggestions for open-ended questions to ask their children to spark a conversation, and guidance on how to support their children emotionally. Finally, they proposed including a goal-setting feature to help them determine what to work on next with their child, based on their child's learning and development.

Conclusion and Looking Forward

Giving policymakers, school leaders, educators, and parents early childhood assessment data that are accurate, useful, and reflect the skills of all early learners is vital in supporting young children's learning and development. Designing assessment tools to capture and report these data in ways that are meaningful for stakeholders is an important step. Focus groups with educators and parents who rely on early childhood assessments surfaced promising ideas for how developers designing assessments as part of the Measures Initiative should proceed.

To enable all children to perform their best, educators and parents recommended making assessment content relatable to children based on their background and experiences; incorporating play-based and interactive activities, making use of child choice and customization and multimedia; and ensuring tool navigation is easy for 3- to 5-year-olds with varying technology experience and providing clear instructions, practice, and reminders. To make the tool useful for educators and parents, they suggested prioritizing simplicity and clarity when designing the data dashboard; showing the data of greatest interest to educators and

parents and displaying performance in multiple ways; designing the data dashboard to facilitate communications around assessment results; and providing individualized guidance based on assessment results.

Looking forward, during the 2025-2026 school year, the Measures for Early Success Initiative will conduct pilot testing of two assessment tools, both currently in development, in pre-K centers across the country. The goal of the pilot testing is to further develop the assessment tools and understand their potential for implementation in different types of pre-K centers at a larger scale. Visit the Measures for Early Success Initiative page for future project updates: https://www.mdrc.org/work/projects/measures-early-success. ■

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8. For more information on the Measures for Early Success Initiative and the participating assessment developers, visit MDRC's project webpage at https://www.mdrc.org/work/projects/measures-early-success.

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12. Other technology-based devices developed for the Measures Initiative included those that record audio of children speaking or conversations between children and educators and analyze those audio recordings; Michael C. Frank, Elise Sugarman, Alexandra C. Horowitz, Molly L. Lewis, and Daniel Yurovsky, "Using Tablets to Collect Data From Young Children," *Journal of Cognition and Development* 17, 1 (2016): 1–17; Megan S. McHenry, Debarati Mukherjee, Supriya Bhavnani, Amir Kirolos, Joe D. Piper, Maria M. Crespo-Llado, and Melissa J. Gladstone, "The Current Landscape and Future of Tablet-Based Cognitive Assessments for Children in Low-Resourced Settings," *PLOS Digital Health* 2, 2 (2023): e0000196.

13. Screen time for young children is an important consideration for many stakeholders when evaluating technology-based assessments. Numerous states have set limits on daily screen time in pre-K. For example, see Chelsea L. Kracht, Jeanette Gustat, Maranda Gourley, Leslie Lewis, and Amanda E. Staiano, "Strategies in Addressing State Screen Time Policies in Early Care and Education Centers in Louisiana," *Journal of the Louisiana Public Health Association* 3, no. 1 (2022): 44; and Amy Lowry Warnock, Carrie Dooyema, Heidi M. Blanck, Seung Hee Lee, Kelly Hall, Nora Geary, and Deborah A. Galuska, "A Healthy Start: National Trends in Child Care Regulations and Uptake of Obesity Prevention Standards (2010–2018)," *Childhood Obesity* 17, no. 3 (2021): 176–184. The Measures for Early Success assessments are designed with these priorities in mind. Each activity is brief — typically 5 to 10 minutes — and interactive, keeping teachers "in the loop" rather than promoting extended, passive screen use. As a result, these tools do not contribute to excessive screen time and align with educators' and families' expectations for healthy technology use in early learning settings.

14. Mallory Undestad, "Developing Engaging Ed Tech Products for Young Children: Insights from User Testing of Assessment Tool Prototypes" (MDRC, 2025).

15. When sharing findings, this brief uses the term "educator" to refer to a school administrator or teacher and the term "parent" to refer to a child's parent or legal guardian.

16. Focus groups comprised 377 total participants. However, some educators and parents participated in more than one focus group. This brief reports the number of unique participants: 192 educators and 116 parents, for a total of 308 participants.

17. The team conducted additional focus groups for the Measures Initiative after these dates; however, this brief focuses on these initial focus groups because their goal was to capture educators' and parents' broad ideas on assessment design and initial feedback on early prototypes of the assessment tools, while the later focus groups dealt more narrowly with specific aspects of two assessment tools and the resulting data were less generalizable.

18. See User Informed Principle 3.1.

19. See User Informed Principle 1.3.

20. Portilla and Iruka (2024).

21. See User-Informed Principles 3.1.1, 3.1.3, and 3.1.5.

22. See User Informed Principle 3.1.3.

23. Hanno, Portilla, and Hsueh (2025).

24. Fiona Smith, Emma Martinho-Truswell, Oliver Rice, and Jessica Weereratne, "How Dashboards Can Help Cities Improve Early Childhood Development," Open Data Institute Whitepaper ODI-WP-2017-002 (Bernard van Leer Foundation, 2017); Shiran Michaeli, Dror Kroparo, and Arnon Hershkovitz, "Teachers' Use of Education Dashboards and Professional Growth," *The International Review of Research in Open and Distributed Learning* 21, 4 (2020): 61–78.

25. Hanno, Portilla, and Hsueh (2025).

26. See User Informed Principles 4.2 and 4.3.

27. See User Informed Principles 4.2 and 4.3.

28. When following this recommendation, developers may consider a more nuanced way to convey kindergarten readiness, as a direct "yes/no" checkbox might be disconcerting to parents viewing the report.

29. See User Informed Principle 4.4.

30. See User Informed Principle 4.1.

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