Introduction

Two-thirds of Tennessee’s students are not proficient in reading and a majority are not proficient in math by third grade, a pivotal year widely recognized as a critical benchmark for future learning. Low scores in third grade are an indication that the quality of children’s learning experiences in each year prior to third grade is in need of significant improvements.

To improve the quality of children’s learning experiences, Tennessee needs strong accountability and effective data-driven continuous improvement systems. Such systems are essential for guiding efforts to strengthen early childhood programs and elementary schools, improving coordination among the multiple agencies that serve children and their families, and ensuring Tennessee is achieving desired outcomes and return on investment in developing young children birth through third grade.

Accountability and continuous improvement systems are dependent on good data. Unfortunately, given limited statewide data on the quality of children’s learning experiences and child learning outcomes from birth to third grade, Tennessee has an early learning blind spot. From state-subsidized child care to early grades public education, the state does not yet have adequate data to support effective, continuous improvement of early learning programs, and to guide investments in new solutions. Inadequate data also means that parents, policy makers and other stakeholders don’t have sufficient information to effectively hold early education systems accountable for high quality, and ensure Tennessee is getting good value from its early education investments.

The good news is, Tennessee is not starting from scratch to establish high quality early learning data systems. Early childhood programs, such as home visiting and early intervention services, collect and use outcomes data to drive program improvements. As well, the department of education recently implemented new methods of data collection in the early grades to monitor the growth and progress of children in school, pre-k through third grade.

These and other points of progress should be leveraged to strengthen statewide accountability and continuous improvement systems in early education so that programs and services for disadvantaged children reach the children and families who need them most; and so that programs and public elementary schools offer the highest quality learning experiences for young children, propelling them to greater and longer-lasting academic gains.
Considerations for Measuring Early Learning

I. What to Measure in the Early Years?

Before young children can read and write fluently, they learn through interactions with educational materials in high quality learning environments, as well as through multi turn-taking conversations and interactions with adult and peers. Early learning environments can either stimulate learning by engaging children in enriching learning experiences, or stifle learning by being developmentally inappropriate and unengaging to children. Because learning environments and teaching are critical to children’s learning, it is important that early learning data systems measure not only child outcomes, but also the quality of children’s learning experiences so teachers and administrators can continuously improve program quality.

Early learning environments should be measured based on multiple variables that influence children’s learning including the quality of teaching, the quality of curriculum and educational materials children have access to and use in daily interactions, and the quality of the environment, including how rooms are arranged, how time is spent, and how intentional the focus is on developmentally-appropriate learning. For elementary schools with pre-k classrooms it has also become increasingly important to assess instructional continuity between grades. Early grades research has found that when teachers focus too much time on skills already developed, children do not learn and disengage from school, but when teaching builds on prior learning, is differentiated for learners at different levels, and offers students opportunities to extend their learning in novel contexts, early gains are sustained and accelerated.

Early learning data systems are valuable when they measure what matters. For early education, quality attributes to be measured, strengthened, and continuously improved include the quality of children’s learning environments, the quality of teaching, and the instructional coherence between grades and programs. It is also essential parents, teachers, program directors, administrators and policymakers know how well children are learning and progressing, which is why learning outcomes matter. Early education accountability and continuous improvement systems should assess the quality of children’s early learning experiences, as well as what children know, understand, and are able to do at each stage, year and/or grade of their development.
II. How to Measure Early Learning?

Measuring the quality of children’s early learning experiences and outcomes in the years from birth to third grade requires new and different ways of thinking about data and the processes used to collect it. Young children under the age of 8 are fundamentally different from older children because young children have limited capacity to demonstrate what they can do through traditional test-taking methods. They don’t yet read or write, it is more difficult for them to focus for long periods of time, they are not familiar with the purpose of tests, they lack motivation for tests that older children have, and their performance at any one point in time is highly susceptible to environmental factors that may differ from minute to minute.¹⁴

Because of these and other child development considerations, it is important to ensure assessments of learning experiences and outcomes are generated through processes that are developmentally appropriate for the age and stage of the children being observed.

This is one reason why early learning assessments have typically relied on teacher-generated checklists or ratings, which include teacher observations of children in their class, analysis of student work samples, and/or performance tasks that require interaction between a child and a teacher, such as the teacher reading a story and asking a child questions about what they heard.¹⁴ These types of assessments are typically conducted in the normal course of classroom activity, through play-based or other types of hands-on interactions, and can be quite beneficial to teachers to inform and differentiate their instruction. They are, however, more subjective than assessments conducted by a trained third party observer with no stake in the outcomes. Third party, developmentally-appropriate assessments are not often used in schools and programs because they tend to be costly to perform for large numbers of children.¹⁵ That said, there are potential innovative solutions that could be both cost-efficient and meet objectives for reliability and validity, and it is in Tennessee’s interest to explore these possibilities for consideration in multiple types of early childhood settings.
Priorities for Action

To address the urgent need for effective early learning accountability and continuous improvement systems in Tennessee, TQEE offers the following policy priorities:

1. Establish a birth to age 5 coordinated early learning data and continuous improvement system to maximize the reach and effectiveness of early education programs and services.

2. Develop a streamlined system for measuring and improving instructional effectiveness and learning outcomes, Pre-K through 3rd grade.

3. Ensure early grades teachers have extensive training and support to know how to use early grades data, such as data provided by the new student growth portfolio models, to improve instruction.

1. Establish a birth to age 5 coordinated early learning data and continuous improvement system to maximize the reach and effectiveness of early childhood education programs and services.

   a. Early prevention and intervention, birth to 3

   Tennessee’s at-risk babies and toddlers and their families benefit from state-funded prevention and intervention programs such as Welcome Baby screenings, Help Us Grow Successfully (HUGS) case management program, the Child Health and Development (CHAD) program, evidenced-based home visiting programs, and Tennessee Early Intervention Services. As well, there are targeted statewide efforts to increase the efficacy of service providers through Adverse Childhood Experiences (“ACEs”) training and new endorsements through the Association of Infant Mental Health in Tennessee.4,5,16,17

   As mentioned in TQEE’s issue brief on Engaging and Empowering Parents, a challenge that Tennessee faces is inadequate support services for at-risk families, particularly in isolated, rural communities. As well, if there are no systems to support expedient coordination between multiple agencies and programs, children and families can become lost in a maze of confusion, and end up receiving little to no care or services that they need to help their children grow and thrive.

   Furthermore, while outcomes data is collected by the individual programs, the data is not organized across systems, meaning there is little to no visibility for stakeholders and policy-makers into overall effectiveness of state investments.
In recent years, programs administered by the Departments of Children’s Services, Human Services, Health, Education, and Mental Health and Substance Abuse have taken steps to improve the screening, referral and follow-up coordination between their programs. The goals are to better use resources so more families receive services, and to employ a "no wrong door" approach so families can efficiently access the services so crucial to their young children’s healthy growth and development. These and other coordinating aims have been spearheaded by the Governor’s Children’s Cabinet, which has been charged with coordinating and enhancing the state’s efforts to provide needed resources and services to Tennessee’s children and families.\textsuperscript{18}

These efforts should be continued and strengthened through the establishment of a new Governor-appointed Cabinet of Department Commissioners charged with the following:

- Develop statewide accountability and continuous improvement systems that enhance program coordination and track child outcomes between and across agencies, leveraging technology to provide transparency and access to data dashboards for providers, stakeholders and policymakers. Better coordination leads to more efficient and child-centered service, and ultimately increases program effectiveness and reach.\textsuperscript{3}

- Maximize federal and state funding streams to expand program reach. A systematic assessment of early childhood program funding across departments and agencies that serve young children, such as the statewide resource mapping currently produced by the Tennessee Commission on Children and Youth, provides opportunities to develop cost efficiencies and expand reach to more disadvantaged children and families across the state.\textsuperscript{19} The next iteration of Tennessee’s resource mapping should inform the annual budgeting and strategic planning for every department serving children, as well as the Governor and legislature’s budget and planning process, via the use of detailed and comprehensive mapping of geographic or demographic gaps in programs and services for young children and families, by county and region.\textsuperscript{3}

b. Child Care, birth to 5

For infants, toddlers and preschoolers served in child care settings, there is currently no statewide system for measuring learning outcomes and a limited accountability and quality improvement mechanism, though there is a voluntary Star Quality Rating System for child care providers.\textsuperscript{20}

Tennessee’s investment in child care subsidies for disadvantaged children is substantial, with total available funding of more than $300 million annually.\textsuperscript{21} Ensuring those dollars go toward quality would be significantly aided by a strong and improved data-driven accountability and continuous improvement system.

As noted in TQEE’s child care issue brief, we recommend that the new governor initiate a comprehensive examination and overhaul of the state’s child care system, prioritizing quality, affordability and accessibility to more children and families. We further recommend that accountability and continuous improvement be an integral part of the child care system improvement plan, with a focus on program quality and child outcomes.

2. Develop a streamlined system for measuring and improving instructional effectiveness and learning outcomes, Pre-K through 3rd grade.

a. Tennessee’s Pre-K to 12 Accountability and Continuous Improvement Context

The last decade of school reform efforts in Tennessee, and the accompanying growth in student achievement, were powered in part by new state academic standards and the availability of statewide student achievement data in grades 3 – 12. This statewide “summative data” on student achievement and growth has been instrumental in informing policymakers, teachers and administrators about where students are making progress, where they are not, and which student subgroups are accelerating, stagnating or declining in their growth and achievement. Student academic achievement data has become a critical part of how the state holds districts accountable and also how it makes decisions about how to best support improved student outcomes.\textsuperscript{22}
In 2016, when congress established the Every Student Succeeds Act (ESSA), the Tennessee Department of Education (TDOE) put in motion an enhanced program for accountability. The new program continues to be data-driven and based largely in student growth and achievement measures, but due to the absence of objectively validated, standards-aligned growth and achievement data for children in Pre-k through 2nd grade, early grades have been mostly left out of the district and school accountability system.  

Given the substantial evidence regarding the importance of quality early learning to third grade outcomes - a critical benchmark for Tennessee students - it is important to examine viable options for including early grades accountability in the state’s revised ESSA plan.

b. Early Learning Assessments in Tennessee

Since 2015, Tennessee has put in place a variety of early learning measurement tools, providing valuable data for decision making, including:

★ Student growth portfolio model – for pre-k and kindergarten teachers in all districts with VPK programs, and for 1st grade teachers as an option for the growth portion of their evaluation. This tool allows teachers to demonstrate students’ progress towards mastery of English language arts (ELA) and math standards. Teachers collect student work artifacts from a sampling of students to submit for review via an online platform. Certified peer reviewers score student work based on a comprehensive scoring guide.

★ Response to Instruction and Intervention (RTII) – a universal screening process used for every student, beginning in kindergarten. Students are screened 1-3x per school year to assess gaps in basic math and literacy skills. Based on the results, students are grouped into Tiers and provided with interventions to get them on grade-level, or enrichments if they are at or above grade-level in the skills measured by the screeners. The RTII screening process is a skills check versus a comprehensive assessment of mastery of grade-level standards, which are broader and deeper in scope.

★ Optional second grade assessment - a summative, end of year assessment aligned to the new TN Academic Standards which provides teachers, administrator, parents and policy-makers information on how all students are performing on grade-level standards at the end of 2nd grade. It’s similar to but shorter than the 3rd grade TNReady test and since 2017 has been offered to districts on an optional basis, with more than half opting in so far.

Additionally, Tennessee students participate in a variety of district-determined assessments, which can include quarterly benchmark or interim assessments to measure student mastery of specific standards, as well as multiple screeners for student placement and/or diagnostic purposes.

Just as it is important to avoid “over-assessing” children in the older grades, it is critical to avoid over-assessment in the early grades. Too much assessment can be problematic because it can detract from valuable learning time and in excess, can minimize student and teacher engagement. Measuring student growth and achievement should be purposeful, streamlined and user-friendly, with tools optimized to support multiple purposes where possible.

That said, successful learning outcomes depend on a strong accountability and continuous improvement system. A strong accountability and continuous improvement system depends on a full picture of children’s growth and achievement in school, using screeners, formative assessments, and summative assessments, where applicable.

Today, statewide early grades assessments are neither streamlined nor sufficient to provide a critical full picture of student growth and achievement and yet, when statewide tools are combined with the myriad tools used by various school districts, there are in some cases too many tools being employed.

Therefore, it is essential the state examine the Pre-K to third grade continuum to ensure current assessments do not leave gaps in accountability and/or continuous improvement, or over-assess children unnecessarily. If either is occurring, the state should develop a detailed plan and timeline for optimizing the early grades assessment system with strategic additions, omissions and/or changes in design.
Given the importance of early grades to long-term student success, as well as the comprehensive approach required to conduct a full examination and potential redesign of current and future accountability plans, TQEE recommends the new governor and his/her administration convene an Early Grades Accountability and Continuous Improvement Task Force to develop a streamlined and integrated system for measuring and improving instructional effectiveness and outcomes, pre-k to 3rd grade. This task force would include representation from key stakeholder groups, including those with early childhood education expertise. This Early Grades Accountability and Continuous Improvement Task Force would provide the state with specific recommendations around priorities identified in this brief, including:

- Examine ways to include early grades accountability in the state’s revised ESSA plan;
- Streamline state and district early grades assessments to only those most valuable to improving child outcomes; and
- Examine the Pre-K to third grade continuum holistically to ensure current assessments do not leave gaps in accountability and continuous improvement and if they do, determine what should be added, omitted or changed to optimize the current system.

3. **Ensure early grades teachers have extensive training and support to know how to use early grades data to improve instruction.**

In response to third grade data, Tennessee-specific research, and the Pre-K Quality Act of 2016, the Tennessee Department of Education (TDOE) has implemented a new developmentally-appropriate tool to measure student growth in the early grades: the pre-k, kindergarten and first grade student growth portfolio models. These tools rely on teachers’ abilities to administer assessments and use them to guide instruction. Thus far, teacher training has been predominantly focused on how to administer the new tools appropriately. This has been necessary as a first step in the implementation process, but teacher training should now be extended and sustained for the next 2-3 years with a focus on how to:

- Observe and record young children’s behavior to assess learning progress and challenges using multiple tools available to teachers in the early grades;
- Interpret and use data, including student work samples, to understand what children know and are able to do;
- Adjust instructional strategies to help children at all levels reach learning and developmental goals; and
- Facilitate data-driven conversations with parents.

Early grades teachers have taken on tremendous new responsibility, requiring knowledge of how to interpret and use data from newly implemented tools, as well as how to improve instruction based on results. Early grades teachers should be supported in these efforts by the state and by districts through increased investments in job-embedded professional development and support focused on the use of the student growth portfolio model to improve early learning in schools.

**Conclusion**

To improve the quality of children’s learning experiences birth through 3rd grade, effective data-driven accountability and continuous improvement systems are essential.

Tennessee has excellent momentum towards using data to guide instructional improvements in grades 3 – 12, as well as points of progress on gathering data to understand outcomes for some early childhood programs and early grades. With a new Governor taking office in January 2019, for what will likely be the next eight years, the time is right to go to the next level in education transformation by improving the quality of children’s learning experiences birth through 3rd grade. Strengthening Tennessee’s early learning accountability and continuous improvement systems will provide the critical and necessary tools to make that next level transformation possible.
Endnotes


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