



## Acadience® Pathways of Progress™

 Abridged version. View [full version](#) for more in-depth information.

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### Introduction

Progress monitoring and formative evaluation are critical components of a Response-to-Intervention (RTI) or Multi-Tiered Systems of Support (MTSS) approach to service delivery in schools. In an RTI or MTSS approach, differentiated levels of instructional support are provided to students based on their demonstrated need and on their progress toward learning goals. Periodic assessment of all students and ongoing progress monitoring for select students receiving intervention support provide data that indicate whether the instructional support being provided at any tier of instruction is effective and/or if further modifications need to be made to address individual learning needs. Hattie (2009, 2012) and colleagues (Fisher, Frey, & Hattie, 2016) found that RTI approaches to instruction were the third largest positive effect on student outcomes, with an effect size of 1.07.

We developed Pathways of Progress to be used in conjunction with the Acadience benchmarks and cut points for risk to:

- create individual progress monitoring goals that are meaningful, ambitious, and attainable;
- evaluate individual student progress; and
- evaluate the effectiveness of instructional support at a systems level.






## The Logic of Pathways

In developing Pathways of Progress for Acadience Reading K–6 and Acadience Math K–6, we examined the **beginning-of-year composite score** as it related to **end-of-year outcomes**.

The Pathways of Progress analysis is based on students' initial skills using the **composite score**, because it represents the best measure of students' overall proficiency in reading or math. The pathways were constructed using quantile regression (Koenker & Hallockto, 2001) to identify the 20th, 40th, 60th, and 80th student growth percentiles (Betebenner, 2011) for every value of the beginning-of-year composite score. Thus, Pathways of Progress is based on student rates of reading or math progress relative to other students who started the year with similar initial skills. This information provides a normative context for growth that professionals can consider with the Acadience benchmarks when establishing a goal and aimline for an individual student.

For each beginning-of-year composite score, the end-of-year scores at the 20th, 40th, 60th, and 80th percentiles of growth serve as boundaries for establishing the five Pathways of Progress. These pathways are used to characterize student progress from Well Below Typical to Well Above Typical (see Figure 1).

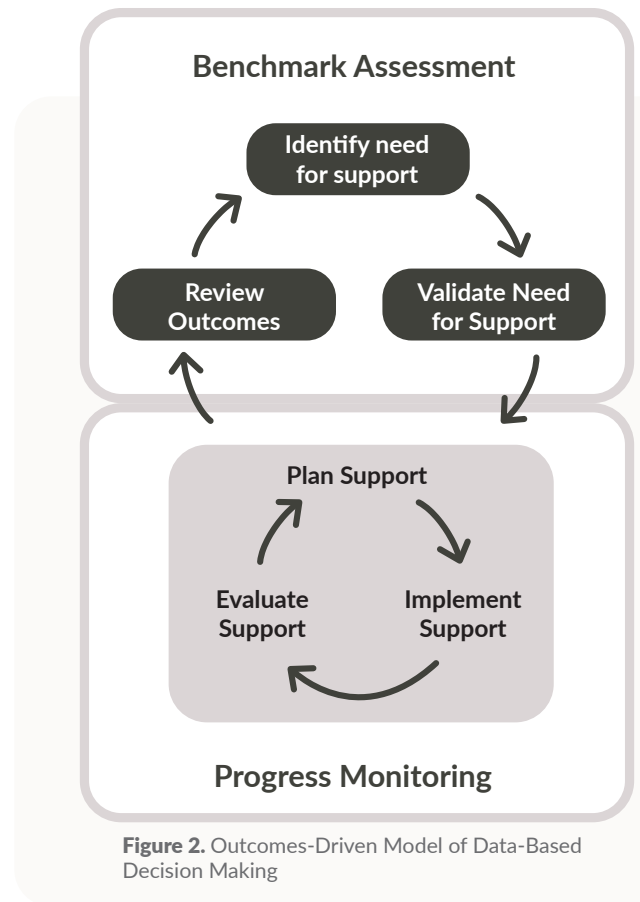
Figure 1. Pathways of Progress Descriptors

Progress Descriptor	Progress Percentile Range
 Well Above Typical	80th percentile and above
 Above Typical	60th to 79th percentile
 Typical	40th to 59th percentile
 Below Typical	20th to 39th percentile
 Well Below Typical	Below 20th percentile

## Pathways of Progress and the Outcomes-Driven Model

The Acadience Pathways of Progress and benchmarks are intended to be used within an Outcomes-Driven Model of educational decision making to set student learning goals, monitor student progress, and evaluate the effectiveness of instruction at a systems level.

The Outcomes-Driven Model (ODM; Good et al., 2020; Wheeler et al., 2020) emphasizes early intervention and prevention and consists of five data-based decision-making steps summarized in Figure 2. The ODM provides a framework that can be used for educational decision making for individual students as well as for decision making at a systems-level (e.g., classroom, school, district). For the purposes of illustrating the use of Pathways of Progress, we will focus on decisions for individual students.



1

Identify Need for Support. Which students may need support?

The first step of the ODM uses a student's initial skills as measured by the Acadience benchmark assessment to determine a student's level of need for support (i.e., Tier 1, 2, or 3). The Pathways for each individual student are anchored by the student's composite score at the beginning-of-year benchmark assessment period, thus the student's initial composite score provides the foundation for Pathways of Progress.

**2**

**Validate Need for Support.** Are we reasonably confident that the identified students need support?

The purpose of the second step of the ODM, Validate Need for Support, is to be reasonably confident in the initial skills assessment. If there is any concern about the accuracy of the initial scores, the student should be retested or additional information should be obtained.

**3**

**Plan and Implement Support.** What are the student's skills and needs? What is the plan to support the student including goals and progress monitoring?

The third step in the ODM is Planning and Implementing Support. A critical element in planning instructional support for a student is **establishing an individual student learning goal** for each student that is **meaningful, ambitious, and attainable**. Pathways of Progress provides a normative framework for evaluating growth to determine whether a goal is appropriately ambitious and yet attainable. We recommend setting an individual student goal for progress monitoring based on the individual student's benchmark status and their desired Pathway of Progress.

Acadience benchmarks were established based on predictive probabilities. For students whose beginning-of-year skills are Below Benchmark, the probability of achieving subsequent benchmarks and meeting grade-level expectations is generally 40% to 60%. For students whose skills are Well Below Benchmark, the probability of achieving subsequent benchmarks is generally 10% to 20%. For students who have Acadience scores Below or Well Below Benchmark, a meaningful goal entails accelerating their progress to achieve grade-level benchmarks. **Thus, for students whose beginning-of-year benchmark status is Below or Well Below Benchmark, a meaningful, ambitious, and attainable goal would be to meet the end-of-year benchmark and/or represent Above Typical Progress.**

For students whose beginning-of-year skills are At or Above Benchmark, the probability is generally 80% to 90% of achieving subsequent benchmarks and meeting grade-level expectations by making Typical Progress with effective core instruction. **For students who have scores At or Above Benchmark at the beginning of the year, a meaningful, ambitious, and attainable goal would be to remain At or Above Benchmark at the end of the year and/or represent at least Typical Progress.**

## 4

## Evaluate and Modify Support. Is the support effective for individual students? Do we need to modify the planned support?

At the fourth ODM step, the instructional support for a student can be determined to be effective (i.e., a student's progress can be determined to be adequate) in two ways. Historically, we have recommended using the aimline to the student's goal as a frame of reference to evaluate a student's progress. When the three most current progress monitoring data points are below the aimline, we recommend reviewing the instruction/intervention being provided to the student and considering whether a change in the intervention is warranted. We can also look at the student's Pathway of Progress to determine if the student's progress is Typical, Above or Well Above Typical, or Below or Well Below Typical compared to other students who had the same level of initial skills as measured by the Acadience composite score.

Pathways of Progress and the student's progress relative to the aimline generally provide complementary information when evaluating support. In general, when an aimline is specified to an appropriate individual student learning goal and when instruction is matched to the student's learning needs, the student's progress monitoring data and Pathways of Progress will provide consistent information. When Pathways of Progress and aimline information appear inconsistent, we recommend a pause to consider the student's skills, goals, and the instruction/intervention being provided and making adjustments as needed to improve learning outcomes.

We note in particular two cases where Pathways of Progress and the aimline to the student's goal provide conflicting information:

- when the student's goal is set so low that it is not meaningful or challenging
- when the student's initial skills are so high that goals in grade-level material may not be appropriately meaningful and challenging

To help prevent the case where the goal is set too low, we provide recommended initial goals that provide meaningful, ambitious, and attainable goals constrained by minimum and maximum values. A description of the initial goals for reading and math are available [here](#) and [here](#). Of course, the instructional team can always modify the initial goals based on other information or professional judgment. To assist with educational decision making when the student has very high skills, we provide the Highly Skilled Learner Criterion (available [here](#) and [here](#)) that provides for a student to be classified as making at least Typical Progress when their skills, goals, and instruction may be best characterized as in above-grade-level material.

## 5 Review Outcomes. How are we doing? Has the student met learning goals?

The final step of the ODM again provides an opportunity to pause and reflect on the effectiveness of the decisions, interventions, and outcomes for individual students. Has each student reached the benchmark? Has each student achieved their individual learning goal? Has each student made at least Typical Progress toward their learning goal?

At this step, both Pathways of Progress and the Acadience benchmarks again provide important information for interpretation. If, for example, a student has met their goal but their progress was Well Below Typical for the year, it may be that the goal was set too low for the student or that their initial skills were very high. This may happen in a case in which a student's initial scores were just below the benchmark and the goal was set at the benchmark. There is also a possible scenario in which a student does not achieve their goal but makes Well Above Typical Progress. This might be the case for a student whose initial skills were well below the benchmark and for whom the end-of-year benchmark was selected as the goal. If the student made a great deal of progress but did not quite meet the benchmark at the end of the year, their progress could be Above or even Well Above Typical. **It is important to take into account both pieces of information—the student's status relative to the benchmarks and their Pathways of Progress—when reviewing student outcomes.**

As noted earlier, all steps of the Outcomes-Driven Model are also applicable at the systems level (e.g., classroom, school, district). As we review outcomes, for example, we can also reflect on the effectiveness of the instructional support at a systems level, by asking, "What proportion of students have reached the benchmark? What proportion of students have achieved their learning goal? What proportion of students have made progress that is Typical or Above Typical compared to other students with the same initial level of skills?"

## Summary

In sum, the Acadience Pathways of Progress and benchmarks provide educators with research-based tools for:

- establishing individual student progress monitoring goals that are meaningful, ambitious, and attainable;
- evaluating individual student progress and rate of growth; and
- reflecting on the effectiveness of our system of support at the classroom, school, or district level.

Using Pathways of Progress in conjunction with Acadience benchmarks within an Outcomes-Driven Model, educators have a framework for formative data-based decision making that is consistent with an RTI/MTSS model of instructional support and can be used to improve outcomes for all students.

## Reference

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