

# User's Guide to Academic Progress Monitoring Tools Chart

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## About the National Center on Intensive Intervention

The National Center on Intensive Intervention (NCII) is housed at the American Institutes for Research and works in conjunction with many of our nation's most distinguished experts on intensive intervention. It is funded by the U.S. Department of Education's Office of Special Education Programs (OSEP) and is part of OSEP's Technical Assistance and Dissemination Network (TA&D).

### **National Center on Intensive Intervention**

<http://www.intensiveintervention.org>



# The Basics of the Chart

## What Is the Tools Chart?

The tools chart is a list of commercially available academic progress monitoring tools. Each of the progress monitoring tools has been reviewed by the National Center on Intensive Intervention (NCII) Technical Review Committee (TRC) on academic progress monitoring. The chart offers information about the technical rigor, cost, and implementation requirements of the tools. The tools chart can be viewed at <http://www.intensiveintervention.org/chart/progress-monitoring>.

## What Is the Purpose of the Tools Chart?

The purpose of the chart is to assist educators and families in becoming informed consumers who can select academic progress monitoring tools that best meet their individual needs. The tools chart is not intended to endorse any of the tools or compare tools to one another. Each tool was rated against a standard set of criteria regarding the technical adequacy of the tool.

## Who Rated the Tools on the Chart?

Ratings were made by the TRC on academic progress monitoring, a group of 10 national experts on measurement and academic progress monitoring. Selection criteria for the academic progress monitoring TRC were (1) member has a background in measurement and strong methodological skills and (2) member has strong expertise related to progress monitoring. Special efforts were made to include members with expertise on culturally and linguistically diverse populations. A list of academic progress monitoring TRC members can be found at <http://www.intensiveintervention.org/about-us/centers-technical-review-committees>.

## Tips for Using the Chart

The tools chart includes a large amount of information designed to assist you in selecting a progress monitoring tool that is most appropriate for use in your classroom, school, or district. The “best” tool is not going to be the same for every user and is not determined by any single element on the chart. Users of the chart should review all of the elements of the chart when making a decision.



### We recommend a six-step process for using the chart:

1. Gather a team.
2. Determine your needs.
3. Determine your priorities.
4. Familiarize yourself with the content and language of the chart.
5. Review the data.
6. Ask for more information.

### 1. Gather a Team

Often, decisions about appropriate progress monitoring tools will involve the input of multiple administrators, teachers, and staff. When using the tools chart, it will be important to gather a team of key constituents in your school and district to review the information together.



### Before you begin, ask yourself:

- Who should be involved in selecting an academic progress monitoring tool?
- What types of expertise and what perspectives will I need to be available among those involved in selecting a tool?

## 2. Determine Your Needs

The most appropriate progress monitoring tool for you will depend on your specific needs.



### Questions to think about, as a team, include:

- For what skills do we need an academic progress monitoring tool?
- For what grades do we need an academic progress monitoring tool?
- Will this progress monitoring tool be used with all students or with only a specific subgroup (or subgroups) of students? Which subgroup(s)?

## 3. Determine Your Priorities

In addition to determining your needs for an academic progress monitoring tool, your team should consider its priorities.



### What is the most important thing to look for in an academic progress monitoring tool?

- Can the tool be purchased for a reasonable cost?
- Does the tool take long to administer and score?
- Does the tool require specialized expertise or lengthy training to administer and score?
- Does the tool offer ready access to training and technical support for staff?
- Does the tool meet the highest standards for technical rigor?
- Has the tool's effectiveness been studied and demonstrated in our district or state?

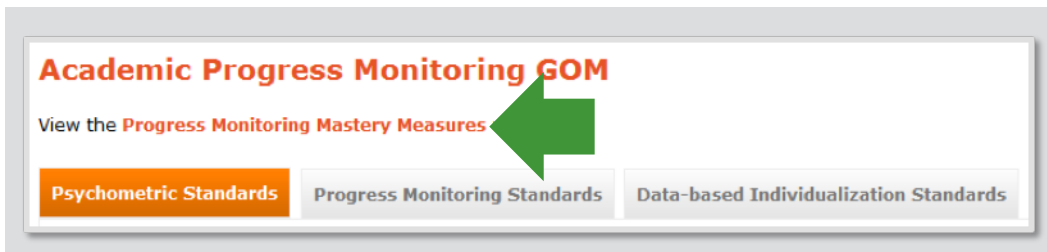
While you may ideally want a tool that meets all of these criteria, there may not be one that does so. You will need to weigh your priorities carefully when making your selection.

## 4. Familiarize Yourself With the Content and Language of the Chart

There are two tools charts that include information on academic progress monitoring tools, each focusing on a different approach to progress monitoring:

- **General outcome measures** reflect overall competence in the annual curriculum.
- **Mastery measures** index a student’s successive mastery of a hierarchy of objectives.

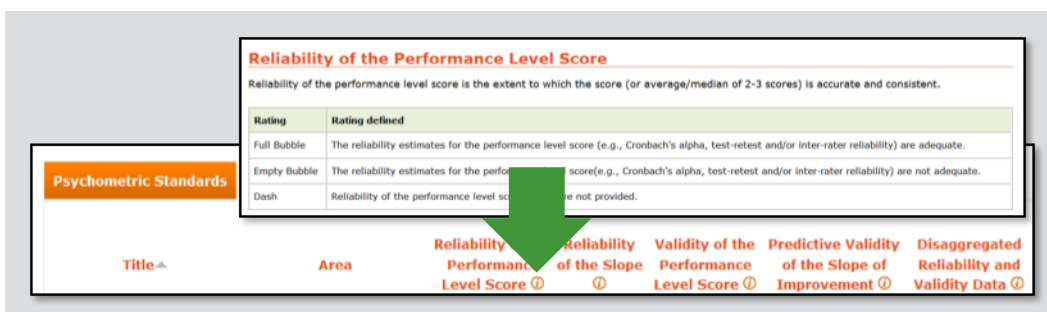
To view the tools by each type, click on the link to switch between the two charts:



Both of the tools charts are subdivided into three sets of technical standards against which each tool was rated: (1) psychometric standards, (2) progress monitoring standards, and (3) data-based individualization standards. Additional information is available by clicking on features within the chart.

The first tab, Psychometric Standards, includes ratings from our TRC members on the reliability and validity of the tools. The second tab, Progress Monitoring Standards, includes ratings related to how well the assessment functions as a progress monitoring tool that can accurately detect small changes in student performance over time. The third tab, Data-based Individualization Standards, includes ratings related to the extent to which use of the tool is associated with positive student or teacher outcomes.

For each of these standards, the TRC reviewed data submitted by developers of the tools and gave a rating of *convincing*, *partially convincing*, *unconvincing*, or *data unavailable*. Click on the ⓘ within any of the column headings to view a definition of the standard and a rubric describing the specific criteria used by the TRC to rate tools on that standard. The Progress Monitoring Technical Standards Rating Rubric is available in the Supplemental Resources box below either tools chart.



## PSYCHOMETRIC STANDARDS

The screenshot shows the 'Academic Progress Monitoring GOM' interface. It includes a navigation bar with three tabs: 'Psychometric Standards' (selected), 'Progress Monitoring Standards', and 'Data-based Individualization Standards'. Below the tabs is a table with the following columns: 'Title', 'Area', 'Reliability of the Performance Level Score', 'Reliability of the Slope', 'Validity of the Performance Level Score', 'Predictive Validity of the Slope of Improvement', and 'Disaggregated Reliability and Validity Data'. Each of the last five columns contains a small circular icon with a question mark.

For progress monitoring tools using the general outcome measures approach, the TRC has established five psychometric standards:

- **Reliability of the performance level score:** the extent to which the score (or average/median of two to three scores) is accurate and consistent
- **Reliability of the slope:** the extent to which the slope of improvement accurately represents the rate of improvement
- **Validity of the performance level score:** the extent to which the score (or average/median of two to three scores) represents the underlying construct
- **Predictive validity for the slope of improvement:** the extent to which the slope of improvement corresponds to end-level performance on highly valued outcomes
- **Disaggregated reliability and validity data:** scores that are calculated and reported separately for specific subgroups (e.g., race, economic status, special education status, etc.)

The screenshot shows the 'Academic Progress Monitoring MM' interface. It includes a navigation bar with three tabs: 'Psychometric Standards' (selected), 'Progress Monitoring Standards', and 'Data-based Individualization Standards'. Below the tabs is a table with the following columns: 'Title', 'Area', 'Reliability', 'Validity', and 'Disaggregated Reliability and validity Data'. Each of the last four columns contains a small circular icon with a question mark.

For progress monitoring tools using the mastery measures approach, the TRC has established three psychometric standards:

- **Reliability:** the extent to which scores are accurate and consistent
- **Validity:** the extent to which scores represent the underlying construct
- **Disaggregated reliability and validity data:** scores that are calculated and reported separately for specific subgroups (e.g., race, economic status, special education status, etc.)

## PROGRESS MONITORING STANDARDS

Title ^	Area	Alternate Forms Ⓞ	Sensitive to Student Improvement Ⓞ	End-of-Year Benchmarks Ⓞ	Rates of Improvement Specified Ⓞ
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For general outcome measures, the progress monitoring standards include the following:

- **Alternate forms:** parallel versions of the measure within a grade level, of comparable difficulty (or with Item Response Theory [IRT] based, item, or ability invariance)
- **Rates of improvement:** specify the slopes of improvement or average weekly increases, based on a line of best fit through the student's scores
- **End-of-year benchmarks:** specify the level of performance expected at the end of the grade, by grade level
- **Rates of improvement specified:** the extent to which a measure reveals improvement over time, when improvement actually occurs

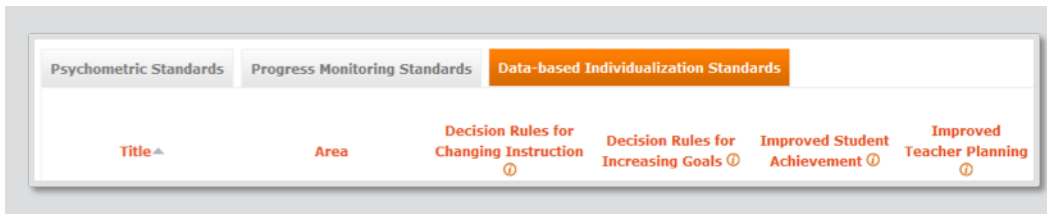
Title ^	Area	Skill Sequence Ⓞ	Sensitive to Student Improvement Ⓞ	Pass/Fail Decision Ⓞ
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For mastery measures, the progress monitoring standards include the following:

- **Skills sequence:** the series of objectives that correspond to the instructional hierarchy through which mastery is assessed
- **Sensitive to student improvement:** the extent to which a measure reveals improvement over time, when improvement actually occurs
- **Pass/fail decision:** the metric in which mastery measurement scores are reported



## DATA-BASED INDIVIDUALIZATION STANDARDS



The screenshot shows a web-based standards chart interface. At the top, there are three tabs: 'Psychometric Standards', 'Progress Monitoring Standards', and 'Data-based Individualization Standards', which is currently selected and highlighted in orange. Below the tabs is a table with the following columns: 'Title', 'Area', 'Decision Rules for Changing Instruction', 'Decision Rules for Increasing Goals', 'Improved Student Achievement', and 'Improved Teacher Planning'. Each of the four 'Area' columns has a small circular icon with a question mark below it.

For both general outcome measures and mastery measures, the TRC has established four standards related to how the use of the progress monitoring tool relates to positive teacher and student outcomes:

- **Decision rules for changing instruction:** provide guidance indicating to a teacher when he or she should make a change to instruction
- **Decision rules for increasing goals:** provide guidance indicating to a teacher when he or she should increase the goal
- **Improved student achievement:** the relationship between use of the tool and increases in student performance on external measures of achievement
- **Improved teacher planning:** the tool's ability to help a teacher in planning for and adjusting his or her instruction to meet student needs

## IMPLEMENTATION REQUIREMENTS

The tools chart offers an “implementation table” for each tool. The implementation table can be accessed by clicking on the name of the tool. The implementation table includes the following information:

- Cost of the tool
- Training required to implement the tool
- Level of staff expertise required to administer the tool
- Where to go for training and technical support
- How scores are reported

Psychometric Standards		Progress Monitoring Standards		Data-based Individualization Standards		
Title	Area	Reliability of the Performance Level Score	Reliability of the Slope	Validity of the Performance Level Score	Predictive Validity of the Slope of Improvement	Disaggregated Reliability and Validity Data
AIMSweb	Cost	Technology, Human Resources, and Accommodations for Special Needs	Service & Support	Purpose & Other Implementation Information	Usage & Reporting	
AIMSweb	Annual cost per student: AIMSweb assessment materials are included with an AIMSweb System software subscription: <b>AIMSweb System Subscriptions</b> \$3.00-\$5.00 per student. *All materials are provided via download in PDF format.	Internet access is required for full use of product services. Testers will require 4 - 8 hours of training. Paraprofessionals can administer the test. Alternate forms available in Spanish for benchmarking.	Pearson 19500 Bulverde Road San Antonio, TX 78259 Phone: 866-313-6194 Visit <a href="http://AIMSweb.com">AIMSweb.com</a>  General Information: 866-313-6194 option 2 <a href="mailto:sales@aimsweb.com">sales@aimsweb.com</a>  Tech support: 866-313-6194 option 1 <a href="mailto:aimsweb@pearson.com">aimsweb@pearson.com</a>  Access to field tested training manuals are included with	As a reading screening tool, Reading-CBM is utilized to identify children at-risk of reading failures and those students significantly below grade-level expectations. As a progress monitoring tool, additional standardized, equivalent, and graded alternate forms are used to frequently measure student progress towards specific goals and monitor the effects of instructional changes. <b>Reading-CBM</b> is a 1 minute standardized measure of oral reading of graded passages to	Raw score, percentile score, developmental benchmark scores (cut points and benchmarks), probability scores, and error analysis scores are available. Raw scores are computed by computing the total number of words read correctly within the 1 minute time period. A raw score is also reported for the total number of errors (words read incorrectly). These data can be interpreted in a norm-referenced way via percentiles or categorically in a standard interpretive format	

## 5. Review the Data

In addition to the TRC ratings and implementation tables, the tools charts include details about the actual data for each progress monitoring tool that was submitted for review. These data can be viewed by clicking on any of the rating bubbles in the chart.

Examining these data can be useful for several reasons. You may see two or progress monitoring tools that received the same rating for a particular dimension; in these cases, how do you know which one really best meets your needs? By clicking on the rating and viewing the actual data, you have more information available to help determine which tool is the most appropriate.

For example, on the Psychometric Standards tab, you will see information on each tool's disaggregated validity of the performance level score. You may want to look for tools with evidence that their tools work in populations similar in characteristics to the students you work with. By clicking on the bubble in the Participants column for one of the tools, you will be presented with this type of information:

Monitoring Basic Skills Progress (MBSP)	Basic Math Computation	●	●	●	●	—
Monitoring Basic Skills Progress (MBSP)	Basic Math Concepts/Applications	●	●	●	●	—
Scholastic Math Inventory	Math	●	—	●	—	—
Scholastic Reading Inventory		●				

**Reliability of the Performance Level Score: ●**

Type of Reliability	Age or Grade	n (range)	Coefficient		Information (including normative data)/Subjects
			range	median	
Correlation between odd and even scores	1-6	279	.94-.98	.97	42% African American; 56% subsidized lunch; 6% learning disabilities

## 6. Ask for More Information

You may find that the tools chart does not provide you with all of the information you need. For example, what if a tool that you are interested in does not have disaggregated data available for a particular subgroup that is important to you? Ask the vendor! Developers who have chosen to submit their tools for review and publish them on the chart are interested in meeting the needs of their customers and doing more research to provide needed data.

Similarly, if a tool that you currently use or are interested in learning about is not on the chart, call the developer of that tool. Tell the vendor about the TRC review process and the tools chart, and ask the developer to consider submitting the tool for review.



**Finally, if you are unsure about what any technical terms on the chart mean, or how to interpret any of the information on the chart, contact the National Center on Intensive Intervention at [NCII@air.org](mailto:NCII@air.org).**

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