# Evolving Assessment Practices: From Compliance to Meaningful Instructional Data

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## ABSTRACT

As the field celebrates the 50th anniversary of the Individuals with Disabilities Education Act (IDEA), it is important to reflect on how assessment practices have evolved alongside advances in special education. Over the past five decades, assessment has shifted from a primary focus on identification, eligibility, and compliance to a broader emphasis on instructional decision-making, student progress, and equitable outcomes. This article traces key historical, legislative, and professional developments that shaped contemporary assessment, including IDEA, curriculum-based measurement, data-based individualization, response to intervention, and multi-tiered systems of support. We highlight the increasing use of multiple data sources, family collaboration, culturally responsive practices, and technology-enhanced assessment systems to support student learning. Practical examples illustrate how assessment can guide instruction and intervention. We conclude by examining future directions, including artificial intelligence and assessment literacy, and offer recommendations for preparing educators to use assessment as a meaningful tool for improving outcomes for students with disabilities.

## KEYWORDS

**Assessment, IDEA, curriculum-based measurement, data-based decisions, progress monitoring, special education**

For decades, special education services have been delivered to students in United States classrooms. Special education as a field and service have not been without controversy. Prior to the Civil Rights Movement and subsequent Disability Rights Movement, individuals were excluded from schooling based on identified differences and needs. Despite positive development and student outcomes, a persistent critique of special education relates to evaluation and placement practices. In its infancy, special education relied heavily on psychometric tests—standardized instruments designed to measure characteristics such as intelligence, aptitude, or academic achievement—that were deemed biased and leading to misidentification. Court cases (e.g., *Larry P. v. Riles* [1972]) and research studies (e.g., Mercer, 1973) documented that commonly used intelligence and achievement tests were not appropriate for all learners and in some instances caused considerable harm through inappropriate identification or instruction. Conversely, other scholars found little evidence to support these claims (e.g., Jensen, 1980). Regardless of viewpoint and level of analysis, students with disabilities—particularly students of color—have not historically been well represented in the literature on test bias (Skiba et al., 2008). Standardized assessments (e.g., intelligence tests, achievement tests), however, have a substantial impact on their access to a free and appropriate public education.

In this article, we outline some of the key historical and legislative moments that influence assessment practices in inclusive and special education. This will also include more contemporary structures guiding the use of formal and informal assessments to ensure that students receive an appropriate education leading to optimal outcomes. We offer evidence-based and practical recommendations for educators to implement effective assessment practices and conclude with projections for the next 50 years.

**TABLE 1:** Key IDEA Terms and Evaluation Safeguards

| Term | Definition |
|---|---|
| Identification | The process of recognizing that a student may have a disability and may require a comprehensive evaluation to determine educational needs and eligibility for services. |
| Evaluation | A comprehensive process that uses multiple assessment tools, strategies, and sources of information to understand a student's academic, developmental, behavioral, and functional strengths and needs. |
| Eligibility Determination | A team-based decision about whether a student meets the criteria for one or more disability categories under IDEA and requires special education and related services. |
| Free Appropriate Public Education (FAPE) | Special education and related services provided at public expense and designed to address a student's individual educational needs as outlined by the student's IEP. |
| Individualized Education Program (IEP) | A written educational plan describing a student's present levels of performance, measurable annual goals, services, supports, accommodations, and methods for monitoring progress. |
| Least Restrictive Environment (LRE) | The requirement that students with disabilities be educated with peers without disabilities to the maximum extent appropriate and removed from general education settings only when their needs cannot be met satisfactorily with appropriate supports. |
| Parental participation | The right of parents and caregivers to participate meaningfully in decisions concerning their child's identification, evaluation, eligibility, placement, and educational program. |
| Due Process | Procedural protections that provide families and schools with formal methods for addressing disagreements related to identification, evaluation, eligibility, placement, or educational services. |
| Nondiscriminatory Evaluation | The requirement that assessments be selected and administered in ways that minimize racial, cultural, linguistic, or disability-related bias and are appropriate for the purpose for which they are used. |
| Progress Monitoring | The repeated collection and analysis of student-performance data to determine whether the student is making adequate progress toward identified academic, behavioral, or functional goals. |

The mid to late-20th century marked a pivotal period for Disability Rights and special education. The Supreme Court's decision in *Brown v. Board of Education* (1954) struck down the legality of "separate, but equal" on the basis of race and paved the way for ending separation based on disability. Subsequently, Section 504 of the *Rehabilitation Act of 1973* created greater access and rights within social systems, which led to the 1975 *Education for All Handicapped Children Act* (Martin et al., 1996). Across subsequent reauthorizations, the law documented the need for appropriate assessments to support effective instruction and intervention. Although early assessment practices often emphasized identification and placement, the role of assessment has increasingly expanded to support ongoing teaching and learning (Frey, 2019).

These historical concerns remain relevant to teacher preparation because teacher candidates must understand that assessment decisions are never neutral or solely technical. The measures selected by educators, the conditions in which the assessments are administered, and the interpretations made can expand or restrict students' access to instruction and services. Educator preparation programs must help candidates recognize assessment bias and use multiple sources of information when making eligibility and instructional decisions.

## HISTORICAL PERSPECTIVE AND FOUNDATIONAL MILESTONES

The evolution of assessment in special education reflects broader shifts in educational priorities, policy, and practice over the past fifty years. Historically, assessment was primarily used to determine eligibility for services rather than informing instruction. However, foundational legislation and reform efforts have significantly expanded the role of assessment, positioning it as a continuous and integral component of teaching and learning. Understanding these historical developments can assist future educators in recognizing why and how assessment must be connected to instruction, interpreted through multiple sources of information, and used to support meaningful learning outcomes for all students. Legislation and policy provide broad guidance to ensure student access and protection.

### The Passage of IDEA and the Establishment of Evaluation Safeguards

The Education for All Handicapped Children Act was later renamed the Individuals with Disabilities Education Act (IDEA). IDEA established several interconnected requirements that govern how students are identified, evaluated, determined eligible for services, and provided an appropriate educational program. As summarized in Table 1,

these requirements include: identification, evaluation and eligibility determination, parental input and due process, a Free Appropriate Public Education (FAPE), guided by an Individualized Education Program (IEP), and delivered in the Least Restrictive Environment (LRE; Martin et al., 1996). Under IDEA, assessment is central to identification and eligibility determination, as well as ongoing development, implementation, and evaluation of an appropriate educational program. This process requires the collaboration of a team with expertise on the student to continuously collect, analyze, interpret, and share data to make decisions on student progress toward documented academic and behavioral goals. Team members include school-based professionals (e.g., special educator, general educator, school psychologist), the family members, the student, and potentially other community members or employers (Kamman & McCray, 2022). Family participation is essential because families have valuable knowledge about students' strengths, needs, interests, and performance in contexts outside of the school environment that can be critical to a picture of the whole child. Teacher candidates need to know how to present assessment results, and how to elicit family perspectives, explain results in accessible language, and incorporate family knowledge and assets into educational planning.

Expanding the purpose of assessment from initial evaluation and eligibility determination required greater knowledge and skill among teachers and increased communication with other members of the student's IEP team. Standardized assessments provide formal measures of progress at predetermined intervals, usually conducted on an annual basis. In the interim, educators can conduct formative assessments to collect data more frequently. Formative assessment refers to information gathered during teaching and used to determine what students understand, where they are having difficulty, and the appropriate instructional response. This type of assessment allows teachers to more quickly determine student progress and make instructional adjustments as needed. Progress monitoring using curriculum-based measurement (CBM) has become a hallmark of special education service delivery and data-based individualization (National Center on Intensive Intervention, 2013). For future teachers, the essential distinction is not simply whether an assessment is formal or informal, but how the information will be used. An assessment has limited instructional value when educators collect data, but do not connect the findings to a specific decision about teaching or support for students.

## The Emergence of Continuous Assessment: CBM and Data-Based Individualization

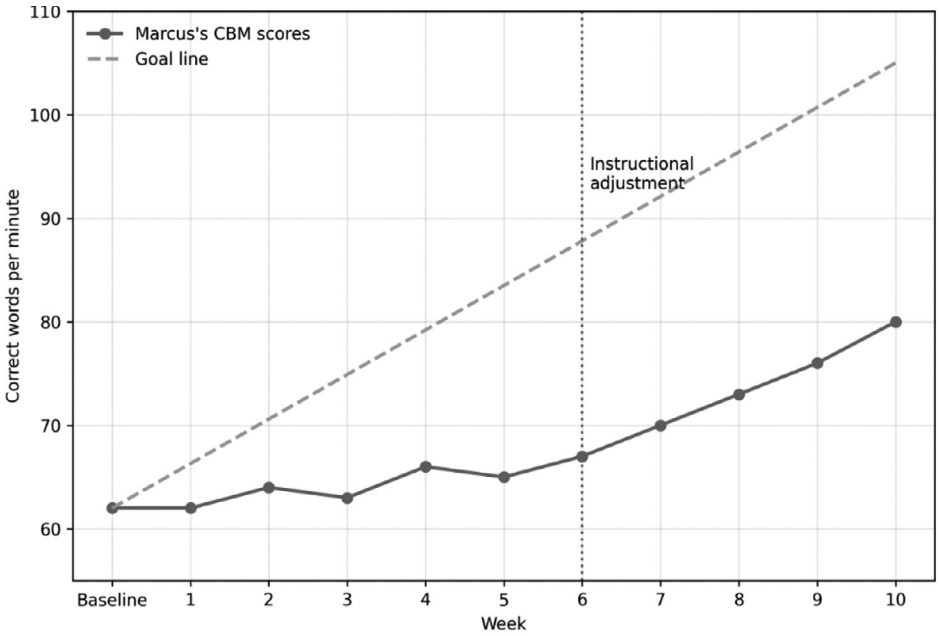
Curriculum-based measurement (CBM) is an assessment approach using brief, repeatable measures to evaluate students' academic performance and growth over time. CBM was designed to assist teachers in formatively assessing instruction and student learning (Deno, 2003). The procedures involve using reliable and valid measures to assess specific tasks, with specific administration and scoring procedures. Importantly for teachers, they are time efficient and easy to implement. This allows CBM to be used frequently with many students to document changes over time. As a result, educators can make timely, data-informed decisions about whether students are responding adequately to instruction or whether adjustments are needed. CBM is key to making data-informed decisions to support student learning (Cornelius et al., 2024). In this way, the use of CBM shifted assessment from a periodic event to an ongoing process that is closely integrated with instruction. The value of CBM does not come from producing a score or graph alone; its instructional value depends on how educators use it to document, review, and interpret patterns of student performance to determine whether to maintain, modify, intensify, or replace the current instructional approach.

Building on the use of CBM for frequent progress monitoring, educators began to formalize processes for using these data to make systematic instructional decisions. Data-based individualization (DBI) is a validated process for making student-centered decisions for instruction and intervention. The process begins by selecting an appropriate progress-monitoring tool. This first decision should be based on the goals documented in the IEP and developmentally appropriate for the student being served (Park et al., 2024). Once the assessment is selected, the teacher should implement and score it with fidelity following relevant guidance or procedures. Accurate scoring then leads to accurate data collection over time, which allows for analysis and decision-making about student performance and subsequent instruction or intervention. As assessment practices became more continuous and data-driven, educational systems began to shift toward prevention-oriented frameworks designed to support students earlier and more effectively.

## Putting It into Practice

*Ms. Lee, a teacher candidate completing a practicum with a fourth-grade class, is working with Marcus, who is receiving reading intervention. Marcus's goal is to read 105 words per minute, with no errors, on a fourth-grade oral fluency measure by the end of the semester. His baseline is 62 words per minute with 8 errors. Every week, Ms. Lee administers a CBM passage and graphs the results against Marcus's goal line. For the first six weeks, Marcus's scores*

**FIGURE 1:** Marcus's Weekly CBM Oral Reading Fluency Scores




*are 62, 64, 63, 66, 65, and 67 correct words per minute. His scores do show a slight improvement, but at his current rate he will not reach his goal by the end of the semester. Ms. Lee notices that many of Marcus's errors occur when he reaches multisyllabic words. As Ms. Lee and her cooperating teacher consider an instructional change, they consider several questions. Was the intervention implemented consistently? Were the CBM passages the same level of difficulty? Does Marcus's classwork show the same issues? Could other factors such as language or attendance have impacted his performance? After reviewing information related to these questions, Ms. Lee and her cooperating teacher decide Marcus needs more explicit instruction in decoding multisyllabic words and create a plan for intervention. Ms. Lee continues weekly CBM administration and after four more weeks Marcus's scores are 70, 73, 76, and 80 correct words per minute. As shown in Figure 1, Marcus's scores only slightly increased during the first six weeks, suggesting the initial intervention was not sufficient to meet his instructional goal. After adjusting the intervention to add more explicit multisyllabic decoding, his growth rate improved.*

## From Identification to Prevention: RTI

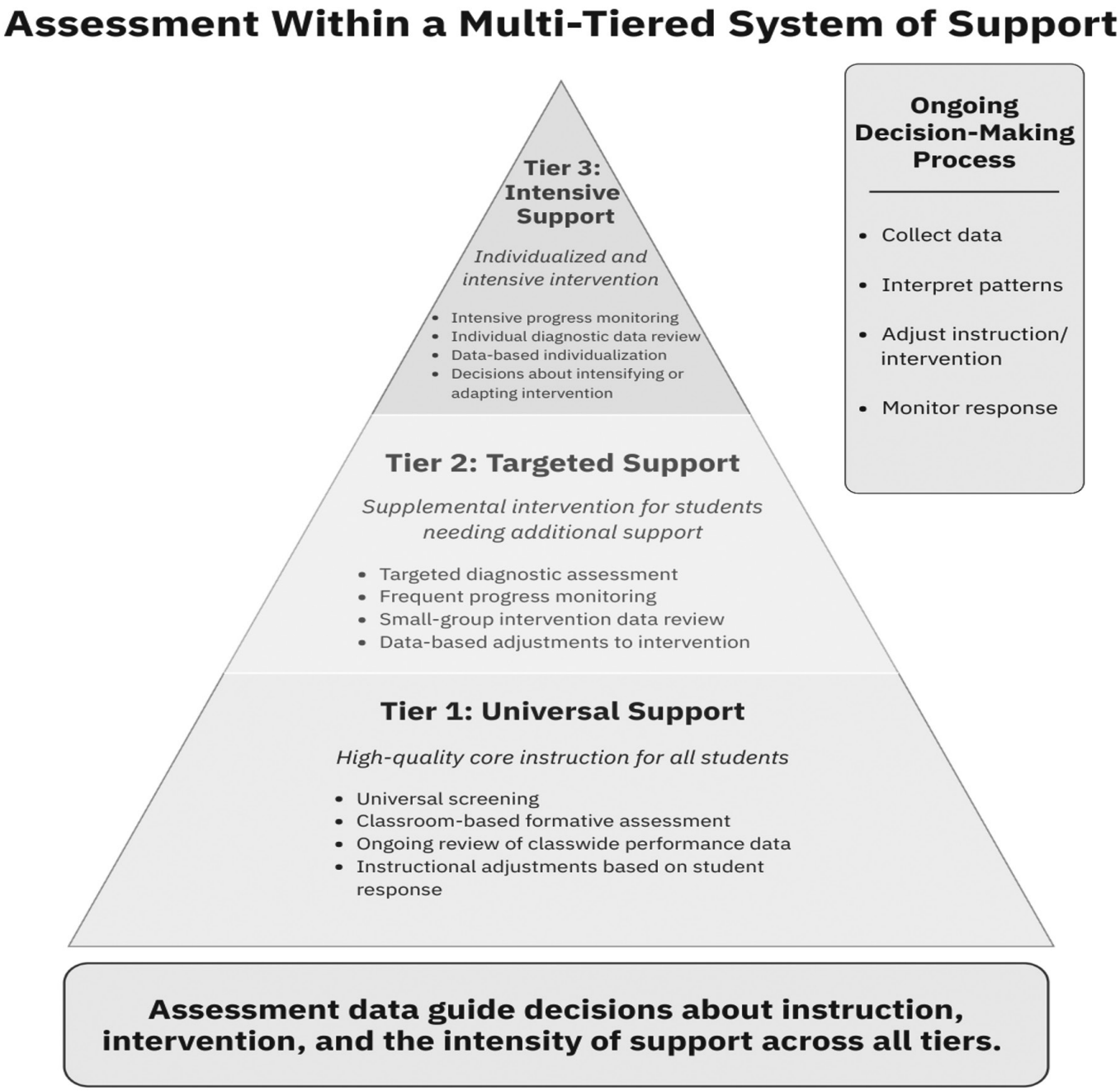
Madeline Will's Regular Education Initiative (REI), introduced in 1986, offered a vision for a more integrated system of education for all students, including students with disabilities (Leach & Helf, 2016; Will, 1986). Although REI received a mixed reception, its spirit continues to influence efforts to make schools more inclusive. In fact, multitiered systems of support frameworks harken back to Will's call for specialized instruction to take place in the general education classroom. Many students who are ultimately identified with disabilities begin in classrooms with their typically developing peers. When general education environments do not adequately meet students' needs, or when students do not respond to typical instruction, it may become necessary to provide more specialized and intensive supports.

Response to Intervention (RTI) is a prevention-oriented framework designed to identify and address student learning needs early. In RTI, educators use screening and progress monitoring to identify which students need additional support and whether current instruction or intervention is effective. In the typical three-tier model, all students receive high-quality core instruction and universal screening (Tier 1). Students who need additional assistance receive supplemental instruction and intervention (15% of students, Tier 2). Students with more intensive needs receive individualized supports (5% or fewer students, Tier 3). This structure builds on a sound general education foundation and provides earlier support and, in some instances, disability identification in contrast to other models that delay intervention or identification (Hoover, 2011; Kirby, 2017). Formative assessment is critical to an RTI framework to ensure that teachers have timely instructional information to adjust to the needs of students who are struggling or have disabilities in each context (Kressler et al., 2020). These developments in assessment reflect a shift in assessment from a reactive model focused on identification to a proactive, prevention-oriented approach that emphasizes early support, continuous monitoring, and data-informed instruction.

## Reflection Questions

1. In what ways has the purpose of assessment in special education changed from identification and placement to instructional decision-making?
2. Why is it important for educators to understand the historical concerns related to assessment bias and misidentification?
3. How do IDEA's evaluation safeguards, family participation requirements, and emphasis on multiple sources of data influence the way assessment should be used today?

**FIGURE 2:** Assessment Within a Multi-tiered System of Support




## MAJOR ADVANCES AND PRACTICE-CHANGING INNOVATIONS

Over the past several decades, assessment in special education has evolved from a system largely focused on eligibility and compliance toward one that supports ongoing instructional decision-making. Determining whether a student qualifies for special education services is no longer the primary role of assessment. Instead, advances in research, policy, and practice have expanded the role of assessment as a key component of ensuring educators understand how students learn and how instruction can be improved (Aceves & Kennedy, 2024). Today, assessment systems are designed to provide timely, meaningful information that guides teaching, supports collaboration among professionals and families, and promotes equitable learning opportunities for all students. Key innovations in assessment and the structures that support assessment systems have reshaped how educators collect and use information about student learning. This shift aligns with the growing emphasis on evidence-based assessment practices,

which require the integration of multiple data sources and theoretically grounded measurement approaches to inform educational decision-making (Talbott et al., 2023). Historically, assessment practices focused heavily on classification and eligibility, often relying on limited data sources that did not adequately inform instruction (Frey, 2019). These advances position assessment as a critical and central tool for improving instruction and supporting the success of students with disabilities and their peers.

## Multi-Tiered Systems of Support

One of the most significant advances in assessment practice over the past several decades has been the development of Multi-Tiered Systems of Support (MTSS). MTSS reflects a shift away from assessment as a gatekeeping mechanism and toward assessment as a tool for improving instruction and supporting the success of all students, including students with disabilities (McIntosh & Goodman, 2016). Within MTSS, assessment, instruction, and intervention operate as an integrated system designed to respond to students' learning needs in a timely and coordinated way. In an MTSS framework, all students receive high-quality core instruction, while additional supports and interventions are provided for students who need more intensive assistance. Educators use student data to determine when additional supports and interventions are necessary and to evaluate whether those supports and interventions are effective. MTSS also supports more equitable identification practices by emphasizing the use of multiple sources of data and reducing reliance on single high-stakes assessments (Hoover et al., 2018). As shown in Figure 2, assessment data are used across all tiers to identify student needs, monitor response to instruction and intervention, and inform decisions about the level and type of support provided. Federal guidance under IDEA further reinforces the importance of comprehensive evaluation procedures that incorporate observations, progress data, and multiple assessment tools to inform eligibility and intervention planning (Power-deFur, 2023).

A comprehensive approach encourages educators to view assessment not as a single event, but as an ongoing process that informs instruction and guides decision-making (Cornelius et al., 2024). MTSS also strengthens collaboration among general educators, special educators, instructional specialists, and school leaders who work together to review data, identify student needs, and design appropriate supports and interventions. A collaborative approach reinforces the idea that supporting student learning is a shared responsibility across the school system. By integrating assessment and instruction, MTSS has helped move schools toward a more proactive and equitable model of support. Students receive help based on their needs rather than waiting for academic failure to occur before support and intervention.

## Putting it into Practice

*During the fall universal screening period, a sixth-grade mathematics team finds that 38% of students scored below the benchmark for fluently multiplying and dividing multi-digit decimals and positive fractions. Before assigning several students to Tier 2 intervention, the team examines class-wide performance patterns, alignment between the screener and recent instruction, and considers the consistency of core instruction. The teachers also review formative assessments, student work samples, and classroom observation reports. This review reveals that many students can multiply multi-digit decimals but are having difficulty dividing decimals and positive fractions accurately. Because this is a pattern across students and classrooms, the team determines student performance is likely due to core Tier 1 instruction. The teachers work together to strengthen core instruction by adding explicit instruction, frequent and responsive feedback, and multiple opportunities for students to practice. After five weeks, the math team gives an assessment aligned with the grade level skills. The majority of students demonstrate improvement, but a smaller group of 6 students is still struggling. These students will begin a targeted Tier 2 intervention, and their progress will be monitored weekly.*

## Universal Screening and Early Identification

Another important advancement in assessment practice is the widespread adoption of universal screening to identify students who may require additional academic or behavioral support. Universal screening involves assessing all students at regular intervals using brief measures designed to detect potential learning difficulties. Universal screening represents a significant departure from earlier models in which students were often identified for support only after prolonged struggles. However, researchers caution that universal screening tools must be carefully selected and interpreted to ensure validity across diverse student populations. For example, assessments that include unnecessary linguistic complexity may introduce measurement error, meaning that a student's score is influenced by factors other than the knowledge or skill the assessment is intended to measure. This can lead to inaccurate conclusions about student ability, particularly for English language learners (Richards-Tutor & Aceves, 2025). Incorporating culturally and linguistically responsive practices helps ensure that screening results accurately reflect students' learning needs rather than language differences (Hoover et al.,

2018; Richards-Tutor & Aceves, 2025).

Early identification allows educators to provide targeted support before gaps in learning become more difficult to address. Universal screening also highlights the importance of proactive assessment practices. Effective educators do not wait for students to fall behind before taking action. Instead, they regularly examine student performance data to identify patterns and determine which students may benefit from additional support (McIntosh & Goodman, 2016). From a policy perspective, universal screening has helped schools create more systematic and equitable processes for identifying students who need additional services. These practices, when implemented effectively, help ensure that decisions about student support are informed by data rather than subjective judgment alone. Screening results should be interpreted alongside classroom performance, instructional history, and other relevant information rather than used as the sole basis for an educational decision.

## Progress Monitoring and Data-Based Instruction

The development of progress monitoring has also transformed the role of assessment in classrooms and schools. Progress monitoring is the frequent measurement of student performance to determine whether students are making adequate progress toward learning goals. Rather than relying only on end-of-year or periodic testing, educators now collect data regularly to track growth over time (Fry et al., 2023). Progress monitoring data allow teachers to evaluate whether current instructional strategies are effective by examining patterns in student performance over time. When progress is slower than expected, educators can use the data to determine whether to adjust instructional strategies, pacing, group size or the intensity of support. Within an evidence-based assessment framework, progress monitoring relies on the use of reliable, valid measurement tools and systematic data interpretation processes to guide instructional adjustments (Talbott et al., 2023). Educators play a critical role in administering and interpreting these assessments, though research suggests variability in training and implementation practices across preparation programs (Lockwood et al., 2022).

Progress monitoring supports a more responsive approach to teaching. When data show that students are progressing as expected, educators can continue with the current instructional approach and pacing. This process ensures students are meeting benchmarks and progressing toward intended outcomes. When progress slows or stalls, educators can modify instructional strategies and/or increase the intensity of support. Progress monitoring reinforces the idea that assessment is most powerful when it is closely connected to instructional decision-making. Data are not collected simply to document learning but to improve teaching and ensure that all students have access to meaningful learning opportunities.

## Expanded Data Sources

Assessment practices have increasingly shifted toward the use of multiple, complementary sources of data to develop a more complete and equitable understanding of student learning (Cornelius et al., 2024; Fry et al., 2023). Multiple sources of information may include standardized and curriculum-based measures, classroom observations, student work samples, interviews, and input from families and other members of the educational team. The growing emphasis on evidence-based assessment practices reflects the need to draw on multiple methods, sources, and contexts to develop a comprehensive understanding of student learning (Talbott et al., 2023). Rather than relying solely on standardized or isolated measures, educators increasingly use a range of assessment approaches, including classroom observations, curriculum-based measures, student work samples, and interviews with key stakeholders. Family perspectives, in particular, provide critical context for understanding student performance across settings (Power-deFur, 2023; Talbott et al., 2023). Collectively, varied forms of assessment data offer a more nuanced picture of what students know and can do across contexts and over time (Jung & Thomas, 2010).

Increasingly, assessment frameworks recognize families as essential contributors to the assessment process, as they offer valuable perspectives on students' strengths, experiences, and learning outside of school contexts (McCray et al., 2025; Talbott et al., 2023). Family insights offer valuable information about students' strengths, cultural and linguistic assets, learning preferences, and experiences outside of school that may not be captured through traditional assessments (Gaspar & Sahay, 2025). Incorporating family perspectives can help educators interpret assessment results more accurately and develop instructional plans that are responsive to the whole student (McCray et al., 2025). This positions families as active partners in understanding and supporting student learning.

Incorporating multiple data sources also supports more equitable and accurate decision-making by reducing overreliance on standardized assessments that may not fully capture the abilities of diverse learners. Research has shown that failure to consider linguistic and cultural factors in assessment can lead to misinterpretation of student performance and inappropriate identification for special education services (Hoover et al., 2018; Richards-Tutor & Aceves, 2025). When educators rely on a single measure, particularly those

that may carry cultural or linguistic bias, important aspects of student ability can be overlooked (Stewart et al., 2022; Artiles, 2019). By integrating multiple data sources, including family input, educators can reduce bias and make more informed instructional decisions. Assessment becomes not only a tool for measuring learning but also a mechanism for ensuring that all students have meaningful opportunities to demonstrate their knowledge in ways that honor their identities and experiences.

### Putting it Into Practice

*A seventh-grade student, Elena, performs below the benchmark on a schoolwide reading assessment. Her teacher also notices that she sometimes needs additional time to complete written assignments. However, Elena participates actively in class discussions, demonstrates strong understanding when information is presented orally, and consistently completes complex projects successfully. Before drawing conclusions about Elena's reading performance, the team reviews several additional sources of information, including classroom work samples, previous assessment results, language development data, attendance records, and teacher observations. During a conversation with Elena's family, the team learns that she regularly reads and discusses texts in Spanish at home and that she has recently transitioned into more advanced English language coursework. The information from multiple data sources suggests that Elena's screening score should not be interpreted in isolation. The team decides to continue monitoring her reading performance, provide targeted language and literacy support within core instruction, and review her progress prior to additional intervention.*

### Technology-Based Data Systems

Technological advances have further strengthened the role of assessment in supporting student learning. Digital assessment platforms, data dashboards, and integrated data systems now allow educators to collect and analyze student information more efficiently than ever before. These systems make it possible for educators to track student performance across time, classrooms, and content areas. Technology can also empower students to track and monitor their own performance, a strategy that has been shown to motivate student learning (McIntosh & Goodman, 2016). Emerging technologies, including artificial intelligence (AI), are beginning to extend these capabilities by supporting more rapid analysis of student data, automating aspects of scoring, and generating insights to inform instructional decisions; however, the integration of AI into assessment remains an emerging area of research and practice (Ouyang et al., 2023; Owan et al., 2023). Although still developing, AI shows promise in enhancing assessment systems by identifying patterns in student learning and providing more timely, individualized feedback (Lin et al., 2023).

Technology-based data systems also allow teachers and school leaders to visualize trends in student learning and share information with colleagues and families. As a result, data that were once difficult to access or interpret are now more readily available to inform instructional decision-making in a more immediate manner. Technology-based data systems illustrate how assessment can function as a powerful tool for continuous improvement. Increased access to data also requires strong data literacy, including the ability to determine which information is relevant, interpret patterns accurately, recognize limitations, and connect findings to appropriate instructional decisions. When educators have access to timely and understandable information about student learning, they are better equipped to respond to student needs and strengthen instruction across classrooms and schools.

In addition to improving efficiency, technology-based assessment systems are increasingly shaping how educators conceptualize teaching and learning. As digital platforms become more integrated into classrooms, assessment is no longer confined to discrete moments but is embedded within daily instructional interactions. For example, adaptive learning technologies can continuously collect data on student responses, providing real-time insights into patterns of understanding, misconception, and engagement. This use of technology and data assists with moving toward more dynamic and responsive assessment environments in which data are generated through authentic learning experiences rather than isolated testing events. As a result, assessment becomes less intrusive and more seamlessly aligned with instruction.

### Reflection Questions

1. How have MTSS, universal screening, progress monitoring, and data-based individualization changed the relationship between assessment and instruction?
2. Why is it important to consider multiple sources of information rather than relying on a single assessment result when making educational decisions?
3. How can assessment data help educators determine whether a student needs a change in instruction, additional intervention, or more intensive support?

## IMPLICATIONS FOR RESEARCH AND PRACTICE

The evolution of assessment practices over the past fifty years has important implications for both research and professional practice. As assessment

systems have shifted toward continuous, instructionally relevant data use, educators must develop the skills and structures necessary to use these tools effectively. Teacher preparation programs, schools, and state education systems all play a role in ensuring that assessment practices support meaningful learning rather than simply fulfilling compliance requirements. Assessment literacy refers to the knowledge, skills, and dispositions educators need to select appropriate assessments, administer and score them accurately, interpret results, recognize limitations, communicate findings, and use assessment information to make informed educational decisions. Preparing educators to interpret and act on assessment data, strengthening collaborative data use, designing coherent assessment systems, and advancing equity through thoughtful data practices are key priorities for the future of assessment (Mandinach & Gummer, 2016; McCray et al., 2025).

## Preparing Teachers to Use Assessment Effectively

Teacher preparation programs play a central role in ensuring that future educators can use assessment as a meaningful tool for improving instruction. As assessment systems have grown more sophisticated, teachers must develop strong assessment literacy, including the ability to interpret student data, monitor progress, and connect assessment results directly to instructional decisions (Mandinach & Gummer, 2016). This data literacy emphasis aligns with evidence-based assessment frameworks, which require educators to integrate multiple data sources and apply theoretically grounded decision-making processes when interpreting student performance (Talbott et al., 2023). Assessment data may be underutilized or misinterpreted without these competencies, limiting their impact on instructional improvement.

Teacher candidates should learn how to examine multiple forms of data to understand student learning and growth with diverse student populations, such as interpreting assessment results, identifying patterns in student performance, recognizing the limitations of individual measures, and determining when and how instructional adjustments are warranted. Research also highlights that effective assessment literacy includes understanding the limitations of individual measures and the importance of triangulating data across sources to improve accuracy and instructional relevance (Frey, 2019). Candidates must also develop the skills to monitor student progress over time, ensuring that instruction and interventions remain responsive to student needs (Deno, 2003; Fuchs & Fuchs, 2006).

Equally important is the ability to communicate assessment information effectively. Teachers regularly share data with colleagues, school teams, and families in order to coordinate supports and ensure that students receive appropriate instruction (Cornelius et al., 2024). Effective communication includes explaining assessment results in accessible language, inviting questions and perspectives, and helping families understand how the information connects to instructional goals and supports (Cornelius et al., 2024). When assessment is integrated into everyday instructional routines, teachers learn to view data not as a separate task but as an essential component of effective teaching (Aceves & Kennedy, 2024).

## Strengthening Collaborative Data Use

Effective assessment practices depend on collaboration among educators. Teachers, specialists, administrators, and families each bring valuable perspectives that help schools interpret student data and design appropriate supports (Billingsley et al., 2024; Datnow & Hubbard, 2016; Talbott et al., 2023). Collaborative data use encourages teams to examine student progress together, identify areas where students may need additional assistance, and develop coordinated strategies for instruction and intervention (Billingsley et al., 2024). Regular team discussions around student data can help ensure that decisions are informed by multiple perspectives and that supports are implemented consistently across classrooms (Billingsley et al., 2024; Wayman, Jimerson, & Cho, 2012). For teacher candidates, learning to participate in these collaborative processes is an essential professional skill. Preparing educators to engage in productive data conversations helps schools build a culture in which assessment information is used constructively to improve teaching and learning.

## Advancing Equity Through Assessment

Assessment also plays a critical role in advancing educational equity. When used thoughtfully, assessment data can reveal patterns in student opportunity, access to instruction, and academic outcomes across groups of learners (Darling-Hammond, 2010; McCray et al., 2025). Examining multiple sources of data helps educators develop a more complete understanding of student learning and reduces the risk that decisions will be based on a single measure. Overreliance on single measures, particularly standardized assessments, has been shown to introduce bias and contribute to inequitable identification practices, especially for culturally and linguistically diverse learners (Hoover et al., 2018; McCray et al., 2025; Richards-Tutor & Aceves, 2025). Ethical use of assessment data requires educators to consider not only whether a measure is technically sound, but also how the data

are interpreted, whose perspectives are represented, and how resulting decisions may expand or restrict a student's access to instruction and opportunity. A broader view of assessment supports more accurate and fair decision-making about instruction and student support (Cornelius et al., 2024). At the same time, maintaining high expectations for all students remains central to equitable assessment practices. Data should be used not to limit opportunities but to identify ways to strengthen instruction and expand access to meaningful learning experiences. When assessment is used in this way, it can help educators identify barriers to learning and support improved outcomes for students with disabilities and other historically underserved groups (Cornelius et al., 2024; Darling-Hammond, 2010).

### Reflection Questions

1. What knowledge and skills do educators need to move from simply collecting assessment data to using those data to make informed instructional decisions?
2. How can collaboration among educators, students, families, and other professionals improve the interpretation and use of assessment information?
3. What responsibilities do educators have to ensure that assessment practices and data-based decisions are equitable, ethical, and responsive to individual learners?

## LOOKING AHEAD TO THE NEXT FIFTY YEARS

Assessment in special education has evolved since 1975 from primarily an identification mechanism to an essential part of instructional decision-making. Both formal and informal assessments offer insights into a student's unique strengths and needs and provide the foundation for developing individualized goals documented in the IEP and monitoring meaningful progress. Additionally, assessment can provide short and long-term feedback on instruction and highlight a teacher's strengths and needs.

As MTSS models are increasingly adopted at school, district, and state levels, it is important to consider assessment as a key element of the system designed to support the whole child in learning. Evaluation and assessment are used for initial identification, to determine eligibility, to set goals and monitor progress, and to measure the appropriateness of instruction. Each of these purposes informs teaching and learning and decisions about the supports needed. In effective systems, educators, specialists, students, and families work together to identify needs, interpret assessment information, and determine appropriate supports in a timely manner. Depending on identified needs, support may include professional development or coaching for a teacher, release time for observations or team planning, or supplemental instruction, intervention, and assessment accommodations provided within the classroom.

Evidence-based assessment systems should include multiple assessments, appropriate technology tools, and effective collaboration to promote access, growth, and optimal outcomes for all learners. Summative assessments provide data relative to appropriate standards and developmental and grade-level expectations. These data facilitate longitudinal and cohort comparisons. Formative assessments (e.g., CBM, quizzes, observations) provide ongoing, real-time data that can inform instructional adjustments. Coupled together, summative and formative assessment data facilitate long and short-term progress monitoring. Multiple forms of data are important to developing an IEP that will "enable a child to make progress appropriate in light of the child's circumstances" consistent with the Supreme Court decision in the *Endrew F.* case (2017).

Educators must develop AI literacy to effectively evaluate and use technology tools to enhance assessment and instruction (Marino et al., 2023). According to Ding and colleagues (2024), non-technical users including teachers should possess three dimensions of AI literacy: AI mechanisms, AI capabilities, and AI ethics. The first dimension (AI mechanisms) focuses on a functional understanding of AI. The second dimension (AI capabilities) focuses on understanding the capabilities of AI, its strengths and weaknesses. Finally, AI ethics emphasizes considering the impact on society such as data privacy issues and algorithmic bias. Technology is ubiquitous and leveraging technology tools appropriately has the potential to enhance assessment systems. For instance, machine learning can facilitate student assessment and adjust difficulty in real time based on responses. Additionally, child study teams–and learners themselves–can use programs that will compile, analyze, and interpret performance data and make suggestions for instruction or intervention (Ding et al., 2024). These opportunities must be guided by ethical and professional judgement.

Using these technologies ethically will require ongoing professional learning and educator professional judgement to ensure sound instructional decisions and adherence to FERPA regulations. Technology should supplement and enhance educator knowledge and skill, not supplant it. Future improvements in assessment literacy will depend in part on how well teacher candidates learn to connect assessment knowledge to instructional practice. As they move through coursework and clinical experiences, candidates need opportunities to interpret authentic student data, examine the strengths and limitations of different

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assessment tools, communicate findings clearly, and use evidence to make instructional decisions. Developing these habits can help future educators move beyond simply creating, collecting, and reporting data toward using assessment as an ongoing tool for understanding student learning and improving instruction.

Technological advances offer a powerful means for data collection, analysis, and the development of responsive instructional supports, positioning assessment systems to become increasingly dynamic and personalized in the years ahead. Advances in artificial intelligence and machine learning have the potential to support more adaptive assessment practices, allowing educators to better understand student learning trajectories and respond to needs in real time. For example, emerging tools may adjust task difficulty based on student responses or generate timely insights that inform instructional planning and intervention. At the same time, these technologies can streamline data aggregation and interpretation, providing educators and teams with more accessible and actionable information to guide decision-making.

However, the effective use of these innovations will depend on educators' ability to evaluate and apply technology thoughtfully and responsibly. Developing AI literacy, including understanding AI mechanisms, capabilities, and ethical considerations such as data privacy and algorithmic bias, will be essential for ensuring that technology enhances rather than constrains equitable assessment practices. Ongoing professional learning and strong professional judgment will be necessary to ensure that data are interpreted accurately and used in ways that support meaningful learning. Ultimately, technology should supplement and strengthen educator expertise, not replace it. The future of assessment will depend not only on continued technological innovation, but also on the ability of educators and systems to integrate these tools in ways that are ethical, equitable, and responsive to the diverse and evolving needs of learners.

### Reflection Questions

1. What assessment and data-literacy skills will future educators need as assessment systems and technologies continue to evolve?
2. How can artificial intelligence and other emerging technologies strengthen assessment practices without replacing educator expertise and professional judgment?
3. What ethical considerations should guide educators when using technology to collect, analyze, interpret, or act on student data?

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