



Best Practices for Accelerating Student Learning in Special Education

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Introduction

There are a multitude of reasons that students in special education make slow progress, often requiring years of intervention to achieve the goals defined in their Individualized Education Program (IEP). Special education programs are notoriously short staffed and special educators leave the profession at double the rate of general educators. While educators often take on heavy caseloads, the personnel factor is only one of several that contribute to the slow progress and poor outcomes for students in special education.

Mastering skills requires constant stimulation and practice, particularly for students with special learning needs. These students require greater intensity, with more opportunities to practice, as well as the ability to receive effective feedback. While evidence-based practices do exist for many areas of need in special education, the level of utilization of such practices among school-based practitioners is quite low ([Hoffman et al, 2013](#)).

Students across the board have been negatively affected by the pandemic, with the most vulnerable being among those hardest hit, including students receiving special education instruction and intervention services. However, despite the turbulence caused by the pandemic, the increasing use of technology in education has opened up many new opportunities.

This white paper outlines five best practices that can help students with special needs accelerate their practice:

Mastering skills requires constant stimulation and practice, particularly for students with special learning needs.

1

Use Evidence-Based Curricula and Programs

While students in general education classes are taught according to established curricula, in special education, educators must individualize instructional plans on a student-by-student basis.

Over the last decade, adoption of the Common Core State Standards in the United States has fast tracked research and development of higher-quality curricula, resources, and supports for educators ([Steiner, 2019](#)). Concurrently, the widespread use of digital tools and resources in general education has made these curricula widely available to general education students and educators via digital Learning Management Systems (LMS).

However, the adoption of advanced, research-based tools and practices in special education has lagged significantly behind. As an example, the Department of Education's What Works Clearinghouse, which reviews evidence of effectiveness of educational programs, policies, and practices, lists 233 studies on literacy but only 37 studies within the "children with disabilities" category ([What Works Clearinghouse, 2022](#)). Whereas general education is streamlined and standardized using LMS and digital curricula, special education relies almost exclusively on the personal skills of highly-trained, individual educators.

The term "evidence-based practice" (EBP) refers to an approach in which the process of clinical decision making utilizes current, high-quality research evidence, integrated with practitioner expertise and client preferences. Organizations such as the American Speech-Language-Hearing Association (ASHA) have published [position statements](#) encouraging the use of evidence-based practices in clinical care.

Despite this, school-based professionals are not yet putting evidence-based practices into widespread use, citing the lack of time for research and workload/caseload size as their most significant barriers to implementing EBP ([Greenwell & Walsh, 2021](#)).

Several mechanisms can be put into place to support special educators in utilizing evidence-based curricula and programs to help students accelerate progress. For evidence-based programs to be effective, the content must be easily accessible, searchable and structured with clear sequences. Educators can be trained on how to implement the EBP as intended, along with a set of guidelines that includes specific information on the practice (which students should participate, how long the program will take, the length and frequency of sessions, required materials, etc.).

With digitized evidence-based programs – both those that are commercially available as well as new research – educators can easily follow instructional scripts, implementation procedures, and utilize other resources that support delivery.

What are school-based professionals' experiences with evidence-based practice?



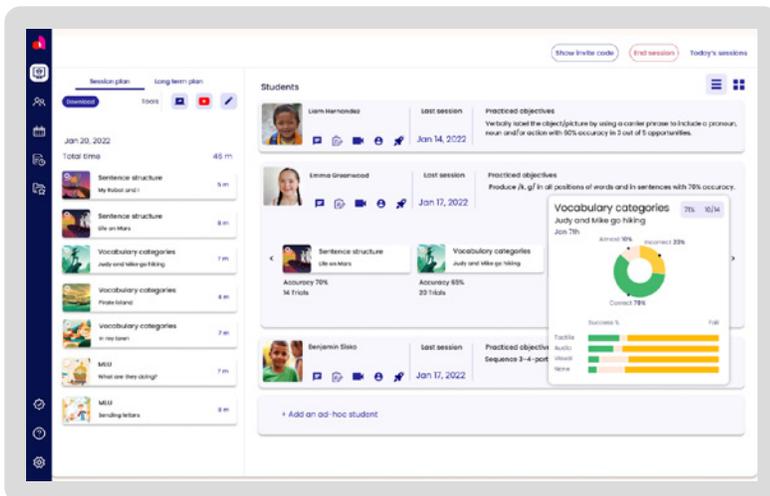
Source: [Schooling & Solomon, 2017](#)

2

Ensure Fidelity of Instruction

Educational research consistently shows that the success of evidence-based programs depends on high-quality and consistent implementation by educators. Often referred to as “fidelity,” a learning platform designed for special education can utilize technology to ensure that educators follow the instructions within each lesson plan so that all of the points and objectives are covered.

Research shows that when programs implemented with fidelity are compared to programs not implemented with fidelity, the difference in effectiveness is significant; those implemented with fidelity yield an average effect size that is two to three times higher, and under ideal circumstances may be even greater ([Durlak & DuPre, 2008](#)).



Recommendation Engine for Specific Programs

Mechanisms such as easy navigation within a program/curriculum, scripted instructions for the educator, and a recommendation engine for specific programs and sequences can help educators identify, select, and implement individualized programs and curricula adapted to the varied needs of their students.

3

Increase Practice Intensity

Studies have shown that increased practice time yields improved outcomes for special education students. “Children...who received [more frequent interventions]... made significantly greater gains when they were provided with a more intensive dose frequency and when cumulative intervention intensity was held constant” (Allen, 2013).

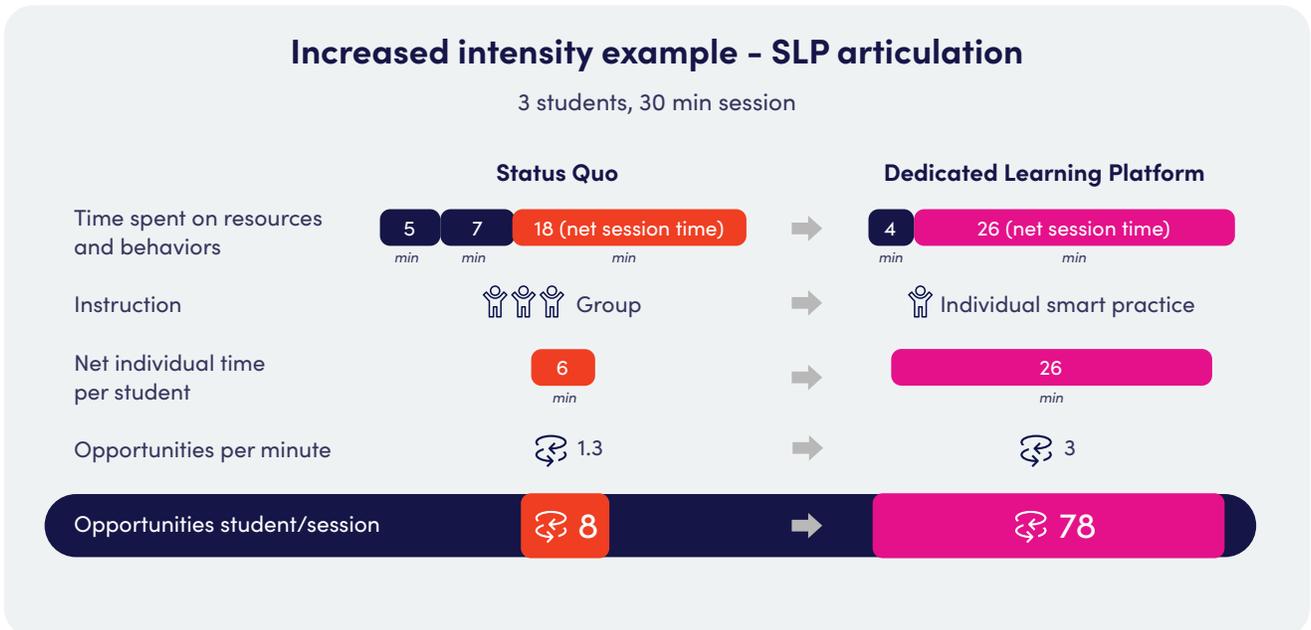
One way to measure intensity in special education is the number of practice repetitions (a.k.a. trials or productions). By using a dedicated, special education learning platform, students will receive individualized instruction and practice, as well as an increase in practice opportunities. To highlight the significance of increased intensity, consider the following scenario. Typically, students can receive speech therapy for thirty minutes per week in a mixed group of approximately three students. Five minutes will be lost due to gathering materials and explaining activities. An additional seven minutes will be lost due to redirection and engagement techniques. With eighteen minutes remaining, the therapist is still working with multiple students and at a slower pace.

One way to measure intensity in special education is the number of practice repetitions (a.k.a. trials or productions).

With a dedicated special education learning platform, therapy minutes are individualized, based on areas of need. Additionally, the amount of repetitions per minute can be significantly greater.

The result is that students utilizing a dedicated special education platform may experience 10 times the opportunities, or trials, to practice their individual goals when compared to status quo therapy models.*

In this learning platform example, students receive 78 repetition opportunities in the same 30-minute session:



*Estimated repetition for articulation

4

Provide Corrective, Immediate and Specific Feedback

Providing feedback is often mentioned as a powerful influence on learning and achievement, though the impact may be positive or negative. Studies show that effective feedback should be corrective, immediate and specific ([Hattie & Timperley, 2007](#)). Corrective feedback focuses on what the student should do, rather than on the incorrect response. Timing of the feedback is also important because feedback that is delayed from the performance is less effective than feedback delivered immediately. Lastly, feedback should be specific or modeled so that the student can grasp what was missing from the response.

When students are provided with corrective, immediate and specific feedback designed to scaffold their skills, they receive practice opportunities that are consistent with their individual capacity for development.

When serving students in groups, it's difficult for educators to provide all three components of effective feedback to students. Likewise, when educators assign worksheets or other homework, any feedback the students receive is not immediate and not specific.

Digital learning platforms measure student responses and provide corrective, immediate and specific feedback. Artificial intelligence, natural language processing and speech-to-text tools are just a few of the advanced technologies that learning platforms can utilize to offer students effective types of feedback that is designed to accelerate their progress. For example, when a child working on an advanced learning platform responds with a partial or incorrect answer, the platform can immediately react with supportive and specific messages, offering hints and tips as to what needs to change in the answer, as well as the opportunity to try again.

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5

Make Clinical Decisions Based on Data

Data-driven instruction has long been the holy grail of education, taught in universities, yet classroom teachers often do not know how to make use of the data ([Schifter et al, 2017](#)). Although studies have shown the efficacy of data-driven decision making ([Buzhardt et al, 2020](#)), even in non-trivial settings, data is mostly collected and used merely for compliance purposes, and less so for pedagogical purposes. Education leaders can look to other professions for guidance on creating a clear decision methodology around data. For example, the medical field uses advanced tools to assist in data-driven decision making, which results in actionable insights for practitioners and improves outcomes for patients.

Educators can use data to fine-tune and improve their instruction and interventions to help students make faster progress, however they need a systematic approach to collecting the data, analyzing it for insights, and implementing it in reality.

There are four categories of objective data that educators can use to make data-driven decisions:

- ✔ **Activities:** # of sessions completed, amount of time, and activities completed during each session and/or independent practice
- ✔ **Outputs:** the number and percentage of correct responses on a targeted objective
- ✔ **Outcomes:** measurable progress towards IEP goals
- ✔ **Impact:** improved performance in the classroom and in non-academic settings such as the home or workplace

Conclusion

With the right tools, there are a number of ways that special educators can help their students master goals and achieve impact at a faster pace than ever before. Look for a learning platform designed for special education that incorporates evidence-based practices and curricula, along with mechanisms to ensure instructional fidelity. Advanced technologies can also be used to offer students corrective, immediate and specific feedback, and increase their overall practice time. Lastly, educators can continue to improve the effectiveness of instruction and interventions when they have the appropriate data and data-driven recommendations on the best course of action for each student.

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- The linked sites noted above are in no way associated with Amplio and do not endorse Amplio.

About Amplio

Amplio's award-winning special education learning platform uses evidence-based curricula and programs to address a wide range of special learning needs. Our mission is to help students with special needs maximize their potential using the powers of technology.

Accelerate Student Progress

Amplio's special education learning platform delivers structured, engaging instruction with personalized assignments that equip students with a quicker path to success. Mastering skills requires constant stimulation and practice, particularly for students with special learning needs. Students using the platform may

increase their opportunities to practice

by more than ten times the status quo.* Together with the automatic measurements and feedback, students benefit from rigorous, intensive interventions, which are strongly correlated with progress.

Empower Educators

Amplio helps educators increase instructional fidelity by equipping them with evidence-based curricula and programs delivered through an advanced platform. With streamlined lesson planning, guided practice assignments, data-driven decision making, and automated documentation, the platform also saves educators time, reduces workloads and boosts teaching capacity.

Amplio allows districts and states to pilot test solutions prior to large-scale implementation. This approach lets educators experience the process, review outcomes, and monitor fidelity of instruction, while administrators can review reports on student progress, intervention content, timing, intensity, and other key data to assess program effectiveness.

Platform Features

- ✔ Evidence-based curricula
- ✔ Structured protocols and programs
- ✔ Smart resources that automatically measure and provide feedback
- ✔ Recommendation engine
- ✔ Personalized assignments
- ✔ Ongoing progress monitoring
- ✔ Lesson planning with the click of a button
- ✔ Automatic and digitally-assisted measurement per task and objective
- ✔ Automated documentation such as session notes and Medicaid reports
- ✔ Executive dashboards

Tens of thousands of students nationwide have received services and interventions on the Amplio platform since it launched in 2019. Find out how Amplio can help you and your students today!

*Estimated repetition for articulation

Amplio's award-winning special education learning platform uses research- and evidence-based curricula and programs to address a wide range of special learning needs.

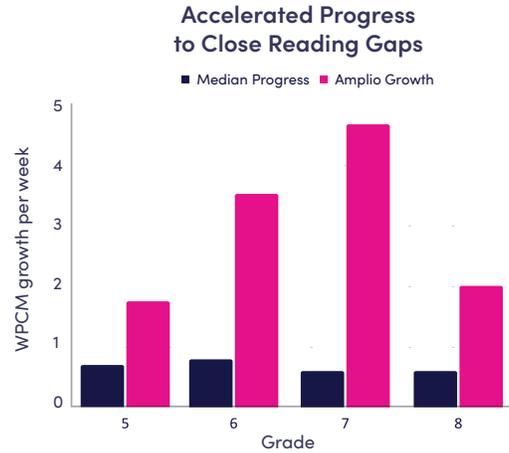


Selected Progress Data and Evidence from Amplio¹

Initial Data: Dyslexia Progress

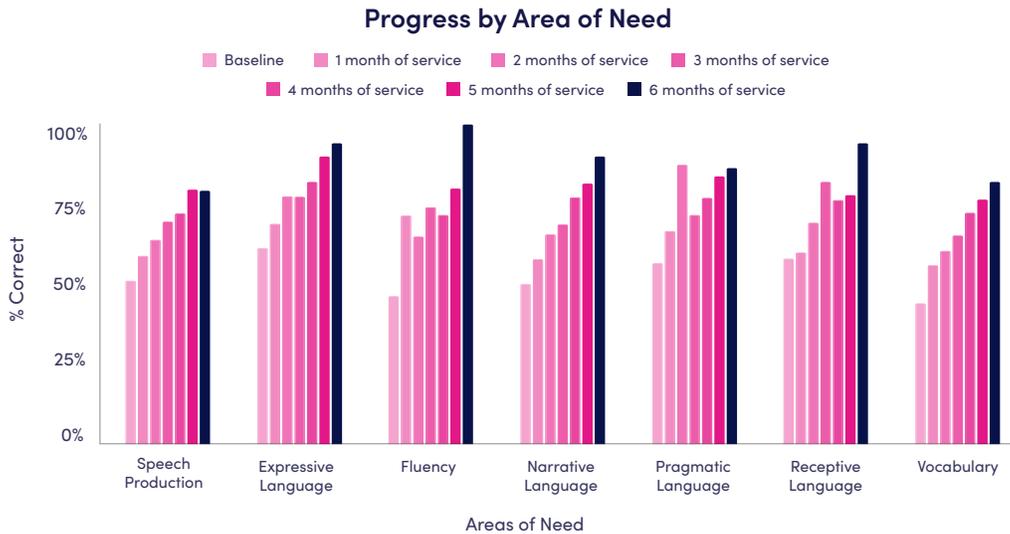
In 2021, Amplio launched its learning platform for dyslexia intervention. The platform utilizes two comprehensive, integrated language arts programs based on the Orton-Gillingham approach: the Multisensory Teaching Approach (MTA) for English-language instruction, and the Esperanza program for Spanish and bilingual instruction. Students work according to a structured, kit-based program, with multiple activities, lessons, and assignments in each kit.

Preliminary data on reading progress for over 340 students shows that students using the Amplio platform have improved significantly in their Words Correct per Minute, week over week. The median growth in the chart below shows the average week-over-week growth for non-dyslexia students at the same grade level.



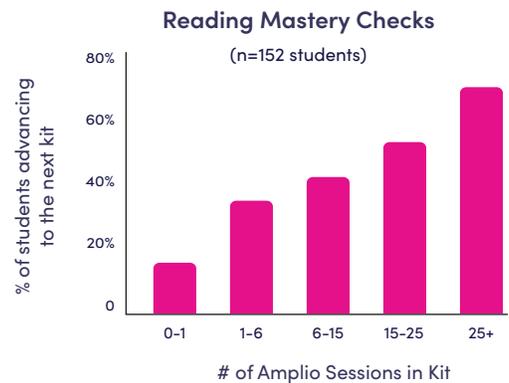
Progress by Areas of Need: Speech-Language

In another analysis of 200 speech-language students from a school using the Amplio platform, progress was reported in almost every area of need. The percentages on the Y-axis depict the percentage of correct answers in the respective areas of need over the course of six months.



Platform Usage Correlated with Progress: Dyslexia Intervention

Mastery checks are given on a regular basis to determine when a student may advance to the next kit in the curriculum. The figure below shows a correlation between the sessions a student receives in the Amplio platform in a particular kit and their ability to pass the mastery check for that kit. Over 70 percent of students who received 25 or more sessions via Amplio's platform advanced to the subsequent kit.



¹The information in this section is based on the Company's internal measurements and assessments of performance and other data collected.