STUDENT
ACHIEVEMENT
PARTNERS

Examining the Research Base for Literacy Accelerators & the Intersections for Equitable Personalization

INTRODUCTION

Reading is liberation. Being able to read well opens doors. Reading is rich and complicated; an intricate mix of various habits, skills, confidence, and knowledge. The other skills of speaking, listening, writing, and facility with language add to and strengthen the threads of the rich tapestry. Erratic and uneven access to literacy instruction exacerbated by the current pandemic is intersecting with a long-delayed racial and socio-economic reckoning in America. Conventional models of classroom-based instruction aren't meeting the needs of vast swaths of students, particularly those frequently at the margins of design considerations and resource allocations. At the same time, vital questions about how to ensure all school-aged children learn to read and write capably and with confidence have gained even greater urgency. So too, the disruption has created an environment ripe for new opportunities to reset how we do things to make literacy instruction more effective for all students.

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WHO IS THIS PAPER INTENDED FOR?

The audience is at once specific and broad. Those who serve education, either philanthropically or through developing products and materials for students, will find essential information to guide their literacy investments. The audience also includes all educators—those at the school and district level—who are seeking ways to accelerate student outcomes in literacy and considering how personalized learning approaches might enhance that acceleration. Fair warning! The paper is lengthy and detailed, packed with research syntheses and the implications the evidence points to. This is by design, with the hope of providing funders, product designers, and educators of all stripes as much solid guidance as possible.

Further on in this summary, under the heading "A Road Map to the Report," a "choose-your-adventure" way through this research compendium is laid out for you.

At the same time, vital questions about how to ensure all school-aged children learn to read and write capably and with confidence have gained even greater urgency. So too, the disruption has created an environment ripe for new opportunities to reset how we do things to make literacy instruction more effective for all students.

1. LITERACY ACCELERATOR DRIVERS TO BUILD STRONG READERS AND WRITERS

First, forming the basis of all else, is ensuring students have access to the full set of literacy accelerators those elements that have a formidable research base for their collective effectiveness. Time is a scarce commodity in educating students—now made more compressed by months of school closures. Anything that distracts in English language arts classes from the focus on students learning to read, reading and listening to content-rich texts widely and deeply, and responding to what they read through lively discussions and writing—will need to be stripped away. To that end, we describe and provide a brief research synthesis for each of the five essential components of literacy: the accelerators for every student learning to read and use language capably:

1. **Making sure students learn how to read:** securing solid foundational reading skills early on in students' school careers (ideally by grade three) so students can continually develop as fluent readers in every grade level thereafter.

2. **Growing knowledge of the world** so students develop a trove of knowledge to reference whenever they read.

3. **Expanding the vocabulary children bring with them** through a volume of reading and word study.

4. **Marshalling evidence and communicating it** when speaking and writing about what the text is conveying.

5. **Deepening understanding of what is read** through regular reading of ever richer, more complex text, with supports as needed **for universal access and success**.

Collectively, these syntheses rest on more than 500 studies that have been reviewed and distilled into what we hope are easy-to-digest summaries. While each of the accelerators is well established in the literature, they are not often fully enough integrated. Indeed, as you'll see throughout the syntheses, they work in concert; they bolster one another in innumerable ways. Each is essential, but they only genuinely accelerate student literacy when exercised together. The implications of this truth have too seldom been appreciated or enacted in the teaching-and-learning students' experience. Therefore, this paper makes a strong case for ensuring that a research-based, comprehensive set of instructional materials drives literacy learning in schools. The best of them integrate these literacy accelerators in powerful ways. Ensuring such power is in the hands of teachers and students is this paper's a priori recommendation.

2. PERSONALIZED LEARNING BOOSTERS TIED TO THE LITERACY ACCELERATORS

Second is personalized learning customized to each literacy accelerator. Personalized learning is not new to education. It has been around for millennia, and in recent years, it has roared back into fashion.

As we—researchers and literacy and equity experts—gathered together for our inaugural meeting, our first task was to precisely define personalized learning as it pertains to promoting literacy growth. Perhaps unsurprisingly, we were faced with a dizzying number of definitions and little agreement on any one of them. As this is a moment of high interest in personalization, the ideas of what it is and what it could be are varied, fluid, and sometimes contentious. We chose to get pragmatic and define personalized learning in ELA/literacy

from the perspective of K–12 practitioners and the goals they seek. We arrived at the following definition as the best current statement of what it should be in (regular) school settings at this moment for our focus:

> *Personalized learning in literacy education is an approach in which teaching and other learning experiences build on each student's strengths, address each student's needs, spur student motivation and agency, and help all students meet grade-level standards and, ultimately, achieve college and career readiness.*

As we define it, personalized learning is an instructional approach, not a product (though it could encompass products). We intentionally created a "big-tent" definition that includes practical teaching and learning methods and strategies designed to customize learning matched to each student's skills, abilities, identities, preferences, and experiences.

We hold there are indeed known and powerful avenues that would allow for such acceleration to take place—meaning approaches that would support students in meeting grade-level standards and college and career readiness in a timely manner. Abundant research in cognitive science exists about the processes for learning to read and what matters most in growing successful readers. Empirical research in what constitutes effective personalized practices in literacy is scant, however, and lags well behind reading research. In the words of leading personalization expert John Pane (2018):

> "Those who want to use rigorous research evidence to guide their [personalization] designs will find many gaps and will be left with important unanswered questions about which practices or combinations of practices are effective. It will likely take many years of research to fill these gaps. Despite the lack of evidence, there is considerable enthusiasm about personalized learning among practitioners and policymakers, and implementation is spreading." (p. 1).

Many people in education are excited about the possibilities of personalized learning as an approach to support acceleration of learning for many students. We share this enthusiasm, but our findings from the personalization research make it clear that personalization *must* be driven by and in service of the content being taught, in this case, each literacy accelerator. As pointed out earlier, the pandemic has pulled the curtain back on the fact that a one-size-fits-all approach to school is failing too many students—disproportionately those students from historically marginalized groups, such as Black students, students learning English[1], or students whose families are experiencing prolonged economic hardship. Research on literacy and cognitive science provide insights into what types of personalization approaches can make a difference in their lives.

3. EQUITY CONSIDERATIONS ARE AT THE CENTER

The third component is equity because it undergirds—is pivotal to—both the literacy accelerators and personalized approaches to student learning. We are purposefully including equity considerations as to not do so would be unconscionable. We are deliberately expanding our focus to urge the field to consider not only how much measurable student growth personalization (and the literacy accelerators themselves) might provide—though we feel that is a crucial feature—but also how these approaches land on students, teachers, and the classroom environment to create a wholesome place to come together for learning.

While the literacy accelerators examined in the body of this paper hold for all students, the particular lens applied here focuses on increasing students' literacy capacity who have not been well-served in public schools and whose learning needs have been pushed to the margins of resource allocation and focus. That focus also makes steady attention on equity concerns of paramount importance. As discussed above, we draw specific attention to the needs of students from historically marginalized and underserved groups, including

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[1] This group of students is referred to in various ways, including English learners (ELs), English language learners (ELLs), and emergent bilinguals (EBs). We use English learners, or ELs, in this paper since it is the term used in the most recent federal legislation (ESSA) and in most general use.

Black students, students learning English, and students currently experiencing poverty. These identifiers have become all too predictive of students' academic outcomes. That needs to stop, and this moment provides us with an enormous opportunity to do much more and a whole lot better by students too long historically marginalized.

Three principal recommendations emerged as we undertook this study and worked with those steeped in equity research:

> One: Care must be taken not to deem a certain segment of students deficient based on quantitative metrics—often a single test score. "The power of tests to translate difference into disadvantage" is borne most sharply by the students themselves (Cole, 2008, p. 6). They are condemned to months of low-level, dead-end work, having ostensibly been diagnosed by a test, with little regard to whether the test could even diagnose such a thing. Rather than attributing student failures to lack of ability, those results should spark a determination to uncover the deficits in the systems meant to serve students (Paunesku, 2019). If students aren't learning at grade level, we need to change the approach to teaching them.

> Two: For students to thrive, they need to have a sense of belonging and safety—a rapport and bond with their teacher(s) and peers. They need teachers who believe they can learn at high levels and literacy work that honors their cultures and communities while opening the door to the wide world (Paunesku, 2019). Young people are astute at knowing whether their teachers respect their brains and believe they can succeed with grade-level work; they need that assurance to risk trying to put their best effort forward in class. Whole class, small group, and personalized literacy learning necessarily grow out of the larger social context of the classroom. Collectively, we must stop identifying students as the thing to fix, and mend the learning environment to empower students to prosper.

> Three: Equity can't work as an afterthought or superficial gesture. It needs to be baked into instruction from the start, whether whole class, small group, or personalized. That means designing education tools and techniques to intentionally meet the needs of students from historically marginalized and underserved groups, including Black students, students learning English, and students currently experiencing poverty. That means supporting an equity-first method.

ENGLISH LEARNERS

English learners (Els) deserve special mention. The principal challenge for ELs in all-English programs—which is what most ELs in the United States are in—is that they are becoming literate in a language they are simultaneously learning to speak and understand. The challenge is not insurmountable, however, as proven by the fact that many students who enter school as ELs attain English proficiency and learn academics, are reclassified as fluent, make good grades, and graduate high school with their postsecondary ambitions intact (Saunders and Marcelletti, 2013; Kieffer and Thompson, 2018).

But neither is the challenge inconsequential. It is a double-barreled challenge for students and, just as important, their teachers. Teachers need to understand that ELs deserve the same grade-level literacy instruction that English-speaking students receive, as outlined in the following pages. But in addition, these students require targeted *supports* and ample high-quality English language development *instruction*. The two are not the same. The purpose of "just-enough, just-in-time" *supports* is to make sure that students comprehend content instruction that is provided in English. Such support might also help promote English language development indirectly. But English language *instruction*, the explicit purpose of which is to promote English language development directly, is vital (Goldenberg, et al., 2020). A student who hasn't developed English comprehension skills (regardless of language background) will require

greater emphasis on oral language development in English, particularly listening comprehension, as they progress through the grades. Otherwise, they will be unable to attain sufficient proficiency to read the language written in their books to permit grade-level-appropriate reading comprehension. Oral language proficiency plays a role at all stages of reading development (relatively less at first, with word knowledge the most important for learning how to read) increasingly as students progress through the grades, and the English-language demands of reading and writing increase (Goldenberg, et al., 2020).

Teachers need to tap the considerable resources that ELs bring to school, including knowledge of a home language(s) and culture(s). These assets should be leveraged for English acquisition, boosting reading achievement, learning more broadly, and graduating fully functional bilingual students (National Academies of Sciences, Engineering, and Medicine 2017). Research shows that ELs perform better on tests measuring comprehension, reading, spelling, and vocabulary when their home culture and language are valued and incorporated into academics (Doherty et al. 2003).

A truly productive approach to literacy learning must advocate for ways to fundamentally redesign the schooling system, not just maintain the trappings of school as we know it. We believe this crossroads represents opportunity, not threat. Dr. Gloria Ladson Billings has called this moment, deep as we currently are in a pandemic that has itself deeply disrupted how students are experiencing school, an opportunity to do a "hard reset" for how we educate in America, and we agree. When thoughtfully implemented and grounded in research-based practices for literacy and equity, our working hypothesis is that personalized learning approaches can serve as levers to help make up ground and accelerate literacy outcomes.

It is our intent with this report to provide fodder so this conversation can kick into high gear.

KEY LEARNINGS

We arrived at the components above after months of analyzing the research and consulting experts and educators. In the course of that process, several key learnings emerged.

> Five literacy accelerators lead to strong readers and writers. They are mutually interdependent and when activated, work together to produce results for students.

> A research-based comprehensive set of instructional materials should drive literacy learning in schools. The best of them integrate these literacy accelerators in powerful ways. Ensuring such power is in the hands of teachers and students is crucial.

> Personalization approaches have potential to accelerate literacy outcomes when they are employed equitably in ways that are in direct service to the literacy discipline. Personalization approaches must be tightly integrated into the specifics of the content students are learning.

> Of the five, some of the literacy accelerators are more conducive to personalized learning approaches than others. For example, Accelerator #1: Foundational Skills is ripe for personalization, while Accelerator #5: Deepening Understanding of What Is Read has fewer prospects.

> Much more research is needed to discover where the power of personalization is and for whom. Empirical research in what constitutes effective personalized practices in literacy is thin.

> Literacy learning inescapably grows out of the larger social context of the classroom. Quality of the instructional materials and approaches aside—including personalization—students need to feel safe, seen, and respected in their school environments to thrive.

> Equity can't work as an afterthought or superficial gesture; equity needs to be baked into instructional materials from the start, whether for whole class, small group, or personalized learning.

A ROADMAP TO THIS REPORT

This paper is divided into sections, designed to be as accessible and actionable as possible. The findings presented here, supported by research, are dense in places and can take work to wade through. Because the essential focus is on linking any discussion of personalization tightly to content (in this case, the content that has a robust research base for improving literacy outcomes), all personalization recommendations are embedded within the five sections of this paper that tightly synthesize the current research on each accelerator.

Remember you can start in one place and then work backward and forward to meet your goals, that is, set your route and pathway to meet your needs and desires. You might want to start with a focus on the executive summary and the personalization sections. Or you might skip to the appendices, where practitioner-facing resources and a proposed research agenda live. Wherever you decide to start, you may want to take the report in bite-sized chunks or study it with a group charged with improving student literacy outcomes.

Here's how the report is organized:

Immediately following this executive summary is the research base to guide the equitable implementation of personalized learning. Included there are essential elements to educating students who have too often been marginalized and neglected when designing learning approaches. The research is organized into four clusters, or buckets, to ensure any personalization approaches introduced into a school setting are:

· Advancing the right content that is integrated seamlessly into the subject matter students are working on,

· Promoting equity and counteracting bias,

· Cultivating student agency and elevating student interest in their learning, and

· Easy for teachers and schools to use and implement.

Next are a dozen operating principles drawn from the research that can help guide educators' recommendations. Keeping these operating principles in mind is essential. They will ensure student learning is guided by relevant research while personalization is authentically and equitably grounded in the individual needs of students against the specific demands of the subject matter. This is vital because the potential triumphs of personalized learning are matched by the known perils and problematic track record of some damaging approaches done *in the name* of personalization. Some practices labeled as differentiated or individualized instruction have done harm to students already chronically marginalized in school because of their race, language base, or family's economics. Students have been tracked into low-level classes in

which they are purportedly working at their individual instructional levels or isolated in "ability" groups within heterogeneous classes. They're left mired in low-level "individualized" work, often accompanied only by a humdrum worksheet or computerized practice program. They have been denied thought-provoking and inspiring work while simultaneously not having their learning needs met. The principles are meant to gird against such harmful approaches done in the name of personalization and ensure efforts are in service of the true promise of personalization.

The heart of this paper comes next; it contains five research syntheses—each one dedicated to a literacy accelerator, establishing the case for the role each area of literacy contributes to powerful reading outcomes and demonstrating how interconnected each accelerator is with the others. The conclusion of each synthesis contains the specific recommendations for promising personalized learning suitable to that sphere and determines which of those possible recommendations are most fruitful against the literacy research base and could provide an extra boost for students in that specific aspect of literacy, while remaining realistic to implement for teachers and school systems. Against the backdrop of the specific literacy accelerator, considerations for the application of personalization are presented in light of the research base for both equitable schooling and what is known of effective personalization practices. There is not yet a separate personalization research base robust enough to support these recommendations—which points at essential work for the research community to investigate. They are therefore embedded and in service to improving literacy—not decontextualized as snazzy nice-to-have tools or treated as an end in itself.

Following the syntheses and personalized learning recommendations are resources designed to be useful for school or district-based decision-makers. We have developed pinpointed sets of questions to activate the operating principles in specific uses and instances. These to-the-point consideration questions are for stakeholders to ask themselves what exactly they are trying to accomplish when reviewing their current personalized learning approaches or considering adopting new approaches or products. These questions will be handy for developers since they'll provide insight into what their customers may come to demand. Following it is an application chart (**Appendix B: Implementation Guidance for Literacy Acceleration**) that looks at various common situations in ELA classrooms. It is organized by literacy accelerator and then sorted into the three most common program approaches in classrooms: 1) basal reading programs, 2) classrooms following a balanced literacy approach, and 3) classrooms already using a research-aligned comprehensive program that includes each of the literacy accelerators. That chart has near-term classroom applications possible to do relatively easily and longer-term recommendations for broader changes to move teaching and learning closer to realizing the full power of the accelerators for students.

Finally, there is a call for further research (Appendix C) with our recommendations for fruitful areas of early focus. The fact is too little is known about what constitutes effective personalization practices. The notion of giving each student exactly what they need is a seductive and checkered area of educational resource allocation. Too many dollars have been tossed into the stream of hopes and promises without benefit of an empirical research base. We need to know better what works for the students we ask to experience these approaches.

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