

# 2020's Learning Landscape: A Retrospective on Dyslexia

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by David Rose and Ge Vue

(The following article, written by David Rose and Ge Vue in 2010, imagines the future by “pre-creating” the Presidential Address at the IDA Annual Conference in 2020.)

It is with great pleasure that I address you today. As we enter the third decade of the 21<sup>st</sup> century, IDA is a stronger, better-positioned organization than ever before. We are also a very different organization. Although our mission has remained the same since our founding, over the last decade our approaches have changed radically.

At this celebratory moment, it seems timely to reflect on our history and on how we got here. First, I want us to remember how education—and dyslexia—looked at the time of our founding.

If any of us were transported back in time to the founding of IDA—or to any time during the 20<sup>th</sup> century—we would be struck by how closely most classrooms resembled those of the 19<sup>th</sup> century. Certainly, the lack of modern media would be obvious, and it would be hard to miss the remarkable isolation of teachers and their students from the rest of the world.

But what would be most striking would be how low the general level of literacy was. Despite enormous federal investments in early reading programs, a visitor to almost any middle or high school classroom would find that many students were essentially nonreaders. In many schools, most students would be reading below grade-level expectations.

Even more striking than the low level of literacy would be the narrowness of its scope. Only one aspect of literacy was valued or seriously addressed: the literacy of reading and writing printed text. Learning to read and reading to learn dominated the curriculum. While classroom literacy focused almost exclusively on written text, the overall culture already was progressing toward the much richer media mix of modern literacy. Students at that time often brought new media to school—primitive versions of modern communication devices—but these rarely penetrated the core of instruction. Teachers (and parents) usually saw them as invasive distractions rather than as critical aspects of emerging literacy. A modern visitor also would notice that the pedagogy of the late 20<sup>th</sup> century or early 21<sup>st</sup> century classroom was linked more to the industrial age than to the knowledge age. We would be struck by how uniform, mass-produced, and “standardized” the curriculum and methods of teaching were. Students would be sitting in the same seat every day doing the same activity at the same time and in the same way.



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It is not surprising that students with dyslexia faced daunting difficulties in such classrooms. However, the modern visitor might be surprised by the response to those difficulties: For the most part, the focus of intervention was on the student. Despite the obvious barriers and impediments in the classroom (what we now recognize as injustices), remediation centered on fixing students not curricula. Students were blamed subtly for the failures they experienced. They were called “learning disabled.”

By 2010, important changes were emerging at IDA. We did not abandon the successful approaches of the past: Dyslexic students still desperately needed effective remediation and intervention, but there was growing recognition that schools were only addressing the student side. The curriculum also needed remediation. From that point on, intervention focused on both the student and the curriculum. Highlights follow of some of the changes emerging around 2010 that led to today's IDA.

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### Policy and Practice Overcame Barriers and Injustices

In 2004, the U.S. Congress passed a revision of IDEA—the landmark Individuals with Disabilities Education Act. While many of the provisions and concerns of IDEA now seem largely out-of-date, one section was surprisingly forward-looking: the National Instructional Materials Accessibility Standard (NIMAS). The NIMAS regulations (which first went into effect in 2006) drew little attention at the time, but they led to fundamental changes in educational publishing and practice that are foundational to modern practices.

The NIMAS legislation stipulated three things. First, it established that standard printed textbooks were not an adequate or accessible instructional format for all students; they posed too many barriers and impediments. To redress that problem, NIMAS stipulated that all textbooks published for American schools after 2006 must be available not only in print, but also in an alternative format, specifically in the NIMAS format. That format was a digital “source file,” a simple (by today's standards) electronic version of the textbook that could be transformed easily into various formats (e.g., digital talking book, audiobook, large print book, regular print book, and others) more accessible to many students than the print version. (Go to <http://aim.cast.org/learn/practice/future/2020learning> for a first-hand experience of a NIMAS and UDL version of this article.)

Second, NIMAS legislation mandated that schools and districts must provide one of these alternative, accessible versions of textbooks to individual students free of charge and in a timely manner, that is, at the time their peers receive their print materials.

Third, the legislation introduced the term *print disability* to identify those students who would qualify for these alternative formats. In so doing, NIMAS legislation changed the relationship between children with disabilities and their schools irrevocably and paved the way for today's balanced approach to dyslexia.

**“Print Disabilities”** Viewed in hindsight, the important advance in the NIMAS legislation was not so much the technical standard itself (now outdated), but the introduction of the term, *print disabilities*. Using this term represented a watershed in American education. The conversation about disability and remediation shifted from focusing exclusively on weaknesses inherent in individual students—for example, a student's “learning disabilities” or “dyslexia”—to also focusing on weaknesses in the primary medium of instruction: print. In this subtle but significant shift, lay a profound change that now affects the way we educate all children. In more dramatic terms, we stopped blaming students.

Contemporary educators rarely use the term *print disabilities* anymore for several reasons, all of which illustrate the progress since 2010. First, because print now plays only a minor role in contemporary education, its role as a “disabler” is less prominent. Second, soon after NIMAS created a mandate for alternative versions of textbooks, publishers began to market and distribute more flexible digital versions—for ALL students. In this new ecology (which began in 2009), print

became merely one of many options available to any student, but particularly one that was valuable to students with dyslexia.

The important advance was the fundamental shift in our understanding of what was disabled in our schools and what needed remediation. NIMAS rebalanced the focus—formerly on remediating disabilities in children—toward also remediating disabilities in the curriculum. That shift, once radical, now is so commonplace we have forgotten its roots. We now expect less disabling curricula.

Today we assume that the role of high-stakes assessments is to evaluate the abilities and disabilities of the curriculum, not just the students. Careful progress monitoring allows us to identify weaknesses in every aspect of the curriculum and to recommend remediation wherever it is warranted, not only when the curriculum is ineffective for everyone, but also when it is ineffective for one or more types of students—such as those with dyslexia.

The idea that no single version or presentation of a curriculum works equally well for all students, which seems eminently reasonable now, was the most revolutionary fallout of NIMAS. Today's schools are built on the logical extension of this premise: The attempt to impose a single “standardized” way of teaching and learning on all students creates barriers and injustices.

### Technology and Design Offered Equal Opportunities for Success

The NIMAS legislation signaled the beginning of important policy changes regarding literacy and disabilities. But those policy changes would not have been possible were it not for advances in the underlying technologies of learning and literacy that were becoming apparent in 2010. The explosion of new technologies in the latter part of the twentieth century drastically changed the media landscape and our orientation to information. The most obvious change was the loss of print's preeminence as the medium for communication, scholarship, and entertainment, an evolution that ushered in our modern era. But viewed retrospectively it is easy to miss a more fundamental change: The very “soul” or “language” of new media was radically different from print. That difference ultimately exposed print's limitations and challenged its central role first in our culture, and then in our schools.

Whereas the “soul” of old media was its “fixedness” or permanence, the “soul” of new digital media is its flexibility—the flexibility that allows it to be customized, modified, and manipulated. Print constrained our thinking and learning linearly; new digital media expands our imagination and creativity. While these characteristics brought consternation and confusion in some areas—notably copyright practices—the effects on education, especially for those students who struggled under the conditions where media was limited to print, were transformative. Among the most transformative effects of the new media was the shift from a pedagogy based on standardization to one based on individualization.

Curricula used to be designed and developed as if students were homogeneous, and the best approach to variance was to address the needs of an “average” or standardized student.

This approach was dictated primarily by the limits of print; standardization, uniformity, and “one size fits all” were among the primary benefits of Gutenberg’s revolution (Johannes Gutenberg is credited with inventing a mechanical printing press which led to the standardization of print and mass production of books).

Because few, if any, students actually are average, schools, parents, and teachers had to adapt, accommodate, or “retrofit” the curriculum to be effective for the many students who were not average. (Note: Howard Gardner and others already had shown that it was problematic to view students as normalized on any single curve or “intelligence.”) This retrofitting process was arduous and expensive, but deemed necessary in a world dominated by print.

From our perspective in 2020, it is difficult to remember the enormous costs and effort required to “de-standardize” the curriculum to make it responsive to individual differences. Now that the basic platform for education is no longer print media, we are accustomed to materials and methods that can be highly differentiated and adapted easily and adroitly to

individual differences. The flexibility of modern media makes it routine to present information in multiple formats and media, to adjust presentation, pace, supports, and challenges to meet needs of individual students, to allow them to articulate what they know in various ways, and so forth. Now we seek high standards for all students, but no longer have to standardize methods for reaching those standards.

**Universal Design for Learning** Technology itself is not what provides the educational advantages. The flexibility and diversity of modern multimedia provide an ideal foundation for education, but the advantages of that foundation only can be realized with proper design. In today’s classrooms, educational materials adhere to important principles of design—universal design for learning (UDL)—that offer equal opportunities for success for all students.

The first release of the UDL guidelines and evidence-based practices was published in 2008. While most teachers in 2010 had not yet heard of UDL, considerable national momentum was building in both policy and practice. The Higher Education

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## MARKETING EXPERT PERSPECTIVE

### Market the Dyslexia Brand to Find Resources

by Michelle Halsey

As I read through the contributions in this issue, I marveled at the prospect of a world where

- cerebrodiversity would be celebrated
- parents would choose not to modify an identified dyslexia gene in utero, but instead would anticipate eagerly the arrival of a child who may be endowed with many gifts
- that same child would learn in a reading-accessible classroom made possible by standard-issue assistive and creative technology
- the social and emotional pain associated with dyslexia would be eliminated along with print-dependent reading
- a label would become synonymous with ability or possibility, not disability

Sound idealistic? Perhaps. Impossible? No.

According to IDA (see <http://www.interdys.org/FAQHowCommon.htm>), studies suggest that 15-20% of the population has a language-based learning disability and 85% of that number represents those with dyslexia. So conservatively, 1 in 10 people has dyslexia—a staggering 10% of the population has the condition, yet *dyslexia* is not a household name. How is that possible? Why is it that autism, which occurs at a rate 10 times less than dyslexia, has been demystified while dyslexia remains in the shadows? In a word, marketing. Marketing has raised awareness while mobilizing a community. It’s time this happened for dyslexia too.

Dyslexia is ready to have its brand (yes, brand) marketed and the light of the public eye cast on it. Awareness will build, support will become widespread, funders will emerge. And, it doesn’t have to cost a fortune to get there. Social media and street-level guerrilla campaigns can provide high public brand visibility while attracting traditional media attention. Examples are happening all around us—you have seen them on the news, your e-mail or Facebook page, and YouTube. Visible Measures reported in 2009 that there are now more than 25 videos that have been viewed over 100 million times (see <http://tinyurl.com/ygtsrjs>). You can’t deny that kind of marketing clout. Imagine a message about dyslexia going viral to millions of people in a matter of minutes.

The key to exploring ideas like those proposed in this issue of *Perspectives* is finding the necessary human and monetary resources. Both can be attracted by generating awareness through a creative, integrated marketing plan. Dyslexia gives rise to unconventional and innovative thinking. I think it’s time to apply the same principles to marketing the brand.

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Opportunity Act of 2008, for example, was a crucial milestone because it was the first federal legislation to define UDL and encourage its practices in colleges and universities nationwide, especially for teacher preparation programs. Established in 2006 and comprised of dozens of national educational and advocacy organizations, the National UDL Task Force spearheaded inclusion of UDL in the higher education bill and succeeded in embedding UDL into all the K-12 legislation that followed.

But the practice of UDL in American schools in 2010 was hardly pervasive or systematic. Unlike today, there was no comprehensive and validated UDL curriculum that spanned a



full school year, nor was there a fully realized UDL district or school. The principles were there and the technologies that would instantiate those principles were available, but they were fragmented in their application to the curricula. By 2010, the harbingers of future curricula that would combine both good principles and good technology were emerging. Several early examples follow.

By 2010, education already was moving rapidly to the Web, a medium that even then proved to be much more flexible than print in supporting learning for all kinds of learners. Many curriculum producers began to take advantage of this flexibility by applying UDL principles to the creation of web-based learning materials.

One early example, Universal Learning Editions ([www.udleditions.cast.org](http://www.udleditions.cast.org)) still is available online. Designed by the Center for Applied Special Technology (CAST) for the Web and published in conjunction with Google to celebrate World Literacy Day in 2008, these UDL editions of classic works from literature offered a lot of the learning supports and scaffolds that we take for granted today. They rendered classic texts in ways that could be highly individualized to support many different kinds of learners. For the reader with dyslexia, these editions provided options that reduce or eliminate many barriers and impediments found in print editions. For example, any text, in whole or part, could be read aloud to reduce decoding barriers, key words were linked to a multimedia glossary to reduce vocabulary barriers, most passages had links to more information to reduce background knowledge barriers, and so forth. These versions also embedded highly customizable supports to help the student become a better reader:

graduated scaffolds for building reading comprehension strategies, for identifying author's craft, and so forth, along with models and feedback essential to a successful apprenticeship. These UDL editions provided a model for curriculum developers and others for leveraging the enormous flexibility of digital environments to support all learners.

In 2010, easy-to-use, web-based, content-authoring environments and a culture of open-licensing content (text and multimedia) under Creative Commons (a nonprofit organization that provides web-based, legal tools for individuals or companies to grant copyright permissions to their creative work) permitted anyone with a computer and Internet access the freedom to create, remix, manage, and publish content on

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the Web. Teachers and students began exploring different ways to access information, express skills, and make learning interactive and engaging. Educators already had created hubs like Connexions ([www.cnx.org](http://www.cnx.org)) where they could share, build, and enhance each other's modules—extending their use for students everywhere.

Just as students with dyslexia faced barriers when they tried to access information in a world of print, they also faced barriers expressing what they knew. By 2010, however, new options in the media for expression had appeared, options that paved the way for the rich expressive media mix that dominates today's schools. For example, many classrooms already had begun to use VoiceThread, an early (and free) form of web-based tool for creating composition that encouraged students not only to write, but to speak, draw, illustrate with video, and comment on each other's work in many different ways. Internationally, teachers and students in the "Flat Classroom" project created a classroom wiki—an early web-based, collaborative space for students to create, edit, and share their work. The Flat Classroom project linked students from two different classrooms—one in the United States and the other in Bangladesh. To facilitate communication and collaboration across distance, students used a variety of communication tools such as e-mail, discussion forums, podcasts, MySpace, Skype, and instant messaging. As students researched their own topic, they shared and synthesized their findings in the form of text, images, podcast, or video. These early multimedia projects, and many others, eventually grew into the worldwide, learning environments that are now typical in our schools. The important point, however, is that the technologies and designs that allowed students from the U.S. to effectively communicate and collaborate with students from Bangladesh were the same

technologies and designs that proved effective in providing the literacy options that students with dyslexia needed.

These examples are merely the tip of the iceberg, even for 2010. For a better feel for the literacy environments that were pioneering in 2010, visit this historic website—[www.cast.org](http://www.cast.org)—where others can be found and explored.

### New Landscape, New IDA

I have highlighted history today to emphasize the transformative period from which we have emerged. At the beginning of this period, when IDA was founded, students with dyslexia typically were educated in an environment that frustrated their progress and limited their success. Schools were unsupportive at best and damaging at worst. Because there were few alternatives at the time, the only option was to teach these students, vigorously, how to survive in an alien world.

Somewhere around 2010, the environment began to change. New policies, principles, and technologies all conspired to change our view of a proper landscape for learning. In that new landscape, it became nearly impossible to think of students with dyslexia as “learning disabled.” In fact, these students taught us that our schools were “print disabled.”

In that regard, students with dyslexia were canaries in the mine. Their painful difficulties were early warning signs that there wasn't enough air to breathe in our schools. All students now benefit and are more literate because of these warnings. And, IDA has become a very different organization—remediating not only our students, but also our schools—so that there is enough air for everyone.

And so, welcome to the new IDA—2020!

Go to <http://aim.cast.org/learn/practice/future/2020learning> for a first-hand experience of a NIMAS and UDL version of this article.

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