

# **Advancing Children With Learning Disabilities: How an Innovative Cyber Charter School Specializing in Serving Students with Reading, Math and Written Expression Could Foster Wide-Reaching, Breakthrough Innovation in Education**

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## **Summary**

The failing state of our education system is old news. The immense irony in simply the phrase "No Child Left Behind" is hard to ignore even for those who aren't directly involved in education. While diversity has become the norm in public schools, as many have pointed out, the curricula and instruction have largely been designed to address the needs of the typical student at the expense of others. And this has been particularly damning to children who learn differently and those with learning disabilities.

Ten to 15 percent of the population, or approximately three million students, possess some type of learning disability, yet approximately 44 percent of them spend 80 percent of their time in inclusive classrooms that teach curricula designed for the average student (US Department of Education Office of Special Education and Rehabilitative Services, 2005). Neurological in nature, and often lacking physical symptoms, learning disabilities are considered hidden and difficult to diagnose. This leaves many children struggling silently and remaining undiagnosed for years or even their entire lives. Without diagnosis and access to specialized teaching strategies or effective assistive technologies, these students become only functionally literate, ultimately ending up as part of the 44 million Americans with the lowest literacy levels (Dyslexia Research Institute, <http://www.dyslexia-add.org/index.html>). With the inability to properly engage in reading and writing, these Americans face steep uphill battles, continually struggling to find gainful employment and ways to positively contribute to society.

Additionally, learning disabilities account for 17.6 percent of highschool dropouts (US Department of Education National Center for Education Statistics [USDOE NCES], 1995). Dropouts wreak havoc on the economy and public funds. It's estimated that the reduced earning potential of dropouts, on average, costs the federal government \$158 billion in lost revenue each year (The University of Richmond Pew Partnership for Civic Change [Pew

Partnership], 2006).

The problem has far exceeded what the government can or should be expected to single-handedly correct. We need collaboration, grit and innovative thinking from all angles. We need those who are, as F. Scott Fitzgerald put it, "able to see that things are hopeless and yet be determined to make them otherwise." And what we really need to move the needle are mavericks: innovators working day in and day out on the front lines, passionate and determined to make change happen, not just people debating their own agendas in exclusive boardrooms.

This article explores what a partnership between an exploratory and an innovative cyber school could look like and what impact could result. It seeks to conceptually analyze the roles, relationships and responsibilities of both parties from various perspectives. It looks at the cross-section of skills and the opportunities that arise when lines are blurred in the interest of quality education for children. In favor of breaking out of outdated paradigms, it asks "what if" and at times throws practicality aside. Because after all, revolution is about overthrowing something. And revolution is what our education system needs.

## **The Challenges of Learning Disabilities**

When educating children with learning disabilities, there

are two obvious challenges: the disability and the education system. Both impact each other and should be designed to work together, not at odds. However, neither of these challenges offers easy solutions. Underlying complexities, various factors and differing perspectives make establishing even a commonly accepted starting ground a hurdle. Understanding what defines a learning disability and what causes it is one place to start. The National Joint Committee on Learning Disabilities describes the term as:

*A disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations. (1991)*

It's estimated that one in five students has a language-based learning disability (National Dissemination Center for Children with Disabilities, 2011). Dyslexia is probably the most common of the language-based learning disabilities, affecting an estimated 10 to 15 percent of the population (Allen, 2010). Dyslexic students struggle to decode text, analyze the sounds of language and link letters with sounds, and they are particularly poor in phonological awareness—all essential skills in reading, writing and spelling. Other types of learning disorders include: dyscalculia—difficulty with arithmetic and numbers; dysgraphia—difficulties with motor skill and the ability to write; dyspraxia—difficulty with coordination; and

ADD-difficulty with concentration and focusing.

Dyslexia and other learning disabilities cannot be cured. And students with learning disabilities require repetitive multisensory instruction to help them learn to adapt to their disorders (Allen, 2010). Scheduling the necessary time for effective instruction is one of the biggest challenges educators face. Particularly as children progress through grades, finding time for basic reading instruction among their increasing workloads becomes even more challenging.

Additionally, children with learning disabilities are often held to the same standards as the general population. This requires that they overcome greater obstacles just to graduate. The added work and frustration can take its toll, and many youths with disabilities drop out of school at much higher rates than the general population (USDOE NCES, 1995).

## **The Impact of Learning Disabilities**

In 2000–2001, a total of 41.1 percent of students ages 14 and older with disabilities dropped out of school (USDOE NCES, 2001, p. 69–70). Learning disabilities were the most commonly reported disability, affecting 2.2 percent of the population and resulting in a 17.6 percent dropout rate for this group (USDOE NCES, 1995). Lost efforts in the labor force and lost taxes, plus the burden of paying for public assistance and prisons, mean that every dropout

becomes a costly public liability (Pew Partnership, 2006).

In *The School Dropout Crisis*, from 2006, the Pew Partnership offered some additional staggering statistics on the impact of dropouts on our economy:

- The lower wages of dropouts mean \$36 billion in state and local funding is lost each year.
- Nearly 80 percent of dropouts depend on the government for health care assistance.
- Each youth who drops out and enters a life of drugs and crime costs the nation between \$1.7 and 2.3 million in crime control and health expenditures.

Additionally, children of dropouts are more likely to drop out and to live in poverty (Pew Partnership, 2006). And due to the neurological origin of learning disabilities, they are often inherited and passed down through generations (Allen, 2010). This creates a vicious, repetitive cycle of poverty for those with learning disabilities.

It also provides plenty of rationale to develop better, more specialized ways of educating our most challenging and at-risk youth.

## **The Rise of Choice**

Realizing the immensity of the dropout crisis, and fueled by frustration with the current educational system, the innovation of charter schools has been and still is a driving force of change. The argument for choice is that

competitive pressure promotes greater efficiency and innovation, which are propelled by consumer demand. And parents of children with learning disabilities are demanding better.

The issue is that more often than not, these parents are simply being forced to pay for better education through a private school on top of their already-paid public school taxes. Because the public schools were not able to sufficiently serve their children through adapting their curricula and educational models with specialized teaching strategies or targeted programs, these parents end up essentially paying double for their children's education. Additionally, parents are forced to fight through a due process to force school districts to pay the tuition for specialized schools.

One of the resulting innovations of charter schools has been blended learning and cyber schools. Blended learning involves a portion of schooling via online delivery and in-person instruction with some element of control over when the student takes part in learning. It has simultaneously become both embraced and a hot-button topic of debate. Like cyber schooling, it has come under fire for fear that instruction delivery by teachers will be replaced with delivery by computers. And when blended learning is executed poorly, it does run that risk. The concept has a variety of applications, and this versatility in execution could be leading to the problem. Clearer boundaries that define what works and what does not

could bring clarity to the issue. Cons aside, the opportunity still exists for blended learning to free up teachers and enable them to shift their teaching methods to working with students individually or in small groups to meet respective academic levels.

Market models for education do still raise eyebrows. And while it is technically feasible to conceive of education as a private good, doing so would controversially mean that funding streams would flow directly from the government to private individuals, eliminating the mediation of the public system. In this model, education becomes more of a private relationship between parent/student and school and less of a collective public undertaking. The biggest issue that reveals itself is a philosophical one. In a pure market model, "individuals' access to and use of education is for private, individual benefit more than for any broader public interest benefits that flow into the wider society" (Harvard Kennedy School Ash Center for Democratic Governance and Innovation, 2003). These reasons explain why a public-private model-sharing partnership in education makes a lot of sense. The relationship offers benefits of both sectors while still incorporating public value.

## **Technology as a Bridge**

Technology has the potential to be one of the most powerful tools to support students with dyslexia (Texas Education Agency, 2013). The term assistive technology is

used broadly in education. Federal law defines assistive technology devices as: "any item, piece of equipment, or product system used to increase, maintain, or improve functional capabilities of individuals with disabilities" (Individuals with Disabilities Education Act [IDEA], 1990). This can range from simple, low-tech physical devices, like colored-screen readers for dyslexics, to high-tech innovations such as smart classrooms. Assistive technology has clear benefits in supporting fluency and comprehension for students with learning disabilities (Hecker & Engstrom, 2011). Text-to-speech software is a good example of this because it removes the burden of decoding, allowing the student to focus on comprehension.

While assistive technologies have proven benefits, the challenge is to ensure that the technology is current and effectively applied and that all educators are properly trained. In the United States, IDEA '97 specifies that the benefit from technology is supposed to be analyzed on an individual basis. The benefits found are then linked to individual education plans, which should help influence a student's curriculum. However, the rapid speed of technology, the costs for adequate training and the demands of schools to keep up with the latest products and services can drain resources. Funding and resources play a key role in the widespread adoption of assistive technology. In a 2005 report, about one-third of public schools reported that they didn't have enough computers

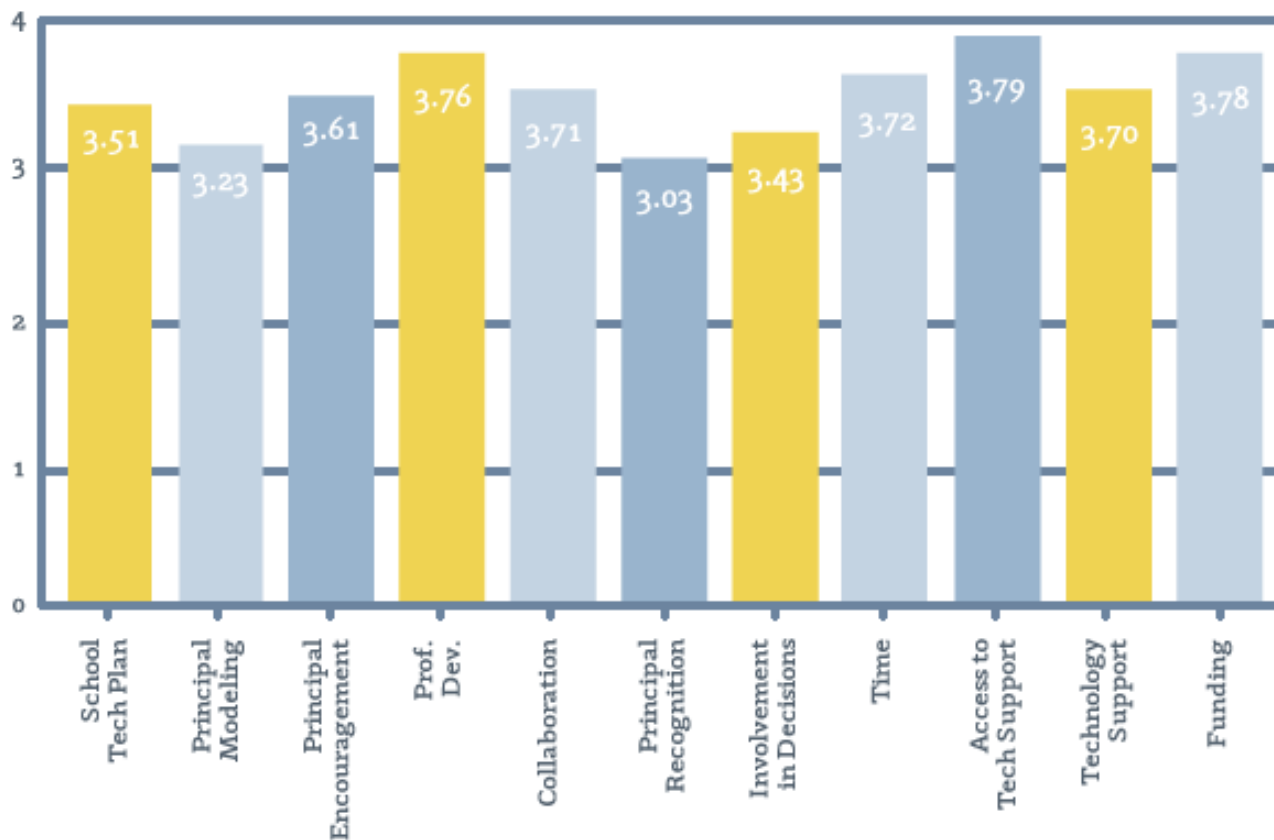
with alternative input/output devices for students with disabilities and they had insufficient evaluation and support to meet these students' special technology needs (Education World, 2005).

In a technology integration research study done by Ball State University, several teachers and educators were interviewed, and the following factors stood out as very important for promoting adoption: access to tech support, funding, professional development, time, collaboration and encouragement from the principal (see Fig.1). Without plans in place to support these factors, executing, maintaining and updating assistive technologies can pose extreme barriers even for schools with the best intentions.

**Figure 1. Factors leading to technology integration**

by respondents who are currently participating in UDL Training (CIT)

Note: Likert-type scale: 1 = Not Important; 2 = Somewhat Important; 3 = Important; 4 = Very Important



# A Methodology for Providing Technology for Students

Golden (1999) estimated that assistive technology could benefit up to 35 percent of students with a learning or cognitive disability; as well as, benefit up to 75 percent of students with autism. (Learning Point Associates, 2004). If we know that assistive technologies help, it then becomes a matter of their effective application. This, however, is still a new area with both great potential and much needed research.

In May 2013, the Texas Education Agency released an online tool to help assist in the integration of technology for students with dyslexia. The report provides the following methodology for providing technology for students:

1. Have administrators and teachers attend trainings
2. Create an inventory of resources
3. Conduct research
4. Evaluate technologies
5. Ensure pedagogical support
6. Match the needs of identified students
7. Identify gaps in technology
8. Ensure that teachers are thoroughly trained on the use of the technology chosen

This methodology helps shed some light on how to initially plan technology integration. But there are still several

factors that make it a challenging task, including the number of products and services to choose from, budget restrictions, demand and product updates to name a few.

Effectively matching technology to students plays a large role in the success. And technology works best when students' strengths and weaknesses are assessed before specific tools are assigned. Online tools such as the Matching Person and Technology Framework; the Student, Environment, Tasks, and Tools Framework; and the TechMatrix Framework offer insight when determining appropriate technologies to accommodate students' needs (Texas Education Code, 2013).

## **Marketplace**

Shifting from assistive technology frameworks, we next look at examples of software that focuses on aiding children with learning disabilities. Scholastic has been a notable leader in the education market, both b2b and consumer. Their school-targeted products, iRead, Read180 and the newest addition, System 44, have had a positive impact on students with learning disabilities. System 44 is a foundational reading program for the most challenged readers in grades 3–12.

It succeeds by systematically breaking down the English language into 44 sounds and letters or letter combinations that create those sounds (PR Newswire, April 15, 2013). A recent study has shown that System 44

can improve students test levels by 14 percentage points, which could make a big impact on the outcomes of students with learning disabilities (PR Newswire, April 1,, 2013).

Even with the rapid rise of on-demand programming and learning, the consumer market remains less saturated. Some popular apps that address learning disabilities for consumer purchase include: Read For Me, which allows students to take a picture of the text and the application will read it aloud; Bob Books #1 Reading Magic, which teaches young students early phonics; and Dragon Dictation, which dictates using the built-in microphone.

## **Powerful Possibilities**

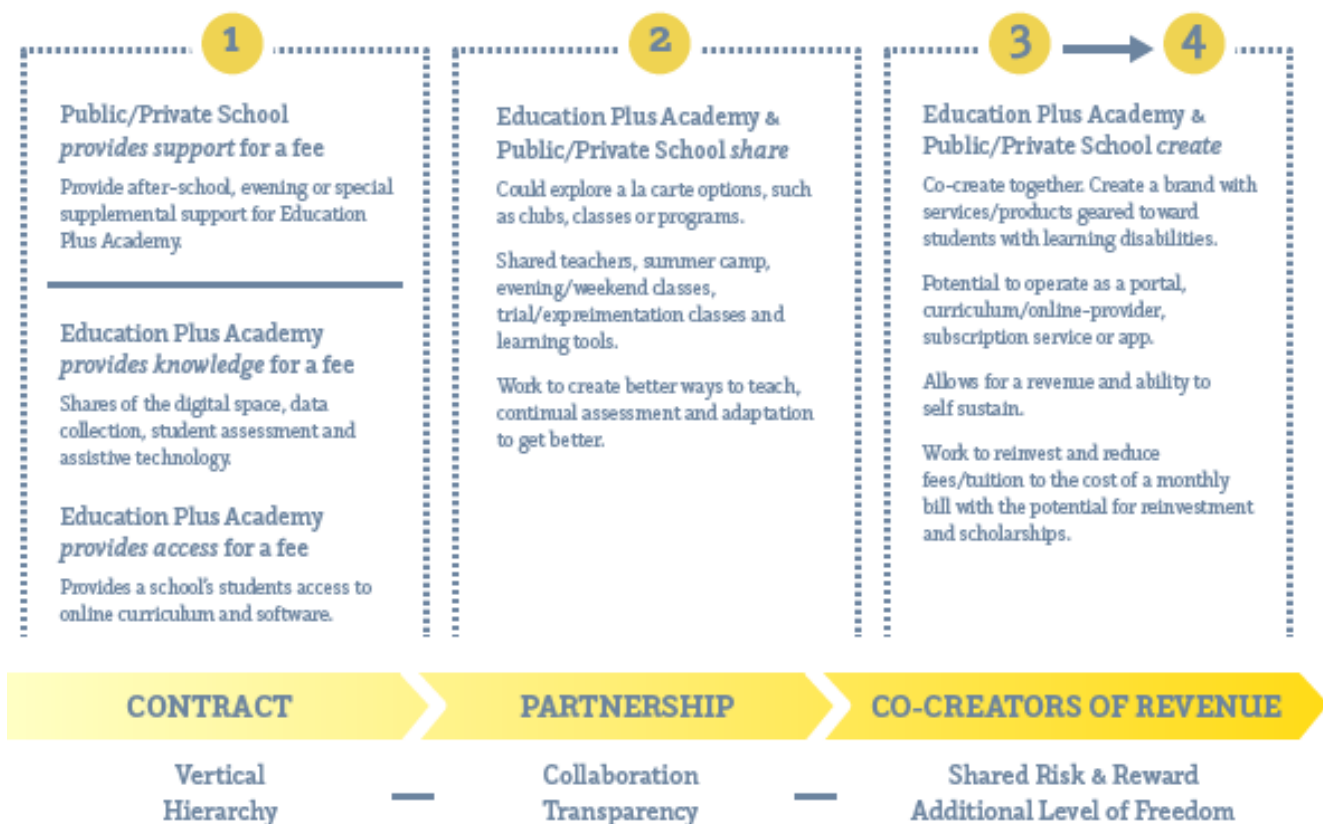
An opportunity to disrupt the status quo exists when two schools join forces. A public-private collaborative school partnership that recognizes the importance and strengths of both sectors and seeks to unify rather than polarize could offer powerful possibilities. A partnership between Education Plus Academy Cyber School and traditional brick-and-mortar schools, public and private, could create a whole new set of possibilities for both schools and their students.

As a free, public, cyber charter school, Education Plus Academy serves a population that could never consider going to specialized private schools. Center School, as an example, is a private school with tuition of \$26,000 for

2013 (centerschoolpa.org). At this price only a select few can be served. At the same time, demand from parents of students with special needs far exceeds what Education Plus Academy, or any one school, can deliver. This is one of the reasons a partnership between the two types of schools is so appealing. It would allow existing schools to reach a broad spectrum of children, in an innovative and effective model, who would otherwise be unable to access specialized models due to cost or geographic logistics.

There are various types of relationships that could emerge between Education Plus Academy Cyber Schools and public and/or private schools; Figure 2 illustrates these options. The chosen type will dictate each participant's role and responsibility and, ultimately, the intensity and involvement of the relationship. This could range from a more vertical, hierarchical contract approach to a collaborative partnership with shared resources to the possibility of co-creators' distributing and profiting from the results of their partnership.

A contract or consulting approach, option one, would utilize either school's resources for a fee. A school could provide after-school, evening or special supplemental support for Education Plus Academy's curriculum, students and/or teachers, while Education Plus Academy could share its knowledge of the digital space, data collection, student assessment and assistive technology, or simply provide a school's students access to online curricula and software.



A contract or consulting relationship would be the easiest, least involved relationship to establish; however, contract agreements do not directly constitute collaboration. The roles are essentially defined as purchaser and provider, with one serving the other.

A true partnership between the two schools should foster collaboration and transparency with shared resources and the co-creation of new programs. This opens up a floodgate of possibilities and offerings that would benefit a school's students while respecting the fact that they exist within a larger educational ecosystem.

## Together, Smarter Learning

A traditional school focuses on serving students with learning difficulties by offering inclusive and pullout options for students with the intent to help foster each

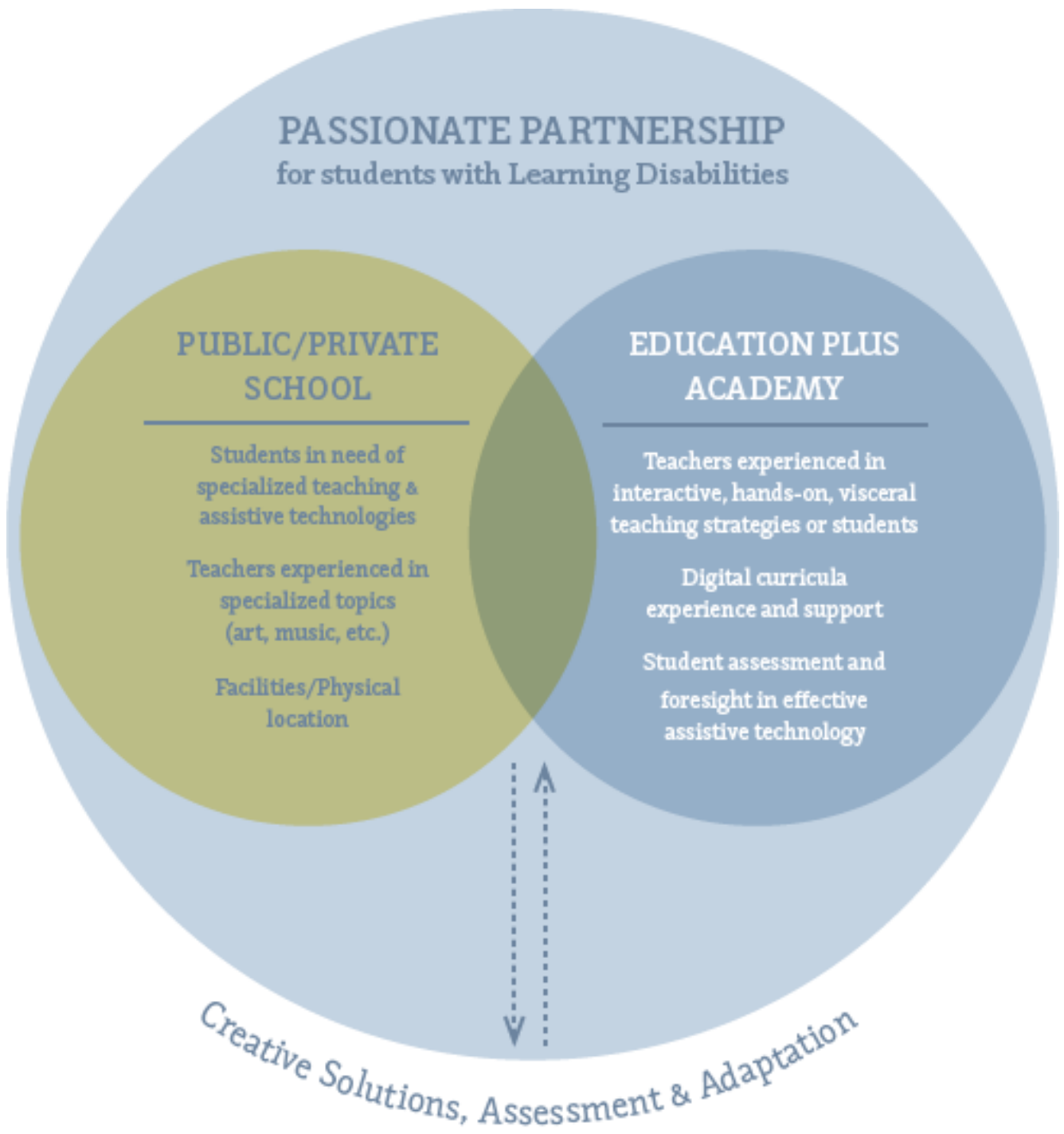
child's optimal developmental growth. In rare cases, schools develop or train their teachers on a specialized approach such as the Orton-Gillingham method, which utilizes a systematic, multisensory, sequential, phonics-based program. Visceral teaching strategies like these and those employed by Education Plus Academy have been shown to significantly improve standardized reading test scores within eight weeks (Tucker, 2007).

Overlaying Education Plus Academy's approach and experience with the previously mentioned Methodology for Providing Technology for Students, a theory of change that incorporates the best of both schools starts to take shape. This approach, (illustrated in Figure 3) overlays Education Plus Academy's interactive, hands-on, visceral teaching strategies, which have been honed, adapted and combined with digital curricula, with its student assessment and foresight in effective assistive technologies as it would apply within a public or private school environment. Figure 3 represents this approach and is as follows:

1. Interactive, visceral teaching strategies, and
2. Effective application of assistive technologies with
3. A passionate, transparent partnership that facilitates collaboration of
4. Cross-sectional programs that combine elements of interactive, visceral teaching strategies with effective application of assistive technologies to
5. Create new solutions and creative ways to integrate

cross-sectional programs into both schools' curricula and extended offerings with

6. Continual assessment and adaptation of the cross-sectional programs



Some suggested criteria for partnership success include: transparency, collaboration, feedback loops and shared risks and rewards.

## **Creative Integrations Solutions**

While a student can only legally be enrolled in one school, there are creative ways that two schools can work together. We see simple iterations of this in schools' sharing football fields or swimming pools or with one student's participating on another school's sports team, as well as other more involved instances such as allowing one school's vocational tech program to take place inside another school's facilities.

Similarly, a variety of creative solutions could be adopted to allow students with learning disabilities to reap the rewards of collaboration. At their core, school partnerships help provide students across all incomes high-quality education. Education Plus Academy and public and private schools could creatively work together to offer co-created classes, programs or clubs to their students.

The sharing of teachers and the cross-pollination of knowledge is one of a potential partnership's greatest assets. After-school programs, summer enrichment opportunities, mini-classes and specialty electives are all possible. Adopting an a la carte or pay-per-class/-per-credit fee structure opens up even more opportunities. If treated as add-on or after-school enrichment programs or clubs, these low-cost classes could allow students and teachers from both schools to mix but still allow students to officially only "belong" to one school.

As a low-cost way to expand class offerings, Education

Plus Academy could continue to utilize working professionals as adjunct teachers for specialty classes and the collaborative school could offer to review lesson plans, ensuring high-quality instruction in specialized topics.

These elective-type classes or student clubs could be taken a step further by integrating assistive technology into the curriculum. An assistive technology grant, via Education Plus Academy's leverage of public dollars, could help power a specialized experimental or research-based class that focuses on incorporating the latest technology and products into the lives of students and teachers. One notable grant that Education Plus would be eligible to apply for is the State Grant for Assistive Technology Program (# 84.224A), which "supports state efforts to improve the provision of assistive technology to individuals with disabilities of all ages through comprehensive, statewide programs that are consumer responsive." Pennsylvania is one of the five states receiving the largest financial backing for this grant. In 2013, the state was awarded \$629,892, and that amount is expected to increase by 6.2 percent in 2014.

Gaming and blogging offer promising new ways of learning that could transform those currently labeled as "non-academics" or those with disabilities into flourishing, confident self-learners. A recent study found that dyslexic children trained on action video games showed significant improvements on basic measures of both attention and

reading ability (Bavelier, Green, Seidenber, 2013). So a class that integrates visceral and systematic learning into a game setting might be worth considering.

Blogging has also been shown to improve reading and writing performance. A 2009 study reported that students had higher writing achievement when writing for an audience online than when writing for a teacher (Jones, 2012). Another 2007 study further supports the concept of blogging. It directly compared the journal writing of three groups of high school students for 11 weeks. One group hand-wrote journals, another typed and a third blogged. Students in the blogging group made the largest gains in writing proficiency (Jones, 2012).

## **Market Opportunities: Blurring Boundaries Between State, Community, & Market**

Referring back to Figure 2, the third partnership opportunity seeks to encompass the best of all three entities—state, community and market. It shifts the relationship into one of co-creation with the added benefit of a revenue stream.

One example of a co-creation that would capitalize on both schools' skill sets would be an online portal or network that provides resources for students and parents. Much like what k12.com has done by operating as an online-content provider, Education Plus Academy could

offer specialized, supplemental, digital instruction for student with learning disabilities.

Another idea would be to create a platform/community and offer a subscription-based service for added studies or support for students once they transition to high school and college. Not only does this help the students, it also provides the ability to additionally track progress and determine impact after students move on.

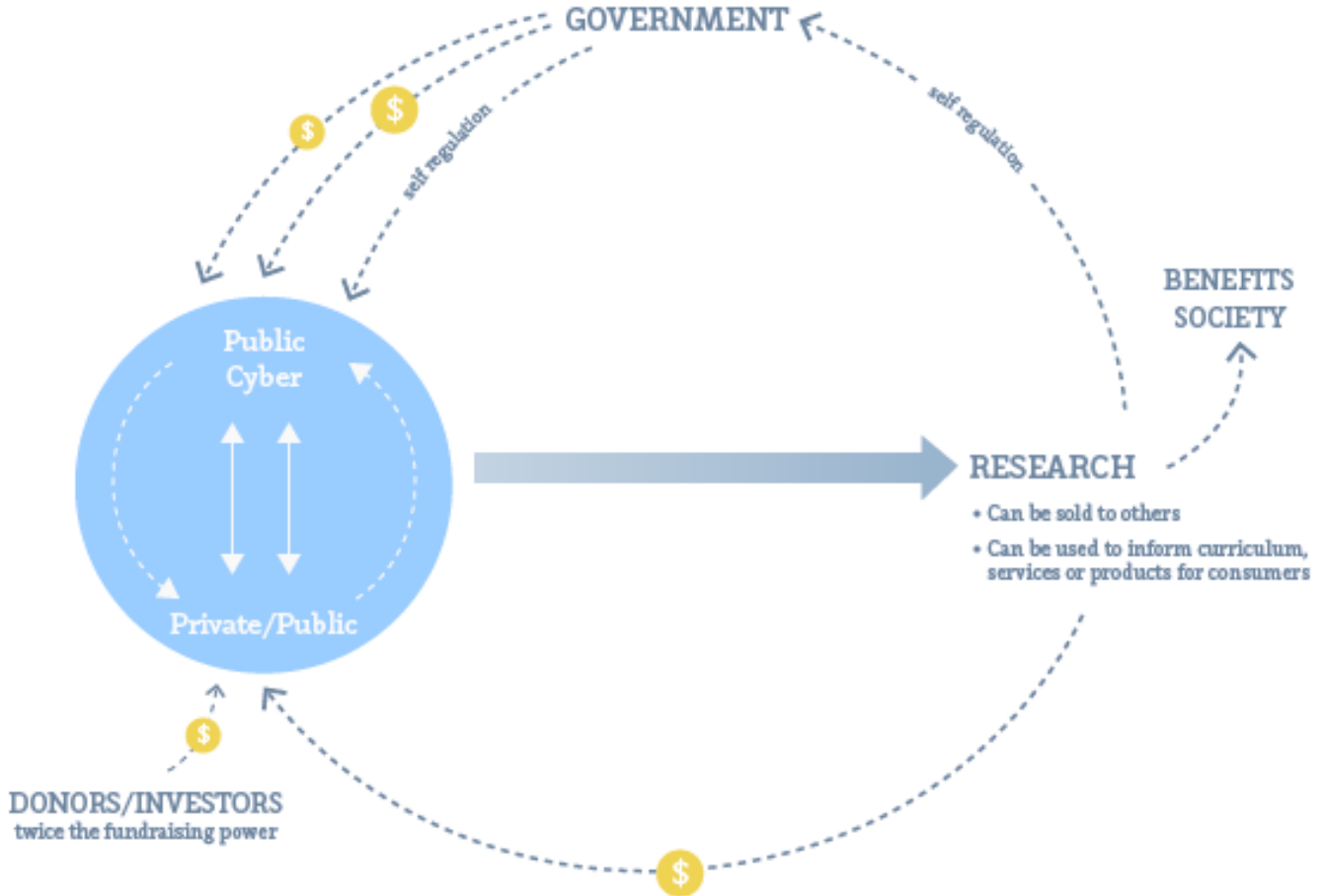
Many predict the end of paper textbooks within five years (Moffett, 2012). This will open up doors for smaller content providers like Education Plus Academy to create, brand, market and sell their own content. The additional competitive nature of markets should help bring dedicated leaders to the forefront, drive quality content and encourage brand loyalty. Self-sustaining revenue streams would allow the schools to reinvest and work to reduce tuition to almost the cost of an average monthly cable bill, with the potential for reinvestment.

While this model may not entail a fully free service via the public entity (or what was the public entity), it would provide a merit service at belowmarket price to a much wider audience. This ability to elevate the overall standard of living even if it is at a small cost justifies the decision. Additionally, the flexibility that an added revenue stream affords would allow scholarship opportunities for those in extreme situations.

The same strategies that are used to help students with learning disabilities may also benefit those without them. Universal design theory suggests that many of the same principles could be applied for faster learning for all. If products and services could be easily modified, the market, opportunity and revenue potential would all expand.

## **The Best of All Three**

Aside from checks and balances, one of the main things school partnerships can theoretically achieve is the ability to reinvest in research, which correlates to reinvesting in students. In a school partnership, there is the added benefit of leveraging public money. This in a sense translates into reinvesting in research, which can help keep the publically funded system circular and sustainable. Figure 4 offers an illustrated overview of one such possible system.



With state, community and market working together, the potential exists for all players to benefit. Combining revenue streams allows for greater flexibility and freedom. Money comes into the public entity via per-student costs and grants; the private entity brings in revenue largely from tuition and donors; and joint research efforts can be materialized through direct sale or used to influence products and services.

## Zeroing in on Philadelphia

Figure 5 presents a closer look at the Philadelphia school districts. It shows each district's total education attainment, dropout rates and price per student that the government pays to public schools. Twenty schools are represented.

SCHOOL DISTRICT	EDUCATIONAL ATTAINMENT				PRICE PER STUDENT*
	Less than 9th grade	%	9th - 12th grade (no diploma)	%	
Abington	816	2.1	1,943	4.9	\$21,797.19
Jenkintown	112	3.7	799	26.1	\$30,502.29
Cheltenham Twp.	423	1.7	1,013	4.1	\$33,164.16
Springfield Twp.	252	1.8	653	4.7	\$29,275.19
Upper Dublin	139	.8	424	2.4	\$23,774.62
Colonial	511	1.7	1,452	4.8	\$30,120.58
Wissahickon	441	1.7	824	3.2	\$30,801.33
Upper Darby	2,174	3.8	4,657	8.1	\$17,494.55
Chester	1,705	6.8	3,763	14.9	\$23,414.57
Upper Moreland	203	1.2	990	5.7	\$21,696.78
Neshaminy	2,110	4.2	2,761	5.5	\$26,464.58
Centennial	1,008	2.8	2,395	6.8	\$24,275.52
Philadelphia	64,241	6.4	144,576	14.4	\$18,512.20
Hatboro-Horsham	239	1.1	1,148	5.4	\$22,251.77
Haverford	531	1.6	982	3.0	\$26,348.12
Norristown Area	2,427	6.0	3,874	9.6	~\$17,500**
North Penn	1,612	2.4	3,501	5.2	\$23,909.90
Upper Merion	501	2.1	1,088	4.6	\$32,324.99
Lower Merion	204	.5	760	1.8	\$40,138.15
Bensalem	1,437	3.5	3,685	9.0	\$24,864.82

Source: ProximityOne, 2009 American Community Survey

\*Special Education Rate

\*\*This cost an assumed estimate because it was unlisted

In the selected 20 school districts, the total number of students who dropped out in 2009 was 262,374 (ProximityOne, 2009). Of those 262,374 students, it could be estimated that 10 percent, or

26,237, suffered from learning disabilities and could have benefited from individualized instruction and assistive technologies (Allen, 2010).

Taking into consideration the total number of students in each district who dropped out, the dropout rate, commute distance challenges and cost per student per district, some key areas to target emerge. These may include Abington, Jenkintown, Cheltenham Township, Upper Darby, Neshaminy, Centennial, North Penn and Bensalem and Chester, which are notably farther away than the others. High dropout rates—at 26.1 percent, the district boasts one of the highest dropout rates in the area—and close proximity make Jenkintown a good potential target.

Additionally, it's worth noting that the School District of Philadelphia does account for a large percentage, 55 percent, of overall dropouts. While the impact potential is big, the commuting challenges, increased facility rental costs and lower costs per student might not initially make it a favorable area in comparison with the other districts. Another reason to initially limit this district is the lack of parental involvement. This is supported in Bill Green's 2010 report, *Investing in Philadelphia's Future: The Case for Comprehensive Education Reform*, in which he states that, "Too many parents in our city are not engaged in the education of their children." With a new partnership, uncertainty will exist and strong feedback and involvement from parents will be necessary. Therefore engaged parents will be a key factor for success.

# Social Return on Investment

Almost 80 percent of youth offenders in the United States are young people who have difficulties with reading and who are reported to be functionally illiterate (American Speech-LanguageHearing Association, 2004). Those with learning disabilities have limited access to education and jobs, resulting in many of them turning to crime.

In starting to examine a social return on investment (SROI), the following statistic from 2006, provided by the Pew Partnership, was used: Increasing graduation rates by 10 percent would correlate with a 20 percent reduction in murder and assault rates.

In 2013, Philadelphia suffered 246 murders (Philly.com, 2014). Even assuming that 25 percent of those murders remained unsolved and no one will serve sentences for them, that still leaves 184 new inmates, each costing \$32,059 per year (Pennsylvania Department of the Auditor General, 2011) for an average of 10 years, totaling \$58,988,560. Add in police time spent on murder cases  $246 \times \$10,000 = \$2,460,000$  and 7,177 assaults (Philadelphia Police Department Crime Stats Report, 2013) at an average cost of \$1,500 per assault  $\times 7,177 = \$10,765,500$ , and the total is a staggering \$72,214,060.

Note that this estimate only includes police time and does not include the likely, additionally linked medical or mental health care costs associated with crimes.

With programs that focus on helping children with learning disabilities succeed, it's realistic to assume a 10 percent increase in graduation rates, which would result in a savings of \$14,442,812 for Philadelphia ( $\$72,214,060 \times$  the 20 percent reduction rate).

## **A Pie-In The Sky Possibility**

We all like to dream a little, and asking "what if" really can't hurt the education system. So to conclude the discussion of collaborative school-to-school partnership opportunities, one last concept is presented, one that's meant more to stimulate and provoke.

With the concept of SROI bonds seeming at least plausible—though maybe far from materialization—one wonders if the same sort of idea could be applied and executed by a company or a "semi-quasi" business/school partnership". The thinking, which is represented in Figure 6, is that if a school could provide high-quality education at a low price, as low as a typical monthly phone or cable bill, then that "tuition" could be held in a high-interest account on a student's behalf and allowed to accrue interest for the duration of the child's time in school. Upon the student's graduation from high school, that money, which had been allowed to earn interest, could be transferrable to college tuition. Based on the child's academic performance and financial need, could the possibility exist that the funds might be matched, at least partially matched or even doubled by the state and/or

government for use toward higher education? This could reduce the need and burden of applying for grants because the mechanism could essentially work in the same way. If a child enrolled in specialized education in second grade at a cost of \$50-\$70 a month, even with no interest applied, they could graduate with a base level savings of around \$8,000 to \$11,000. If they could watch that money grow and see even greater rewards from each higher grade they received, could this help give students at lower income levels with learning disabilities the platform and motivation to succeed?



## What's At Stake

Innovation inevitably involves both creation and destruction. This often results in someone losing so someone else can win. The idea however is to "create a logic for the reinvention and a case for transformation" (Moffett, pg. 54-55, 2012), which would unearth clear consequences and reveal priorities that should form the basis of all decisions.

Regardless of perspective, one thing is clear: in the case of education, the student needs to come first, with the goal of creating productive citizens. What defines "productive citizens" could generate some debate, but

even so the adage "garbage in, garbage out" readily applies and should be adequately considered. The shift in focus should help reposition the emphasis of education to personalized learning, with the purpose being more to teach students how to think and less about what to think. This has implied benefits for those with learning disabilities and begins to reframe the questions being asked. New questions thus emerge: What types of people do we need and want for the future? What skills and assets does a mind with dyslexia or other learning disorders possess and how can it best be utilized? Because in the words of Temple Grandin, "The world needs all kinds of minds." We just need to learn how to harness and best apply them.

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