

BACKGROUND

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Open Education: Individualized Learning from Kindergarten to College

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Abstract

Notions about how the American education system should function, from kindergarten to college, are changing. The very idea of grade levels, or a rigid division between high school and college, is now being challenged. The proliferation of online learning has created unprecedented access to a wide range of academic content, laying the groundwork for a competency-based education system and an individually tailored academic experience. An open education system offers the prospect of student-centered learning at every level. At the K–12 levels, it represents the abandonment of an ossified factory model of education—the brick-and-mortar assignment-by-zip-code public education system that fails to meet the needs of individual students. At the postsecondary level, it represents a democratization of higher education by providing options outside the traditional college experience and the expensive residential model. At every level, it is responsive to student learning needs and goals, lowers costs to taxpayers, and increases educational opportunity for all.

Notions about how the American education system should function, from kindergarten to college, are changing. The very idea of constructs such as grade levels, and a rigid division between high school and college, is being challenged. The proliferation of online learning has created unprecedented access to a wide range of academic content, laying the groundwork for a competency-based education system and an individually tailored academic experience.

It is a change that could not come fast enough. Today, millions of American students are consigned to public schools that fail to meet their unique learning needs. For some, that means attending an assigned public school that is underperforming; for others, it means

KEY POINTS

- Millions of American students are consigned to public schools that do not meet their unique learning needs. For some, that means attending underperforming assigned public schools; for others, it means attending one of the thousands of “dropout factories.”
- Since the 1970s, per pupil spending has more than doubled, while academic outcomes have languished; public school student enrollment has increased a modest 9 percent, while school staff, including teaching and non-teaching staff, has increased 83 percent.
- Notions are changing about how the American education system—from kindergarten to college—should function. The very idea of constructs such as grade levels, and a rigid division between high school and college, is being challenged.
- The proliferation of online learning has created unprecedented access to a wide range of academic content, laying the groundwork for a competency-based education system and an individually tailored academic experience.

This paper, in its entirety, can be found at <http://report.heritage.org/bg3056>

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The Promise of Education Savings Accounts (ESAs)

In June 2015, Nevada became the fifth state to enact ESAs. Nevada's program is particularly robust, open to all students currently enrolled in the state's public school system. As with other states that have enacted ESAs, funds are deposited into the parent-controlled accounts quarterly, and can be used to pay for private school tuition, online learning, special education services and therapies, textbooks, and a host of other education-related services and products. Notably, unused funds can be rolled over from year to year. Nevada follows Arizona, Florida, Mississippi, and Tennessee in enacting this groundbreaking approach to education choice.

attending one of the thousands of "dropout factories." Far too many students spend too much time in a costly government education system that does not adequately prepare them to climb the ladder of economic mobility or to reach their fullest potential.

The problems that plague education today are not due to underfunding. Since the 1970s, per pupil spending has more than doubled in real terms while academic outcomes have languished. Nor are the problems a product of inadequate school staffing. Since 1970, public school student enrollment has increased a modest 9 percent, while school staff, including both teaching and non-teaching staff, has increased 83 percent.¹ The problem lies with an outdated model of education, delivered via school systems that operate under the factory production model of schooling popularized by the Prussians and advanced in the United States by Horace Mann in the 19th century.² As Harvard business professor Clayton Christensen writes:

Much of the support behind this standardization—categorizing students by age into grades and then teaching batches of them with batches of material—was inspired by the efficient factory system that had emerged in industrial America. By instituting grades and having a teacher focus on just one set of students of the same academic proficiency, the theory went, teachers could teach "the same subjects, in the same way, and at the same pace" to all children in the classroom.³

This model first became popular in the U.S. for educating the future workforce in industrializing urban areas, and then spread to rural areas and upper-income families. By the 1950s, the factory model had come to dominate American education.

By the 1970s, the law of diminishing returns took effect. Spending more money per student and making incremental changes in the model did not improve overall outcomes. In retrospect, society may have been better off if policymakers had recognized some 40 years ago that the old model was obsolete, and that trying to improve the system by increasing spending was an approach doomed to fail.

American K–12 education can do better than just maintaining 1960s-level performance. A new model of education is emerging that holds the promise of personalizing—not standardizing—education for every student. At the K–12 levels, education savings accounts (ESAs) hold the promise of enabling families to craft a completely customized education for their children by separating the financing of education from the delivery of services. ESAs are restricted-use, parent-controlled savings accounts, funded with state per pupil dollars that would have been spent on a child in the public system, and allow families to direct spending to a variety of education-related services, products, and providers. (See text box, above.)

In higher education, a leading example of competency-based learning is Western Governors University (WGU), a fully accredited nonprofit university

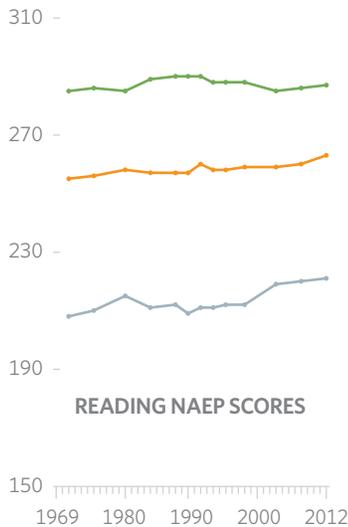
1. Lindsey M. Burke, "How Escalating Education Spending is Killing Crucial Reform," Heritage Foundation *Backgrounder* No. 2739, October 15, 2012, <http://www.heritage.org/research/reports/2012/10/how-escalating-education-spending-is-killing-crucial-reform>.
2. Joel Rose, "How to Break Free of Our 19th-Century Factory-Model Education System," *The Atlantic*, May 9, 2012, <http://www.theatlantic.com/business/archive/2012/05/how-to-break-free-of-our-19th-century-factory-model-education-system/256881/> (accessed August 11, 2015).
3. Clayton M. Christensen, Michael B. Horn, and Curtis W. Johnson, *Disrupting Class: How Innovation Will Change the Way the World Learns* (New York: McGraw Hill, 2008).

CHART 1

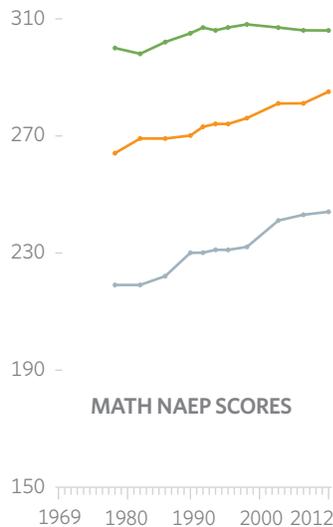
Student Test Scores See Little Improvement Despite Spending Increases

—9-year-olds —13-year-olds —17-year-olds
 NAEP—NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS

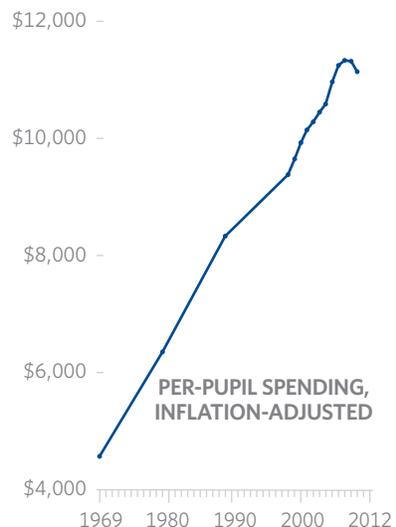
Public school student achievement in **READING** has barely improved over the last 45 years.



Similarly, **MATH** scores have remained almost constant.



SPENDING PER PUPIL has increased by more than \$6,000 since 1969.



Source: U.S. Department of Education Institute of Education Sciences, National Center for Education Statistics, “NAEP Long-Term Trend Assessments,” March 3, 2015. <http://nces.ed.gov/nationsreportcard/ltt/> (accessed August 7, 2015).

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started in 1997 by the governors of the 19 Western states. Tuition at WGU is \$3,000 for six months. Average time to degree completion is 30 months, which translates to less than \$17,000 for a degree. This is far below the more than \$56,000 cost (to state and student) for four years at a public regional college.⁴ This significant cost advantage, coupled with the acceptance of WGU degrees by employers, has led to rapid growth for WGU. Today, WGU has 45,000 students. WGU has succeeded in this regard by employing a new model—low-cost, competency-based, online education.

This student-centered, nimble education system—herein referred to as an “open” education system—dispenses with all constraints that currently box in education: grade levels, seat time, and geographic school assignments, among many other

limiting features of the existing system. The open education system is a model that holds the promise of dramatically reshaping K–12 and higher education into an agile, individualized learning experience for every American student. The approach utilized by WGU and other education-delivery providers, such as Khan Academy, Coursera, and EdX, along with financing mechanisms, such as ESAs, have laid the groundwork for an open education system. As detailed in the following section, an open education system is competency-based and allows learning anytime, anywhere, blending formal school with work experience, apprenticeships, and continuing professional education. Such an open system holds the potential to empower student learners with choice at every level, reduce costs across the board, and foster economic growth.

4. Vance H. Fried, “College 2020,” Heritage Foundation Center for Policy Innovation *Discussion Paper* No. 10, March 26, 2013, <http://www.heritage.org/research/reports/2013/03/college-2020>.

A Competency-Based, Open Education System

Public education at the K–12 levels operates far too much like a monopoly. A steady stream of dollars and students has created very little incentive for the public system to innovate, and little incentive to improve. For its part, higher education has seen prices skyrocket, with too many students graduating with degrees of questionable value in the marketplace. But a shift in the way academic content is delivered at both the K–12 and higher education levels, the emergence of competency-based assessments, and a de-emphasis on the bachelor's degree as a signaling device to employers, herald a major change for the better in education.

Evolving Content-Delivery Methods. The way in which educational content is delivered to students is beginning to change. Online platforms such as Khan Academy and Coursera deliver content to the user anytime, anywhere there is an Internet connection, in a self-paced manner that meets the learner where she is academically. Virtual schools are becoming increasingly common in K–12 education. Some brick-and-mortar schools now blend face-to-face instruction with online learning. Rocketship Academy and Carpe Diem are public charter schools that utilize a hybrid online model, combining computer-assisted instruction with onsite teacher coaches.

Although online delivery is still emerging for K–12 education, it is well-established in higher education. Significant media attention has focused recently on free open content through massive open online courses (MOOCs). Austere institutions, such as Harvard and MIT, have created their own MOOC called edX. A competing MOOC, Coursera, is home to online classes offered by elite colleges, such as Berkeley, Michigan, Penn, Princeton, and Stanford.⁵ The elite names and free nature of these offerings has generated attention, but what is yet to be seen is whether online content without college credit will be accepted in the current education and employer marketplace.

What is known is that the marketplace accepts online education for college credit. WGU, as discussed earlier, is not unique in its use of online delivery. Most public and private colleges and universities offer some online learning options. As noted, what makes WGU different is that it uses a competency-based model of education.

Competency-Based Learning

Competency-based learning stands in stark contrast to the brick-and-mortar factory model of schooling, which, by its very nature, has limitations. As Michael Horn and Meg Evans explain:

When a class or teacher is ready to move on to a new concept today, all students move on, regardless of how many have mastered the previous concept (even if it is a prerequisite for learning what is next). On the other hand, if some students are able to master a course in just a few weeks, they remain in the class for the whole semester. Both the bored and the bewildered see their opportunity to achieve shredded by the system.⁶

Online delivery makes it possible to move away from a system of schooling that batches students based on age, toward student-centered learning in which students can progress based on content mastery. It provides a platform to move away from the current ossified system of measuring learning in terms of seat time, toward competency-based learning as a better measure of student comprehension. Competency-based learning allows students to progress in their education as soon as they can demonstrate mastery of a given subject or topic. Instead of moving students through school in cohorts based largely on age—“both the bored and the bewildered” alike—a competency-based system is much more fluid, allowing a student to progress when she can demonstrate proficiency through varied assessments, such as teacher-designed tests, formative and summative assessments, lesson-specific tests, and portfolios, among a host of other assessment tools.

5. Lindsey M. Burke and Stuart M. Butler, “Accreditation: Removing the Barrier to Higher Education Reform,” Heritage Foundation *Background* No. 2728, September 21, 2012, <http://www.heritage.org/research/reports/2012/09/accreditation-removing-the-barrier-to-higher-education-reform>.

6. Michael B. Horn and Meg Evans, “Pathway to Success: New Schools and Innovative Delivery,” Wisconsin Policy Research Institute, May 2013, http://www.aei.org/files/2013/05/29/-hornevans-new-schools-and-innovative-delivery_163046841296.pdf (accessed August 11, 2015).

Competency-based learning is entirely different from traditional time-based measures of educational attainment, such as Carnegie units in high school or credit hours at the postsecondary level. Instead of assuming a student has mastered a concept because enough “seat time” hours were expended, competency-based learning requires students to exhibit subject mastery through assessments, and frees them to move on once proficiency has been demonstrated. Prior learning evaluations and formative assessments allow a student to bypass lessons, courses, or content if he can demonstrate concept mastery.

WGU is a pioneer of competency-based learning at the postsecondary level. Not only is WGU fully online, the university eschews the traditional academic calendar. The university allows students to start a course of study any time during the year and then progress at their own pace. As the Clayton Christensen Institute’s Heather Staker explains:

WGU is unlike most online postsecondary education institutions. Its graduation requirements are based on demonstrating competency, not on earning credit hours. This model means that students earn their degrees as soon as they pass a series of high-stakes assessments. Competency based education rewards students for what they know, not for how they learn it.⁷

Although not as developed as in higher education, competency-based education is moving into the K–12 realm. The most visible example is the Khan Academy. Khan Academy is not a school, but a provider of free, short video lessons covering thousands of discrete topics. With more than 3,000 online videos on subjects ranging from algebra to art history, Khan Academy exemplifies competency-based learning.

As a means of assessment, competency-based education is a powerful approach to K–12 learning. Instead of progressing by age, students progress based on ability and content mastery. Struggling students get the time—and personal attention—they need to eventually master a concept, and advanced students can progress quickly, no longer forced to

wait while the rest of the class catches up. In his book *The One World Schoolhouse*, Salman Khan explains the concept of mastery learning:

In a traditional model, a certain amount of class time is devoted to a particular topic or concept; when the allotted interval is finished, the entire class moves on, in spite of the fact that individual students will have achieved widely varying degrees of mastery over the material.... [B]y contrast, students, with the help of self-paced exercises, proceed at varying rates toward *the same level* of mastery. Those who learn quickly can move ahead or do “enrichment exercises.” Those who learn more slowly are helped along by individual tutoring, or peer assistance, or additional homework.

In a traditional academic model, the time allotted to learn something is fixed while the comprehension of the subject is variable.... What should be fixed is a high level of comprehension and what should be variable is the amount of time students have to understand a concept.⁸

Competency-based learning can be delivered in a variety of settings, for instance at hybrid schools where students spend part of the day in a physical school building with a teacher, and part of the day or week learning online at home. It can be delivered in a more traditional brick-and-mortar school, in which the classroom model is “flipped”: Students engage in lectures in the evenings at home online (in lieu of homework), and “homework” is done at school, enabling teachers to work as guides helping students navigate the content and questions that arise from the previous night’s lecture, increasing teacher-student interaction.

New Signaling Devices. Although in higher education access to information is being democratized through online options, such as WGU and MOOCs, the traditional bachelor’s degree still holds a vaunted place as a signaling device to prospective employers. But a dramatic change in how content is delivered could usher in a decline in the importance of the bachelor’s degree as a proxy for employability. Traditionally, the bachelor’s degree has signaled

7. Heather Staker, “The Engine Behind WGU: Configuration of a Competency-Based Information System,” Clayton Christensen Institute [formerly the Innosight Institute], February 2012, <http://www.christenseninstitute.org/wp-content/uploads/2013/04/The-engine-behind-WGU.pdf> (accessed August 11, 2015).

8. Salman Khan, *The One World Schoolhouse: Education Reimagined* (New York: Twelve, 2012).

“Offering scholarships and up to 100 internships underscores our firm commitment to the potential of nanodegrees to build a pipeline of talented workers for our future workforce. Nanodegrees will also provide a highly effective means to build the skills of our current employees around critical software disciplines.”

—Bill Blase, Senior Executive Vice President, Human Resources, AT&T
<http://digitalworksjobs.com/nanodegree/>

competency, reliability, and persistence. As economist Richard Vedder and co-authors Christopher Denhart and Jonathan Robe note:

From the employer’s perspective, the best thing about relying on diplomas to help narrow the pool of job applicants is that the potential employee bears the bulk of the search-related costs—he or she pays for the college training. The employer in effect pays them back for those costs through a salary differential that ultimately might cover the training/screening costs, but in the short run the employer does not lay out huge sums of money to learn of the potential employee’s competence. In addition, employers may also value the fact that their employees are certified by third-parties who specialize in the general education of young students, an expertise that many employers lack.⁹

However, as Vedder and his co-authors suggest, the days of the bachelor’s degree as an employability proxy may be numbered due to the proliferation of online learning:

[F]or many who enter college, the ultimate payoff in terms of employment is disappointing in a financial sense. As the cost of the piece of paper—the college diploma—grows over time, and the financial gains to having it stagnate or even decline (as more graduates take lower-paying unskilled jobs), the private rate of return on a college education falls for many, and people start looking for alternative ways to certify worker competence. One approach... is to offer a very low cost online education centered around high-quality open-source courses.¹⁰

The education currently required for a fairly technical career, such as public accounting, could also benefit from a shift from the traditional higher-education paradigm toward an open one. Becoming a certified public accountant (CPA) is the educational outcome for anyone pursuing a career in public accounting. To become a CPA, one must pass a rigorous, national certification exam. The problem is that before being allowed to take the exam, one must have earned a bachelor’s degree and at least 150 college credit hours. Of those 150 hours, 36 must be accounting courses, and nine must be other business courses. In addition, the budding CPA will need about 45 credit hours to meet the general education requirements for a bachelor’s degree, bringing the total number of credit hours in required coursework to 90. The value of requiring 60 additional credit hours, which typically take two years to complete, is questionable, especially when the profession is agnostic as to which credits they should be.

Alternative credentialing could change the way in which employers assess the skills of prospective employees. Udacity, which started as a MOOC, now offers low-cost technical “nanodegrees,” such as Front End Web Development. Equivalent to about nine hours of upper division college courses, a nanodegree costs roughly \$1,500. Although not accredited, these nanodegrees are supported by major employers like AT&T, Google, and Facebook.

Alternative credentials are also offered by traditionally accredited schools. Recently, Harvard Business School launched its online initiative HBX. HBX does not offer Harvard MBAs and other degrees online. Instead, it offers a two-month suite of three fundamental business courses for students who do

9. Richard Vedder, Christopher Denhart, and Jonathan Robe, “Why Are Recent College Graduates Underemployed? University Enrollments and Labor-Market Realities,” Center for College Affordability and Productivity, January 2013, <http://centerforcollegeaffordability.org/uploads/Underemployed%20Report%202.pdf> (accessed August 22, 2015).

10. Ibid.

not have any business education. Upon successfully passing the exams in these courses, the student earns a CORe (Credential of Readiness). The material covered is roughly equivalent to what business undergraduates cover in a semester of freshmen-level and sophomore-level courses, but the price is much lower—\$1,500 for the entire suite of classes.

Benefits of an Open System

A completely open and competency-based education system allows learning anytime, anywhere, and blends formal school with work experience, apprenticeships, and continuing professional education. An open system provides the student with quality credentials in higher education and substantial savings of money and time. The flexibility provided through an open, competency-based education system meets students where they are, at every level, increasing their opportunity for economic mobility. It gives higher esteem to vocational work and on-the-job experience, and sheds the unwarranted stigma associated with trade schools, apprenticeship programs, and on-the-job training. For those wanting advanced credentials, the open system makes college better, faster, and cheaper, while equalizing access to credentials. The same credential is available to anyone who can earn it. Achieving a prestigious credential is not dependent on getting one of the limited number of seats at a brick-and-mortar college and then making exorbitant tuition payments.

Quality Credential. Competency-based credentials have a clear meaning: “Potential employers understand what students should be able to do (as spelled out in the competencies) and the extent to which they can actually do it (their performance on assessments).”¹¹ This is an improvement over the current system, which awards high school degrees to students who have not mastered the skills necessary to enter college or the workforce, and too often even lack basic reading skills. Competency-based education particularly benefits

economically disadvantaged students by offering quicker entry into the work place by equipping them with credentials.

Savings. An open system is vastly cheaper than the current system, so the cost to taxpayer and student drops radically. For example, a student saves \$3,230 an academic year by going to WGU rather than paying in-state tuition at a public regional college (paying \$4,000 instead of \$7,230). The savings to the state taxpayer are even greater. The state provides a subsidy to the regional college of about \$8,460 per academic year, whereas WGU receives no ongoing state subsidies.¹² The open system also saves the student calendar time. At WGU, the average time to a bachelor’s degree is 30 months, compared to 42 months for the student who graduates in four years under the traditional calendar.

Giving students the option to demonstrate competency and subject mastery could reduce the amount of seat time spent in traditional K–12 schools, and the attendant taxpayer funding. At the K–12 level, state and local government taxpayers pick up almost all the cost per child, per year in public schools.¹³ Average per pupil spending now exceeds \$12,000 per year. Yet K12inc., a provider of online courses that are used by public school systems, provides the same courses through its own private online school at a tuition rate of under \$2,000 per year.¹⁴

Economic Mobility. One key component of an open education system is choice in education. Education savings accounts at the K–12 levels have emerged as one of the most promising financing mechanisms for enabling families to access education content through a wide variety of providers: private schools, online learning platforms, and private tutors, to name a few examples. School choice, whether created through options like ESAs, or through tuition-tax-credit scholarship programs, school vouchers, or charter schools, ensures that students are able to choose among quality education options that meet their unique learning needs regardless of their zip

11. Fried, “College 2020,” p. 4.

12. WGU Washington, “Fact Sheet: Background and Mission,” http://washington.wgu.edu/about_WGU_washington/fact_sheet (accessed August 13, 2015).

13. Susan Aud et al., “The Condition of Education 2013,” May 2013, National Center for Education Statistics, <http://nces.ed.gov/fastfacts/display.asp?id=66> (accessed August 13, 2015).

14. In-state tuition and state subsidy apply to a student taking 30 credit hours of undergraduate business courses at the University of Central Oklahoma.

Funding Online Providers

In an open system, which has a greater proportion of online courses than the current K–12 system, how do states fund course providers? In states with existing competency-based systems, such as Louisiana and Utah, the most straightforward approach has been to pay half of what is owed to an online provider when a student enrolls in a course, and half of what is owed upon completion of that course. The risk to this approach is encouraging providers to “pass” students or claim that they have achieved competency in a given area in order to receive funding, even in instances when they fall short of content mastery.

In Utah, funding follows the students from their school district or public charter school to the courses of their choice, which includes both public and private providers. Utah’s course choice option, which was passed in 2011, enables local education agencies (LEAs, school districts) to contract with providers, such as K12inc. (a private online course provider) and the Florida Virtual School (state-run and public) to provide online courses. There are no caps on student enrollment in online courses, and providers receive 50 percent of their payment from the LEAs up front, when a student enrolls in a course, and 50 percent upon course completion, or credit being earned. All public, private, and homeschooled students in Utah are eligible to participate in the course choice option (although there is a separate funding stream for private and homeschooled students), and the state does not have to find an annual appropriation for the program because funding comes directly from a student’s local school district.

The state of Louisiana modeled its nascent course choice program on Utah’s model, allowing both third-party private providers and public school systems to offer classes in the course choice program. Louisiana offers a fully online option, or enables students to utilize a hybrid approach, mixing traditional classes taught in a brick-and-mortar establishment with online courses. Students can even engage in course choice among exclusively face-to-face providers (for instance, an AP calculus course taught in a traditional public school).

Louisiana compensates course providers through a 50–50 remuneration structure similar to Utah’s. Course providers receive half of their payment up front when a student enrolls, and half upon a student’s course completion. There is a cap on the course cost of up to 90 percent of one-sixth of the Minimum Foundation Program formula, which sets the minimum level of state education funding on an annual basis. As a result, the cap on course costs is roughly \$1,200.

Course providers in Louisiana’s course choice program include corporate and industry associations, educational entrepreneurs (such as cohorts of teachers banding together to teach a math course), postsecondary institutions, private online providers, such as Connections Academy, and public online providers, such as the Florida Virtual School. In addition to the many online offerings, allowing students to take classes anytime, anywhere, students and parents can log on to the Louisiana course choice website, enter their zip code, and find the closest face-to-face provider for a given course. They can find, for example, the closest welding course or the closest university-level math course. Today, when a family logs on to the Louisiana course choice website to search for an Algebra II course, it will find 21 different courses offered by 13 different providers, some in person, some virtual.

The payment structure for course providers is similar to Utah’s pay-for-completion model, but Louisiana’s system notifies a student’s school counselor when the student has signed up for a class through the course choice program, and requires course providers to submit grades to the student’s home school on the first and the 15th of every month.

Although Utah and Louisiana have been pioneering in the course choice field, some state policymakers recognize that another approach, such as funding course providers dependent in part on whether students master course content, could hold more promise for rewarding providers who affect student learning in a positive way. States and school districts could employ performance-based funding of individual courses that rewards student proficiency, not just student completion, and pay providers once students complete a course *and* demonstrate mastery.

code or parents' income. Choice in education is a critical component to increasing academic opportunity.

Barriers to Creating an Open System

Although an open education system holds the promise of benefiting both students and taxpayers, there are some existing barriers to such flexibility.

Entrenched Incumbents. The members of the “education iron triangle,” (a term coined in *Teachers Versus the Public*),¹⁵ are politically powerful proponents of the status quo. As the book’s authors explain:

For political analysts, the iron triangle is the perfect metaphor for characterizing one of the strongest, most stable, and most pervasive aspects of American politics—the connection among producer interests, elected officials, and actions taken by government agencies.¹⁶

The current system makes K–12 a near monopoly, and higher education an oligopoly. An open system brings choice and competition. Although this means higher quality and lower cost to the student and taxpayer, it also means a loss of control and guaranteed resources to incumbents. Not surprisingly, opposition to an open system from existing institutions and their employees is strong.

For more than 100 years, public schools have been designed to operate in a closed system. They have developed organizational structures and management systems for a closed system, which are deeply ingrained in the daily operations that affect administrators and teachers.

State Intervention in Local Schools. Public schooling in its earliest iteration in America was a local matter. Taxes were raised at the local level and decisions were made at the local level. Over

time, however, funding shifted toward the state, and today more funding comes from the state than local sources. Not surprisingly, states now exercise a tremendous amount of control over local schools. State regulation goes far beyond requiring that districts have sound financing and transparent governance. The greatly enlarged state role has driven up administrative costs and dramatically reduced flexibility in K–12 education. Particularly detrimental to an open system are state rules that dictate local school staffing and instructional processes.

Common Core National Standards and Tests.

The Common Core State Standards Initiative is an effort to establish national standards and tests to define what every child in public schools across the country will learn. Common Core was spearheaded by the National Governors Association and the Council of Chief State School Officers—and bolstered with billions in federal funding and the support of the Obama Administration. Forty-six states, thanks in large part to federal incentives, agreed to adopt the standards when they were first developed.

Common Core is an undertaking designed to standardize education, not create customized learning opportunities for students. At its essence, Common Core expects students to progress at the same pace, in lockstep through the years, as the existing system does. It does not allow student learning to be self-paced. In mathematics, for instance, standards are set by grade level from kindergarten through grade eight; in middle school and high school, standards are set by course, such as algebra and geometry. Likewise in English language arts (ELA), the standards reflect the “time is fixed, learning is variable” model of schooling. The ELA standards define what students should have learned by the end of each grade level in reading and writing.

15. Paul E. Peterson, Michael Henderson, and Martin R. West, *Teachers Versus the Public* (Washington, DC: Brookings Institution Press, 2014).

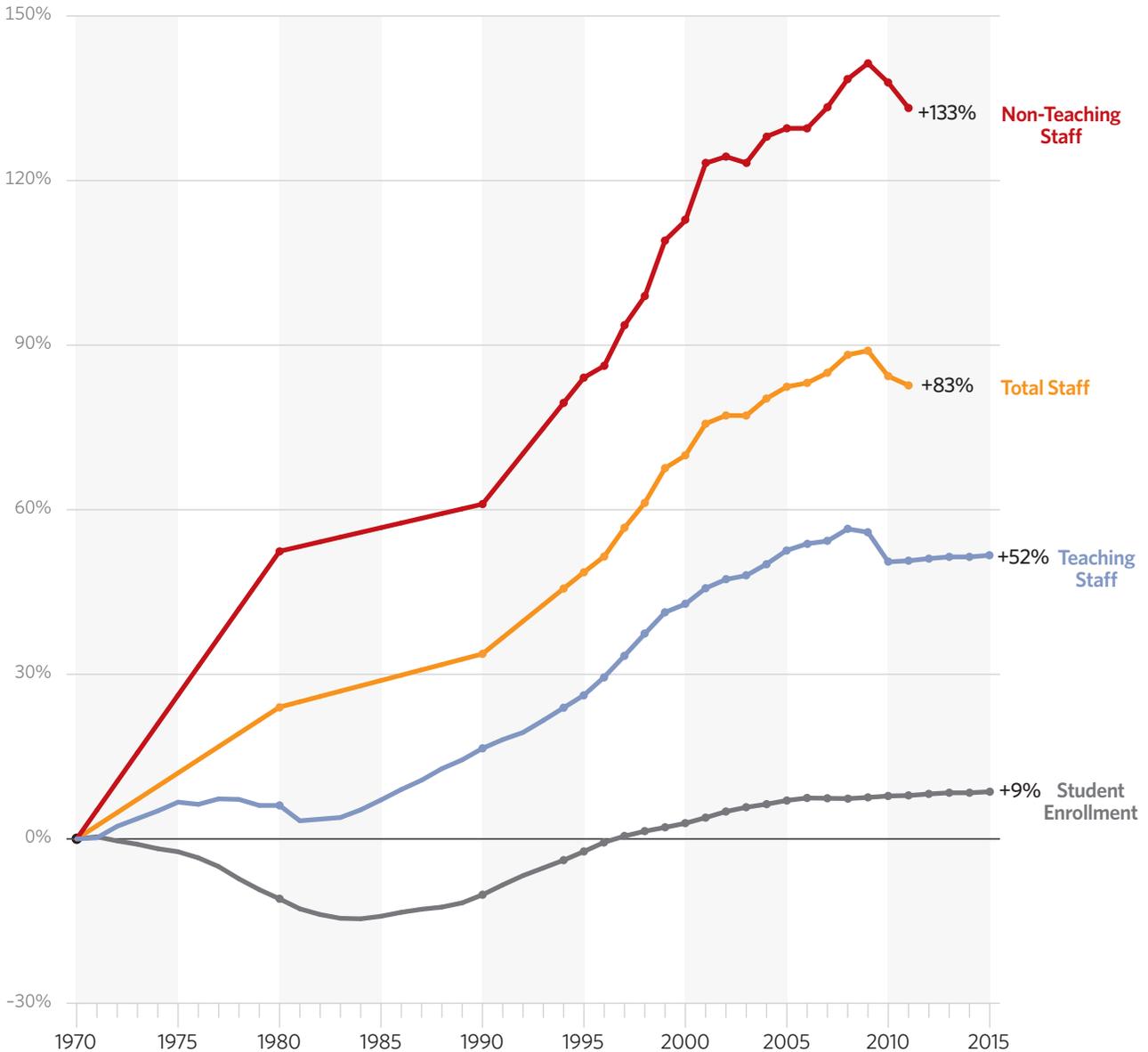
16. Paul E. Peterson, “The Education Iron Triangle,” *EducationNext*, April 7, 2014, <http://educationnext.org/education-iron-triangle/> (accessed August 13, 2015).

CHART 2

School Staffing Spikes Despite Flatline in Student Enrollment

Over the past 45 years, the number of students enrolled in the public school system has increased by only 9 percent. During that same time, education staffing, both teaching and non-teaching, has expanded by 83 percent.

PERCENTAGE CHANGE SINCE 1970



Notes: Some figures have been interpolated. Figures for non-teaching and total staff are up to the most recent data sets.

Source: National Center for Education Statistics, *Digest of Education Statistics*, "Public and private elementary and secondary teachers, enrollment, pupil/teacher ratios, and new teacher hires: Selected years, fall 1955 through fall 2012" Table 208.20, https://nces.ed.gov/programs/digest/d13/tables/dt13_208.20.asp (accessed August 7, 2015).

Establishing national standards and tests will create a new barrier to the budding nimble education system by maintaining the status quo of how student learning is assessed, the pace at which students can progress, existing definitions of grade level and school structure, and seat time as the proxy of learning.

Federal Intervention. Federal intervention in education has grown significantly over the past half century, punctuated with the passage of No Child Left Behind (NCLB) in 2001. NCLB is the seventh reauthorization of the Elementary and Secondary Education Act (ESEA) signed into law by President Lyndon Johnson in 1965.

NCLB included significant new policy prescriptions that increased federal intervention in education. “Adequate yearly progress” requirements for all students to be proficient in math and reading, the “highly qualified teacher” provision mandating additional certification requirements, and a host of new programs and spending are just a few examples. NCLB continued a trend by national policymakers to have a “program for every problem,” expanding Washington’s fingerprints on local education systems.¹⁷

NCLB, like Common Core, is a law that reflects the status quo, not the flexible options that have become available thanks to digital and hybrid learning. NCLB has created a tremendous burden of bureaucratic paperwork for state and local leaders, and codifies regulations that hinder movement to an open system.

Outdated Funding Model. Public K–12 education funding is derived from local, state, and federal tax sources. Some of the state (and sometimes local) funding is allocated to a school for general operating purposes, but much of the funding is tied to specific programs with specific spending mandates. The result is a patchwork of disconnected and often illogical spending decisions. Even worse, the current funding model gives the public schools monopoly power. Currently, education funding is allocated to the school that the student attends, which, for the vast majority of American school-age children, is chosen for them by the state or district based on a zip-code system.

Accreditation. In higher education, accreditation is often a barrier to innovation. In order for its students to access federal student aid (student loans and Pell grants), a college must be accredited by an association approved by the federal Department of Education. Usually that means the regional accreditor for the geographic region in which the school is located. The intention is to assure students (and their parents) that higher-education institutions meet certain standards of quality. But accreditation is a poor indicator of quality. Worse, accreditors are slow and bureaucratic. They are prone to rules that promote rigidity in the system and act as disincentives to new—and possibly better—entrants from entering the market.

While some accrediting associations are better than others, colleges have little ability to choose which one to join, and it is virtually impossible to create a new accrediting association. An additional problem is that accreditation rates entire institutions instead of individual courses. Thus accreditation is a poor indicator of the quality of the courses in which students enroll. It also keeps small, high-quality providers of individual courses out of the market.¹⁸ Although the value of accreditation is, at best, questionable, prospective schools endure the de facto federal process of accreditation because student aid is linked to it.

Recommendations for Federal Policymakers

“Fix schools by not fixing schools,” urges University of Arkansas professor Jay Greene. Even if existing establishment schools wanted to change dramatically—an unlikely prospect in and of itself—it is unlikely that they could. In his studies of the history of hundreds of industries, Harvard University business professor Clayton Christensen observed that it is extremely rare for the leaders under the old model to be leaders under a new model. Instead of trying to force new models on old institutions, public policy should give those who want to innovate the ability to do so. Over time, change will spread throughout the system as the incumbents will gradually adapt.¹⁹

17. Dan Lips, “Reforming No Child Left Behind by Allowing States to Opt Out: An A-PLUS for Federalism,” Heritage Foundation *Background* No. 2044, June 19, 2007, http://www.heritage.org/research/reports/2007/06/reforming-no-child-left-behind-by-allowing-states-to-opt-out-an-a-plus-for-federalism#_ftn6.

18. Burke and Butler, “Accreditation: Removing the Barrier to Higher Education Reform.”

19. Vance H. Fried, “Venturing to Affordability,” American Enterprise Institute conference, “Stretching the Higher Education Dollar,” August 2, 2012, <http://www.aei.org/publication/venturing-to-affordability/> (accessed August 24, 2015).

Congress should:

- **Decouple federal financing from accreditation.** Congress should decouple federal financing (federal student loans and grants) from accreditation, and enable states to allow independent entities to accredit and credential courses. Senator Mike Lee (R-UT) and Representative Ron DeSantis (R-FL) have introduced companion proposals known as the Higher Education Reform and Opportunity (HERO) Act (H.R. 1287/S. 649), which would allow states to determine who can accredit and credential, and importantly, would allow individual courses to be credentialed. Reforms to remove the “gatekeeper” function of accreditation could also be achieved by amending the Higher Education Act (HEA) to decouple federal financing from accreditation. As Senator Lee explains:

[A]ccreditation could also be available to specialized programs, individual courses, apprenticeships, professional credentialing, and even competency-based tests. States could accredit online courses, or hybrid models with elements on- and off-campus... businesses, and trade groups could start to accredit courses and programs tailored to their evolving needs. Churches and charities could enlist qualified volunteers to offer accredited classes and training for next to nothing.²⁰

Decoupling federal financing from accreditation would mean that a state could have, for example, a class in music accredited by the New York Philharmonic, or an aeronautical engineering course accredited by Boeing. It would enable students to earn credits for concept mastery, the value of which would be determined through a system of independent accreditors in competition with one another to demonstrate that their stamp of approval is the most rigorous or most accurate in judging competencies valued by employers.

- **Allow states to opt out of NCLB.** Members of Congress, superintendents, parents, and

taxpayers recognize that schools need genuine flexibility from Washington mandates. The Academic Partnerships Lead Us to Success (A-PLUS) Act would allow states to completely opt out of the programs that fall under NCLB and direct dollars to their state’s most pressing education needs. Such an approach would help downsize federal intervention in education, place decisions about education spending and programs in the hands of state and local leaders, reduce the bureaucratic compliance burden, and begin to restore federalism in education. During consideration of a reauthorization of the Elementary and Secondary Act in 2015, lawmakers in both the House and Senate considered APLUS in the form of an amendment to ESEA. The measure received considerable support in both chambers.

- **Establish portability of federal funding.** In order to advance a more customized and flexible education system, states should be allowed to make federal education funding for children with special needs, and funding for low-income school districts, portable, following a child to any school of choice—public or private. States should be empowered to allow families to have control over their child’s share of funding under the Individuals with Disabilities Education Act (IDEA) as well as funding authorized under Title I of the ESEA, which authorizes the bulk of federal funding for low-income school districts.

Recommendations for State Policymakers

For their part, state policymakers should advance choice in education through ESAs, move toward competency-based learning models, and exit the Common Core national standards and tests.

- **Create education savings accounts.** In 2011, Arizona was the first state in the nation to enact ESAs. Known as the Empowerment Scholarship Account in Arizona, the option is available to eligible parents who choose to withdraw their child from his or her assigned public school. Parents then receive 90 percent of what the state would have spent on the child in public system, which

20. Senator Mike Lee, “What’s Next for Conservatives?” speech at The Heritage Foundation, October 29, 2013, <http://www.lee.senate.gov/public/index.cfm/2013/10/what-s-next-for-conservatives>.

is deposited into an ESA, directly onto a restricted-use debit card. The parent can then use the ESA to purchase a variety of education-related services and products, including private school tuition, online courses, special education services, curricula, textbooks, private tutors, and other approved education-related expenses. What makes ESAs unique—and distinct from other private school choice options, such as vouchers—is that parents can roll over unspent funds from year to year. They can even roll unused funds into a college savings account.

The ESA option in Arizona has allowed parents to completely customize their children’s educational experiences. Some families use part of their funds to finance private school while reserving some for special education services. Others pay private school tuition and also purchase additional curricula to supplement instruction. Some eschew private school altogether, and purchase curricula, textbooks, and hire a private tutor to completely tailor an educational experience to their child’s learning needs. Approximately 34 percent of Arizona families are using their ESAs for a customized learning experience.²¹ In 2014, Florida became the second state to adopt ESAs, followed by Mississippi, Tennessee, and Nevada in 2015.

Other states should follow Arizona’s lead and offer ESAs. Instead of funding traditional brick-and-mortar public schools, funding should be deposited into an ESA for families, who can then use those funds to purchase a variety of education-related services and products. Families should be empowered to roll over unused funds from year to year, and to roll unused funds into a college savings account.

■ **Allow course choice.** During the 2013–2014 school year, Louisiana began offering “course choice,” enabling students to craft an à la carte education tailored to their individual learning needs. Louisiana’s course choice program enables K–12 students to take courses from colleges, public high schools, and public and private online providers. It gives students access to Advanced Placement and career and technical education courses, allowing them to earn high school and college credit and industry-based certifications.²² “They might, for instance, take algebra from a math tutoring firm, ACT prep from Princeton Review, pipefitting from a construction trade association, French from an online public school...or all of the above,” writes *Politico*’s Libby A. Nelson.²³

Louisiana’s course choice program uses state aid to cover the cost of courses for students attending a school rated “C” or lower on the state’s accountability system. Students enrolled in “A” or “B” schools are eligible to participate in the course choice program if their public school does not offer particular courses.²⁴

■ **Move toward student-based budgeting (a weighted-student formula).** Several states, including Indiana, Hawaii, and Rhode Island, along with several school districts, have implemented student-based budgeting, also known as a weighted-student formula.²⁵ This school funding portability structure funds schools with “actual dollars (rather than staffing allocations) based on each child’s precise funding determined by various ‘weights’ based on factors such as grade level, socio-economic status and past educational performance.”²⁶ Such weighted

21. Lindsey M. Burke, “The Education Debit Card: What Arizona Parents Purchase with Education Savings Accounts,” The Friedman Foundation for Educational Choice, August 2013, <http://www.edchoice.org/wp-content/uploads/2015/07/2013-8-Education-Debit-Card-WEB.pdf> (accessed August 14, 2015).

22. Louisiana Department of Education, “Supplemental Course Academy?” <https://www.louisianabelieves.com/courses/supplemental-course-academy> (accessed August 13, 2015).

23. Libby A. Nelson, “High Demand for Course Choice,” *Politico* Morning Education blog, August 16, 2013, <http://www.politico.com/morningeducation/0813/morningeducation11441.html> (accessed August 13, 2015).

24. Erik W. Robelen, “Louisiana’s Course Choice Program Gets Underway,” *Education Week*, August 27, 2013, http://www.edweek.org/ew/articles/2013/08/28/O2courses_ep.h33.html (accessed August 3, 2015).

25. Lisa Snell, “Annual Privatization Report 2013: Education-Weighted Student Formula in the States,” Reason Foundation, April 29, 2013, <http://reason.org/news/show/1013316.html> (accessed August 13, 2015).

26. *Ibid.*

WGU Partnerships

In 2010, Indiana created WGU–Indiana; then-Governor Mitch Daniels referred to it as the “eighth state university.” It is not technically a part of the Indiana state system and does not receive a state subsidy. Rather, it is a private, nonprofit institution formally established by the state in partnership with WGU.

WGU–Indiana has a chancellor and advisory board who reside in Indiana and provide guidance on the most effective ways the university can meet the needs of Indiana residents. The curriculum is a slightly customized version of WGU’s standard curriculum. WGU has a formal articulation agreement with the Indiana state system that defines how WGU credits can be easily transferred to the state system.

This approach has achieved bipartisan acclaim. In fact, the 2013 WGU–Indiana Annual Report features glowing endorsements from both President Barack Obama and Governor Mike Pence. Four states—Texas, Washington, Tennessee, and Missouri—have followed Indiana’s lead and have created similar partnerships with WGU.

student formulas, when combined with school choice options, allow money to follow the child to educational options that meet that child’s learning needs, and create more decentralized systems of school finance.

- **Lift the cap on charter schools.** Charter schools, which are public schools that are tuition-free and open to all students, are very popular with parents. Unfortunately, the demand for charter school education far exceeds supply. While only nine states do not have charter school laws (allowing charters to operate), many place caps on the number of charter schools that can operate, and as well on their individual enrollment numbers. These caps are simply a way to protect the establishment schools’ market share. Supply is also limited by the process used in authorizing a new charter school. In most states, the only way to become authorized is by a local school district, the very group that runs the existing public schools. As a result, the number of charters granted is often well below demand. In addition, these charters are often forced to operate under many of the same rules as the district’s regular schools, inhibiting their ability to truly innovate. States should revise their charter laws to allow multiple authorizers to avoid the fox-guarding-the-henhouse

phenomenon produced by allowing only a single authorizer in a state.

- **Encourage competency-based learning in K–12 and higher education.** In 2013, the University of Wisconsin system created the Flexible Option, offering competency-based learning for students with professional experience. Students with skills obtained through professional experience or other training can test out of courses and expedite the time to earn a degree.²⁷ States might follow Wisconsin’s lead to provide students with more flexibility in earning credentials within their university systems. States might also follow Indiana’s lead, and loosely integrate private competency-based colleges into the state system.
- **Exit the Common Core national standards and tests.** States should exit Common Core national standards and tests. National standards and tests monopolize the educational marketplace and are a top-down approach to education that distances those closest to the students—parents, teachers, and local leadership—from the educational decision-making process. National standards also maintain a rigid factory model of education, and are not conducive to the type of flexible, customizable education options that an open system creates.

27. Scott Carlson, “Competency-Based Education Goes Mainstream in Wisconsin,” *The Chronicle of Higher Education*, September 30, 2013, <http://chronicle.com/article/Competency-Based-Education/141871/> (accessed August 13, 2015).

- **Eliminate unnecessary education requirements for government jobs.** Like the federal government, state governments are very large employers that often require degrees that are not necessary to perform the job. The K–12 education system is perhaps the biggest offender. Compensation structures often pay teachers more if they have a master’s degree. Pay differences between teachers should be based on job performance, not paper credentials.

Whether in the K–12 realm or at the university level, “if some students can learn their lessons in a matter of weeks, they should not be forced to sit in a classroom for months,” as Michael Horn argues.²⁸ Nor should they have to pay for the extra time expended. Rethinking public education financing is a critical component in moving toward a completely open and fluid education system. States and school districts must first reconfigure funding formulas to fund students instead of physical school buildings, and should consider student-based budgeting options that allow money to follow the child to any school—or course—of choice.

Conclusion

An open education system offers the prospect of student-centered learning at every level. At the K–12 levels, it represents the abandonment of an ossified factory model of education—the brick-and-mortar assignment-by-zip-code public education system that fails to meet the needs of individual students. At the postsecondary level, it represents a democratization of higher education by providing options outside the traditional college experience and the expensive residential model. At every level, it is responsive to student learning needs and goals, lowers costs to taxpayers, and increases educational opportunity for all.

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28. Horn and Evans, “Pathway to Success: New Schools and Innovative Delivery.”