



The Perfect Storm

Education | Moving Forward

Community Service Council - October 2015

The Perfect Storm

Is a publication of the
Community Service Council
Based on the work of the Long Range Planning Committee

October 2015

Authors:

Angela Chambers, MA, Consultant
Melanie Poulter, MA, Senior Planner
Michael Witham, BA, Consultant
Layout: Kole Krause, AS, Program Assistant
Cover Photo: Georgie Gilmour



Community Service Council

16 East 16th Street, Suite 202
Tulsa, Oklahoma 74119
918 585-5551
www.csctulsa.org



Partner Agency

The analysis is produced by the Community Service Council providing leadership in community-based planning and mobilization of resources to address health and human service needs in much of Oklahoma. Since 2006, the Council has been monitoring the Perfect Storm of international, national and local developments that impact the future of Oklahomans. This analysis guides the Council's strategic planning for itself and the broader community.

Education

Executive Summary

Education is “the most powerful equalizing force in the long run.”

-Economist Thomas Piketty

America’s K-12 education is no longer in the same competitive category as multiple countries offering quality education to the majority of its citizens – not just the well off. It’s not a story of “continuing to compete” with these nations but “how is America going to catch up?” This will require a significant, often uncomfortable but altogether necessary overhaul of the current system. The United States may still be revered for its research universities, but these, just like grade-school levels, are experiencing significant cuts in funding. On average, countries part of the Organisation for Economic Co-operation and Development (OECD) increased education spending by 6 percent from 2008 to 2011.¹ But the United States, which cut spending by 3 percent, was one of only six countries to decrease education funds from the 34 OECD members. As most of the 20th century demonstrated, America has the ability to lead in free, quality education. The country’s economic future depends on a return to this collective goal.

Two key areas will help the United States work toward this purpose. First, integrating nonacademic resources into schools, such as health and social services, will allow students falling behind for reasons beyond their cognitive abilities to have a better chance of catching up. The Tulsa Area Community Schools Initiative (TACSI), part of a nationwide network of similar organizations, is one example of this approach. A second important focus is revising how teachers are educated and respected from college to the classroom. If education degrees aren’t considered as rigorous as an engineering major, the public is less likely to respect a teacher’s authority and autonomy. It would be much more logical to provide teachers with proper training from the start of college rather than attempting to make up for lacking standards after they receive the job. But despite current education degree standards at many universities, there are still countless talented teachers that deserve more value, both in compensation and respect. If this doesn’t happen, fewer and fewer gifted educators will pursue this career.

Oklahoma’s story

Education is undoubtedly a highly talked about issue at the state and local levels. In March 2014, 25,000 people traveled to the Oklahoma Capitol to stand for better education. Thousands again joined together for this year’s rally.² Tulsa Regional Chamber’s 2015 OneVoice Legislative Agenda lists education as a top priority, as it has for multiple years.³ An October 2014 SoonerPoll revealed 31 percent of respondents say education is the state’s most important issue – the highest level since early 2003.⁴

While discussing this concern is the first step, the question remains whether these voices will result in effective change. The U.S. Chamber of Commerce’s 2014 “Leaders and Laggards” report finds Oklahoma received an “F” grade in international competitiveness, academic achievement of low-income and minority students and overall academic achievement.⁵ Multiple studies rank Oklahoma close to the bottom of U.S. states in education quality. But even with this outlook, the state budget still doesn’t adequately fund academics. The Sooner State has ranked first in education funding cuts for K-12 since 2008.⁶ Oklahoma property taxes, the main source of public education funding, are the second lowest in the nation. Surrounding states pay two to three times more in property taxes than Oklahomans.⁷ An

Oklahoma Policy Institute analysis reveals public education funding fell by \$175 million in Oklahoma since 2008 while the student population increased by 45,000.⁸ With this level of funding, it should come as no surprise that skilled educators are leaving Oklahoma for better salaries in other states. When voters overwhelmingly approved a March 2015 Tulsa Public Schools education bond package, it simply kept current tax rates level.⁹ Oklahomans need to take a closer look at what they’re saying and the policies enacted in the voting booth and at the Capitol.

Oklahoma’s academic standards have an uncertain future. In spring 2014, the state Legislature repealed Common Core, which is math and English academic standards created in 2009 by school leaders and state governors. The primary reason Oklahoma legislators came to this conclusion was a belief that state and local public schools would lose control. The repeal led to Oklahoma losing a waiver for No Child Left Behind requirements, which left \$30 million in federal education funding in question. By October 2014, the Oklahoma State Regents for Higher Education certified the state’s previous math and English standards, called Priority Academic Student Skills (PASS), which gave the state a chance to reapply for an NCLB waiver. The *Tulsa World*

editorial board responded by saying, “Revoking Common Core was a mistake. Revoking it without a worthy standard to take its place magnified that mistake.”¹⁰ Currently, 40 percent of Oklahoma college students take remedial courses, meaning high schools aren’t properly preparing them for higher education.¹¹

Federal officials turned down Oklahoma’s first NCLB waiver extension request in August, noting that the state’s standards don’t provide students with enough skills for careers and postsecondary pursuits. Cheryl Oldham, vice president of education policy at the U.S. Chamber of Commerce, strongly criticized Oklahoma for “putting politics before students,” as six months after defending Core standards, Gov. Mary Fallin turned away from this stance and returned to PASS, which Oldham says doesn’t provide students with an adequate education. The education policy VP goes on to

note if Oklahoma doesn’t improve its higher education gap, it will significantly affect business growth and the state’s economy.¹²

By November 2014, the U.S. Department of Education chose to extend Oklahoma’s NCLB waiver through the 2014-15 school year; however, to have spending flexibility for subsequent years, the state must resubmit an amended proposal that meets conditions and requirements set by the federal government.¹³ This year, the Oklahoma Standards Setting Steering Committee, established by the State Board of Education, is working on new math and education standards to present for the state Legislature at the start of the 2016 season. Town hall meetings are planned for August and September, which will allow the public to provide input on the proposed standards.

Further ahead: What to expect

To understand the complex dynamics of post-recession education, this report will focus on key developments facing current and future academic conditions locally, nationally and globally.

The report will begin by discussing how students are performing and what that means for future economic growth. Next, the topic of continued disparities in racial/ethnic minorities’ access to education will demonstrate why moving toward more rather than less diverse schools benefits students and society as a whole. Access to a higher education is becoming more difficult as costs continue to rise. But by providing more flexible options and transparent information, students will have a better chance completing a postsecondary degree and earning a living wage. Several years before going to college, children with a healthy, nurturing early environment have a much better chance at success later in life. However, interventions made in even adolescence and beyond can transform at-risk students’ trajectories.

Another discussion will focus on the ways family poverty is a barrier to educational attainment and what can be done to address this concern. Along the same lines, nonacademic needs – such as character traits, health and a trustworthy adult – are likely to determine how successful a student is in the classroom. Finally, this report will touch on ways the nation may help teachers have a better work environment and success in the classroom.

If it takes a community to raise a child, the same should be said about making sure students have access to a quality education and life.

STUDENT ACHIEVEMENT

With a lack of funding and teacher shortages, Oklahoma's children are falling behind most U.S. states in academic performance. From an international comparison, American students are performing below other developed nations, even when adjusted for socioeconomic backgrounds. Lessons can be learned from business leaders' needs and education programs in other parts of the country and world.

Oklahoma and the nation

With continued low education standards, Oklahoma risks more jobs and economic progress moving to other locations. As mentioned in the previous *Perfect Storm* report on employment, multiple corporate headquarters have left Tulsa seeking talent elsewhere, with some citing a better-educated talent pool as a key reason. Paula Marshall, CEO of the Tulsa-based Bama pie company, says she has trouble finding enough Oklahomans to fill her positions, which call for problem solving, communication and reading skills.¹⁴ Simply rolling dough and packing pie boxes isn't enough in today's job market, says Marshall.

A 2014 report by Tony Hutchison, who works in workforce and economic development at the Oklahoma State Regents for Higher Education, finds Oklahoma continues to have a significant gap between educational attainment and workforce needs.¹⁵ Jobs available in the state require more than three times as many employees that earn postsecondary education than what the current Oklahoma employee base provides, notes the report. About 24 percent of Oklahomans receive bachelor's degrees, lower than the nation's 28 percent. To fulfill Oklahoma job needs, the state should increase its bachelor's recipients to 28 percent, Hutchison finds. More than one-third of Oklahoma's new jobs through 2022 will require at least an associate's degree.

From a positive perspective, Tulsa Public Schools is succeeding in reducing dropouts. From 2011 to 2014, dropouts in the school district have gone down by more than 37 percent.¹⁶ Reasons that may be contributing to this decrease include campus police officers visiting students in their homes if they haven't gone back to school after a 10-day suspension. School leadership also is working to inform students at-risk of dropping out of alternative education. If the fastest-growing jobs with livable wages require some form of postsecondary education, it becomes even more crucial for students to first complete their high school degrees. Studies reveal increasing high school graduation rates also reduce crime. The Alliance for Excellent Education estimates Oklahoma could save \$283 million in crime-related costs and increase earnings by \$13 million if it simply had a 5-percent higher male high school graduation rate.¹⁷ Oklahoma has the fifth-highest absentee rate in the nation, which can lead to additional dropouts and lower performance, finds an analysis released in fall 2014.¹⁸ Tackling this concern will help TPS and other state school districts retain students.

When looking at Oklahoma eighth-graders, only 29 percent are proficient in reading, while 25 percent are proficient in math.¹⁹ The national averages for eighth-grade proficiency,

which aren't impressive, are still higher than Oklahoma, at 36 percent for reading and 35 percent math. [Possible graph] One analysis compared U.S. states to countries. In this study, Oklahoma would rank 81st in the world in math, about the same as Croatia and Turkey.²⁰ Once they reach higher education, 39 percent of Oklahoma high school graduates must take at least one remedial course, while it's 32 percent nationally.²¹ [Possible graph] Students enrolled in these courses pay for instruction that doesn't count toward their degrees, which leads to higher loan debt and frustration that often results in more dropouts.

International perspective

Student achievement isn't always in the hands of the better off. The most privileged U.S. teenagers ranked 18th in math on the Programme for International Student Assessment (PISA), a critical thinking skills test given to students across the world, when compared to privileged counterparts in other countries.²² Students in Beverly Hills scored below the average of all Canadian students. Amanda Ripley, author of 2013's *The Smartest Kids in the World*, notes while the United States may have the second highest spending per pupil in the world, taxpayers in countries ranking the highest on PISA spend much less. Ripley finds teachers' skills and autonomy in the classroom allow the higher-ranking countries to perform better, even with less funding per pupil. This topic is discussed further in the "Teacher Success" section.

Among the countries ranking high on international education comparisons, some still manage to provide more free time and less homework to students. Se-Woong Koo, a former South Korean school teacher who has taught Korean studies at Yale University, believes the stressful environment in this country's schools, which often require students to work up to 13 hours a day on studies, amounts to "child abuse."²³ South Korea may have a high-ranking education system, but Koo and others believe the stressful environment outweighs student achievement. Finnish students, on the other hand, rank high on PISA and also have frequent periods of free time and less homework. Ripley in *The Smartest Kids* believes this is linked to the highly selective education degree programs provided to Finnish teachers along with parenting styles that provide children with independence and respect to think for themselves.

In a report released last fall, the OECD found social mobility is declining across the world.²⁴ The analysis of 34 primarily developed countries revealed 16 percent of those ages 25 to 35 years old have less educational attainment than their parents. The contrasts between countries can have an

effect on global competitiveness, as a Japanese high school graduate may have more skills than an Italian university graduate, the “Education at a Glance” study finds. The United States was once first in access to higher education.

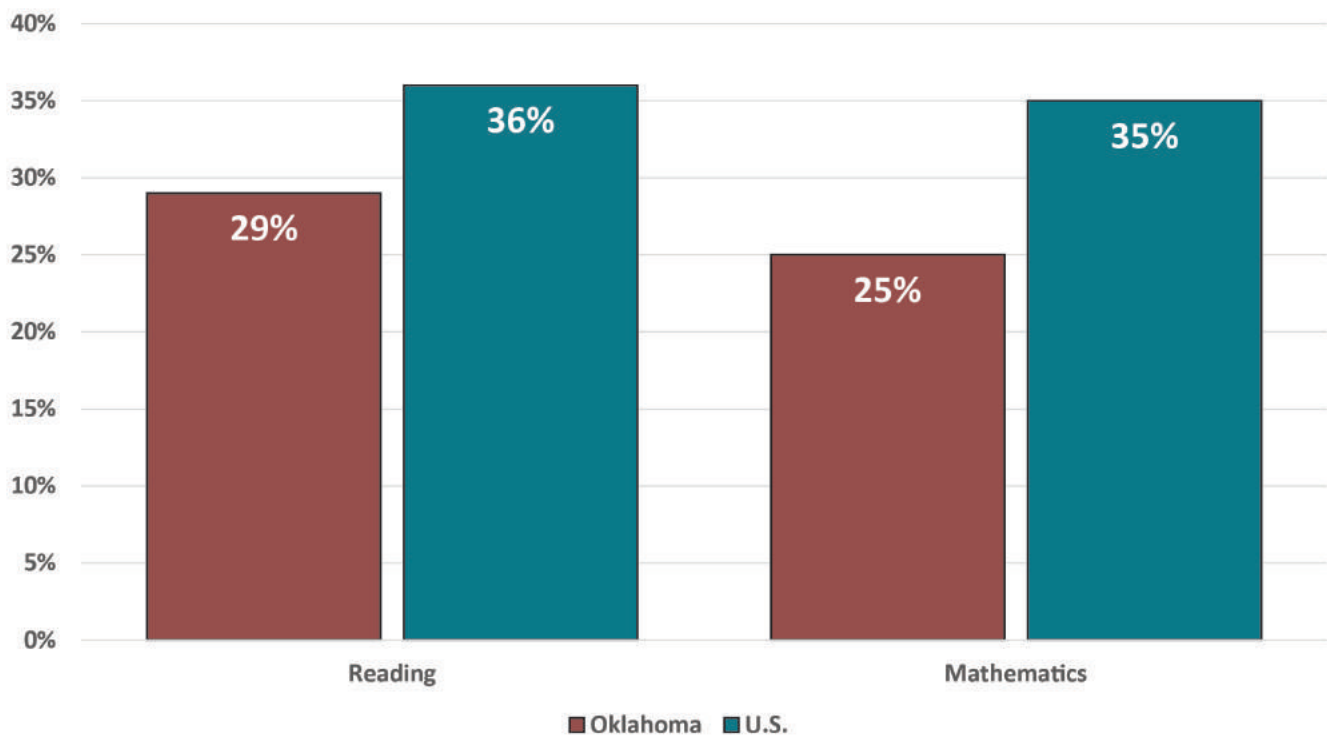
Today, the report notes, the country provides average postsecondary access, which is heavily tied to increased costs.

RACE/ETHNICITY & EDUCATION

Diversity at schools provides students with a better understanding of those who aren’t from the same backgrounds. These interactions help prevent racist, hateful actions that are still prevalent today, as demonstrated by the now-banned University of Oklahoma Sigma Alpha Epsilon fraternity.²⁵ Yet, parents and subsequently, their children, continue to be wary of those who come from different cultures, beliefs and circumstances. These attitudes must change in order to address educational disparities between minorities and the majority white population.

Oklahoma’s eighth grade proficiency levels lower than national averages for reading and math

Eighth grade proficiency rates, 2013



SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics. (2013). The National Assessment of Educational Progress (NAEP). The Nation’s Report Card: 2013 Mathematics and Reading. Retrieved January 15, 2016, from http://www.nationsreportcard.gov/reading_math_2013/#/comparison-graphs?st0=OK.

Latino community

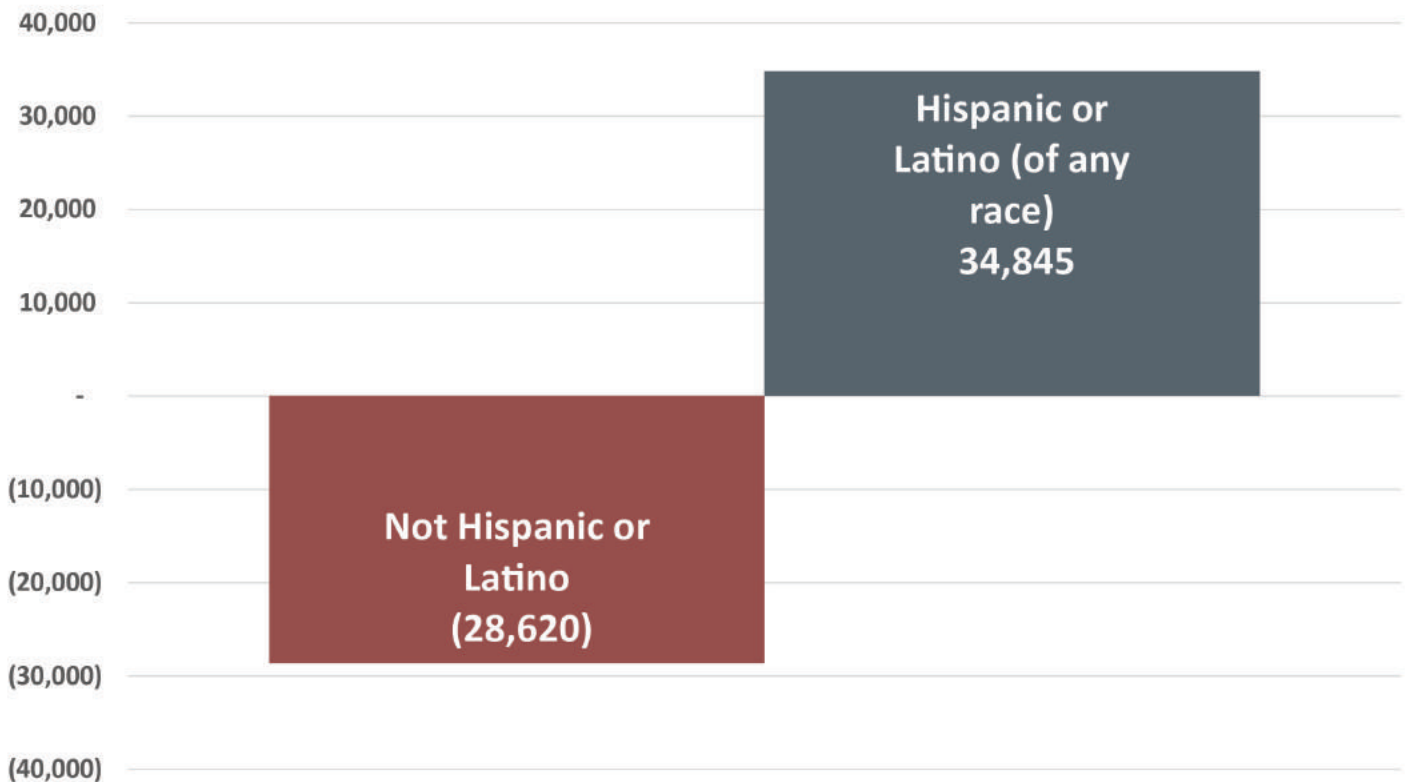
Since Latinos are now the largest racial/ethnic group at Tulsa Public Schools, educators are paying closer attention to meeting their specific needs. The school district is proposing a new east Tulsa elementary school to alleviate overcrowding needs for this area, which has a strong Latino community. This is in contrast to other parts of Tulsa where schools are closing or aren't reaching full capacity. Many Latino students need English Language Learner (ELL) programs. But for Tulsa County overall, there haven't been major investments in ELL, with a few exceptions at TPS and Union Public Schools.

Tulsa's non-Latino population younger than 18 decreased by 8,000 (about 6 percent) from 2000 to 2010, while Latinos increased by 14,200 (116 percent).²⁶

While educational attainment at American high school and postsecondary levels have increased for all racial groups in the last two decades, Latinos still have a significantly lower rate than other groups. However, most of the increase in Latino attainment occurred in the last 10 years, suggesting a better future outlook than previous decades.

Hispanic population saving Tulsa from population decline

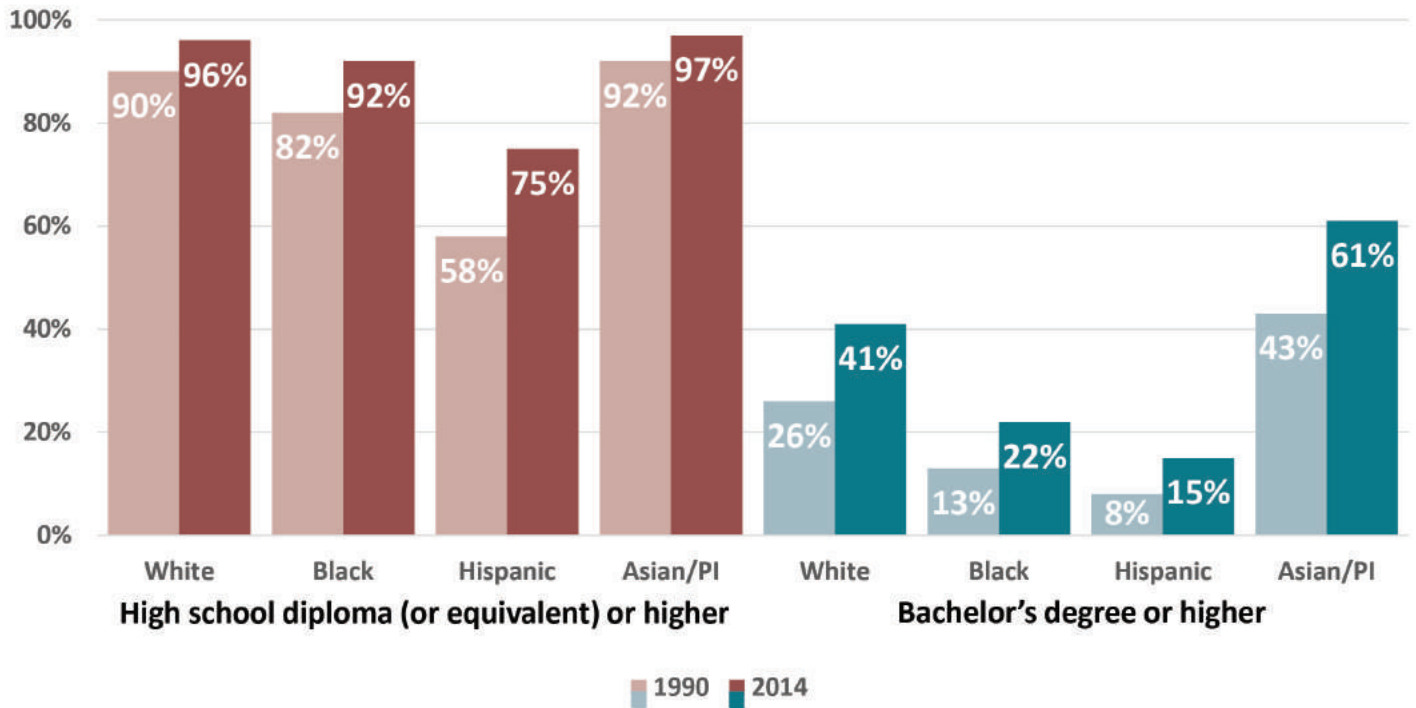
City of Tulsa, population change, 2000 to 2014



SOURCE: Tulsa City Council. (2015). The Quality of Life Report. Retrieved January 15, 2016, from [http://tulsacouncil.org/media/113213/QoL_Report_Presentation_\(1-14-14_Complete\).pdf](http://tulsacouncil.org/media/113213/QoL_Report_Presentation_(1-14-14_Complete).pdf); US Census Bureau, American Factfinder. (2016). Table P008: Hispanic or Latino origin by race. 2000 Census Summary File 1. Retrieved January 15, 2016 from <http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>; US Census Bureau, American Factfinder. (2016). Table B03003: Hispanic or Latino origin. 2014 American Community Survey 1-Year Estimates. Retrieved January 15, 2016 from <http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>.

Educational attainment growing for all, but disparities growing for those with college degree

Educational attainment levels for persons age 25-29 by race, U.S., 1990 and 2014



SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics. (2013). Fast Facts: Educational Attainment. Retrieved January 18, 2016, from <http://nces.ed.gov/fastfacts/display.asp?id=27>

Latinos cited barriers to pursuing a college degree in a 2009 Pew Research Center survey.²⁷ The biggest reason respondents said they didn't finish their higher education pursuits was from financial pressure to support a family. This reason is stronger among foreign-born Latinos than native-born. Other reasons Latinos taking the survey said they stopped their college educations include poor English skills (50 percent of respondents). Despite family being a particular concern, more than three-quarters of Latinos ages 16 to 25 say their parents believe going to college is the most important thing to do after high school.

School environment

Segregation in schools across America isn't improving. A study by the Civil Rights Project discovered black students are as segregated today as they were in the late 1960s. The average white student goes to a school where 77 percent of students also are white.²⁸ Segregation is a particular problem in metro areas like Tulsa where most minorities are located. Last year (2014) was the first time in U.S. history that public schools had a majority minority population.²⁹ Among all public school students, 48 percent were poor in 2011. Since a large portion of a local school's funding comes from the surrounding area's taxes, this causes minority students, often in lower-income communities, to have fewer resources. Oklahoma is facing a particularly difficult struggle, as it was one of only three states (including Iowa and Ohio) in 2011 and 2013 where the achievement gap between white and black fourth-grade public school students grew. Oklahoma's score gap increased from 19 in 2011 to 26 in 2013.

When looking at an international comparison in Finland, a country ranking high in student performance, the more diverse schools are given extra funding by the government for immigrant students' intensive language instruction.³⁰ Principals at these schools openly publish test scores to convince native-born Finnish parents that their children

will do well in these diverse environments. Without these details, misinformation and prejudice spreads, and the native population is more likely to place their children in a school district that holds the majority race. Some parents in the more diverse parts of Finland apply to international science, music or foreign language schools, which often hold more upper-income children. A comparable Tulsa example is Zarrow International School, which offers Spanish language immersion. Zarrow has a majority white student body when only 27 percent of TPS students overall are white. But a solution to this disparity may come starting this fall. The old north Tulsa Bunche school building, at 2703 N. Yorktown Place, will reopen as a permanent location for the Dual Language Academy.³¹ This may provide more access to the large black population in this area.

Another country working to encourage natives to attend more diverse schools is Germany, particularly in inner city Berlin. Like in Finland (and arguably every country in the world), those of German ancestry are skeptical of sending their children to schools with more immigrants, believing the curriculum will be less challenging. But a new initiative in Berlin called “Local Schools for All” is disproving commonly held myths about diverse schools and the students attending these institutions, which has seen early success in bringing back native children to their area schools.³²

HIGHER EDUCATION

While it works for some, not everyone has the time or financial means to pursue a full-time, four-year university pursuit. This is particularly the case when college costs continue to rise. Higher education institutions need to make information on graduation rates, average student loan debt and career trajectory more transparent so students making this investment can choose the best path for their personal success.

Certification required

When the fastest-growing jobs projected through 2020 are expected to require at least some postsecondary training, there will be few well-paid options for those who don't pursue education beyond high school. In today's job environment, employers are more likely to require a bachelor's degree for positions to narrow the talent pool, even if these skills aren't needed, such as in administrative support roles. Researchers from the New York Fed find the job market isn't much better for bachelor's degree holders, but that it's worse for those without this certification.³⁵

Since not everyone can easily pursue the traditional university path, alternatives are available. Older, nontraditional students are taking competency-based programs that allow them to use current job skills to complete certifications.³⁶ Boot camps to train a growing need for software developers are another alternative certification program. Students that complete the boot camps often are offered lucrative jobs in a much quicker time period than a traditional bachelor's program. These options are becoming more popular when

Behaviors & educational attainment

When white populations participate in what's considered unacceptable behaviors at school, they are much less likely to face punishment than minority groups. A John Hopkins University study found while affluent white students had the highest levels of drug abuse and binge drinking, they still experienced the most upward mobility.³³ By 22 years old, 89 percent of white high school dropouts were working compared with 40 percent of black dropouts. While 49 percent of black men from low-income families had criminal convictions by age 28, it was 41 percent for white men from similar backgrounds. Addressing punishment disparities will likely alleviate some gaps in achievement.

When comparing black and white girls, a 2014 report by the NAACP and National Women's Law Center revealed black girls were more likely to be suspended, held back or expelled.³⁴ Not enough research looks specifically at girls, as most research focuses on boys' behavioral issues, finds the study's authors. Black girls are suspended six times more than white girls. Studies on black students show they aren't misbehaving more than fellow students, yet they have more harsh punishments. Black girls have additional struggles, as they aren't encouraged to enroll in STEM courses because of their gender and, at the same time, are often in lower-income schools.

college costs continue to rise. A study from Carnegie Mellon University found a hybrid model of combining traditional and alternative certifications taught students just as much as they would learn in a solely traditional degree. At the same time, this hybrid model allowed students to finish their educations in a quarter less time and significantly reduce costs.

Oklahoma programs are working to address the gap between educational attainment and needs in the job market. The Oklahoma Reach Higher college completion program is designed for working adults.³⁷ It provides bachelor's degrees in organizational leadership for students with at least 72 credit hours. Nine universities around the state offer flexible in-person and online course options to meet the nontraditional student's needs. Reach Higher also offers associate programs at 14 community colleges for students with a minimum of 18 college credit hours. The University of Central Oklahoma's Reach Higher program received the 2014 Malcom Knowles Award for Outstanding Adult Education Program by the American Association for Adult

and Continuing Education.

In a *Tulsa World* op-ed, Chuck Mills, president of Mills Machine Co. in Shawnee and chairman of the board of directors for the State Chamber of Commerce, said the Oklahoma business community doesn't have enough skilled employees to fill positions available.³⁸ To find a solution, Mills notes higher education, career technology, businesses and local chambers of commerce in Duncan and Shawnee are working together to match the education system with current employer needs.

A national initiative launched in Oklahoma is the Complete College America program, with the goal of increasing the state's postsecondary degrees and certificates earned by 67 percent from 2011 to 2023.³⁹ Time will tell whether Oklahoma can meet this considerable goal. Reports released this year reveal Oklahoma is ranked 26 out of 33 states in funding going toward Complete College America.⁴⁰ The State Regents for Higher Education asked for \$90 additional dollars for Complete College America, but with Oklahoma's \$611 million budget shortfall, state officials say that isn't going to happen this year. One other initiative is the Okla-

homa Higher Education Connect, which allows businesses to search for resources at state public colleges and universities, such as workforce education and training along with strategies to develop or expand businesses.

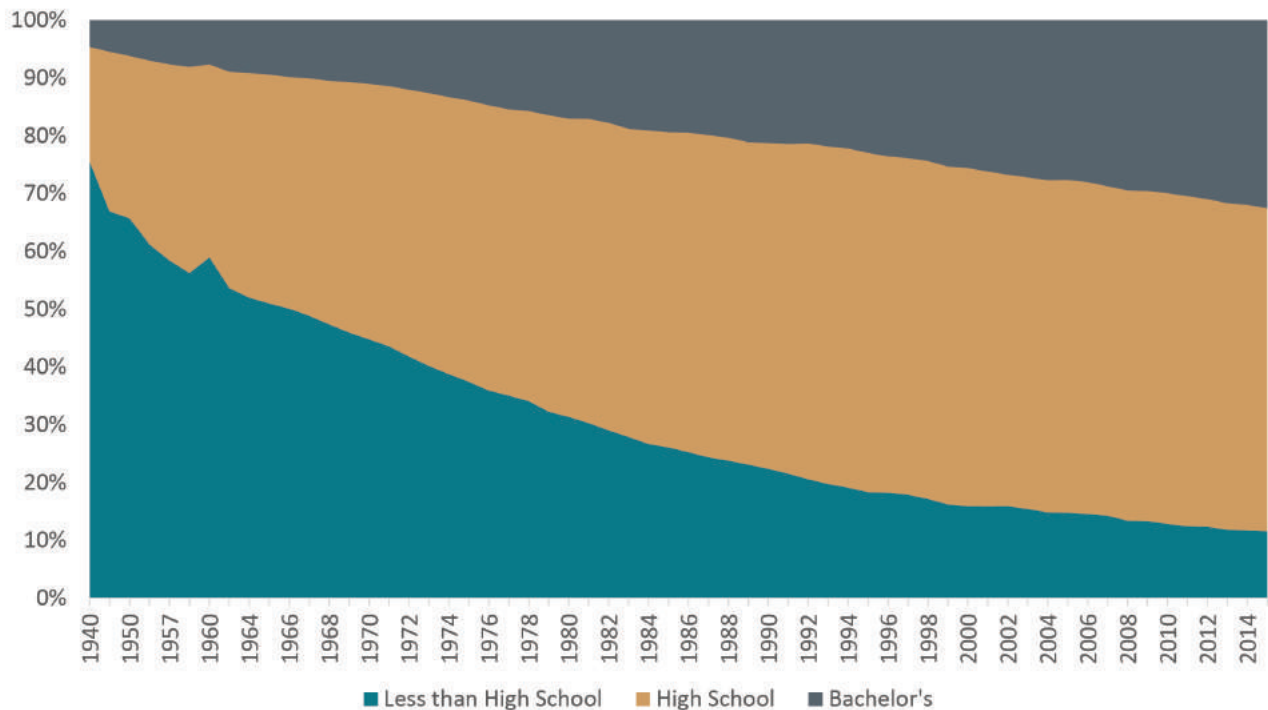
This year, Tulsa became one of 20 cities to join the Lumina Foundation's national Community Partnership for Attainment, which aims to increase postsecondary degrees and certifications.⁴¹ Through this program, Tulsa will receive professional development opportunities, funding, technical assistance and planning tools.

Educational attainment

From a historical perspective, the United States has experienced a significant increase in higher degrees. The percent of the population (aged 25 and older) with a bachelor's degree or higher went from about 5 percent in 1947 to around 30 percent in 2014.⁴²

Percentage of Population Age 25 and Over by Educational Attainment

1940-2015



SOURCE: 1947, and 1952 to 2002 March Current Population Survey, 2003 to 2015 Annual Social and Economic Supplement to the Current Population Survey (noninstitutionalized population, excluding members of the Armed Forces living in barracks); 1960 Census of Population, 1950 Census of Population, and 1940 Census of

While this progress is positive, other countries are now surpassing the United States in higher education pursuits. One likely cause is the increasing costs of American university tuition. The OECD's "Education at a Glance 2014" finds the United States ranks 12th among the 34 member countries in adults, ages 25 to 34, with a college degree.⁴³ On the other hand, Americans ages 55 to 64 are fourth in the world in postsecondary attainment, with Canada, Israel and Russia as the only countries ranked higher.

The United States may not be keeping up with other countries, but Oklahoma is experiencing lower attainment than other American states. From a 2008-2010 state-by-state comparison, Oklahoma was 43rd in adults (25 and older) with a bachelor's degree or higher.⁴⁴ In Tulsa, only 28 percent of eighth-graders are on track for college, and with the current rate, more than 20,000 Tulsa area secondary school students are expected to drop out in the coming decade.⁴⁵

America does well in college enrollment rates (eighth in OECD) but is second to last before Italy in college completion.⁴⁶ In 2006, only 59 percent of U.S. students that began as freshman at four-year universities completed their degrees in six years. Among students scoring from 1200 to 1600 on the SAT, low-income students were half as likely to finish their degrees as those in the top 25 percent of income distribution.⁴⁷ Disparities exist among racial groups, as college completion is 40 percent for blacks and 62 percent for whites.

University actions

With so much competition among American universities, these institutions may focus on making their campuses look "cool" to attract more students over what's most important: education standards. Colleges are focusing more on entertainment, housing, recreation and what are arguably professional sports franchises.⁴⁸ The elaborate football stadiums and athletic housing at the University of Oklahoma and Oklahoma State University are two such examples. Universities also are so concerned about being ranked high in various categories that they can lose sight of what's happening in the classroom.

Another concern is when university leadership stifles transparency. Private colleges' lobbying helped block the federal government's attempt in the mid-2000s to create a college tracking system with such details as what students earn after college. The private institutions argued this move would compromise student privacy. Many believe this concern was overblown and instead a worry by private colleges that the information would reveal there are less differences between public and private universities than what is generally believed, writes Jeffrey Selinger in *College (Un)Bound*. A new investigative book released this year by *New York Times* columnist Frank Bruni, *Where You Go Is Not Who You'll Be: An Antidote to the College Admissions Mania*, explores why the place a student attends college doesn't matter as much as perceived. When looking at CEOs at the

top 10 corporations, Bruni found only one went to an Ivy League.⁴⁹

While a national college tracking system still isn't fully realized, some online options are available. LinkedIn's "University Finder" allows users to enter what degree path they want to pursue and receive results on which universities send the most alumni into this career.⁵⁰ It isn't completely accurate, as it limits information gathered from professionals who have set up a LinkedIn profile. Still, it's a start and more than what is available elsewhere. Parchment.com collects data from a student's transcript and resume to determine her or his possibility of being admitted at particular colleges.⁵¹ Parchment doesn't take into account a person's college interview or essay, which can make a difference in whether he or she is accepted.

Oklahoma has taken steps to make state-based colleges more transparent. The Oklahoma Education Information System, launched in September 2014, created the website okeis.org. At this address, students may discover various data from public and participating private institutions, including retention rates, remediation success, graduation rates and other performance outcomes.⁵²

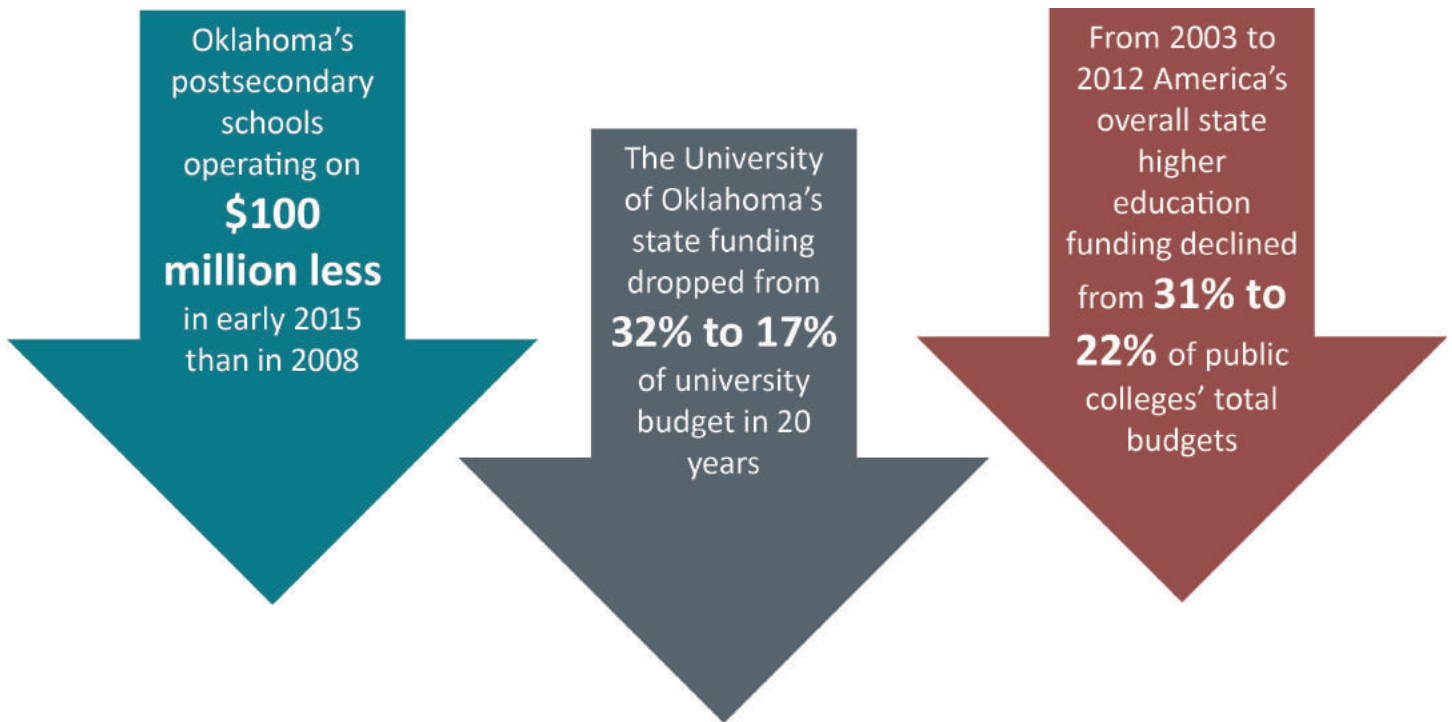
College costs

Another way many universities aren't transparent is with the total amount students pay for college. In an attempt to avoid college comparisons, these institutions won't share the average cost to attend, which creates an environment where students are sold on the idea of college at any cost.⁵³ With few high schools offering college financial literacy programs, it's not uncommon for families to be unaware of just how much debt they'll eventually need to pay. Without knowledge on how to properly fill out the Free Application for Federal Student Aid (FAFSA), tens of thousands of families in 2014 made a decimal-point error that may have affected their chances of receiving a Pell Grant.⁵⁴

With less taxpayer spending going to public colleges, more of the burden is falling to students.

From an international perspective, students in the United Kingdom are experiencing a similar dilemma. While multiple European universities have few or nonexistent tuition fees for its citizens, that's not the case in the UK, where what previously was paid from public money is now heavily relied on private debt. Danny Dorling, professor of geography at the University of Oxford and author of *Inequality and the 1%*, says, "I believe my generation is opting out of an obligation to pay to fully educate the much smaller generation behind it."⁵⁷ A similar argument could be made about the education policies adopted by older U.S. generations in positions of leadership.

When comparing the United States to other countries, America has higher direct costs of education (like tuition) than any of the OECD's 34 member countries.⁵⁸ Americans that received a bachelor's degree in 2011-12 borrowed a



median amount of \$26,500, which is an increase of 60 percent from the 2003-04 school year.⁵⁹ Furthermore, higher education's cost has surpassed wage growth for nearly all Americans, and federal government grant support hasn't kept up with the costs, finds an analysis by the Center for American Progress.

Vocational/associate degrees

With increasing costs at four-year universities, community colleges are a more affordable and accessible option. However, since two-year institutions are heavily attended by low-income students, President Obama announced this year his desire to make this option even more accessible by allowing anyone to attend community colleges at no cost. Tulsa is ahead of the game as the five-year-old Tulsa Achieves program, which provides free tuition and fees for every Tulsa County high school graduate with at least a 2.0 GPA, has been recognized as a model to emulate in other locations across the country.

One concern with this education path is families and employers often aren't as supportive of this choice when compared to four-year universities, even when the training provided at community colleges is specifically geared toward today's high-demand jobs. Matt Sigelman, CEO of Burning Glass, a Boston-based career matching service, says, "Employers are clearly skeptical that an associate's degree really meets their needs."⁶⁰ But having at least some form of postsecondary education places future employees at a major advantage financially over those with a high school degree or less. Therefore, more support and consideration should be given to this option.

In the United Kingdom, a 2014 study by the Edge Foundation revealed many students felt their secondary schools and parents weren't supportive of their choice to attend a vocational college, believing it was a second tier option.⁶¹ But a study by the UK's Institute for Public Policy Research finds many of the jobs driving economic growth and mobility won't necessarily require a four-year, traditional postsecondary education. Many positions will need on-the-job training and apprenticeships.

Since America's community college students often come from vulnerable populations, more attention should be given on how to increase graduation rates at these institutions, which are lower than four-year universities. Only 34 percent of students enrolling at community colleges during the 2003-04 school year earned a credential from either a two- or four-year institution within six years.⁶²

One way to increase graduation rates is providing high school students with the option to take vocational or associate's degree courses, called dual credit or enrollment. This allows them to get a feel for college-level classes in a comfortable environment. A Columbia University study found dual enrollment helps to increase college enrollment and persistence, greater credential accumulation and higher college GPAs.⁶³ Availability of dual enrollment is becoming more common. In 2013, 66 percent of U.S. high schools reported students took dual enrollment with an academic focus, and 46 percent said students took courses with a career or technical focus.⁶⁴ But as these numbers show, there's still room to grow.

This year, the redesigned Will Rogers College High School in the Tulsa Public Schools system graduated its first senior class. A major component in the new program is offering Tulsa Community College and Tulsa Tech courses to the high school students, with the chance of earning more than 20 college credit hours before leaving the secondary school. Another local avenue is provided at Union High School, where students may learn to become auto mechanics by

interning with city of Tulsa employees. In February, the American Power Foundation and Tulsa Community College announced a \$3 million grant to go toward TPS students that want to take high-demand STEM college courses while in high school. The five-year program begins at Will Rogers in 2016 and will expand to four high schools and feeder middle schools.⁶⁵

EARLY CHILDHOOD

Children's development during the first few years of life can have a significant impact on their future wealth and health. Studies show 90 percent of the brain's physical growth happens by the time a child is 3 years old.⁶⁶ If a student isn't ready to read by first grade, 88 percent of these children won't be properly prepared by fourth grade. That's why national attention is being given to providing more quality, affordable preschool programs. Too many of the nation's preschools are of poor quality.

While preschool enrollment has increased significantly in the United States since the 1970s, children in this country are lagging behind on an international scale. About 66 percent of U.S. 4-year-olds are in a preschool program, compared to an average of 84 percent for OECD member countries. European Union countries have 89 percent of 4-year-olds in preschool.⁶⁷

Wealth and preschool access

Access to quality preschool programs with a credentialed, supported teacher, small classroom and appropriate curriculum is often only available to the well off that can afford the high costs.⁶⁸ It's not just low-income children that are left out. Middle class families also have a difficult time paying \$10,000 or more a year. The Economic Policy Institute finds quality prekindergarten provides significant income gains later in life (\$48,000 for middle income and \$53,000 low income students).

Families earning more than \$75,000 per year have the most access to preschool. Latino children are the least likely to have access and to attend full-day programs.⁶⁹ Child care shouldn't be cut off completely when parents earn more money but rather decline gradually to prevent instability, recommends the Center for American Progress.

Quality control

An area where Oklahoma shines is in providing quality preschool programs. The state met nine out of 10 quality standards for preschool, ranking higher than most states in the 2013 "State of Preschool."⁷⁰ Only a handful of states, including Oklahoma, Georgia and Washington, D.C., offer preschool to most 4-year-olds. The only standard the report finds Oklahoma didn't meet was assistant teachers holding the Child Development Associate certification.

Head Start, a national program offering low-income families school readiness support, typically has better standards than other childcare programs. But only half of eligible children access Head Start.⁷¹ Early Head Start, which is for low-income infants, toddlers and pregnant women, reaches less than 5 percent of eligible women. Among black children, 74 percent are in medium or low quality programs, compared to 54 percent of white children.

To address disparities, \$1 billion in public-private funding was announced in December to help more low-income children access state preschools, which is currently available to only 28 percent of U.S. 4-year-olds.⁷² Time will tell whether this funding is spent in an effective way.

EDUCATION & THE INCOME GAP

Earning a postsecondary education is increasingly a deciding factor between the haves and have-nots, particular in the United States. From an OECD comparison, America has a greater percentage of people with high school diplomas or less making below half the median income than any of the other member countries.⁷³ An analysis by the Economic Policy Institute revealed in 2013, Americans with four-year university degrees earned 98 percent more an hour on average than those without a degree.⁷⁴ This is the highest level on record, up from 64 percent in the early 1980s. The gap makes it difficult for those without postsecondary educations to earn a middle-class wage. In 1970, seven in every 10 employees with a high school diploma or less were in the middle class; today, it's less than four in 10.⁷⁵

Family dynamics

While receiving a postsecondary education is becoming more important to economic stability, it's a struggle for those who come from low-education families to finish college. For Americans whose parents didn't complete high school, only 5 percent earn a college degree, while it's 23 percent in other rich countries.⁷⁶ Commenting on this issue, *New York Times* op-ed columnist Nicholas Kristof remarks, "The United States has become 19th-century Britain: We provide superb education for elites, but we falter at mass education." Enrico Moretti, author of *The New Geography of Jobs*, finds the two main reasons there hasn't been a significant increase in college graduates are the expensive costs and neighborhood segregation, as college graduates live near college graduates, and high school graduates also concentrate.⁷⁷ Not living near other college graduates can affect whether a student enrolls in a postsecondary pursuit, Moretti writes.

Money and family make a difference between failure and success, prison and college and sometimes life and death, finds a 2014 John Hopkins University study.⁷⁸ After tracking 800 children in Baltimore from first grade through their late 20s, the study found a child's life trajectory is often fixed at birth thanks to parents' wealth and strength. In high income inequality countries like the United States, low-income families have less resources to invest in their children's educations. From a 2012 speech, Princeton University economics professor Alan Krueger said, "The persistence in

the advantages and disadvantages of income passed from parents to the children is predicted to rise by about a quarter for the next generation as a result of the rise in inequality that the U.S. has seen in the last 25 years."⁷⁹

The Great Recession didn't help to improve the education gap. During this time, the top 10 percent of earners increased education spending, while the remaining 90 percent of American families didn't spend more, revealed research by Emory University sociologist Sabino Kornrich.⁸⁰ With increased spending, wealthy families had better SAT scores, increased college graduation rates and a more likely chance to have high salaries and job security.

One way to tackle differences between the poor and wealthy is providing an education to low-income parents when their children are young. A 2014 Annie E. Casey Foundation study, which says ending the cycle of poverty is a two-generation approach, recommends creating job and education programs for impoverished parents and their children.⁸¹ For the last few years, the nonprofit Community Action Project (CAP) Tulsa office has offered a similar approach. When enrolling children in CAP's early childhood programs, which are available to low-income families, parents are provided with "Family Advancement" programs, which include parenting skills, GED courses and English Language Learner (ELL) programs.⁸²

NONACADEMIC NEEDS

Earning good grades and degrees doesn't happen simply because a student is intelligent. Many other factors determine whether the student will have a successful educational experience. These areas need to be addressed in conjunction with and many times before they can gain proficient reading, writing and math skills.

Character traits

One commonly held belief in early childhood education is since students from low-income families typically don't hear as many words and aren't read to as much as better off children, the key remedy to this problem is finding ways to develop these cognitive abilities. But new research suggests what matters most isn't how much knowledge children can cram into their brains at an early age; instead, the focus should be on their ability to develop character traits – perseverance, curiosity, grit, self-confidence, self-control and so on.⁸³

A 1960s study at Perry Preschool in Detroit found these noncognitive character skills provided two-thirds of the benefit low-income students achieved. The skills didn't improve their IQs, which are difficult to change, but it did make them more likely to graduate from high school and be employed by age 27. The children with developed character traits also were less likely to be on welfare and spend time in prison. While pure IQ is difficult to change after age 8, the ability to handle stress and emotions can be improved in adolescence and adulthood, writes author Paul Tough in *How Children*

Succeed: Grit, Curiosity, and the Hidden Power of Character.

When looking at prospective employees, curiosity and a willingness to adapt are more important than the specific college degree, notes Jeffrey Selingo, contributing editor at *The Chronicle of Higher Education*.⁸⁴ What matters most from a college education is not the field but the rigor placed into it and the critical thinking developed from this pursuit. Selingo's studies find managers want employees that have the ability to learn and solve future problems with both broad knowledge and specific skills. A 2014 study published in the journal *Neuron* found the brain's chemistry changes when a person becomes curious, which allows her or him to better retain and learn information.⁸⁵

Since curiosity can be stifled by stress, one way to solve this is by giving children more free time on the playground. This helps children's brains become wired to deal with emotions, solve problems and plan, finds Sergio Pellis, a researcher at the University of Lethbridge in Canada.⁸⁶ But "free" is key here, as they need time to play without coaches or rules. Countries that give children more recess often have higher academic standards.

Parental/caregiver involvement

Instead of focusing on low-income parents that aren't sharing the same number of quality words with their children as more affluent parents, the emphasis should be placed on social inequities, finds Paul Thomas, associate professor of education at Furman University.⁸⁷ "Giving children more or higher quality vocabulary without addressing the roots of social and educational inequity isn't the correct path," writes Thomas in a *Washington Post* op-ed.

Children that experience difficult early environments can overcome these circumstances by having close, nurturing relationships with parents or other adult mentors, such as teachers, pediatricians, clergy, social workers and neighbors.⁸⁸ Families dealing with trauma or poor attachment may need help with counseling programs like the Attachment and Biobehavioral Catch-Up (ABC) Intervention, developed by Mary Dozier, chair of child development at the University of Delaware. Low-income families may have a difficult time developing additional vocabulary for their children, but having a strong attachment will create positive, long-term effects for the child, writes Tough in *How Children Succeed*. One way to find mentors is by using local resources, which is the model practiced at the Hayward Promise Neighborhood in the San Francisco metro area.⁸⁹ The initiative finds tutors for K-12 students from California State University East Bay and through resources at the Hayward Public Library. The tutors help create a college-going culture, the Promise Neighborhood leadership finds.

Finding ways to tackle trauma is particularly important in Oklahoma. The state was ranked first in the rate of children that have experienced two or more traumas (33 percent) from a study by family health professor Christiana Bethel of John Hopkins University.⁹⁰ From a national level, half of

children experience at least one trauma, which can include severe poverty, witnessing violence and a parent's death. Children with two or more traumas were 2.5 times more likely to repeat a grade or become disengaged in school-work, Bethel's study found. Recommended ways to lessen these effects include mindfulness training and emotional support from dedicated mentors.

Low-income families aren't the only ones dealing with detachment concerns. Studies in the 1990s revealed wealthy families were more likely to be distant from their children but still expect high achievement. The more affluent teens also were more likely to use drugs and alcohol than low-income youth. But since better off teens have more social safety nets, it becomes more important for poor youth to have social intelligence, grit and self-control.⁹¹

Frequent moves

One way to address disparities between vulnerable populations and the more well off is finding ways to lessen the impact of frequent moves on children, which is particularly harmful for ages 3 to 8. Low-income students are more likely to have frequent moves to different schools but stay within the same school district.⁹² Yet, many districts don't do a great job making these moves a seamless transition. One option would be allowing students moving within the same district to stay at their previous schools, even if they're technically living in another school's area. Poor students undergoing regular moves are much less likely to be engaged in school work and, therefore, are more likely to be held back a grade or drop out.

Christine Hamby, a Northeastern State University student and former foster child, started a group at her university that supports former foster children in their educations. "Connections and stability are huge. I want people to understand how traumatic it can be for kids to have to move to different schools and have no strong connections," Hamby remarks in the *Tulsa World*.⁹³ Only about 6 percent of former foster children earn a college degree by age 24, finds a 2010 University of Chicago study.⁹⁴

Communities in Schools

One way students are receiving both cognitive and non-cognitive needs in one setting is through Communities In Schools (CIS). Launched by youth advocate Bill Milliken more than three decades ago, CIS now operates in 2,200 sites across the nation, including the CIS of Mid-America at Tulsa. The Tulsa program implements the CIS model in eight area schools.⁹⁵ Through his experience working with vulnerable youth in New York City, Milliken discovered they needed lessons in basic life skills and disciplines before they would be ready for an education. “These kids needed to be turned on to living before we could turn them on to learning,” the CIS founder writes in his book, *The Last Dropout: Stop the Epidemic*.

The nonacademic needs CIS affiliates strive to offer, called the “Five Basics”:

1. One-on-one relationship with a caring adult
2. Safe place to learn and grow – both during and after school
3. A healthy start and future (connecting community health centers with students)
4. Marketable skill to use upon graduation
5. A chance to give back to peers in the community

Once these needs are addressed, Milliken finds students have a much better chance at succeeding in their academic pursuits.

TEACHER SUCCESS

The Great Recession made adequate pay and support even more difficult for the already stretched public school teacher. Instead of looking at the broader issues with America’s education system, attention has often been too narrowly focused on teacher performance, which doesn’t help the already low morale. International examples provide insight on ways education reforms over just a few decades can transform teachers’ work environments.

Respect & support

American teachers earn 68 percent of the average college-educated person, which is significantly lower than the OECD average – 88 percent.⁹⁶ While studying abroad, Kim, a student from Oklahoma, found a Finnish teacher was well-respected, like a doctor, and wished this was the same for her mother, an Oklahoma teacher.⁹⁷

In recent years, focus has been given on teachers as failing to provide children with an adequate education, while it was previously the students’ fault. Communities In Schools founder Bill Milliken finds it’s no more useful to blame the teachers as it was the children; rather, he says, it’s the community’s failure to properly provide the resources for both teachers and students to succeed.⁹⁸

Oklahoma teachers in public elementary and secondary schools were paid an estimated average of \$44,128 during the 2012-13 school year – ranking third in lowest salary.⁹⁹ Debra Steveson, a retired Norman Public Schools teacher, says two-thirds of her interns over the years left the state for better pay elsewhere.¹⁰⁰ But money isn’t always the primary reason teachers leave. They often cite workplace stress and too much focus on testing.

Since state legislators haven’t made education funding a priority, academic programs are seeking options at other levels. In late 2014, Tulsa’s Educare early childhood initiative received a \$3 million grant from the federal government to improve teaching methods.¹⁰¹ Tulsa Public Schools was awarded a three-year grant of \$4.42 million from the Bill and Melinda Gates Foundation for teachers’ professional development.¹⁰² While these are positive developments, these funding sources aren’t easy to receive and are allotted for a limited time period. Schools and students across the state need dedicated local funding to create expansive change.

With less pay and support, Oklahoma districts are experiencing teacher shortages, which adds to a stressful work environment. Tulsa Public Schools leaders brought the concern to lawmakers by noting the teacher shortage, which was 41 TPS positions in late January, is the most pressing issue for the current legislative session.¹⁰³

Training

Teachers shouldn't take the blame for failing students, as it doesn't take into account systemic concerns of the education system. Reformers in recent years have focused on how to increase teacher quality, citing a study by three economists that found when low-income students are placed with a high-performing teacher, this can eliminate the achievement gap.¹⁰⁴ But by concentrating on teacher quality as the one important issue, it ignores the broader concern: "What can we do as a country to significantly improve the life chances of millions of poor children?" writes author Paul Tough in *How Children Succeed*.

When bringing up the issue of teacher quality, it's therefore important to remember it's just one of a number of concerns facing the American education system. But it's still a crucial issue to discuss. An analysis of results from the Collegiate Learning Assessment, a test that looks at college graduates' critical thinking skills, found education, social work and business majors performed the worst while those majoring in social sciences, humanities and Science, Technology, Engineering and Math (STEM) fields did the best.¹⁰⁵ Teaching math, which is a hot topic on a national scale, is one area where education majors aren't equipped with the proper tools to instruct students in new, innovative concepts.¹⁰⁶

The National Council on Teacher Quality conducted a 2014 study on alternative teacher certification programs, which now account for one in five teachers' training. The results revealed 74 percent of alternative certification (not affiliated with a postsecondary education institution) received a D or F.¹⁰⁷ But the NCTQ also found 41 percent of traditional

programs scored low, meaning work is needed to better both types of certification options.

One way many believe teachers shouldn't be evaluated is from student assessments. Tulsa Public Schools teachers have questioned whether surveys by K-12 students can appropriately measure teacher performance, particularly for the younger grades that have a difficult time understanding the questions. As Selingo notes in *College (Un)Bound*, higher education professors that issue more difficult grades often have lower scores on ratemyprofessors.com. Therefore, students shouldn't be considered an accurate measure of teacher performance when they are more concerned with their grades than the knowledge received.

Finland is one country that has placed significant focus on rigor for teacher training at colleges. The eight prestigious teacher-training universities in the country are highly selective (on par with America's MIT).¹⁰⁸ "The rigor in Finland started in the beginning, where it belonged, not years into a teacher's career with complex evaluation schemes designed to weed out the worst performers and destined to demoralize everyone else," writes Amanda Ripley in *The Smartest Kids in the World*. Thanks to a lack of high standards in many U.S. colleges of education, American teachers don't receive respect, while the opposite is true in Finland, Ripley found. With increased teaching standards and other education reforms adopted in just one generation (starting from the 1970s), Finland is now considered one of the top places in the world to receive an education. The United States has the power and resources to make this change.

CONCLUSION

As Finland demonstrates, America has a significant task ahead, but it can be achieved in a relatively short amount of time with the right leadership and community engagement. But if Oklahoma continues to have one of the lowest voter turnouts in the nation, the majority public voice won't be reflected in the policies enacted at the State Capitol. It's time to stop letting a small fraction of the state decide its future. The turnout rates shouldn't only be blamed on individual voters, as current state regulations often make accessing voting difficult, particularly for those working multiple jobs and in more vulnerable populations. Adjusting these policies will help bring more Oklahomans to the polls.

Young adults, who are increasingly seeking a lifestyle in the urban core, have an important role to play in transforming inner city schools. Instead of moving out of the city once children come along, stay where you are and work toward developing your local school. This can happen way before marriage and/or children are considered. Young professionals have a vital perspective and knowledge they can share at area schools through mentorships and volunteering at school functions and fundraisers. By staying in the city, your children have a chance to attend diverse schools and become more understanding of different cultures and backgrounds. This is an invaluable skill in an increasingly global job market. Like the rest of Oklahoma, don't let the young voice become lost in the voting booth. Stay informed on when and where your next election will happen.

Jobs that don't require a postsecondary education overwhelmingly aren't offering a living wage. That's why finding ways to give more students access to higher education – including apprenticeships and certificate programs – is crucial to their future wages and quality of life. Parents, high school counselors and teachers should be supportive of students who don't want to follow the four-year university path, as this isn't right for everyone. Many are better suited for vocational and other nontraditional degree paths, which still provide training for well-paying jobs in high-demand markets.

While many students want to obtain postsecondary education, one or more barriers may keep them from this pursuit. One way to tackle this concern is offering college credit courses at the high school level. This gives students a familiar environ-

ment to become comfortable with higher education, particularly for first-generation college students. Another important element that can be offered at the high school level is postsecondary financial literacy for both parents and students. Having a better understanding of just how much families will spend, as well as what scholarships, grants and financial aid are available, is an additional way to keep students from dropping out or foregoing college altogether.

The multiple barriers faced by students living in poverty often have nothing to do with their cognitive abilities. Key ways to address these obstacles include dedicated mentors, tackling the United States' high income inequality and groups like Tulsa Area Community Schools Initiative (TACSI) that integrate health and social services into the school environment. Another way to help low-income students is connecting their parents with career guidance, counseling and other needs so the entire family is on a successful path. School districts have the power to help poor students, which are more likely to move frequently within one district than better off children, by allowing them to stay in the same school or offering a more seamless transition between schools. This will give students a better chance at achieving good grades and graduating.

Every school day, teachers are the ones in the classroom with the power to provide students with transformative mentoring and guidance. But without proper support, training or wages, fewer quality teachers will enter the profession.

Children, teachers and our country's future global competitiveness depend on what every citizen can do – as a parent, mentor, volunteer, school leader, voter or policymaker – to ensure America and Oklahoma's future generations succeed.

REFERENCES

1. OECD (2014), Education at a Glance 2014: OECD Indicators, OECD Publishing. <http://dx.doi.org/10.1787/eag-2014-en>
2. Habib, N. & Eger, A. (2015, March 31). Keith Ballard tells thousands rallying at capitol for education that not legislators 'get it'. Tulsa World. Retrieved from http://www.tulsaworld.com/news/education/keith-ballard-tells-thousands-rallying-at-capitol-for-education-that/article_fbe0752c-133c-5fa3-b1e5-76dcfe9a676e.html
3. Tulsa Regional Chamber. (2015, February 3). Chamber, regional partners announce 2015 once voice legislative agenda. Retrieved from <https://www.tulsachamber.com/>
4. Krehbiel, R. (2014, November 9). Education of foremost concern, Oklahoma poll finds. Tulsa World, Retrieved from http://www.tulsaworld.com/news/government/education-of-foremost-concern-oklahoma-poll-finds/article_84a29c54-b6fe-55f5-9028-bc4a1b11a13b.html
5. U.S. Chamber of Commerce. U.S Chamber of Commerce Foundation (2014). Leaders and laggards: a State-by-State Report Card on K-12 Educational Effectiveness. Retrieved from <http://www.leadersandlaggards.org/sites/default/files/Leaders%20and%20Laggards%20A%20State-by-State%20Report%20Card%20on%20K-12%20Educational%20Effectiveness.pdf>
6. Leachman, M., & Mai, C. (2014, May 20). Most states funding schools less than before the recession. Center on Budget and Policy Priorities. Retrieved from <http://www.cbpp.org/sites/default/files/atoms/files/9-12-13sfp.pdf>
7. Oklahoma Policy Institute (2015, January 29). 2015 State budget summit. Retrieved from <http://okpolicy.org/events/state-budget-summit/2015-state-budget-summit/>
8. Oklahoma Policy Institute (2015, January 29). 2015 State budget summit. Retrieved from <http://okpolicy.org/events/state-budget-summit/2015-state-budget-summit/>
9. Edgar, A. (2014, November 13). Tulsa teachers say next bond package should address 'digital divide' among students. Tulsa World. Retrieved from http://www.tulsaworld.com/news/education/tulsa-teachers-say-next-bond-package-should-address-digital-divide/article_c385f981-eb0a-5daf-a252-44574746a444.html
10. Tulsa World Editorial. (2014, October 22). State's legacy academic standards aren't good enough. Tulsa World. Retrieved from http://www.tulsaworld.com/opinion/editorials/tulsa-world-editorial-state-s-legacy-academic-standards-aren-t/article_42001fb4-740e-58e2-8dbf-8d6ef51d6b2f.html
11. Doney, E. (2014, October 16). State regents find PASS academic standards 'college and career ready'. News Channel 4. KFOR.com. Retrieved from <http://kfor.com/2014/10/16/state-regents-find-pass-academic-standards-college-and-career-ready/>

12. Oldham, C. (2014). Above the fold: Oklahoma puts politics before students. U.S. Chamber of Commerce. <https://www.uschamber.com>. Retrieved from <https://www.uschamber.com/above-the-fold/oklahoma-puts-politics-students>
13. Willert, T. (2014, November 24). U.S. education department reinstates Oklahoma's no child left behind waiver. *The Oklahoman*. Retrieved from <http://newsok.com/article/5369827>
14. Ripley, A. (2013). *The smartest kids in the world: And how they got there*. New York, NY: Simon & Schuster.
15. McNutt, K. (2014, October 15). Oklahoma faces gap between education, workforce. *The Oklahoman*. Retrieved from <http://newsok.com/article/5356819>
16. Tulsa World Editorial (2014, December 9). Progress in the effort to keep kids in school. *Tulsa World*. Retrieved from http://www.tulsaworld.com/opinion/editorials/tulsa-world-editorial-progress-in-the-effort-to-keep-kids/article_5ae1aacb-e3e9-50ff-b000-860bb1e9b086.html
17. Alliance for Excellent Education. (2013). *Saving futures: The impact of education on crime reduction and earnings*. Retrieved from <http://all4ed.org/wpcontent/uploads/2013/09/SavingFutures.pdf>
18. Archer, K. (2014, September 3) School absenteeism rates high in state. *Tulsa World*. Retrieved from http://www.tulsaworld.com/school-absenteeism-rates-high-in-state/article_d64e3e89-a24c-506b-8c13-617effba3092.html
19. U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics. (2013). *The National Assessment of Educational Progress (NAEP). The nation's report card: 2013 mathematics and reading*. Retrieved January 15, 2016, from http://www.nationsreportcard.gov/reading_math_2013/#/comparison-graphs?st0=OK
20. Ripley, A. (2013). *The smartest kids in the world: And how they got there*. New York, NY: Simon & Schuster.
21. Kemp, A. (2014, September 2). Many Oklahoma students start college taking remedial classes. *The Oklahoman*. Retrieved from <http://newsok.com/article/5337902>
22. Ripley, A. (2013). *The smartest kids in the world: And how they got there*. New York, NY: Simon & Schuster.
23. Koo, S. (2014, August 1). An assault upon our children: South Korea's education system hurts students. *The New York Times*. Retrieved from http://www.nytimes.com/2014/08/02/opinion/sunday/south-koreas-education-system-hurts-students.html?_r=0
24. OECD (2014), *Education at a glance 2014: OECD Indicators*, OECD Publishing. Retrieved from <http://dx.doi.org/10.1787/eag-2014-en>
25. Murphy, S. (2015, March 9). Univ. of Oklahoma severs ties with frat after racist chant. *The Associated Press*. Retrieved from <http://collegefootball.ap.org/article/univ-oklahoma-severs-ties-frat-after-racist-chant>
26. U.S. Census Bureau. (2015). 2000 Decennial Census, 2010 Decennial Census. <http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>
27. Suh, M. (2009, July 19). 2009 national survey of Latinos. *Pew Research Center*. Retrieved from <http://www.pewhispanic.org/2013/07/19/2009-national-survey-of-latinos/>
28. Orfield, G. (2009, January). Reviving the goal of an integrated society: A 21st century challenge. *The Civil Rights Project*. Retrieved from <http://civilrightsproject.ucla.edu/research/k-12-education/integration-and-diversity/reviving-the-goal-of-an-integrated-society-a-21st-century-challenge/orfield-reviving-the-goal-mlk-2009.pdf>
29. Jordan, R. (2014, August 27). America's public schools remain highly segregated. *Urban Wire*. *The Urban Institute*. <http://www.urban.org>. Retrieved from <http://www.urban.org/urban-wire/americas-public-schools-remain-highly-segregated>.
30. Ripley, A. (2013). *The smartest kids in the world: And how they got there*. New York, NY: Simon & Schuster.
31. Eger, A. (2015, February 18). Two more shuttered TPS buildings to be reopened. *The Tulsa World*. Retrieved from http://www.tulsaworld.com/two-more-shuttered-tps-buildings-to-be-reopened/article_9fff1d79-8d4f-5691-b28a-f57d712cc5bb.html
32. Nicholson, E. (2015, March 5). In Berlin, grassroots efforts work to integrate inner-city schools. *Morning Edition*. Washington, DC: National Public Radio. Podcast retrieved from <http://www.npr.org/sections/parallels/2015/03/05/390753243/in-berlin-integration-is-child-s-play>

33. Summers, J. (2014, August 7). Rich kid, poor kid: For 30 years Baltimore study tracked who gets ahead. Morning Edition. Washington, DC: National Public Radio. Podcast retrieved from <http://www.npr.org/sections/ed/2014/08/07/335285098/rich-kid-poor-kid-for-30-years-baltimore-study-tracked-who-gets-ahead>
34. Smith-Evans, L., George, J., Graves, F. G., Kaufmann, L. S., & Frohlich, L. (2014). Unlocking opportunity for African American girls: A call to action for educational equity. Washington, DC: National Women's Law Center. Retrieved from http://www.naacpldf.org/files/publications/Unlocking%20Opportunity%20for%20African%20American%20Girls_0.pdf
35. Abel, J. R., & Deitz, R. (2014). The Value of a College Degree. Retrieved from Federal Reserve of New York: Liberty Street Economics: <http://libertystreeteconomics.newyorkfed.org/2014/09/the-value-of-a-collegedegree.html#.VDvyhvnF-YQ>.
36. Kamenetz, A. (2014, October 7). Competency-based education: No more semesters? Higher Ed. National Public Radio. Retrieved from <http://www.npr.org/sections/ed/2014/10/07/353930358/competency-based-education-no-more-semesters>
37. Oklahoma State Regents for Higher Education. (2015). Reach higher: Oklahoma's degree completion program. Retrieved from <http://www.okhighered.org/reachhigher/>
38. Mills, C. (2014, October 24). Readers forum: Chuck Mills: Business needs to get involved in education. The Tulsa World. Retrieved from http://www.tulsaworld.com/opinion/readersforum/readers-forum-chuck-mills-business-needs-to-get-involved-in/article_9a468dea-8263-53c9-a1fd-112888825d67.html
39. Oklahoma State Regents for Higher Education. (2015). Complete college America. Retrieved from <http://www.okhighered.org/complete-college-america/>
40. McNutt, K. (2015, April 6). Oklahoma's degree completion goal at risk, chancellor says. The Oklahoman. Retrieved from <http://newsok.com/article/5407635>
41. Winslow, L. (2015, February 15). Tulsa joins national network to increase post-high school degree attainment. Tulsa World. Retrieved from http://www.tulsaworld.com/business/employment/tulsa-joins-national-network-to-increase-post-high-school-degree/article_9c0335ff-50ad-5ee7-9f27-dc774e4bfbdf.html
42. Percent of Population Age 25 and Over by Educational Attainment: 1940-2015 (2014). [Graph illustration U.S. Census Bureau 1947, 1952-2002 March Current Population Survey, 2003-2015 Annual Social and Economic Supplement to the Current Population Survey; 1940-1960 Census of Population] Retrieved from <http://www.census.gov/hhes/socdemo/education/data/cps/historical/fig2.jpg>
43. Will, M. (2014, September 17). U.S. trails in college graduation in global study: Lag also cited in preschool enrollment. Education Weekly, 34 (4). Retrieved from <http://www.edweek.org/ew/articles/2014/09/17/04oecd.h34.html>
44. National Center for Education Statistics. (2012). Percentage of persons age 25 and over with high school completion or higher and a bachelor's or higher degree, by sex and state: 2008-2010. Retrieved from http://nces.ed.gov/programs/digest/d12/tables/dt12_016.asp
45. Impact Tulsa. (2014). 2014 community impact baseline report: A first look. Retrieved from <http://www.impacttulsa.com/wp-content/uploads/2015/10/ImpactTulsa-2014-Baseline-Report.pdf>
46. Selingo, J., J. (2013). The future of education and what it means for students. New York, NY: Houghton Mifflin Harcourt Publishing Company.
47. Guo, J. (2014, October 20). Why poor kids don't stay in college. The Washington Post. Retrieved from <https://www.washingtonpost.com/news/storyline/wp/2014/10/20/why-poor-kids-dont-stay-in-college/>
48. Ibid
49. Bruni, F. (2015). Where you go is not who you'll be: An antidote to the college admissions mania. New York, NY: Grand Central Publishing
50. LinkedIn. (2015). LinkedIn University Finder. Retrieved from <https://www.linkedin.com/edu/university-finder>
51. Parchment. (2015). Parchment – Send Transcripts and Get College Matches. Retrieved from
52. Oklahoma State Regents for Higher Education. (2015) Welcome to the Oklahoma Education Information System (OEIS) for the Oklahoma State Regents for Higher Education! Retrieved from <http://www.okhighered.org/oeis/ProductivityReport/InvParams.aspx>

53. Selingo, J., J. (2013). *The future of education and what it means for students*. New York, NY: Houghton Mifflin Harcourt Publishing Company.
54. Seidel, A. (2014, August 11). When applying for federal aid, ‘cross your fingers and hope’. Higher Ed. National Public Radio. Retrieved from <http://www.npr.org/sections/ed/2014/08/11/336043033/when-applying-for-federal-aid-cross-your-fingers-and-hope>
55. Boren, D. (2015, January 30). Why higher education should be a higher state budget priority. Tulsa World. Retrieved from http://www.tulsaworld.com/opinion/readersforum/david-boren-why-higher-education-should-be-a-higher-state/article_b4dff7f8-8457-5d80-ab52-261dec55ae31.html
56. Erickson, J. (2014, September 24). The middle-class squeeze: A picture of stagnant incomes, rising costs, and what we can do to strengthen America’s middle class. Center for American Progress. Retrieved from <https://www.americanprogress.org/issues/economy/report/2014/09/24/96903/the-middle-class-squeeze/>
57. Dorling, D. (2014, September 30). Tuition fees: A bonanza for the 1%. The Guardian. Retrieved from <http://www.theguardian.com/education/2014/sep/30/tuition-fees-bonanza-for-one-per-cent-danny-dorling>
58. OECD (2014), *Education at a Glance 2014: OECD Indicators*, OECD Publishing. <http://dx.doi.org/10.1787/eag-2014-en>
59. Erickson, J. (2014, September 24). The middle-class squeeze: A picture of stagnant incomes, rising costs, and what we can do to strengthen America’s middle class. Center for American Progress. Retrieved from <https://www.americanprogress.org/issues/economy/report/2014/09/24/96903/the-middle-class-squeeze/>
60. DePillis, L. (2014, September 11). Why not having a college degree is a bigger barrier than it used to be. The Washington Post. Retrieved from <https://www.washingtonpost.com/news/storyline/wp/2014/09/11/why-not-having-a-college-degree-is-a-bigger-barrier-than-it-used-to-be/>
61. Hodges, J. (2014, June 4). Vocational education is changing its image, but people need to know about it. The Guardian. Retrieved from <http://www.theguardian.com/education/2014/jun/04/vocational-education-image-vq-day-further-education>
62. Radford, A.W., Berkner, L., Wheelless, S.C., and Shepherd, B. (2010). *Persistence and Attainment of 2003–04 Beginning Postsecondary Students: After 6 Years (NCES 2011-151)*. U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved from <http://nces.ed.gov/pubsearch>
63. Begin, B. Y. (2012). *Implementing a dual enrollment program*. Community College Research Center. Retrieved from <http://ccrc.tc.columbia.edu/media/k2/attachments/dual-enrollment-research-overview.pdf>
64. Thomas, N., Marken, S., Gray, L., & Lewis, L. (2013). *Dual credit and exam-based courses in US public high schools: 2010-11. First Look. NCES 2013-001*. National Center for Education Statistics. Retrieved from <http://files.eric.ed.gov/fulltext/ED539697.pdf>
65. Tulsa World Editorial Writers. (2015, February 11). STEM take a \$3 million step forward in Oklahoma. Tulsa World. Retrieved from http://www.tulsaworld.com/opinion/editorials/tulsa-world-editorial-stem-take-a-million-step-forward-in/article_c8acaeac-ff6b-5f7f-8967-1742b0c8aa03.html
66. Community Service Council of Greater Tulsa. (2015). *JumpStart – Tulsa Community Partnership for Early Childhood Success*. Retrieved from <http://www.csctulsa.org/content.php?p=18>
67. Will, M. (2014, September 17). U.S. trails in college graduation in global study: Lag also cited in preschool enrollment. *Education Weekly*, 34 (4). Retrieved from <http://www.edweek.org/ew/articles/2014/09/17/04oecd.h34.html>
68. Garcia, E., Weiss, E. (2014, October 1). Why universal pre-k makes economic sense- for kids, and the country. *Economic Policy Institute*. Retrieved from <http://www.epi.org/publication/universal-pre-economic-sense-kids-country/>
69. Erickson, J. (2014, September 24). The middle-class squeeze: A picture of stagnant incomes, rising costs, and what we can do to strengthen America’s middle class. Center for American Progress. Retrieved from <https://www.americanprogress.org/issues/economy/report/2014/09/24/96903/the-middle-class-squeeze/>
70. Barnett, W., S., Carolan, M., E., Squires, J. H., & Brown, K., C. (2014). *The state of preschool 2014*. National Institute for Early Education Research, 6. Retrieved from <http://files.eric.ed.gov/fulltext/ED545098.pdf>
71. Erickson, J. (2014, September 24). The middle-class squeeze: A picture of stagnant incomes, rising costs, and what we can do to strengthen America’s middle class. Center for American Progress. Retrieved from <https://www.americanprogress.org/issues/economy/report/2014/09/24/96903/the-middle-class-squeeze/>

72. Kerr, C., J. (2014, December 10). President Obama to announce \$1B for early childhood education. Associated Press. Retrieved from <http://www.abc2news.com/news/state/president-obama-to-announce-1b-for-early-childhood-education>
73. OECD (2014), Education at a Glance 2014: OECD Indicators, OECD Publishing. <http://dx.doi.org/10.1787/eag-2014-en>
74. Leonhardt, D. (2014, May 27). Is college worth it? Clearly, new data say. The New York Times. Retrieved from http://www.nytimes.com/2014/05/27/upshot/is-college-worth-it-clearly-new-data-say.html?_r=0
75. Selingo, J., J. (2013). The future of education and what it means for students. New York, NY: Houghton Mifflin Harcourt Publishing Company.
76. Kristof, N. (2014, October 25). The American dream is leaving America. The New York Times. Retrieved from <http://www.nytimes.com/2014/10/26/opinion/sunday/nicholas-kristof-the-american-dream-is-leaving-america.html>
77. Moretti, E. (2012). The new geography of jobs. New York, NY: Houghton Mifflin Harcourt Publishing Company.
78. Summers, J. (2014, August 7). Rich kid, poor kid: For 30 years Baltimore study tracked who gets ahead. Morning Edition. Washington, DC: National Public Radio. Podcast retrieved from <http://www.npr.org/sections/ed/2014/08/07/335285098/rich-kid-poor-kid-for-30-years-baltimore-study-tracked-who-gets-ahead>
79. Parker, G. (2012, January 17). Running on inequality. The New Yorker. Retrieved from <http://www.newyorker.com/news/daily-comment/running-on-inequality>
80. McRaney, M. (2014, October 3). Wealthy parents increased spending on children during recession. Emory University. Retrieved from http://news.emory.edu/stories/2014/10/upress_kornrich_parent_spending/campus.html
81. Gencer, A. (2014). Creating opportunity for families: A two-generation approach. KIDS COUNT Policy Report. Annie E. Casey Foundation. Retrieved from <http://files.eric.ed.gov/fulltext/ED555534.pdf>
82. Community Action Project Tulsa. (2015). Family Advancement: getting your family ready for success. Retrieved from <http://captulsa.org/families/family-advancement/>
83. Tough, P. (2012). How children succeed: Grit, curiosity, and the hidden power of character. New York, NY: Houghton Mifflin Harcourt Publishing Company.
84. Selingo, J., J. (2013). The future of education and what it means for students. New York, NY: Houghton Mifflin Harcourt Publishing Company.
85. Singh, M. (2014, October 24). Curiosity: It helps us learn, but why? National Public Radio. Retrieved from <http://www.npr.org/sections/ed/2014/10/24/357811146/curiosity-it-may-have-killed-the-cat-but-it-helps-us-learn>
86. Pellis, S. (2015). Play. Research and Innovation Series. University of Lethbridge. Retrieved from [http://www.basic-knowledge101.com/pdf/Play%20\(activity\).pdf](http://www.basic-knowledge101.com/pdf/Play%20(activity).pdf)
87. Thomas, P. (2014, November 10). Stop blaming poor parents for their children's limited vocabulary. The Washington Post. Retrieved from <https://www.washingtonpost.com/posteverything/wp/2014/11/10/stop-blaming-poor-parents-for-their-childrens-limited-vocabulary/>
88. Tough, P. (2012). How children succeed: Grit, curiosity, and the hidden power of character. New York, NY: Houghton Mifflin Harcourt Publishing Company.
89. American Public Health Association. (2015, March 9) Hayward promise neighborhood: Wrapping children in coordinated educational & health supports from cradle to college career. Retrieved from <http://www.apha.org/events-and-meetings/apha-calendar/webinar-events/2015/promoting-health-equity>
90. Khazan, O. (2014, December 11). Half of all kids are traumatized. The Atlantic. Retrieved from <http://www.theatlantic.com/health/archive/2014/12/half-of-all-kids-experience-traumatic-events/383630/>
91. Tough, P. (2012). How children succeed: Grit, curiosity, and the hidden power of character. New York, NY: Houghton Mifflin Harcourt Publishing Company.
92. Beatty, A. (2010). Student mobility: Exploring the impact of frequent moves on achievement: Summary of a workshop. Washington, D.C. National Academies Press.

93. Graham, G. (2014, September 13). NSU student says foster kids need to stay in the same school. Tulsa World. Retrieved from http://www.tulsaworld.com/news/columnists/ginnie-graham-nsu-student-says-foster-kids-need-to-stay/article_ef0de0da-62df-50ed-8bd9-a492d0090740.html
94. Dworsky, A., & Courtney, M. (2010). Does extending foster care beyond age 18 promote postsecondary educational attainment. Chapin Hall Issue Brief. Retrieved from <http://www.chapinhall.org/research/brief/does-extending-foster-care-beyond-age-18-promote-postsecondary-educational-attainment>
95. Communities In Schools of Mid-America. (2015). Communities in Schools of Mid-America. Retrieved from <http://cismidamerica.org/ournetwork/cismidam-at-tulsa/>
96. OECD (2014), Education at a Glance 2014: OECD Indicators, OECD Publishing. <http://dx.doi.org/10.1787/eag-2014-en>
97. Ripley, A. (2013). The smartest kids in the world: And how they got there. New York, NY: Simon & Schuster.
98. Milliken, B. (2007). The last dropout: Stop the epidemic! Carlsbad: Hay House Inc.
99. National Center for Education Statistics. (2013). Estimated average annual salary of teachers in public elementary and secondary schools, by state: 1969-70 through 2012-13 [Table]. Retrieved from https://nces.ed.gov/programs/digest/d13/tables/dt13_211.60.asp
100. Habib, N. (2014, December 14). Some Oklahoma teachers leaving the state, profession. Tulsa World. Retrieved from http://www.tulsaworld.com/news/education/some-oklahoma-teachers-leaving-the-state-profession/article_627c3643-80ed-5d92-be9b-8c9d2a97e4a9.html
101. Graham, G. (2014, December 17). Educare federal grant to help private child-care providers. Tulsa World. Retrieved from http://www.tulsaworld.com/news/ginniegraham/educare-federal-grant-to-help-private-child-care-providers/article_d558dc4c-d180-5b3e-90e1-3e06c43a94cd.html
102. Eger, A. (2014, December 24). Tulsa public schools noted by Washington post as one of Gates' biggest 2014 beneficiaries. Tulsa World. Retrieved from http://www.tulsaworld.com/news/education/tulsa-public-schools-noted-by-washington-post-as-one-of/article_5f380740-5d01-5e3d-a752-82360cd73391.html
103. Edgar, A. (2015, January 24). School officials tell lawmakers biggest problems are too few teachers, too little money. Tulsa World. Retrieved from http://www.tulsaworld.com/news/education/school-officials-tell-lawmakers-biggest-problems-are-too-few-teachers/article_daa08eb3-02e5-500b-917a-831459d7fa8a.html
104. Rivkin, S. G., Hanushek, E. A., & Kain, J. F. (2005). Teachers, schools, and academic achievement. *Econometrica*, 73(2), 417-458. Retrieved from <http://onlinelibrary.wiley.com/doi/10.1111/j.1468-0262.2005.00584.x/abstract>
105. Arum, R. (2011). *Academically adrift: Limited learning on college campuses*. Chicago, IL. The University of Chicago Press.
106. Green, E. (2013, July 23). Why do Americans stink at math? The New York Times. Retrieved from http://www.nytimes.com/2014/07/27/magazine/why-do-americans-stink-at-math.html?_r=0
107. Greenberg, K., Walsh, K., & McKee, A. (2014). Teacher prep review 2014: Findings on secondary alternative certification programs. National Council on Teacher Quality. Retrieved from http://www.nctq.org/dmsView/Teacher_Prep_Review_2014_Report
108. Ripley, A. (2013). The smartest kids in the world: And how they got there. New York, NY: Simon & Schuster.