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Texas Public School Attrition Study, 2017-18

High School Attrition Improves by Two Points

by Roy L. Johnson, M.S.

If we are to both invest in our children’s future and meet the demands of a job market that increasingly requires employees who are college educated, we must have schools be centers of college readiness. We cannot do so if we are not at the very least ensuring students graduate from high school. This is why IDRA takes the pulse of Texas high school attrition each year. Our latest study shows that school holding power in Texas public schools improved in 2017-18, but persistent gaps among major race-ethnicity groups continue. IDRA’s latest attrition study released this month found that 22 percent of the freshman class of 2014-15 left school prior to graduating in the 2017-18 school year.

The statewide attrition rate of 22 percent is 11 percentage points lower than the initial rate of 33 percent found in IDRA’s landmark 1985-86 study and 2 points lower than last year.

Over the past six years, the overall high school attrition rate in Texas has ranged from 22 percent to 25 percent. It was 25 percent in 2012-13, 24 percent in 2013-14, 24 percent in 2014-15, 25 percent in 2015-16, 24 percent in 2016-17, and 22 percent in 2017-18.

This year’s study is the 33rd in a series of annual reports on trends in dropout and attrition rates in Texas public schools. Since conducting the first comprehensive study of school dropouts in Texas in 1985-86, IDRA has conducted attrition analyses to assess schools’ abilities to hold on to their students until they graduate.

Attrition rates are an indicator of a school’s holding power, or ability to keep students enrolled in school and learning until they graduate. Along with other dropout measures, attrition rates are useful in studying the magnitude of the dropout problem and the success of schools in keeping students in school. In simplest terms, attrition is defined as shrinkage in size or number; therefore, an attrition rate is the percent change in grade level between a base year and an end year.

Today’s attrition rates across racial and ethnic groups are lower than they were over three decades ago when the first attrition study was conducted. Attrition rates of Hispanic students have declined by 40 percent (from 45 percent to 27 percent). Attrition rates of Black students have declined by 29 percent (from 34 percent to 24 percent). Attrition rates of White students have declined by 52 percent (from 27 percent to 13 percent).

Despite the positive trends in attrition rates overall there continues to be concern about the persistent gaps between racial-ethnic groups. Between White students and Hispanic students, the attrition rate gap was 18 percentage points in 1985-86 and 14 percentage points in 2017-18. The gap in attrition rates between White and Black students has increased from 7 percentage points in 1985-86 to 11 percentage points in 2017-18.

Key findings of the latest study include the following.

(cont. on Page 2)

“We must make sure that every student has access to high quality teaching and a quality curriculum that prepares them for post-secondary education. As researchers, we play a critical role by examining policies and practices that contribute to students’ success or failure. Together, the future is in our hands.”

– Dr. María “Cuca” Robledo Montecel, IDRA President and CEO

(Texas Public School Attrition Study, 2017-18, continued from Page 1)

- Texas public schools are **failing to graduate one out of every five students**. One out of every five students (22 percent) from the freshman class of 2014-15 left school prior to graduating with a high school diploma.
- A total of **94,767 students** from the 2014-15 freshman class were lost from public high school enrollment in 2017-18 compared to 86,276 in 1985-86.
- For the class of 2018, **Hispanic students and Black students were two times more likely to leave school** without graduating than White students.
- In three decades, the overall attrition rate declined from 33 percent in 1985-86 to 22 percent in 2017-18, a 33 percent improvement.
- The overall attrition rate has been less than 30 percent in the last nine study years.
- Since 1985-86, attrition rates of Hispanic students declined by 40 percent (from 45 percent to 27 percent). Attrition rates of Black students declined by 29 percent (from 34 percent to 24 percent). Attrition rates of White students declined by 52 percent (from 27 percent to 13 percent).
- The attrition gap between White students and Hispanic students was 18 percentage points in 1985-86 compared to 14 percentage points in 2017-18.
- The attrition gap between White students and Black students was 7 percentage points in 1985-86 compared to 11 percentage points in 2017-18. **The gap between White students and Black students increased by 57 percent** from 1985-86 to 2017-18.
- Since 1986, Texas schools have **lost a cumula-**

Change in Texas High School Attrition Rates

Group	1985-86 Rate	2015-16 Rate	2016-17 Rate	2017-18 Rate	Change Since 3 Decades Ago	Change Since Last Year
All Students	33	25	24	22	↓	↓
Native American	45	20	20	21	↓	↑
Asian/Pacific Islander	33	12	13	13	↓	↔
Black	34	27	26	24	↓	↓
White	27	15	14	13	↓	↓
Hispanic	45	31	29	27	↓	↓
Male	35	27	26	25	↓	↓
Female	32	22	21	19	↓	↓

2018, Intercultural Development Research Association

tive total of more than 3.8 million students from public high school enrollment.

- The attrition rates for males have been higher than those of females. In the class of 2017-18, males were 1.3 times more likely to leave school before graduation than females.
- From 1985-86 to 2017-18, attrition rates of male students declined by 29 percent (from 35 percent to 25 percent), while the attrition rates of female students declined by 41 percent (from 32 percent to 19 percent).

IDRA conducts a forecast analysis of the expected year that the attrition rate would equal zero. This supplemental analysis is conducted by IDRA's Felix Montes, Ph.D., using linear regression models. The analysis predicts that at the current pace Texas will continue to range from 21 percent to 25 percent and **will not reach an attrition rate of zero until about the year 2036-37**. The IDRA attrition analyses and forecasts show the progress made in school holding power

and the challenges that remain in reducing and/or eliminating the persistent gaps among racial and ethnicity groups.

The full study is available on IDRA's web site at www.idra.org and includes methodology, historical statewide attrition rates and numbers of students lost to attrition categorized by race-ethnicity and by gender, a county-level data map, a county-level attrition rate table, trend data by county, and historical county-level numbers of students lost to attrition.

These and other resources are available at <https://idra.news/IDRAatrn18>.

Roy L. Johnson, M.S., is Director of Evaluation. Comments and questions may be directed to him via e-mail at roy.johnson@idra.org.

 **Get the full attrition study, infographics and more!**
<https://idra.news/IDRAatrn18w>

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Still Making a Case for Algebra II

by Paula Johnson, Ph.D.

Policymakers, educators, parents and students are concerned with the quality of education. But there are many views about how we define “quality.” Nationally, we see too few high school graduates who are academically prepared for college. One of the prevailing arguments that lingers is about whether or not to require students to take Algebra II in high school. This article will make the case for Algebra II, discuss implications for policymakers and practitioners, and offer recommendations for teaching and learning.

Expert Testimony

There is a steady trend nationally that has turned the focus on education toward increasing the percentage of high school graduates who are prepared for college and career. Royster, Gross & Hochbein (2015) warn that the process of becoming college ready begins long before students enter their senior year of high school. Their research suggests that a student’s college-readiness indicator is highest in the eighth grade.

Findings also reveal a positive correlation with advanced course enrollment, particularly in math. Most students take Algebra I in ninth grade, geometry in 10th, and Algebra II in 11th. Depending on their graduation plan, many will take a fourth-year course like pre-calculus or college algebra.

It is important to note that a large part of the college readiness standards is algebra related. And since the PSAT (taken in 10th grade) and the SAT (taken soon after) contain Algebra II questions, there is a strong rationale for beginning the sequence with Algebra I in eighth grade, so that Algebra II is taken in 10th.

Texas stopped requiring Algebra II for high school graduates in 2014. However, researchers in math education advise parents to strongly encourage their students to take Algebra II (Gaertner, et al.; Ketterlin-Getter, 2014).

Required or not, Algebra II provides an avenue to college for the many students who are unsure of their plans after high school.

Equity in Education

Ensuring that students are college ready is a challenge that spans primary, secondary and higher education. There has been a 25.5 percent increase in the number of students taking the ACT exam from 2012 to 2016. An estimated 64 percent of high school graduates, or approximately 2.1 million students, took the exam. But only 26 percent of the class of 2016 who took an ACT exam demonstrated college readiness in all four subjects (2016). These results are even more disturbing when seen through an equity lens.

There is little variation in the percentages of high school graduates who take the ACT by race-ethnicity since 2012. And unfortunately, underserved students fall well below the average for all students on the mathematics assessment, namely African American (13 percent), American Indian (18 percent), Hispanic (27 percent), and Pacific Islander (29 percent) students. White students are above average at 50 percent, and Asian students far exceed the average at 70 percent (see charts on the next page).

Underrepresentation by students of color in graduation rates and college readiness benchmarks means fewer students enrolling in college or earning a degree (Royster, et al., 2015). Similarly, lower college readiness among high school graduates also limits the projected needs of the U.S. workforce – especially in the growing numbers of jobs that require higher levels of post-secondary education, which also earn an increase in lifetime earnings (Royster, et al., 2015; ACT, 2016).

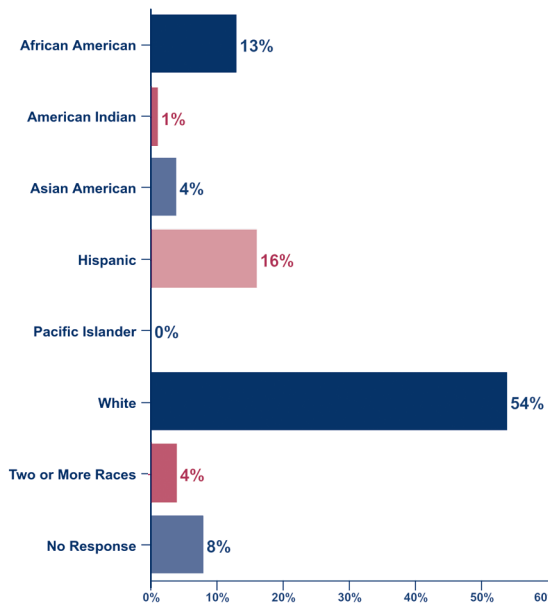
The Court of Public Opinion

Disclaimer: I love math! Yes, I said it. I simply love everything about math. I know there are those who see math as the enemy. But, I believe the problem lies in the way we teach math, not in the math itself.

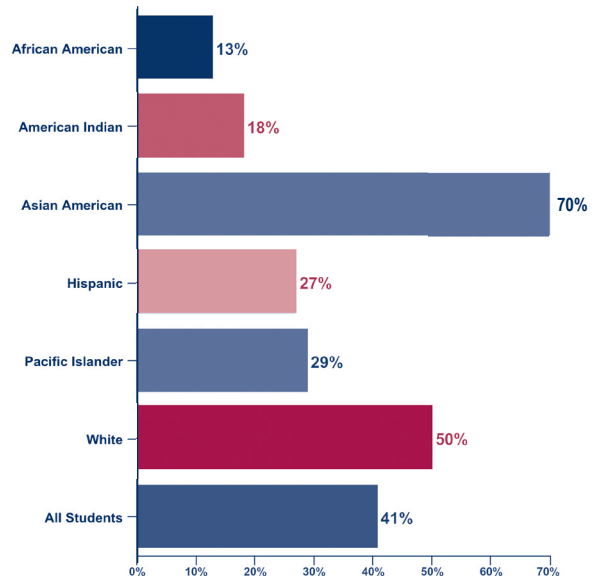
I decided to put aside my own thoughts and feelings before writing this article and reach out to the “masses” for input. In this technology-driven
(cont. on Page 4)

Given opportunities to negotiate their understanding of these topics, with guidance from knowledgeable teachers, students can be successful in math, especially Algebra II.

Percent of 2016 High School Graduates who Took the ACT Test



Percent of 2016 ACT Test-Takers who Met ACT College Readiness Benchmarks



2018, Intercultural Development Research Association

Data Source: ACT. (2016). The Condition of College & Career Readiness 2016: National.

information age, I wanted to know what people had to say.

I posted the following to my Facebook and Twitter accounts: “I’m expanding my invitation to chime in on an article I’m writing. I want opinions from experts in the field, teachers, parents, students, etc. Word association: College Readiness and Algebra II... Go!”

Additionally, I asked when they thought students should take Algebra I.

Most replies encouraged students taking Algebra II and teaching Algebra I in eighth grade. In addition, there were some interesting recommendations. They included summer math camps, teaching for mastery, and engaging students in higher level math activities at younger ages.

Several people related their success in college courses to their success in Algebra II in high school. One former colleague recalls the high level of rigor Algebra II used to hold. Changes in curriculum and standards leave a wide range of topics open for debate.

Simply put, there is a lack of fidelity when it comes to instruction. Does that mean we stop teaching it? Or do we find ways to do a better job of teaching?

My colleague, Hector Bojorquez stated: “Until we revolutionize how we think about algebra or calculus, we will never know how we can use it in our daily lives. Math is the most essential but least understood language in human history.”

Closing Arguments

Students can be successful in advanced math. We must stop making Algebra II the bad guy. Salman Kahn (2016) of Khan Academy put it this way: if we knowingly build on a shaky foundation, we can’t blame the contractor when it falls apart.

Most school systems score students on a series of skills based on a fixed time frame. Several of my respondents encourage educators to address gaps in students’ understanding along the way. They encourage focusing on mastering skills over time rather than the time it takes to master the skills. Students would be much more successful if they entered with full mastery of the previous content.

Teachers and parents can support students who are struggling in math with the help of many free online resources. Below is my list of current favorites and brief descriptions from the websites.

- www.khanacademy.org/math – Expert-created content and resources for every course and level. Always free. Watch videos and practice your skills for almost any math subject.

- mathbits.com – Creative and engaging activities and resources for junior and senior high school mathematics
- www.mathsisfun.com – Math explained in easy language, plus puzzles, games, worksheets and an illustrated dictionary. For K-12 kids, teachers and parents.
- www.mathplanet.com – An online resource where one can study math for free.
- www.purplemath.com – Practical math help provided by informal lessons. Get help with your math concept questions and learn how to succeed!
- mckellarmath.com – Created by Wonder Years actress, Danica McKellar, to explain math concepts in fun, easy-to-digest ways and to show kids that math is an inherent part of the world around them.

The Verdict

It is time to bring more equity and agency into the math classroom. After all these years, our recipe math for public education still needs some work. However, I maintain that Algebra II is a necessary ingredient.

State and local education agencies must continue to work toward some non-negotiables. First, we (cont. on Page 7)

Counselors Overwhelmed and Worried about Implementing Texas' New Graduation Requirements

IDRA Study Explores Counselor Concerns in Supporting Students for College Preparation

by Hector Bojorquez

School counselors play a vital role in the lives of our students. They can hold great sway in placing students on academic paths that lead to prosperous futures in an uncertain and often chaotic world. A counselor's advice is more important than ever before as the job market is so unpredictable due to economic upheavals and technological advances. In Texas, their work has been affected by changes in the state's graduation requirements that went into effect in 2013-14 as determined in House Bill 5.

Called the "Foundation High School Program" the new graduation requirements are less rigorous for mathematics, science and social studies and include a new requirement for career readiness, called "endorsements." How these changes are implemented and what this implies for students, families and schools can have a deep impact on post-secondary preparation, access and completion, particularly for students underrepresented in degree attainment.

As we reported in May, IDRA conducted a study, with funding from the Greater Texas Foundation, of HB5 implementation. We examined how educators, families and students in school districts are navigating implementation of the new high school graduation requirements and what it means for post-secondary preparation.

Part of our study looked at how counselors specifically are navigating the new high school graduation requirements under HB5. We conducted a series of group interviews of counselors, students and parents in five school districts across Texas. In selecting the sites, IDRA considered various academic measures and geographic distribution (rural, urban, border). We were particularly interested in school districts that serve largely low-income, minority-majority student populations and that demonstrate positive academic outcomes, such as higher than the state's four-year graduation rates, college-enrollment rates post-graduation, or enrollment in advanced courses. In four of the five districts, Hispanics

comprise more than half of the student population.

Counselor Concerns

Overall, counselors indicated they were not confident that they were providing effective support for students. Schools and districts have provided materials and training to help counselors advise students regarding personal graduation plans, provide information about graduation options, and explain endorsements, but counselors are frequently overwhelmed. Some stated:

"Endorsements are confusing and do not relate to higher ed."

"Some students are eager to take more AP classes... but want an endorsement [and] are forced to take electives that have no advanced weight to them, i.e., child development or lifetime nutrition."

"The Class of 2018 is the first class that must graduate under HB5. I would appreciate an updated professional training entailing the graduation plans and endorsements. Perhaps if enough counselors asked, a training could be provided... maybe?"

Counselors depicted the implementation of HB5 as taking place in an environment where they, their school, and/or their school district do not have the ability, skills and expertise to execute and accomplish the requirements in HB5. They discussed the different ways they felt unprepared to implement HB5 requirements.

From the counselors' perspective, their district and region are not able to answer all of the specific questions they have about HB5, they do not have the technology necessary to effectively keep track of students' personal graduation plans, and they need more training on HB5.

Specifically, one counselor described a situation with a student that, prior to HB5, was in special education but nevertheless wanted to graduate with the more rigorous "distinguished level

(cont. on Page 6)

Counselors must be equipped to help students know what they need to do to be prepared for college and career.

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(Counselors Overwhelmed and Worried about Implementing Texas' New Graduation Requirements, continued from Page 5)

of achievement” designation. The counselor explained how she was able to assist the student in meeting his goal but then concluded, “Though with House Bill 5, I don’t know, because we don’t know the requirements yet.”

Similarly, another counselor said: “It’s easier to advocate for somebody when you have all the knowledge and experience and confidence, to us [HB5] is something we’re learning... if we don’t then we’re going to be causing a disservice... to the student or to the parent.”

Recurring Themes

IDRA identified a cluster of themes throughout the interviews. These included lack of information; communication challenges between students, counselors and parents; professional development and capacity-building fault lines; perspectives around college aspirations; and professional anxieties around implementing new and complex graduating plans.

On the surface, these themes initially spoke to implementation issues. For example, students often were unaware or confused about HB5 language but understood the nuances behind their graduations plans. Parents felt they had little authentic communication from the school about the new law.

Counselors universally felt that they did not have enough staff capacity to satisfy some of the law’s requirements, such as individualized meetings with parents. These are important concerns about how any new policy is implemented. But, as participants spoke about their experiences and IDRA analyzed their responses, deeper issues concerning the new policy itself arose.

Most issues, whether related to implementation, communication or capacity, were ultimately linked to three major concerns about HB5 that all groups appeared to be grappling with in their own spheres. While each group shared their experiences from different perspectives (student, counselor and parent), the following concerns appear to be at the root of the themes discussed by participants.

- Most participants expressed that there was a lack of clarity concerning the purpose of endorsements.
- Participants were concerned about the what role, if any, endorsements play in life after high school.

 **See IDRA’s Ready Texas Study**
<https://budurl.me/IDRAreadyTX>

 **See our Infographic: Ready Texas – IDRA study points to the troubling effects of the state’s new graduation requirements**
<https://budurl.me/IDRA18RTxIg>

 **Listen to our podcast episode on the Ready Texas Study**
<https://budurl.me/IDRApod178>

- Participants questioned what effects endorsement’s lack of “real life” purpose will have on student’s college-going and career futures.

As we reviewed discussions and observations from all participants concerning their experiences around HB5 implementation, the frustrations all stakeholders shared appear to be based on an explicit question: What purpose do endorsements serve?

Our analysis led us to the conclusion that endorsements, as a requirement, as a practice or as an educational construct are perceived as problematic, at best, regardless of perspective because endorsements have no counterpart, social construct or perceived value in real life, college or careers.

Thus, most counselors were concerned that a focus on endorsements by schools may derail students’ college plans because endorsements often are inaccurately presented as equally important to college preparatory coursework. Counselors reported having to consistently emphasize coursework over endorsements.

Since HB5’s new graduation requirements became law, a new accountability rating system has been put in place in Texas using A-F grades. One of the most significant changes includes measures for “college and career readiness” that comprise 40 percent of a district’s score. While the new system is controversial due to punitive measures and over-reliance on testing that is high-stakes, including college and career readiness as a significant accountability component could signal a step in an unfortunate and detrimental direction.

IDRA’s HB5 research is pointing to the possibility that endorsements, with or without clarification, may be problematic in the pursuit of higher education for all students. Our study outlined some key policy recommendations. For example, the counselor-to-student ratio needs to be improved so that more counselors can help students explore college options, serve as mentors to smaller groups of students and communicate with parents. Student respondents in one mid-size district described just such a situation where counselors were all aware of student’s grades, career goals and even homework assignments. This is not an impossible goal if the state is willing to fund counselors at an appropriate level rather than changing graduation requirements so that fewer students are seen as “needing” college counseling.

Education matters: on nearly every measure of economic well-being and career attainment, young college graduates consistently outperform their less educated peers (IDRA, 2016). For parents and educational stakeholders, the growing concern is that the new foundation high school program has the potential to prevent low-income, minority students from being college-ready or else to track them solely into vocational occupations. And counselors must be equipped, instead, to help students know what they need to do to be prepared for college and career.

Resources

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Hector Bojorquez is IDRA’s Director of Operations. Comments and questions may be directed to him via email at hector.bojorquez@idra.org.

Expanding Career Awareness for College... Especially for First-timers

by Aurelio M. Montemayor, M.Ed.

I've been conducting meetings and workshops for families in community organizations for quite a while. From "Your Children Are College Material" to "Credit Requirements Reviewed by a College Registrar," we've looked at project-based learning with environmental justice activities that some of their children are conducting, to the roles and responsibilities of school board members.

Then, through our Texas Education CAFE Network work, funded by the W.K. Kellogg Foundation, I started getting requests to lead sessions about the different professions that are available to youths who are attending college for the first time. Students seemed to only have two or three ideas of what to major in.

I identified a website with just the information I needed, organized in a fashion that could yield some very participatory and discovery activities. The site has very interesting information, particularly in the section called "Common Jobs for Majors" (<https://www.payscale.com/college-salary-report/common-jobs-for-majors>). The site divides jobs into nine categories or disciplines (which I translated):

- Humanities – *Humanidades*
- Computer Science and Math – *Ciencia De Informática y Matemáticas*
- Social Science – *Ciencias Sociales*

- Art and Design – *Arte y Diseño*
- Engineering – *Ingeniería*
- Business – *Negocios*
- Education – *Educación*
- Communication and Journalism – *Comunicaciones y Periodismo*
- Physical and Biological Science – *Ciencias Físicas y Biológicas*

For instances when participants would not have access to computers on site, I created a packet with information from the website listing each of the nine disciplines, 25 specific jobs within each and the projected annual salary. That's 225 different job titles! I printed the 225 job titles (bilingual Spanish-English) and cut them into individual slips of paper.

I distributed the job title slips randomly among the participants, two to three per person, and asked them to guess the annual salary for those positions and to write them on the papers. I distributed the packet or used computers and had participants search for their job titles and compare their numbers with those listed.

As a follow-up activity, I invited them to compare salaries across disciplines and do online searches to locate job descriptions and information on what the jobs entail. Some began an inquiry in what kind of courses a college student would

have to take to be prepared for a specific job.

Some students were encouraged to create posters and exhibits of the professions and job descriptions they chose, especially those that seemed the most puzzling or foreign.

The families took their packets home and followed up with conversations at home and online searches. Questions were formulated to be asked of teachers and counselors about the various job titles that interested their children.

Families recommended that this information be given to counselors and teachers to distribute to more students and families. That project is still evolving. I've developed a lesson plan for using these materials that is available online at <https://www.idra.org/families-and-communities>. A key element is that participation not be limited to the top achieving students in a school. It should be available to all.

The one clear result of these workshops and the information is that the participating families and students now have a much broader vista of the possibilities for a college graduate with a bachelor's degree. May we have more opportunities to inform our college-bound children.

Aurelio M. Montemayor, M.Ed., is an IDRA senior education associate and directs IDRA Education CAFE work. Comments and questions may be directed to him via email at aurelio.montemayor@idra.org.

(Still Making a Case for Algebra II, continued from Page 4)

have an obligation to address the instructional needs of our teachers. A degree in mathematics or a related field does not always mean someone is prepared to teach math.

Second, we must support the learning needs of students. It is essential to embrace mastery over moving on. Given opportunities to negotiate their understanding of these topics, with guidance from knowledgeable teachers, students can be successful in math, especially Algebra II.

Resources

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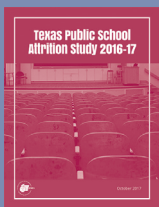
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Focus: College Preparation

IDRA Attrition Study & Resources Online



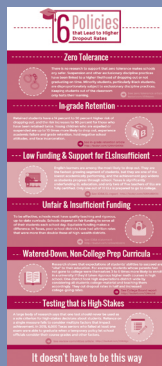
2018 Study:
 Texas Public
 School Attrition
 Study, 2017-18



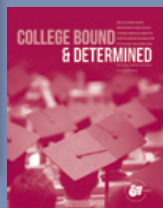
eBook:
 Types of
 Dropout Data
 Defined



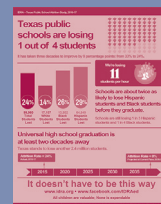
Tool:
 Quality School
 Holding Power
 Checklist



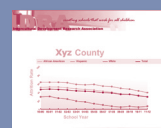
Infographic:
 6 Policies that
 Lead to Higher
 Dropout Rates



See Results:
 College
 Bound &
 Determined



Infographic:
 Quick visual look
 at the data



**Look Up Your
 County:**
 See attrition
 rates over the
 last 10 years



Timeline:
 What happened as the
 Texas Class of 2018
 progressed through school?

Get ideas for taking action www.idra.org/research



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