There is a challenge facing educators, policymakers, parents and students across the nation. Are our schools providing the rigor needed to prepare students for college? The answer lies not only in the question, but in the definition of the terms. What do we mean by rigor? How do we prepare students for college?

It depends on who you ask.

Defining “Rigor”
Rigor, defined in the traditional sense, occurs in a one-size-fits-all manner. One usually associates rigor with hard or challenging. Teachers sometimes believe they are providing rigorous instruction by assigning long, complicated assignments to students that may take hours to complete. Parents are led to believe that more work means higher rigor. Students are left feeling that advanced coursework translates into overwhelmingly tough homework that leaves little time for much else.

But none of these definitions are incorporated into the policies and practices set forth by state education agencies.

State policymakers tend to define rigor as college and career readiness, measured by college or university attendance and standardized assessments (Reich, et al., 2015).

On the other hand, educational psychologists see rigor as the “extent to which educational stakeholders, including students, are oriented towards demanding coursework” (Reich et al., 2015).

And finally, content educators may define rigor in ways that reflect their individual discipline. For example, a rigorous math class would encourage students to think mathematically and use critical thinking to solve problems.

How do we quantify a set of equitable educational outcomes for all students? These abstract definitions of rigor do not provide concrete examples of what rigor looks like.

Tieken (2015) suggests a take on rigor that individualizes it to each student based on their experiences and level of development. For example, there is no cognitive challenge in presenting a problem to a student that only includes concepts he or she is already familiar with and has mastered. Similarly, students who are unsuccessful at completing a problem that is developmentally inappropriate can be mistakenly labeled as a struggling learner or low achieving.

The Goldilocks view means that each student must be given an amount of rigor that is just right for challenging them. Tasks and objectives must allow students to use skills they have mastered but also push them just beyond their current ability.

Moreover, Vygotsky’s Zone of Proximal Development (or ZPD) (1978) suggests that students engage in tasks that expose them to the perspec-
Focus: Rejecting a Return to Tracking (Getting it Just Right! — Rigor and College Prep for All, continued from Page 1)

Rigor by the Numbers: National Trends in Math and Science
There is a “clear link between the access, rigor, and intensity of high school coursework and success in college” (Posner, 2016). IDRA’s Ready Texas research report shows a mismatch between parents and schools regarding how well schools are informing students and parents about college pathways (Posner, 2016; also see Page 3).

The National Assessment of Educational Progress (NAEP) analyzed college preparedness rates from 1992 to 2013 for reading and math. The percent of students at or above college prepared has remained relatively consistently low (see graph at right) (2013). But with a growing population, the consistent rates affect more students over time.

Of all ninth and 10th grade students in 2015-16 who were enrolled in Algebra I, 18 percent were Black and 28 percent were Latino, compared to 16 percent and 2.4 percent of high school enrollment, respectively (see table on Page 6) (U.S. Department of Education, 2018).

White students, at 51 percent of high school enrollment, represented 45 percent of those enrolled in Algebra I. Black students and Latino students comprised lower rates of enrollment in other higher level courses. Black students represent 12 percent of students in physics and 8 percent in calculus. And Latino students represent 16 percent of students in calculus.

Over 963,000 English learner (EL) students were enrolled in high schools across the nation. Comprising 6 percent of all high school students, their enrollment rates in some courses were good: Algebra I, 9 percent; and geometry and biology, 6 percent. But their rates dropped in Algebra II, chemistry and physics (4 percent) and in calculus and advanced mathematics (2 percent).

Increasing Access to Rigorous Coursework
The introduction of higher educational standards, including the Common Core initiative begun in 2010, pushed for higher academic student expectations. An increasing number of school districts across the nation are offering more STEM and advanced courses. But many lack diversity among the students taking them.

The latest Civil Rights Data Collection (CRDC) for 2015-16 shows that Black, Latino and English learner students are largely underrepresented in honors, advanced placement (AP), and higher-level math and science classes.

This disproportional engagement in rigorous studies could have root causes based in discrimination.

IDRA EAC-South
For more information about the IDRA EAC-South or to request technical assistance, contact us at 210-444-1710 or eacsouth@idra.org.

Additional resources are available online at http://www.idra.org/eac-south/

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Focus: Rejecting a Return to Tracking

Rural Districts Take a 24 Percent Hit in Algebra II Enrollment
IDRA Ready Texas Study Examines Texas HB5 Graduation Requirements

by Hector Bojorquez

In 2013, the Texas Legislature established the foundation high school program, which represents one of the most substantial changes to Texas graduation requirements in recent history. The new policy (HB5), lowered graduation requirements for mathematics, science and social studies; implemented a new graduation requirement for career readiness, called endorsements; and added a “distinguished level of achievement” designation that closely resembles the previous graduation requirements.

Each one of these changes has implications for the future of Texas students. Lowering graduation requirements across the board could possibly affect college readiness and preparation. 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.

With funding from the Greater Texas Foundation, IDRA conducted a mixed method study to examine the early effects of the new graduation requirements. This article presents highlights of the study’s findings. The full study will be available online as well (at http://www.idra.org/research_articles/ready-texas).

Weakened Graduation Requirements
The new foundation high school plan replaced the previous more rigorous recommended and distinguished graduation plans with a 26-credit school program, including four “endorsement” credits. Courses that are no longer required are: English IV, Algebra II, chemistry, physics, speech, world history and world geography (replaced with a choice of either world history or world geography or a combination of the two). Chemistry was replaced with a choice of integrated physics and chemistry or other science.

The new requirements also introduced a new concept called “endorsements.” Each eighth grader must consider possible careers and choose one or more of five endorsements to take in high school that focus on specific areas of study. Endorsements are referred to as “pathways” for students to take in high school that require successfully completing 26 credits to include four math credits, four science credits, and two additional elective credits. Endorsement choices require parent approval and written notice from the student as he or she enters ninth grade. These endorsements include STEM, business and industry; public services; arts and humanities; and multidisciplinary studies.

Students may add the “distinguished level of achievement” designation by taking Algebra II and a fourth advanced science credit, in addition to the credits for at least one endorsement. Only students earning this designation are eligible for automatic admission into a state university upon graduation from high school.

IDRA Ready Texas Study
The effects of this massive shift in graduation requirements have yet to be fully known. The class of 2018 will be the first class to graduate under the new requirements. However, this we know: high expectations in the earlier requirements led to increases in college access and success. Before HB5, most Texas students graduated with at least Algebra II. We also know that students who took Algebra II, regardless of socio-economic background, remained and succeeded in college at higher rates than students who did not take Algebra II (Wiseman, et al., 2015).

At a time when students of color, economically disadvantaged students and students who are in at-risk situations face uncertain futures due to a unpredictable educational opportunities, it is important to have research concerning any changes that could affect what had been positive growth.

Key Findings
The first research question in IDRA’s Ready Texas study was: Statewide, what effects has HB5 had on course-taking patterns, specifically Algebra II? The study concluded the following.

• Rural districts lost 24 percent in Algebra II course enrollments in the latest year of HB5 (cont. on Page 4)
Focus: Rejecting a Return to Tracking

IDRA Ready Texas Study Highlights, 2017

Higher math is an indicator of college success. But Algebra II is no longer a required course in Texas

Rural districts lost the most by far... 24% loss in Algebra II course enrollments

Concerning Implications

The future is uncertain. Economic shifts change the value of certain careers and vocations overnight. While one industry may call for an increase in workers for its factories, fields and laboratories, any sudden downturn, technological change or simply a shift in fortune, can decimate what was once a lifelong career path.

It is up to us to prepare students for a constantly changing world, not a path set in eighth grade, long before students have a chance to fully experience their own career wishes and desires or even before given an education that can withstand the whims and chaos of the modern world.

Because of these uncertainties, we must constantly examine the effects of how expectations are played out in graduation requirements. This is why early findings on HB5’s impact must be taken seriously and revisited as new data are released.

Downward turns must be taken seriously. The 24 percent decrease in rural Algebra II enrollment is troubling for areas of Texas that have only recently begun to send larger numbers of students to flagship universities due to the earlier requirements of higher coursework and to the Texas Top Ten Percent Plan. Our findings also point to troublesome trends in how students in high-poverty schools are declaring non-college bound endorsements vs students in low-poverty schools.

After years of advocacy, professional development for effective teaching, requiring high expectations and providing high levels of support – prior to HB5 – there was evidence that Texas students were beginning to reap the benefits of a high-quality education. This was accomplished, not by tracking students into vocational careers, but by remaining true to a vision of a solid education for all students. Before Texas weakened graduation requirements, 80 percent of students graduated with a plan that provided courses required by most institutions of higher education.

We do not know the full extent of how students will fare under the new system. But we must remain vigilant that trends in this study revealed to do not signal a negative sea change in college access for all students.

Resources


(continues on Page 7)
Locked Gates and Hurdles on the College Path

by Aurelio M. Montemayor, M.Ed.

“Dearie, why don’t you just take a course in textiles or cooking?” The high school counselor had finally been corralled by a mother, who spoke no English but was determined that her daughter take advanced biology as a high school freshman. The daughter translated because the bilingual Latina counselor chose not to speak Spanish.

The mother was armed with a list of the 4x4* course titles, determined to keep her daughter on a college track. The counselor insisted the courses would be too difficult, dismissing the young lady’s high grades in middle school. The mother persisted and prevailed, while the counselor, with arms positioned on her hips like jar handles, sneered at student and parent, “I guess you want higher math also?”

If this was an exception, a non-standard-school procedure, it still would be shocking to those of us who want all our children to rightfully be considered college-material. Yet these patterns of inequity permeate our schools. The mother was undeterred by lack of money, of English or of formal education. Her daughter still must face other deterrents.

As another mother told me, “Let me decide, rather than the system that doesn’t see my child’s potential.” Too many people in schools label, stigmatize and track students, using the caveat “college is not for everyone,” while glaring at “those” children. The farther a student is seen from being middle-class, White and English-speaking, the less that student is seen as a potential college student. The same is true for students with a discipline record or “attitude problem.”

As IDRA celebrates its 45th year (42 of which I’ve been on staff, and I toast my 54th in education), the terrain we’ve traveled is marked with World War I-like barbed-wire, bomb-pock-marked indicators of college-path barriers. At times, we have given many of our schools low grades in preparing most students for college, and even lower in students entering and completing a college degree.

We, at IDRA, know that we must consistently and passionately insist that our schools see and nurture the potential in all children: especially those who’ve not been thought of as college material.

In 1967, my third year of teaching high school English to juniors, I heard the counselor advise my over-aged students (retained several times before they reached junior English): “Why don’t you join the military? Maybe there you’ll be good for something You sure aren’t doing well in school.” When they returned in coffins from Viet Nam, they were lauded as heroes and used as a means to recruit more into the military.

Working with schools in the southern states, from Texas to Florida and D.C., the IDRA EAC-South focuses on critical areas to support equity for all students in schools. Key ones, connected to the college access path theme of this article, are student achievement, nondiscrimination counseling methods and materials, and access, treatment and opportunity concerns.

To clear the path to higher education and valuable post-secondary opportunities, schools must ensure academic success (achievement), give clear advice and support to keep students moving toward college (counseling) and take deliberate steps to ensure access. Students must open gates, jump hurdles: the patterns and practices of inequity.

Our schools must develop their own grit and persistence to support all our students to achieve goals that are the norms for our middle-class, English-speaking White students. It’s the least we can do to support the many families persisting in difficult, low-paying jobs to support their families.

We’ve made many advances: reduced dropout rates; increased the number and diversity of students enrolling in college; and seen pockets of success in some schools and school districts where an asset (or valuing) lens has replaced a deficit point of view. Low-level manual skills are being replaced with chess clubs. In some communities, students are carrying out social justice projects with a project-based learning approach.

(cont. on Page 7)
Student Enrollment in High School Math and Science Courses, 2015-16

<table>
<thead>
<tr>
<th>Course</th>
<th>White</th>
<th>Black</th>
<th>Hispanic</th>
<th>English Learner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent of Student Population</td>
<td>51</td>
<td>16</td>
<td>24</td>
<td>6</td>
</tr>
<tr>
<td>Algebra I</td>
<td>45</td>
<td>18</td>
<td>28</td>
<td>9</td>
</tr>
<tr>
<td>Geometry</td>
<td>49</td>
<td>17</td>
<td>25</td>
<td>6</td>
</tr>
<tr>
<td>Algebra II</td>
<td>52</td>
<td>15</td>
<td>23</td>
<td>4</td>
</tr>
<tr>
<td>Calculus</td>
<td>58</td>
<td>8</td>
<td>16</td>
<td>2</td>
</tr>
<tr>
<td>Biology</td>
<td>50</td>
<td>15</td>
<td>24</td>
<td>6</td>
</tr>
<tr>
<td>Chemistry</td>
<td>52</td>
<td>14</td>
<td>23</td>
<td>4</td>
</tr>
<tr>
<td>Physics</td>
<td>51</td>
<td>12</td>
<td>25</td>
<td>4</td>
</tr>
</tbody>
</table>


Promising Practices

It is important to prepare students for all the challenges college brings. Dr. Rogelio López provides a broad list of suggested services for students, parents and instructional staff with approaches that have been critical in maintaining a realistic college culture (López, 2010). Strategies include: hiring a dedicated counselor to assist students in preparing for college, ensuring true parent engagement, and providing professional development to increase teachers’ understanding of how to better prepare students for the academic rigors of college.

The Southern Education Foundation also encourages the following practices for school leaders. These approaches are especially helpful for students of color and students from immigrant families (Preston & Assalone, 2017).

- Hold high expectations of all students. Research argues that rigorous instruction increases positive student engagement. Academic and behavioral supports create learning environments where every child has access to high-quality learning opportunities.
- Actively invest in the recruitment and retention of highly qualified leaders and teachers committed to serving EL students and diverse student populations. Educators need advanced training and proper support to differentiate diverse learners’ needs from their academic knowledge and ability.
- Begin preparing students for college in middle school. Students do better in high school when they have had access to a challenging curriculum in middle school.
- Provide parents with sound college and financial aid information. Developing a plan to pay for college can begin as early as middle school.
- Help students locate school programs that serve their needs. Students from low-income or immigrant families may need guidance in finding spaces that are successful in meeting the needs of a diverse student population.

Begin with the End in Mind

Developing a college-going mindset begins at a young age. Long-term student success needs long-range school supports. Provide students with multiple opportunities to find the academic habits that fit them just right!

Resources

Dual credit courses are becoming more accessible, and students are being given the support needed to succeed and graduate with a significant number of college credits. These authentically achieved credits save time and money for students and family. What was initially a policy and practice to meet the needs of graduating seniors who already had most of their credits to graduate, is now available and accessible to a larger body of students.

Nevertheless, our families tell us, especially those who are poor, or of color, or recent immigrant, or all of the above: their school districts and schools are not informing, much less encouraging, them to consider a college track. In Texas, a shift some years ago from a required 4x4 curriculum, resulted in modified and watered-down graduation requirements, under the guise of giving students more “choices.” Tracks are now called endorsement. Some high-level courses are no longer required, Algebra II a case in point (see Page 3).

One Texas superintendent was overjoyed with all the new “choices” because, after all, those high-level courses are so difficult for “those” students. That’s why they drop out, he said. The irony is that few, if any, of those professional middle-class adults would ever see their own children taking the non-college path.

Our Education CAFE work, supported by the W.K. Kellogg Foundation, keeps us connected to families who want to have excellent neighborhood public schools. Our community organization partners have been disseminating information in family-friendly language to equip families in advocating for their children’s future.

Much more must be done. Too many teachers, administrators and counselors still equate students’ poverty, blue-collar neighborhood, ethnicity, and immigrant status with intellectual limitation and lack of potential to learn. Sadly, the “internalized oppression” in some educators that come from similar backgrounds weds the trials of their school years and their current success to make them embarrassed about their cultural roots and language. Because they are sometimes pointed to as stellar examples of someone from the barrio (or hood) who made it, they stand arrogantly over the unschooled families who approach seeking an excellent education for their children.

But families, collectively, do not give up. They are the energy, the batteries, for our advocacy at IDRA. Imperfect as any middle-class or wealthy families, our laboring, barely-hanging-on-by-their-fingernails, working-for-minimum-wage families intone:

Get an education so that you don’t have to suffer what I’ve gone through. Edúcate para que no tengas que sufrir por lo que he sufrido yo.

Education is not the total answer, but it sure can keep you out of the hot sun working with your hands for low wages. La educación no es la respuesta total, pero seguro que puede mantener alejado del calor del sol trabajando con tus manos por bajo sueldo.

I am proud of my work. Yet, I imagine you being in an air-conditioned office, wearing a business suit. Estoy orgulloso de mi trabajo. Sin embargo, me imagino que estás en una oficina con aire acondicionado, viéndote un traje elegante.

We want you to have more choices than we did. Really. Queremos que tengas más opciones que nosotros. De verdad.

Schools, err on the side of considering all children fit for college. Need the dreams of the families. Aurelio M. Montemayor, M.Ed., is an IDRA senior education associate. Comments and questions may be directed to him via email at aurelio.montemayor@idra.org.
Focus: Rejecting a Return to Tracking


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(Getting it Just Right! – Rigor and College Prep for All, continued from Page 6)