

1980

- When controlling for demonstrated proficiency, non-Asian minority students have about a 50% chance of being recommended for Advanced Mathematics compared to White and Asian students (Vanfossen et al., 1987).
- The racial disparities in course placement are often due to counselors who assign students of color to lower tracks, believing they are making "realistic" judgments about their futures (Moore & Davenport, 1988).

1990

- A 1993 study in California found that Latino students who score near the 60th percentile on standardized tests are less than half as likely as white and Asian students to be placed in college preparatory classes. Latino students who score above the 90th percentile on these same tests have about a 50% chance of being placed in a college preparatory class. Asian and white students with similar scores have more than a 90% chance to be placed in a college preparatory class. A Latino student who scores 90-99% on a standardized math test has a smaller chance of being placed in a college preparatory math class than an Asian student who scores in the 60-69 percentile (Oakes, 1993).
- In a study of 6,000 students, the researcher examined the records of all students who scored in the upper quartile on a nationally normed mathematics test and found that students from wealthier families were three times more likely to be placed into algebra than low income students of equal ability (Stone, 1998).
- Low income students are half as likely to be recommended for rigorous math classes than other students of equal ability (Stone & Turba, 1999).

2000

- When students are not tracked, teacher expectations for all students is high, and no students are stigmatized by being placed on low tracks (Glass, 2002).
- Sixth grade placement is the strongest predictor of 8th grade math placement. The main predictor of sixth grade placement of equally high-scoring students is social factors—race being one of the most significant factors (O'Connor et al., 2007).
- With all other factors being equal, when a student of low socioeconomic status and a student of middle socioeconomic status both make low course grades and average test scores, the former student will often be placed in a lower math track while the latter is placed in a higher track (Abu El-Haj & Rubin, 2009; Callahan, 2005; Gamoran, 2009; Marks, Cresswell, & Ainley, 2006)
- A North Carolina study examined course-taking patterns among eighth-grade students who scored at or above grade level on math End-of-Grade test. Among these students, those who enrolled in eighth-grade Algebra were three times more likely to take chemistry and physics in high school compared with the students who waited to enroll in ninth-grade Algebra. Among the students who scored Level III (at grade level), the students who enrolled in eighth-grade Algebra were 55 times more likely to take chemistry and physics in high school (SAS Institute, 2009a, SAS Institute, 2009b).
- Evaluation of North Carolina dropout prevention grants showed that until receiving guidance on how to use data to target students likely to dropout, students were primarily targeted based on demographic characteristics. Many of the first grant programs (73%) lacked baseline data to measure outcomes. Additionally, many

2010

- programs included components designed to address areas not directly related to academic achievement, which is ultimately the prerequisite for graduation (Edstar, 2009).
- Much research shows that biases play a key role in maintaining the academic achievement gap in school systems (Achieve Inc., 2008; Bromberg & Theokas, 2014; Education Trust, 2006; Garrity, 2004; Singleton & Linton, 2006; Theokas & Saaris, 2013; Van den Bergh et al., 2010).
 - Ninth graders are most likely to drop out of high school if they scored below proficient on standardized math tests at the end of eighth grade, were retained in a grade, or were suspended in middle school. When they receive support and services aligned to these specific needs, they are much more likely to succeed in school and graduate on time (E. Sparks, Johnson, & Akos, 2010).
 - In a state-wide study in North Carolina, educators admitted unabashedly that they used free or reduced lunch status as “academic data” to determine student placement. Others in the same study admitted that, because they had no access to free or reduced lunch status, they had to rely on race to identify students who had perceived barriers to learning (Stiff, Johnson, & Akos, 2011).
 - Harlem Children’s Zone (HCZ) in New York, which is known as a “no excuses” school system that expects its students to do well, prepares students well academically. Researchers have found that the high quality of the schools has led to closing the black-white achievement gap in mathematics in middle school and to closing the White and non-Asian-minority racial achievement gap in mathematics and ELA in elementary schools. Although the community is also involved in the effort, researchers have concluded that the high quality of instruction alone is enough to close these gaps (Dobbie & Fryer Jr., 2011).
 - A recent study found that low-performing, high-income students are given more opportunities to make them college-ready than are the high-performing, low-income students. This is true at every grade level (Cratty, 2014).
 - Educators argue that, although the data may suggest they are capable, poor and minority students could be overwhelmed by the coursework and the high expectations they would encounter on a more rigorous track. Examples abound, however, of school systems that expect all of their students to perform rigorous coursework (Education Trust, 2006; Garrity, 2004; Guo, 2015).
 - In Broward County, Florida in the early 2000s, minority students outnumbered white students, but of the 10,000 students labeled “gifted,” 56% were white, 20% were Hispanic, and 15% were Black. Students were allowed in the gifted program if their parents or their teachers recommended them for IQ testing and they scored a particular score. Minority students and students from poorer schools were rarely recommended. In the 2005-2006 schoolyear, Broward County Schools began testing *all* of the second-grade students. As a result, 80% more Black students and 130% more Hispanic students were in gifted programs for third grade. When more students were included in the rigorous courses, the achievement gaps closed. Although this closed achievement gaps, this practice of testing all students was stopped and the achievement gaps returned. (Dynarski, 2016; Guo, 2015).

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KEY TERMS AND DEFINITIONS

Accountability: in the context of education, accountability is related to equity and refers to school progress toward achieving high academic outcomes for all students.

ADKAR Model: the ADKAR model is a change management tool for organizing the change process in an organization referencing the awareness of the need for change, the desire for change, the knowledge for how to change, the ability of each individual to change, and reinforcing change outcomes for long-term institutional growth.

Change Management: the process by which change is planned, implemented, and measured.

Mental Model: a deep seated mindset, belief, values, assumptions, or perception which determines the way an individual views and acts in in a workplace environment.

Organizational Learning: a process of improvement within an organization accomplished through clear objectives and intended outcomes for what needs to change, who needs to change, why the change is needed, and how change will occur.

Personal Mastery: self-awareness of each individual's behavior and its impact on others in the change process.

Shared Vision: a common meaning, understanding, or focus of what needs to change within a group.

Systems Thinking: a means for reframing a problem from a cause and effect linear relationship to a wider scope of inter-relationships and intertwining solutions to problems.

Team Learning: groups of individuals learning at the same time to accomplish a change goal.