Apply a J-Curve to Achieve Success, Not Perpetuate Excuses

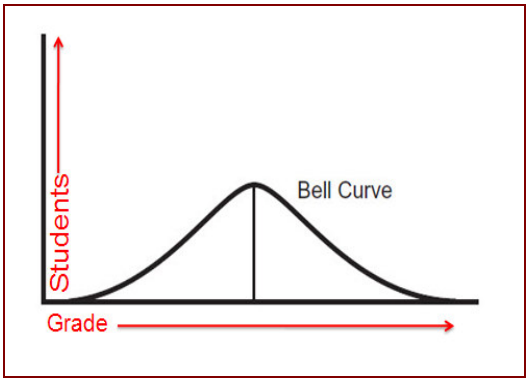
By Linda Mikels, Sixth Street Prep School, and Tina Sartori, Turning Technologies

As Nike says, "Just do it"—whatever it takes, no matter the hurdles, despite all the nay-sayers. No Child Left Behind (NCLB) legislation embodies a bit of the Nike mantra. Emerging from a "Just do it" culture with high expectations for students and staff, Sixth Street Prep School in Victorville, CA, has made a meteoric rise to prominence in the arena of student achievement. The school staff members have effectively jettisoned the limitations of the traditional bell curve thinking and wrapped their minds, and hearts, around the unlimited possibilities of the J-curve.

The billion dollar Race to the Top incentive funding has K-12 schools seeking zero-to-60 solutions that can increase the speed of student learning and change the direction of the nearly 22,000 schools that are failing to meet adequate yearly progress. This acceleration will require a paradigm shift from antiquated educational models that perpetuated excuses for lack of performance to innovative teaching models that propel the speed of improvement.

Sixth Street Prep is a shining example of such a school. Embracing the J-curve model and implementing innovative teaching methods that include purposeful technologies such as Turning Technologies' student response systems, Sixth Street Prep has demonstrated that NCLB is indeed an achievable mission.

Bell curve

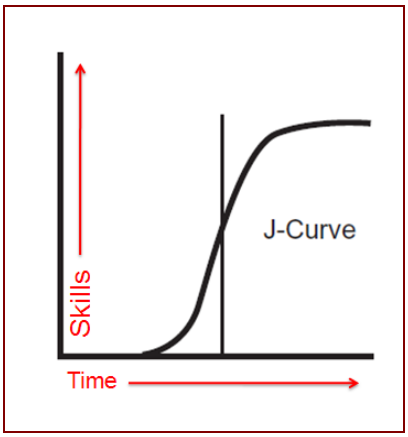


For decades, the bell curve has been a model of normal distribution that has been used in education for tracking, sorting, grade evaluation and application of practices. The symmetrical distribution of the bell curve consists of the majority of the data set falling in the average or middle of the curve and only 2% of the data set at either extremity. *The Bell Curve: Intelligence*

and Class Structure in American Life provided a highly controversial perspective of the bell curve as it related to ethnicity, social class and intelligence.[1] Within this context, it is believed the majority of students are of average ability, and only a small percentage fall to either extreme; thus, the distribution of grades will reflect the bell curve as well, regardless of the instructional process.

Subsequently, the causal inferences outlined in *The Bell Curve* has led to the conclusion that demographically unbalanced schools are essentially powerless to close the achievement gap and should not be held accountable for poor performance. The bell curve model has led to an often heated debate centered on accountability vs. determinism. With the passing of NCLB in 2001, which heavily emphasized ethnic and social subcategories, the bell curve model has been frequently used to explain performance or lack of performance on standardized assessments.

J-curve



In contrast, the J-curve was originally designed as an economic model but has been adapted for a variety of other fields to include medicine, political science and education. This distribution model, when applied to education, does not limit the percentage of students capable of succeeding. This model is built on the conviction that with proper instructional practices over time, there is an unlimited capacity for successful students.

The J-curve refutes the deterministic theory of the bell curve and stresses the significant impact of effective teaching methods. Although social class influences may exist, the J-curve's learning-for-all model suggests that all students have equal opportunity to master skills over time. The variable among students is that all may not reach each skill set at pre-determined times. For example, if we represent skills beginning with kindergarten and ending with a

doctorate degree, the key component to accelerating achievement over time would be determined by the mastery of essential curriculum.

Implementing the J-Curve

The J-curve is a model that has the potential to change the expectations of schools that might traditionally rely on the bell curve to justify poor performance. There are hundreds of schools around the country that are beating the odds, which provides strong evidence that all students can be successful. Sixth Street Prep is an excellent example of a school that has embraced the J-curve philosophy and has experienced accelerated student achievement.

Sixth Street Prep has a large Title I population consisting of 90% economically disadvantaged students and more than 50% English Language Learners. Within the bell curve model, few would expect high-performing scores from this elementary school. Sixth Street Prep's leaders and educators, however, have embraced the J-curve as a philosophy and have adopted new teaching methods that support the learning-for-all belief that failure is not an option.

Sixth Street Prep, under the leadership of principal Linda Mikels, has adopted the J-curve philosophy and has implemented teaching methods that accelerate student achievement. This has led to eight years of increasing test scores and a redefinition of the school culture called the "Sixth Street way." According to Mikels, "Student achievement is not optional at Sixth Street Prep; it is an expectation."

As a product of their no-excuse approach toward accelerating student achievement, they have implemented a teaching method referred to as the "10-a-day-program," which combines solid teaching pedagogy with appropriate technologies. Originally developed by the teachers at Sixth Street Prep, the core of this program is a prove and disprove model of daily review and preview. Teachers develop questions that review skills previously taught or preview skills that remain to be taught. Among the answer choices, they carefully select the distracters—those responses that students would choose if typical errors were made. Students are expected to identify key words and key numbers in the question and to write them on their whiteboards. Then they work to solve the problem and prove or disprove all answer choices.

As the students work on their whiteboards, the teacher functions as a coach, moving around the room, asking thoughtful questions, providing just-in-time feedback and assisting the students as they work. The process engages each student in higher-level thinking skills and is completed when the students input their final response using a Turning Technologies student

response system. After all answers are registered, a graph appears to inform the class of the polling results.

Teachers then review the problem with the class with an emphasis on proving and disproving. After the session, teachers are able to easily analyze student performance individually, using the 32 optional reports that are offered in the TurningPoint software. This data is useful for not only monitoring student progress, but also for planning follow-up instruction.

J-curve implementation results

In 2001, Sixth Street Prep had experienced three years of declining test scores and could have easily relied on the bell curve model to justify its lack of performance. However, with inspiring leadership and teachers who were dedicated to the belief that each student is capable of succeeding, this school has dramatically accelerated student achievement. Since implementing the 10-a-day program in 2001 to the 2008-2009 school year, Sixth Street Prep's math scores climbed from 30% to 94.2%, reading from 17% to 80.3% and science from 14% to 92%. Subsequently, Sixth Street Prep has been highly recognized for these results with multiple awards and recognitions, including Title I Academic Achievement Awards from 2005 to 2009, an award from the 29th Annual Golden Bell Awards Program of the California School Boards Association in 2008, Star School by California Business for Educational Excellence in 2007, 2008 and 2009, and the National Blue Ribbon School Award in 2009.

Sixth Street Prep's student population could provide reasonable justification to have continued their declining test scores. According to the bell curve model, Sixth Street Prep was fulfilling a pre-determined destiny based on cultural inequities. Often referred to as the achievement gap, the discrepancy between minority and disadvantaged students and their counterparts often leads to a heated debate between social class and teacher accountability. Sixth Street Prep has chosen a different path, one that rejects the excuses of the bell curve and embraces the all-students-can-succeed approach of the J-curve model.

Subsequently, Mikels and every teacher within the school has adopted a philosophy of accountability that aims to close the achievement gap. Through the development of their 10-a-day program and innovative technologies such as the Turning Technologies student response systems that collect meaningful data for each student, this school is accelerating student achievement and rejecting the notion of failing students and failing schools. Sixth Street Prep is a beating-the-odds school and can provide a path for other schools to move toward the belief that no one rises to low expectations.

Reference

1. Richard J. Herrnstein and Charles Murray, *The Bell Curve: Intelligence and Class Structure in American Life*, Free Press,1994.

Linda Mikels is principal of Sixth Street Prep School, a charter school in the Victor Elementary School District in Victorville, CA. The school, which serves K-6 students, was a 2009 National Blue Ribbon Award recipient. For more information about the school, visit www.vesd.net/schools/sixth-street-prep.

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