

Effort

determines success at Roxbury Prep

The school has designed a series of deliberate experiences to develop students into self-disciplined individuals who persevere in pursuit of their goals.

By Scott Seider

The Roxbury Preparatory Charter School in Boston, Mass. celebrates Pi Day each year — March 14th — with a Pi Recitation Contest. The entire school crowds into the auditorium, and participating 6th, 7th, and 8th graders stand at the front of the room with their backs to a large screen onto which several hundred digits of Pi have been projected. Then the entire school community follows along as each contestant recites from memory as many digits of Pi as he or she can. Adding to the excitement is that the contest winner gets to “pie” Roxbury Prep’s principal in front of the entire school.

I recently had the opportunity to watch Roxbury Prep’s Pi Recitation contest as part of a research study I was leading on different approaches to character development in high-performing middle and secondary schools (Seider, 2012). To my utter astonishment, the winner of the contest— an 8th grader— recited well over 100 digits of Pi. And she only beat out the second and third place contestants by a handful of digits.

What’s the point of such a contest? Why encourage students to memorize a number that can be found on the Internet with just a few keystrokes? At Roxbury Prep, the Pi Recitation Contest is just one of dozens of ways in which the school’s faculty and administrators explicitly celebrate perseverance — the ability to persist in accomplishing a goal despite difficulty, delay, or opposition. Stated more simply, Roxbury Prep faculty members want students to take on

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the mindset that “effort determines success.” By explicitly framing everything from nightly homework assignments to the Pi Recitation Contest through this lens, Roxbury Prep faculty seek to strengthen students’ motivation and ability to do the hard work necessary to accomplish their goals.

Roxbury Prep’s emphasis on perseverance finds support in a robust body of education research. Studies of gifted children have found perseverance to be a stronger predictor than intelligence of success in adulthood (Terman, 1947; Winner, 1997), as has historical research on the trajectories of geniuses such as Charles Darwin and Albert Einstein (Howe, 2001). Likewise, a number of scholars have found that a key commonality in high-achieving artists, athletes, chess players, and mathematicians is an ability and willingness to put in long hours of time and effort (Bloom, 1985; Ericsson, Krampe, & Tesch-Romer, 1993; Simon & Chase, 1973). Most recently, Angela Duckworth and colleagues (2005, 2006, 2007) found that an individual’s grit and self-discipline are stronger predictors than IQ of success in populations ranging from urban middle school students to West Point cadets.

With a dozen or so participants each year, the Pi Recitation Contest serves as a good example of the relationship between perseverance and success. However, many other events on the Roxbury Prep calendar extend far beyond rote memorization and engage every Roxbury Prep student in the type of sustained and deliberate practice necessary to deliver powerful performances of their own. For example, Roxbury Prep holds a Powerful Speaking Extravaganza (PSE) each year on the final day of school before February vacation, but preparation for the event



Roxbury Preparatory Academy

Boston, Mass.

(data from 2011)

Type	Public charter
Grades levels	5-8
Enrollment	300

Demographics	%
Black	49
White	0
Hispanic	40
Asian	0
Multiracial	11

Low-income (free/reduced lunch)	76
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Advanced/Proficient State requirements	
Math	80
English	86

Source: Roxbury Preparatory Academy

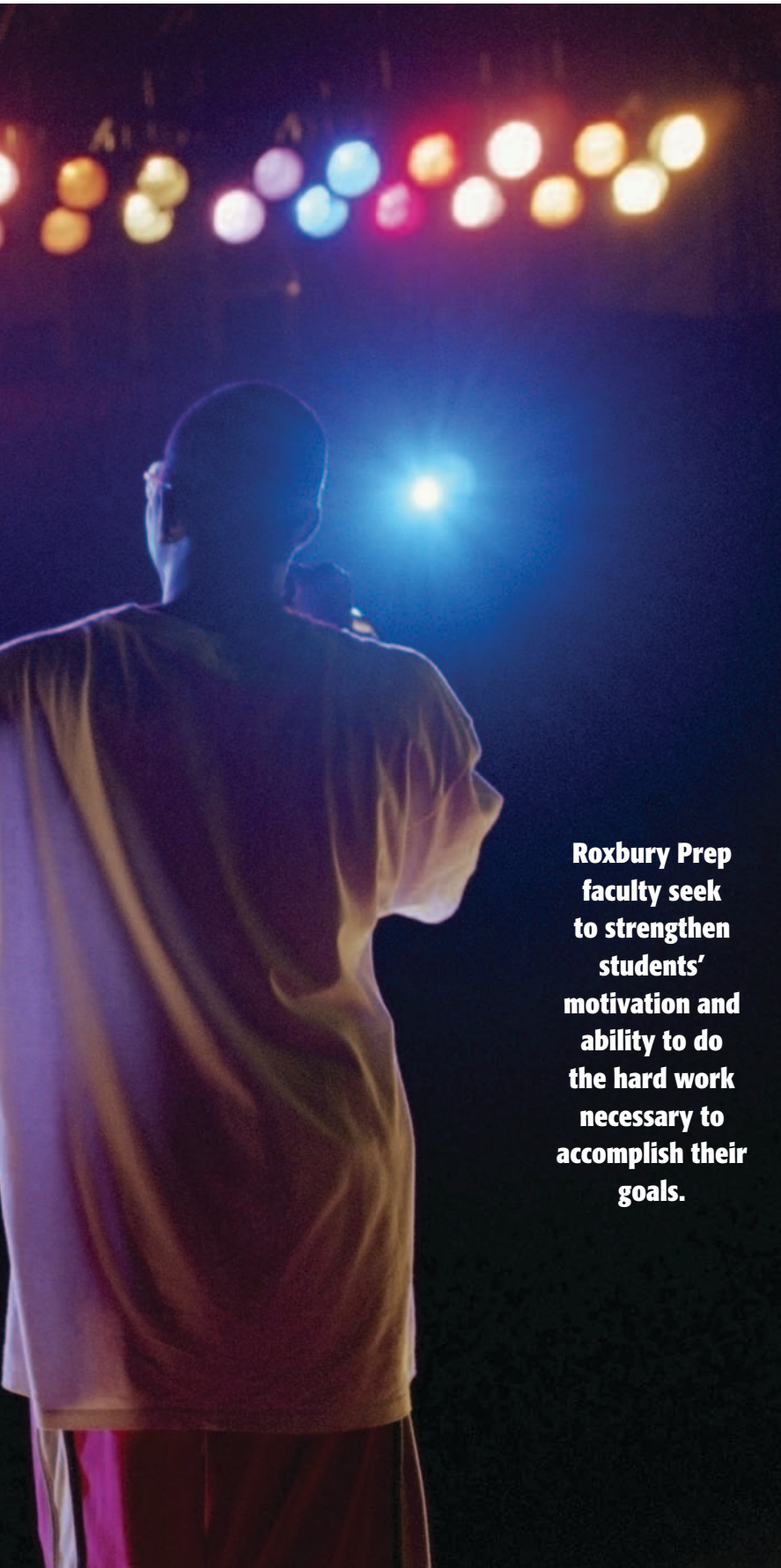
begins in early January. First, each student selects a piece of literature to perform for the PSE. In recent years, selections have included poetry from Shel Silverstein, Langston Hughes, and Maya Angelou; song lyrics from Ben E. King, John Legend, and the Flo-bots; and monologues from Shakespeare’s “Romeo and Juliet” and August Wilson’s “Fences.”

Then, for eight weeks leading up to the PSE, students meet during their weekly advisory periods with peers who have chosen pieces from a similar genre, and they work closely with each other and Roxbury Prep faculty to prepare their performances. Students learn about — and then practice — key dimensions of powerful public speaking such as accuracy, volume, eye contact, posture, expression, tone, pacing, pauses, and emphasis. In the final advisory session before a recent PSE, one anxious 6th grader asked his teacher, “What do you do if you forget something?” His teacher turned the question back to the student’s peers.

“Don’t make a big deal about it,” one 8th grader recommended.

“You could restart a line,” suggested another.

“You’ll rely on your practice,” the teacher added. “If you do make a mistake, persevere. Everyone wants to support you.”



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A week later — in the final period of the school day before February vacation — students entered the auditorium to find colorful streamers and banners dangling from the ceiling. “Express Yourself!” declared an enormous orange banner spanning the length of the auditorium’s front wall. A plastic “red carpet” ran the length of the auditorium’s center aisle, and poster board affixed to the walls reminded students about all the criteria for powerful public speaking — accuracy, eye contact, emphasis, etc. — about which they had been learning and practicing for nearly two months.

Perseverance is a stronger predictor than intelligence of success in adulthood.

Two 8th graders, Nelson and Jaivona, served as the PSE emcees. (Pseudonyms are used for all Roxbury Prep students and faculty.) When every Roxbury Prep student and faculty member was seated and attentive, Nelson asked, “How many of you are nervous?” Two hundred and fifty hands shot into the air. “It’s really good we’re here then,” Nelson told his peers, “to overcome that fear. Today’s event is not about speaking perfectly but about trying your best and getting better. Congratulations to everyone for being willing to try.”

The entire student body applauded gratefully, and then Nelson introduced the three community members who had been invited to Roxbury Prep to serve as judges for the event — local professionals in law and marketing who engaged in public speaking every day. Finally, Jaivona explained the rules. “In this bag, we have the names of every Roxbury Prep student. If your name is called, you are a winner, and you will come on down, and read your piece powerfully to the community. Judges will be giving you feedback and later awarding prizes.”

Over the next two hours, the Roxbury Prep community was treated to powerful readings of works ranging from Dylan Thomas’ “Do Not Go Gently Into That Good Night” to a monologue from Lorraine Hansberry’s “A Raisin in the Sun.” Many students had memorized their pieces, but the primary focus of the event was not memorization, rather it was executing the tenets of powerful public speaking that students had learned. As PSE co-emcee Nelson explained to his classmates, “According to research, many people say they’re more afraid of speaking in public than they are of dying.” The Powerful Speaking Extravaganza offered Roxbury Prep students an opportunity to conquer this fear.

The audience applauded supportively as each new presenter was called and then more boisterously afterward to celebrate a job well done. Each powerful speaker received feedback from the judges, a gift certificate to a local bookstore, and for the winner — a young lady who offered a fierce rendition of Sojourner Truth's "Ain't I A Woman?" — a book of speeches that changed the world and a "gourmet dinner" with a friend and teacher. Finally, the Roxbury Prep principal brought the event to a close by reminding students: "Hold on to the success you felt today because we'll need it when you get back from vacation. We have a lot to do. We need 8th graders getting ready for high school, 6th graders getting ready for their first MCAS [exams], and 7th graders getting ready to be positive leaders. President Barack Obama once said, 'If success were easy, everyone would do it.' You need to work hard to be successful. Have a restful February break."

Much has been made in the popular press of the idea that it takes 10,000 hours of practice to become an expert in a particular endeavor (Gladwell, 2008); however, the research by Swedish psychologist K. Anders Ericsson (2004, 2006) underlying those reports is focused specifically on the role of "sustained and deliberate" practice in developing expertise. Sustained and deliberate practice entails not simply repeating the same task over and over again, but actively working to improve one's performance by incorporating feedback and reflection into one's practice sessions, and then modifying future practice sessions accordingly. Events such as the PSE offer Roxbury Prep students invaluable experience with this process through the eight weeks of practice leading up to the PSE, the feedback at the event itself, and the numerous opportunities following the PSE for students to incorporate this feedback into classes and community meetings.

Given all of their exposure to the benefits of sustained and deliberate practice, it is not surprising that Roxbury Prep students demonstrated, on average, the highest levels of perseverance over the course of the school year of any of the student bodies participating in my recent study of character development (Seider, 2012). As became evident in both the study's quantitative survey data and qualitative interviews and observations, all of the different ways that Roxbury Prep faculty sought to celebrate, model, and engage students in sustained and deliberate practice had positively affected their beliefs about the relationship between perseverance, practice, and performance.

A final example of Roxbury Prep students internalizing the relationship between perseverance, practice, and performance was evident in their preparation for high school interviews. Every win-

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ter, Roxbury Prep 8th graders and teachers begin preparing for the admissions interviews that will be pivotal to students seeking acceptance into selective magnet schools and elite independent schools (and with the substantial scholarships necessary to attend them). In their weekly advisory groups, 8th graders discuss how to dress professionally for interviews, what types of questions to expect, how to formulate questions of their own to pose to an interviewer, and how to write a thank-you note to that interviewer afterward. Each of these lessons offers Roxbury Prep students the social capital necessary to compete with more affluent peers. Students also engage in a series of mock interviews on which they receive feedback from teachers and classmates. The last of these mock interviews is videotaped, so students can watch their performance and reflect on their strengths and areas for improvement.

In one recent mock interview, 8th-grade teacher JoAnne Ferrara — playing the role of interviewer — asked her student, Byron, "Where do you see yourself in five or 10 years?"

Byron responded, "Going to college, professional, and sophisticated, but then have my other side still crazy and wild."

"Tell us what you mean by professional and sophisticated," Ms. Ferrara prodded.

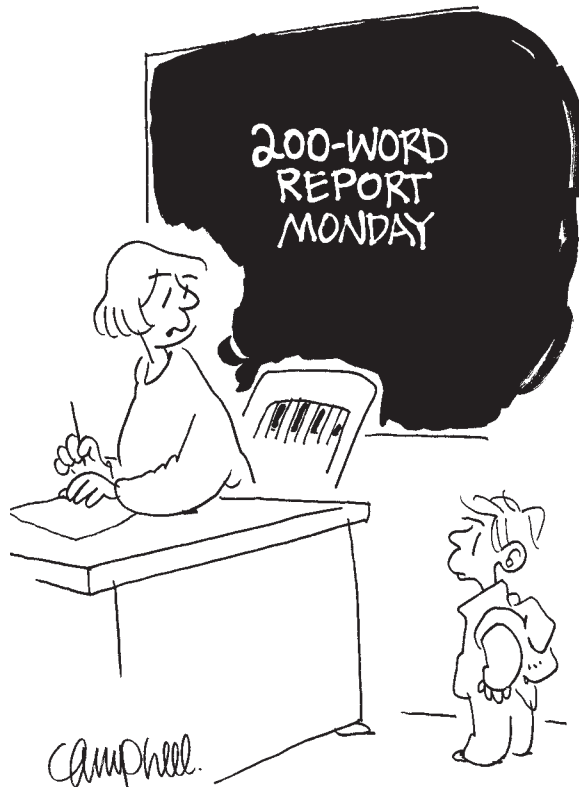
"To act more like an adult than a child."

"I want more details," Ms. Ferrara told him. "Fill it in."

“Like mad straight, like paying attention,” Byron answered.
 “You’re going to say ‘like mad straight’?”
 “Taking notes in college,” Byron offered.
 “That’s a lot better,” Ms. Ferrara responded.

This exchange represents just one example of Roxbury Prep faculty helping students think through the ingredients of a successful high school interview, engaging students in the sustained and deliberate practice necessary to internalize these ingredients, and, in so doing, reinforcing for students the role of perseverance in achieving any type of success. In terms of the interviews themselves, one Roxbury parent, Tamara Oakley, said of her 8th-grade daughter, Brianna, “She’s grown so much in this school. Now she’s able to speak in front of people and not be so timid . . . My husband and I went with her to the [high school] interview, and my husband and I were just so surprised with the way she was carrying herself. It was really amazing.”

The success Mrs. Oakley witnessed was the result of the many hours Brianna had spent practicing for events such as the Pi Recitation Contest and Powerful Speaking Extravaganza as well as readying herself specifically for these high school interviews.



“Yes, Frank. I’m sure you can make 200 words out of just 26 letters.”

Moreover, through each experience, Brianna and her classmates had also begun to see themselves as perseverant, self-disciplined individuals capable of putting in the sustained and deliberate practice necessary to accomplish their goals. A growing body of research at Roxbury Prep and elsewhere has revealed that such a self-concept will be crucial to Brianna and her classmates’ success in the less-structured high school, university, and career settings that await them. ■

References

- Bloom, B. (1985). *Developing talent in young people*. New York, NY: Ballantine.
- Duckworth, A. & Seligman, M. (2005). Self-discipline outdoes IQ in predicting academic performance of adolescents. *Psychological Science*, 16 (12), 939-944.
- Duckworth, A. & Seligman, M. (2006). Self-discipline gives girls the edge: Gender in self-discipline, grades, and achievement test scores. *Journal of Educational Psychology*, 98 (1), 198-208.
- Duckworth, A., Peterson, C., Matthews, M., & Kelly, D. (2007). Grit: Perseverance and passion for long-term goals. *Journal of Personality and Social Psychology*, 92 (6), 1087-1110.
- Ericsson, K.A. (2004). Deliberate practice and the acquisition and maintenance of expert performance in medicine and related domains. *Academic Medicine*, 79 (10), 70-81.
- Ericsson, K.A. (2006). The influence of experience and deliberate practice on the development of superior expert performance. In K. Ericsson, N. Charness, P. Feltovich, & R. Hoffman (Eds.), *Cambridge handbook of expertise and expert performance* (683-704). New York, NY: Cambridge University Press.
- Ericsson, K.A., Krampe, R., & Tesch-Romer, C. (1993). The role of deliberate practice in the acquisition of expert performance. *Psychological Review*, 100 (3), 363-406.
- Gladwell, M. (2008). *Outliers: The story of success*. New York, NY: Little Brown.
- Howe, M. (2001). *Genius explained*. Cambridge, UK: Cambridge University Press
- Seider, S. (2012). *Character compass: How powerful school culture can point students toward success*. Cambridge, MA: Harvard Education Press.
- Simon, H. & Chase, W. (1973). Skill in chess. *American Scientist*, 61, 394-403.
- Terman, L. (1947). *The gifted child grows up: Twenty-five years’ follow-up of a superior group*. Palo Alto, CA: Stanford University Press.
- Winner, E. (1997). *Gifted children: Myths and realities*. New York, NY: Perseus.