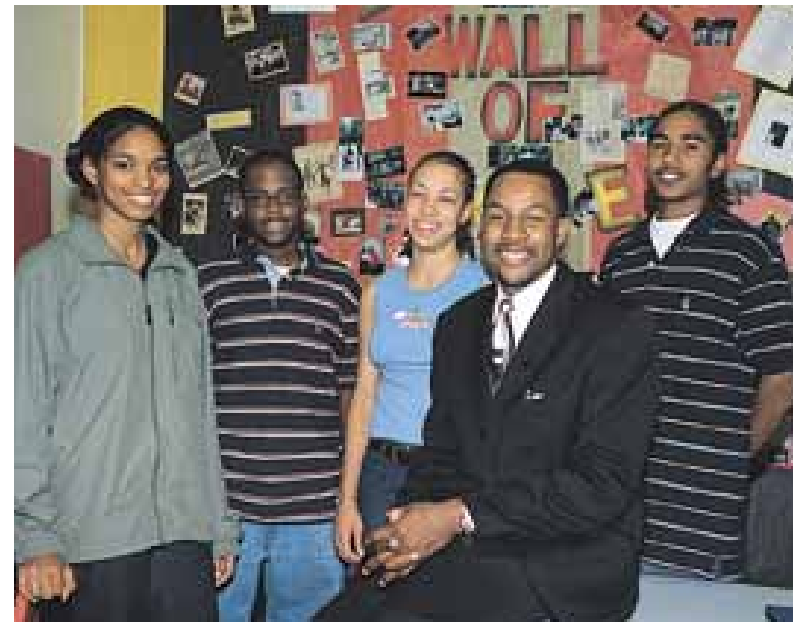


In the Spirit



BY DEBORAH BARCIKOWSKI

Like the creator of the first step pyramid centuries ago, each of Raymon Spottsville's young charges strives for new heights in the innovative math program cofounded by the CWRU alumnus.



TEAM IMHOTEP: WITH THE "WALL OF FAME" AS A BACKDROP, RAYMON SPOTTSVILLE PAUSES WITH THE TEAM OF STUDENT INSTRUCTORS: (FROM LEFT) SHANNON CURTAIN, ADRIAN DUNN, JANELL MITCHELL, AND RODNEY CHAMBERS.

Raymon Spottsville learned how to visualize, analyze, and solve problems as a biomedical engineering major at Case Western Reserve University.

But instead of taking that training to the corporate world, he used it to help establish an award-winning educational program that encourages African-American middle and high school students to enroll and succeed in higher-level mathematics.

Mr. Spottsville is the director and a cofounder of Instructional Mathematics: Helping Our Teens Excel Program (IMHOTEP) in the Cleveland Heights-University Heights (Ohio) City School District. He teaches math concepts and learning strategies to a team of student instructors, who then impart their knowledge to younger students. He also networks with a committed team of educators, who provide the necessary support that ensures the program's growth and success.

In 1991, he collaborated with Mark Wessels and Rodney Spottsville, his twin brother, to create this comprehensive math program, which earned a BEST Practices Award in 1998 as the number one academic program in Ohio. The honor came from Building Excellent Schools for Today and the 21st Century, a coalition of more than 100 education, business, and community

organizations that work to improve education results in Ohio. The award honors exemplary and inventive educational programs that have led to the successful academic performance of Ohio's students, teachers, and schools.

Students enrolled in IMHOTEP have excelled on the Ohio ninth-grade proficiency math test. Students from IMHOTEP have gone on to four-year institutions, such as Case Western Reserve, Carnegie Mellon, Purdue, Emory, Ohio State, Michigan State, and Xavier Universities, and Spelman and Morehouse Colleges.

"What does one say when you look at the efforts of so many people who are passionate about what we do?" Mr. Spottsville says of the award. "More educators should be recognized for the services they provide to young people."

A visit to the high school and notes written on a napkin were the building blocks that formed IMHOTEP. Mark Wessels, a veteran mathematics and calculus teacher at Cleveland Heights High School, asked his former students Raymon and Rodney Spottsville to visit their alma mater. But he had an ulterior purpose: He wanted their help brainstorming ways to increase the number of African-American students in higher-level mathematics courses.

Over the years, Mr. Wessels discovered that fewer than ten percent of the students in accelerated courses were African American. Concerned by the data, he believed the brothers, who graduated in 1988, would be more convincing when urging students to take challenging math courses, since they could draw from their own experiences.

"They were successful students in everything they did," Mr. Wessels says. "They had the drive to do what was needed to be successful. They were serious students." The brothers excelled not only academically, but also competed at the regional and state levels in track and field.

After their visit, the discussion continued over dinner at a local restaurant. Ideas were jotted down on a napkin, Raymon says. Those notes were transformed into a program dubbed AMSuP: Accelerated Math Support Project. The goal of the program was to increase the enrollment of African-American students in eighth-grade algebra, which is a required course for students who wish to take advanced math classes in high school. This advanced-placement curriculum begins with geometry in the ninth grade, algebra II in the tenth grade, pre-calculus in the eleventh grade, and calculus in twelfth grade, Raymon says. Research suggests that mathematics, particularly algebra, is a critical "gatekeeper" course. Mastery opens the door to higher levels of learning, thinking, and problem solving across all disciplines.

The Accelerated Math Support Project began as a four-week summer enrichment program for students entering the eighth grade. Sessions lasted three hours a day. The brothers, at the time undergraduates at CWRU, were instructors. CWRU provided off-site classroom space, although the program was primarily housed at Cleveland Heights High School. Funding



VISIONARY: MARK WESSELS WAS THE DRIVING FORCE THAT LED TO IMHOTEP.

began with a \$90,000 grant from BP America. Funds were used to pay the college students who taught the incoming eighth-graders. Other funders are Progressive Insurance Co., and the Cleveland, Gund, and Martha Holden Jennings Foundations. When the summer program expanded to include seventh- and ninth-graders, plus lunchtime and evening tutoring sessions during the school year, the budget increased to \$120,000 a year.

Once Raymon earned his undergraduate degree, in 1994, he became director of the program, which he renamed IMHOTEP. Rodney, who graduated from CWRU in 1993, with a degree in electrical engineering and applied physics, took a position at Eaton Corporation.

Raymon Spottsville calls Mr. Wessels a visionary. "He's the one who had the foresight of the program, the idea to involve students as instructors and mentors. The students are the ones who make this program work."

Director Spottsville wears several hats: accountant, administrator, marketing director, and fund-raiser. Throughout the school year, he consults with high school math teachers and three middle school teacher-liaisons, and he oversees sixteen high school students who are IMHOTEP mentors and tutors. These peer mentors and tutors follow up with IMHOTEP participants—via phone calls and friendly reminders about tutoring sessions—to be sure they remain motivated and on task. During group discussions, he says, students talk about "everything but math. The kids open up and talk about life, about their fears, their dislikes, what's going on at home, or get help with time management."

In the summer, sixteen college students join the high school tutors to work with about 130 newcomers. Although Mr. Spottsville is not directly in the classroom, his work with IMHOTEP earned him the 1999 Outstanding Male Award and a 2001 Outstanding Teacher Award from *Who's Who Among American Teachers*.

"We created a home away from home for our students, which provided a medium for students to help each other," Mr. Spottsville says. IMHOTEP aims to develop math skills and self-confidence in participants by partnering younger students with older students who have similar cultural and social experiences.

This home away from home is fashioned in two adjacent rooms, on the second floor of the high school. One room is Mr. Spottsville's simple desk-chair-office; next door, in a room called the Achievement Center, group instruction and one-on-one tutoring occur. Computers, individual desks, a chalk board, and a bookshelf, replete with math textbooks and other materials, border the room. The back wall, draped in strips of bright red, black, green, and yellow paper, is covered with snapshots and newspaper clippings about IMHOTEP students. This "Wall of



ONE-TO-ONE: INSTRUCTOR JOSEPH ATLAS USES A CHALKBOARD TO HELP JAMAAL ROGERS "SEE" THE BREAKDOWN OF AN ALGEBRA PROBLEM.

Fame" is a testimony to their hard work, discipline, and study.

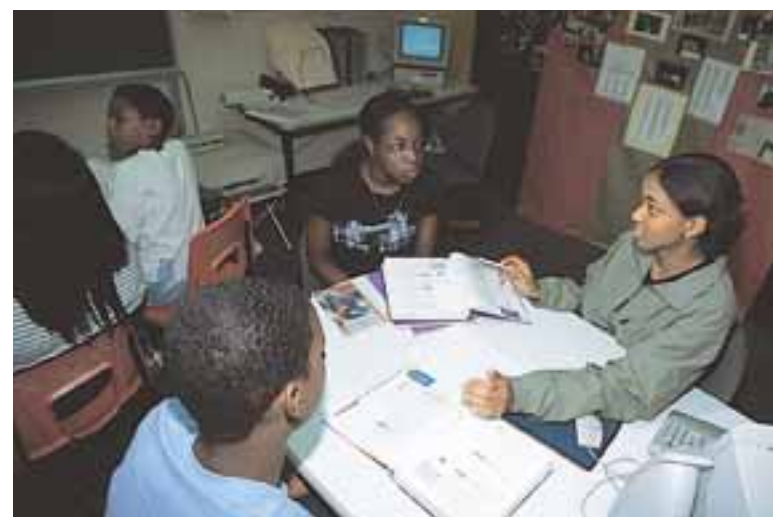
"There is nothing more comforting than to be in an environment where the goal is achievement, the standard is high, and to see people of the same culture as you who have the same goals," says Mr. Spottsville. "IMHOTEP is not school. We are not interested in how many problems [a student] got wrong, but, instead, why

One way IMHOTEP has developed the nurturing relationship, or what Mr. Spottsville describes as a "kinship" between instructors and students, is through summer field trips to such places as the Great Lakes Science Center and Cedar Point amusement park, and through school gatherings like their annual holiday party held at the Manor House at CWRU's Squire Valleevue Farm. "That initial kinship is created when students, who were recruited [from middle school], see a gathering of family and students in various colleges who are successful and have a desire to give back," says Mr. Spottsville. "They see that a 'big sister' or 'big brother' is going to be teaching them math. That is what drives them and continues to drive them."

The Cleveland Heights-University Heights Board of Education is in the last of a five-year process to assume funding for IMHOTEP. Mr. Spottsville has demonstrated the value of the program to the school district and its students during its ten-year history. He cites recent statistics showing that eighty-five percent of IMHOTEP participants pass Ohio's ninth-grade proficiency math exam the first time they take it. Math, reading comprehension, social studies, citizenship, and science are the subjects in the state exam used to measure students' abilities.

A program like IMHOTEP is critical to a district with a diverse population like the Cleveland Heights-University Heights system, says Deborah Delisle, assistant superintendent for educational services. The district's student population is approximately sixty percent African American and thirty percent white.

"An important piece of the program is that they [IMHOTEP administrators] don't just wait until the kids are in high school, but try to reach those kids in middle school," she says. Ms.



TUTORING TIME: THE ACHIEVEMENT CENTER IS THE HUB OF TUTORING, ALLOWING INSTRUCTOR SHANNON CURTAIN (RIGHT) TO ASSIST JESSICA WEAKLEY (CENTER) AND CHRISTOPHER BROWN (FOREGROUND). IN THE BACK, LAINA PERRY AND RYAN WHEELER ARE PART OF A LARGER GROUP DISCUSSING MATH CONCEPTS.

[the student] got those problems wrong," he continues. "We are here to help [the student] improve [his or her] math skills and excel in accelerated math, because we believe each and every student can."

Consistent with an Afrocentric focus, says Mr. Spottsville, the program is named after Imhotep, an Egyptian architect during the reign of Djoser in the third dynasty. Imhotep designed the first step pyramid, in the necropolis of Saqqarah. "Thus we are creating our own [pyramid]—building success one step at a time."

Pivotal to the program has been the careful selection of student instructors, who also can serve as positive role models. All were in IMHOTEP as eighth-graders and were invited, due largely to their own achievement, to apply to become instructors. Instructors are generally close in age to the students, so they can still relate to the challenges students face and share how they overcame similar challenges. The high school volunteer tutors and mentors must maintain a 3.0 grade point average to be hired.

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Delisle is so impressed with the results she has seen from IMHOTEP, she would like to take its concepts and expand them to other subject areas.


"Ten years later, we have students graduating with college degrees in mathematics and pursuing PhDs," Mr. Spottsville says. "It is such a wonderful sign when a student comes back and says, 'Thank you. IMHOTEP helped me more than you realize.'"

Not only do students value their experiences in the program, but IMHOTEP has earned accolades from local and national groups. This year, seven of the eight IMHOTEP senior student instructors were inducted into the National Urban League's National Achievers Society for African Americans. To earn that honor, a student must achieve a 3.0 grade point average, participate in extracurricular activities, perform community service, show evidence of leadership skills, submit an application, provide a recommendation, and secure a sponsor. Each inductee is now eligible for a \$40,000 scholarship. Of the hundreds of applications, sixty-five Cleveland-area students were inducted this year.

In 1992, the Heights Community Congress, a private nonprofit agency serving the cities of Cleveland Heights and University Heights, presented IMHOTEP with its Community

Vision Award. It recognizes a project, program, event, or activity that exemplifies living productively in an integrated community.

Mr. Spottsville gave back-to-back presentations at the invitation of the National Council of Teachers of Mathematics, in 2000, at its annual conference in Chicago, and, this year, at its convention in Orlando, Florida. His first talk was on "Effecting a Child's Desire to Learn." This year he spoke on "Getting Urban Students to Be Successful in Mathematics and Prepared for College."

Apart from his work with IMHOTEP, Mr. Spottsville has served on the board of trustees for the Hanna Perkins School and CWRU's Center for Child Development. He and his wife, Tamara, a self-sufficiency coach at the Cuyahoga County Department of Human Resources, have a son, Terrell, age 14 months. Mr. Spottsville says he is committed to continuing the work of IMHOTEP. He also remains steadfast to the program's objective of treating each child as one mind, one body, one person. "In doing so," he says, "we hope to make every child's dream a goal, and every child's goal a success." 

Deborah Barcikowski is a writer living in Fairport Harbor, Ohio.

PHOTOGRAPHY BY JANINE BENTIVEGNA. LOGO COURTESY OF MR. SPOTTSVILLE

THE IMHOTEP STUDENT PROFILE

The Instructional Mathematics: Helping Our Teens Excel Program (IMHOTEP) has proven beneficial to students' academic success. Continued progress on the Ohio ninth-grade proficiency test, improved grade point averages, and increased enrollment in higher-level mathematics courses are a few indicators as to how well IMHOTEP is serving its participants.

The summer program, in particular, helps students make the difficult academic and social transition from middle school to high school. For math studies, Mr. Spottsville says, this is a transition to a more rigorous math curriculum.

But the students can handle it, especially with the various support systems in place. According to Mr. Spottsville, IMHOTEP students

have an average SAT math score that is more than sixty points above the national average for African-American students.

Other statistics:

- Eighty-five percent of IMHOTEP students pass the Ohio ninth-grade proficiency math test the first time they take it;
- Ninety percent of IMHOTEP students take four years of math in high school;
- More than seventy percent of IMHOTEP students finish at a college level of math, earning an average GPA near 3.0;
- IMHOTEP student instructors have an overall academic GPA of 3.3.