

# algebra project newsletter

## July 2003

“Math literacy is the key to 21<sup>st</sup> century citizenship.” ~Bob Moses

### 2002-2003 School Year In Review

The mission of the Algebra Project is to insure that youth in under-served rural and inner-city areas, particularly African-American and Latino/a children, are equipped with the mathematical skills required for full citizenship in a technological society.

The Algebra Project Network is driven by three collaborating organizations: Algebra Project, Inc., the Southern Initiative of the Algebra Project and the Young People’s Project Inc.



The Algebra Project Network served 4,186 families directly and more than 7,800 indirectly. Specifically, more than 110 teachers participated in the SIAP professional development activities; 75 high school and college Math Literacy Workers of the YPP reached over 10,000 students at events and in the classrooms; the AP, Inc., began developing and evaluating curricula in the classrooms of Lanier High School in Jackson,

Mississippi, fueled by a 3-year National Science Foundation grant. All three project components worked together at the Lanier High School and its feeder schools.

#### ❖ Algebra Project, Inc

(AP, Inc). – Founded 1991 by Robert P. (Bob) Moses, AP, Inc. provides R&D and technical assistance to collaborating AP Network organizations through curricula development, fundraising, administration and financial management. *Highlights of 2002-03 include receiving a 3-year National Science Foundation grant (its third grant from NSF); an active training program to pilot new curricula in 2003-04; a successful year working directly with students at Lanier High School in Jackson, MS, which also serves as a “teaching hospital” for others interested in this work.*

#### ❖ Southern Initiative of the Algebra Project

(SIAP) – SIAP represents the application of AP curricula and the organizing insights gained from the Civil Rights Movement. Founded in 1991 by Dave Dennis, also a veteran from the Movement, and Carolyn Dennis, SIAP has worked in seven states throughout the South, offering professional development, classroom mentoring, youth and community organizing, which includes summer trainings, community math events and bringing local stakeholders to the table, organizing around math literacy.

#### ❖ Young People’s Project

(YPP) --YPP focuses on the recruitment, training and deployment of high school and college-age Math Literacy Workers, and the mentoring relationships they have with middle and elementary aged students, working the demand side of math education reform.

#### How did we do this work?

**We used interactive curricula.** For example, teachers led students on field trips, to develop the concept of distance and direction on a number line, to provide a way to talk about concepts in every day language and later translate this in to the language of mathematics.

**We infused events with the energy of peer-led instruction.** For example, this past April, at the Martin Luther King Jr. Middle School in San Francisco, CA, Math Literacy Workers led a series of math workshops for more than 500 middle school students from San Francisco and Oakland, CA, planting the seeds to work the “demand side” of educational reform.

**We brought stakeholders to the table** in cities throughout the Southern U.S., to collaborate on math reform in their communities.

#### What were the results?

Read on! This newsletter provides information collected by project members and external evaluators, who monitor outcomes through ongoing feedback from students, teachers, and the community, as well as case histories of community/school development and quantitative studies of student achievement.

For example, in 2001 and 2002, the St. Helena Elementary School in the Sea Islands, SC, outperformed their more affluent rival Hilton Head Elementary on the state mathematics test. The Southern Initiative supported this site and its transformation from a low-performing school. With an NSF research grant, the external evaluators are now studying the specific ingredients of this school’s success.

#### In This Issue:

2002-2003 School Year in Review .....	1
Algebra Project Mission Statement.....	1
Announcements .....	4
Case Study: Weldon, North Carolina.....	3
Evaluation Highlights .....	2
Interest from Around the Country .....	4
In the News .....	3
Microsoft Calls the Algebra Project .....	3
Student Profile: Gina M. Wilkerson .....	3

#### DID YOU KNOW?

In 1999/2000, there were more African American men in prison and jail (791,600) than were in higher education (603,000).

Source: Justice Policy Institute National Summary Fact Sheet, [http://www.justicepolicy.org/coc1/fact\\_national.htm](http://www.justicepolicy.org/coc1/fact_national.htm)

## EVALUATION HIGHLIGHTS

Frank Davis and Mary West of the Program Evaluation & Research Group at Lesley University, Cambridge, MA, are drafting an evaluation report covering the past ten years of the Algebra Project's work. Some highlights:

(1) Analysis of district data show that, during Bob Moses' six years of work at Lanier High School in Jackson, MS, the enrollment in Algebra I in Grade 9 increased from 12% in 1996 to 67% in 2002 (compared to an average of 45% in other Jackson high schools). Grade 9 enrollment in courses ABOVE Algebra I increased from 1% to 22% (compared with 18% at other schools). In Grade 10, enrollment in Geometry increased from 16% to 58% (compared to 39%) and from 16% to 24% for courses above Geometry (compared to 23%). Nearly all of the roughly 900 students are African-American, and over 80% qualify for free or reduced cost lunch. Historically the lowest performing high school in Jackson, Lanier's profile for mathematics course enrollment now resembles the more affluent high schools in the city.

(2) In 1995, building on the recommendations of a panel of nationally-known experts that evaluated the project in Mississippi, the Southern Initiative of the Algebra Project developed a professional development management team that included university faculty as well as Algebra Project teachers and trainers.



From 1996 to 2000, this team trained 579 teachers from urban and rural areas in seven southern states. About 66% of the teachers (most were teaching in Grades 4-8) engaged in over 50 hours of workshops and support. This is a high rate, compared, for example, with the 40% rate found at an NSF professional development program for Grade 3-8 teachers in greater Boston, focusing on new NSF-funded mathematics curricula. The Southern Initiative clearly has the ability to attract and sustain teachers' interests. And it reached many rural districts (and some urban) that had not yet been attracted to participate in the mathematics reform movement, which was typically disseminated through university centers.

(3) Marian Currell, Algebra Project Trainer and grade 6 teacher at the Dr. Martin Luther King, Jr., Academic Middle School in San Francisco, believes that the Algebra Project was "incredibly effective" and a "priceless intervention" in transforming that school. Teachers were trained beginning in 1991, and in 1996 the school began offering Algebra I to ALL 8th graders, with no other math



course being offered. Algebra I for ALL has now been institutionalized: teachers, students, and parents all expect that students will study Algebra I in grade 8. Analysis of district data show that the school's graduates are entering 9th and 10th grade college prep math courses at higher rates than their peers from other middle schools in San Francisco. For example, 20% of 2000 graduates were enrolled in courses above Algebra

I in grade 9, compared to 11% of graduates of other middle schools. This school, where 70% of students qualify for free or reduced-cost lunch, has a diverse student body including about one-third African Americans.

(4) During the past ten years, teachers and trainers have adapted the Algebra Project's instructional materials beyond the originally targeted Grades 5-7, and to other contexts, including after-school, youth, and community development initiatives. In their report, the evaluators describe how teachers are using the project beyond grades 5-7, and in the current context of varying state and district mathematics standards and testing programs. They explain how, in this new context, and even though several major mathematics curricula were developed in the 90s, the Algebra Project still plays a unique and significant role in improving mathematics achievement.

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### DID YOU KNOW?

"A college graduate earns 70% more than a high school graduate, and the growing income disparity in the United States is closely related to educational attainment. Even one year of post secondary education increases lifetime earning."

Source: Closing the Graduation Gap: Toward High Schools That Prepare All Students for College, Work, and Citizenship, Bill & Melinda Gates Foundation, 2003  
[www.gatesfoundation.org/hr/downloads/ed/policy.pdf](http://www.gatesfoundation.org/hr/downloads/ed/policy.pdf)

### Student Profile: Gina M. Wilkerson

I am Gina M. Wilkerson and I'm a 4'11", 17-year-old graduate of Lanier High School's Senior Class of 2003. I was born on July 28, 1985 to Mr. and Mrs. Rita Wilkerson. I am the oldest of four children. I have one sister, Roberta, she's twelve years old and attends Whitten Middle School. Two brothers, Robert is nine years old, and Jonathan is six, they both attend Oak Forest Elementary School. I graduated from LHS in May of this year with honors. I was number three in a class of 155 students. During high school, I was involved in different organizations and offices. I was Senior Class President, President of Mu Alpha Theta, a member of the National and Spanish Honor Society, Not Here Club, Newspaper Staff Writer, and other organizations. I will attend Alcorn State University in the fall and major in psychology.

My favorite organization that I am a part of is the Young Peoples' Project. I joined at the beginning of my ninth grade year. I didn't know anything about the project except that I would be getting paid to come. I know that's not a good reason to be a part of something but it was my reason at that time.

Entering the project, I was a shy and quiet person who hardly ever talked. All of this would change; the members of YPP would change me. I didn't know that we would have to get up in front of group of people and facilitate a workshop. I hated getting up in front of people. I would get nervous and scared because I didn't feel comfortable in front of a large group of people. Being a member of YPP didn't mean just reaching out to others to better their math skills, but to improve my facilitation skills and bring me out of my little shell. It was hard breaking my shell, because I was so shy and I had been this way for a long time. I was comfortable with myself. I'm glad that my shell was broken, because letting others know that I have a voice is a wonderful thing. I love working for the Young People's Project. There is nothing better than walking into a room full of children who are anxious and willing to learn math. They are waiting for me to fill their minds with information and knowledge. Fill their minds with the knowledge that has been passed on to me. I'm apart of an organization that is slowly, but surely, changing the way that math is being taught. It feels great and I am grateful to be a member of the YPP.

### Microsoft Calls the Algebra Project

Bob Moses of AP, Inc., Dave Dennis of SIAP, and Omo Moses, of the YPP were all invited in April to spend the day at Microsoft. They met in small groups with human resources staff, diversity marketing staff, representatives from Blacks at Microsoft and also gave a company-wide lecture. Follow up currently under consideration includes collaborating to increase the numbers of students of color who enter the information technology fields, experimenting with the use of Microsoft tablets in the classroom, and receiving technical support for the infrastructure of the Algebra Project. We are grateful for the interest of Microsoft, for our chance to see the inside of a ground-breaking company, and are hopeful for the collaboration possibilities waiting in the wings. A special thanks to Microsoft engineer and Algebra Project supporter, Mike Barnett and Microsoft in-house education coordinator, Tamara Pesik, for coordinating the day and the follow up.



### Case Study: Weldon, North Carolina

"A special group of students within the SIAP graduated this year. They began math studies within the SIAP as sixth graders (1995-1996 school year). At that time their school district was under

state supervision as a result of poor academic performance. By 1997-1998, the school district was classified as exemplary, and the 25 students passed the Algebra I exam at the end of that same year. This is significant, as these students were without an algebra teacher at the time, and outside university-based consultants were brought in to help this highly motivated group of students pursue their studies. Seventeen of these 25 students went on to take pre-calculus in the tenth grade. This number represented a significant increase from the five students (usually seniors) who traditionally took pre-calculus in Weldon. Also of note is that all but one of these 25

graduating seniors will pursue college careers and over 50% received academic scholarships." —David J Dennis, Sr., Director, SIAP; Valerie Whitaker, Asst. Trainer and Middle School Teacher in Weldon; and Melinda Clark, Human Resource Manager/Licensure Specialist for the Weldon City School District and Quandra Edwards, one of the graduating seniors.

### ALGEBRA PROJECT IN THE NEWS (Please check our website, [www.algebra.org](http://www.algebra.org) for a complete bibliography.)

April 19, 2003: *New Scientist Magazine*, "Powers to the People: an interview with Robert Moses." [www.newscientist.com](http://www.newscientist.com)

November 8, 2002: NOW with Bill Moyers, [www.pbs.org/now/classroom/moses.html](http://www.pbs.org/now/classroom/moses.html)

October 2002: NEA Today, "Successful Equation."

## ANNOUNCEMENTS

"The Beaumont Foundation of America of Beaumont, Texas, awarded the Algebra Project Inc., and Lanier High School of Jackson Public Schools in Mississippi, a grant of wireless, laptop computer hardware and wireless networking server valued at approximately \$85,000. The equipment will arrive in August of 2003, and will be used to support the piloting of Algebra Project curricular materials at the Lanier HS Math Lab as part of a three-year, National Science Foundation, Instructional Materials Development award to develop a modular approach to ninth grade algebra I courses, driven by graphing calculators and supported with Intranet technology. These curricular materials utilize the same five-step, experientially-based pedagogy that are the hallmark of the Algebra Project's approach to mathematics education. The computers will be instrumental in up and downloading programs to the graphing calculators, reflective practice on learning by students, and lesson planning and debriefing by teachers. "

### Q. What's the best gift for a newly married couple?

#### A. The Algebra Project Network!

Together with corporate and nonprofit partners, the I Do Foundation provides engaged couples with a host of charitable giving options at their wedding. The Algebra Project Network has been accepted as a nonprofit partner and is listed on the I Do Foundation website at:

<http://www.idofoundation.org/cgi-bin/nposummary.cgi?NonProfitID=308>.

## A heartfelt thanks to our current funders

Delroy Lindo and his management; Danny Glover & Carrie Productions, Inc.; Paramount Pictures; National Science Foundation; Parker Family Foundation; Walton Family Foundation; Working Assets™, Jackson Public Schools, Normandie Foundation; Poss Family Foundation; Tides Foundation; Barr Foundation; Vanguard Public Foundation, Greater Jackson Community Foundation; Cambridge Community Foundation, Beaumont Foundation of America, GE Fund for Math Excellence and our numerous and great individual donors!

A special thanks to Danny Glover, Belvie Rooks, Carrie Productions, Inc., Becky Liebman, Dan Spinner and Marla Greenway for helping to make this newsletter happen.

## INTEREST FROM AROUND THE COUNTRY

The following is a selection of organizations and institutions around the country requesting participation from the Algebra Project Network: National Council of Teachers of Mathematics 2003, San Antonio, Texas; American Educational Research Association 2003, Chicago, IL; Legislature of the State of Arkansas; United Negro College Fund, DC conference 2003; Black Alliance for Education Options, Dallas, TX; Coca-Cola Scholars Conference 2003; National Caucus of Black State Representatives; Rural Community Trust, Providence, RI; National Baptist Convention 2003, Nashville, TN; Los Angeles Unified School District; Rochester Institute of Technology, Rochester, NY; California Council of Teacher Educators; and many more.

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### DID YOU KNOW?

The nine out of 10 fastest growing occupations projected to have the largest numerical increases in employment between 2000 and 2010, for those with a bachelor's degree, are computer related, e.g. software engineers, network administrators, computer systems analysts, database administrators. (The 10th occupation was elementary school teachers.)

Source: Bureau of Labor Statistics *Occupational Outlook Handbook*, 2002-03 Edition. <http://www.bls.gov/oco/>