Being young is a state of mind, young people are the people who want change.

Ella Baker

It is the mission of the Young People’s Project to use Math Literacy as a tool to develop young leaders and organizers who radically change the quality of education and life in their communities so that all children have an opportunity to reach their full human potential.

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Math Literacy and Social Change

The Young People’s Project (YPP) is an outgrowth of the Algebra Project (www.algebra.org), “a national mathematics literacy effort aimed at helping low income students and students of color successfully acquire mathematical skills that are a prerequisite for a college preparatory mathematics sequence in high school and full citizenship in today’s technological society.” YPP joins the Algebra Project in its belief that all the children who live in the country are children of the country and that they have the right to a high quality public school education.

It is the mission of YPP to use math literacy as a tool to develop young leaders and organizers who radically change the quality of education and life in their communities so that all children have the opportunity to reach their full human potential.

Founded in 1996 by Algebra Project graduates, YPP is a nonprofit organization with established sites in Jackson, MS, Chicago, IL, Cambridge and Boston, MA, and developing programs in Petersburg, VA, Miami, FL, Atlanta, and New Orleans. As the founding members of YPP have moved from middle to high school to college, their development and the subsequent development of the young people they’ve worked with, has formed the basis for the evolution into a truly youth driven organization.

Sites and programs employ over 300 college and high school students nationwide and engage over 7,000 students, family and community members through our different programs and initiatives. The essential goals for all YPP programs and initiatives are the same, that all participants will leave with a deeper sense of the way in which their personal and collective gifts can be used to enhance learning for others and support their communities growth and development.

YPP has defined its work in the following ways -- the work that young people need to do with themselves, with their peers and in their communities; the work that they need to do to change and challenge aspects of their culture and the dominant culture; and the work they need to do to support and demand institutions and systems function on their and their communities behalf.
Meaningful Work/Knowledge Work

More so then ever, young people need to know how to read, write and do math and have the creativity, flexibility and imagination to put what they know to use in different situations and contexts. While there are other entry points, YPP has followed in the footsteps of the Algebra Project and has chosen to prepare young people to teach each other mathematics in after school and community based settings. We call this work math literacy work and consider it entry-level knowledge work. Through math literacy work students are required to:

- Think critically about teaching math and learning math,
- Explore, develop and facilitate lesson plans and curricular modules,
- Learn and develop facilitation and communication techniques,
- Create optimal learning environments,
- Strengthen Peer to Peer relationships,
- Learn how to plan, execute, and problem solve together,
- Practice getting help and giving help and working effectively with diverse learners,
- Learn how to share information in a way that resonates with different groups of people.

Along with mastering pieces of mathematics it is essential that young people have the opportunity to develop these types of skills both in and out of school to support their academic and overall development. The development of math literacy workers has been the anchor for the growth of YPP in communities throughout the country and a platform for the broader work that young people need to engage in to help move their communities forward.

Youth Culture/Dominant Culture

We want young people to harness the power of their culture to work for them and not against them. We want young people to challenge the dominant cultural logics that help to marginalize them. We want young people to reject any cultural expectations that limit who they can and should want to be. YPP wants to make it cool for young people to learn and share what they know.

We believe that:

- The work of young people who are investing in themselves, their peers and community needs to be celebrated.
- Young people need to challenge the dominant culture’s propensity to sort people – in YPP we want young people to feel that everyone can do it and that together we can help each other do it.
- Young people need to challenge the idea that education is a scarce commodity and help to create a culture where high quality education is viewed as an intrinsic value that helps to grow a healthy society. To this end young people need their schools, after school programs, families and communities to collaborate more intentionally to hold high expectations for them and to support their diverse needs as learners and young citizens.
- Young people need to broaden their common cultural benchmarks for success that are used to carve out their identity – they learn that it feels good to win and not as good to help others win, they learn to celebrate individual success more than collective success (we want young people to feel that their achievement and accomplishments are a result of and not in spite of their communities and the people that reside in them).
- Young people need to broaden their cultural expectations about what’s cool, what’s acceptable, and what’s respectable -- if we can celebrate each other for being young athletes and hip hop artists we can celebrate each other for being young scholars, organizers, and orators.
Supporting Change/Demanding Change

Ella Baker said that when facing a system that doesn’t lend itself to your needs you must devise ways to change that system. We as young people feel that the public education system needs to work for all children and that it should help to prepare us to be citizens of this country and of the world. We feel that it is our duty to help young people understand how current institutions and systems are or are not working on our behalf and to support and challenge these institutions and systems to function in the way they were intended. Part of this means helping young people to develop the frame of mind, depth of understanding, and conviction to be able to function and operate as independent thinkers within the context of institutions and systems. Part of this means preparing young people to lead, organize and take action to transform systems that aren’t working.

National Programs

Math Literacy Worker Training - Training engages high school and college students in an experiential learning process that prepares them to teach math games and activities to their younger peers.

Math Literacy Worker Outreach - Through Math Literacy Workshops, Community Events for Math Literacy, and Family Math Nights, math literacy workers strive to make math meaningful, fun, and accessible to younger students and their families.

Flagway™ Leagues – Through one of its signature activities (the Flagwgay™ game) YPP is working to demonstrate the idea that math games can engage children and communities in cultivating and celebrating academics in the same way that they cultivate and celebrate athletics. YPP organizes teams of students to practice and play in regularly scheduled Flagway™ games, culminating in a league tournament.

National Initiatives

Quality Education as a Constitutional Right - YPP has begun initiatives in its Boston and Chicago sites to create a space for students to become part of the discussion at the school, community and district levels on issues that effect their educational experiences and subsequent achievement. This is part of a national effort to transform American public education into an international model of excellence for all of America’s students. Through local organizing strategies that are school and community based, QECR seeks to build popular support and political will for a Constitutional Amendment guaranteeing all children the right to an education that supports them to fully develop and use their talent, skills, and intelligence to fulfill their dreams and contribute to the betterment of their communities, the nation, and the world. (www.qecr.org)

Finding Our Folk - This Spring, Summer and Fall the Finding Our Folk Tour will travel to college campuses and communities throughout the country to create opportunities for conversations with students, community members and faculty, using art, culture and New Orleans as the entry points for a broader reflection on social change. The tour will feature the Hot 8 Brass Band and involve hip hop artists, poets, elders, historians and educators, activists and organizers, and young people. Through workshops, performances, panel discussions and open forums, students and community members will have opportunities to learn, discuss, and enjoy the intersections of culture, race, history, and politics in America as evidenced in New Orleans. Through these activities we seek to build awareness that New Orleans is serving as a litmus test for the future of America with regard to housing, education, economics, environmental health and justice and racial justice and to help draw connections between what happened and is happening in the Gulf Coast, their communities and the country. (www.findingourfolk.org)

The Masculinity Project- YPP is a nonprofit partner of The Masculinity Project. The project will gather multi-
generational voices to explore the question, “What does it mean to be a man?” with a focus on the Black community in the 21st century. This project addresses the critical topic of masculinity in the African American community by exploring how young men are represented and perceived, investigating the obstacles they encounter, and celebrating the contributions they make.

The Masculinity Project is a partnership of the National Black Programming Consortium (NBPC) and the Independent Television Service (ITVS) with funding provided by the Ford Foundation. (www.blackpublicmedia.com)

*The Gathering for Justice* -- The mission of The Gathering for Justice is to build an inter generational movement, rooted in history, cultures and nonviolent direct action. Our purpose is to heal communities, build collective strength and generate an environment of hope and opportunity. The Gathering, founded by Mr. Harry Belafonte and elders of the civil rights movement seeks to build a national movement to end child incarceration. YPP is a partner organization of the Gathering.

**YPP Accomplishments**

*(1996)* Brinkley Middle school students who would go on to found YPP began assisting students and teachers in learning how to use the graphing calculator and began conducting Saturday workshops for their peers. Graphing calculator workshops were developed to encourage and help prepare Brinkley students to take Algebra in the 8th grade and pass the Algebra 1 exam. Brinkley Middle school had one of the highest percentages of 8th grade students in Jackson Public Schools enrolled in Algebra 1.

*(1997)* The majority of Brinkley students who took the Algebra 1 exam scored at or above the state average.

Brinkley graduates and YPP students began conducting graphing calculator workshops for students in the Mississippi Delta. Scores from the 1997 Statewide Algebra Exam revealed that Algebra Project (AP) students who attended the graphing calculator workshop had higher test scores than the 20 AP students who did not attend, and that their mean score of 315, was 25 points higher then the average score of non AP students.

Taba Moses and Khari Milner developed the Brinkley Middle School MathLab, transforming an old science room into a student centered space that teachers brought their students to to work with local college students and visiting instructors to explore areas of mathematics. The first major activity of the Math Lab was to organize an all school “Flagway League”, involving over 200 6th, 7th, and 8th grade students and which culminated in a tournament at the end of the semester.

YPP expanded to Cambridge, Ma, beginning an after school program and Summer Camp at the Area IV Youth Center.

15 students from Jackson travel to North Carolina Central University (NCCU) to train students that were part of an Algebra Project Leadership Institute organized by Dave Dennis, in the use of the Graphing Calculator and Flagway games.

*(1998)* 15 students from Jackson spend the Summer in Cambridge, Ma training local YPP students to do Math Literacy Work. These trainings coincided with the YPP Summer Camp, training participants went on to pioneer math literacy work in Cambridge and Boston.

*(2000)* YPP begins training high school students in Chicago to do Math Literacy work.
YPP Cambridge Students Play “The Stacking Game!”
YPP Founder, Nate Young works with student from Charleston, SC on the 2002 AP/YPP Spring Break Tour.
Kevin Edmondson and Albert Sykes report out at the Quality Education as a Civil Right Conference, held at Howard University, in March, 2005.
YPP Students from Cambridge and Jackson plan their future, University of New Orleans, 2002.
The Hot 8 Brass Band and YPP students prepare for the Ella Baker Workshop.
The Algebra Project
Education Resource Map
Volunteering for Beginners

American History and Civil Rights:
The Young People's Project

The Young People's Project (YPP) is a direct result of the Algebra Project. It was founded in Jackson, Mississippi in 1996 by two Algebra Project graduates and nine eighth grade Algebra Project Students with the goal of keeping the Algebra Project growing and the spirit of the civil rights movement alive. In the course of three years, the Young People's Project has expanded to include sites in Cambridge, MA and Atlanta, GA.

"YPP was founded on the belief that literacy, specifically mathematical literacy, is the organizational tool, comparable to the right to vote, for disenfranchised Blacks to determine their existence in today's society."

The slogan on the YPP is "Each One, Teach One." Find out more about how to get started volunteering in your community.

Gina Wilkerson is one of the Young Peoples' Project volunteers profiled in the NOW story THE MATHEMATICS OF SUCCESS.

GINA WILKERSON: Before I went in there, I hated math; To me it was very complicated because you had to use all those big numbers and had to use calculators and all those different formulas and equations ... I don't want to try these; it's too hard. I just wanted to forget about math and just leave it alone, but then I came to the Algebra Project and they started using different methods in learning mathematics. It became interesting and I decided that I would stick with it.

It wasn't until I started doing and going out and trying to reach other people with what we were doing, then I understood that [Bob Moses] was trying to get us to make a demand for what we want to do today. We don't have to just accept what's given to us; that we can make a change, and we're trying to bring about a change in the educational system dealing with math.

It's more than math; it's a combination of a lot of things — you go out and you interact with the community and then you'll go travel on the tour nationwide and you're presenting different things that we do and — it's also helping your communications skills.

It's given me a lot of confidence that you know I can go out here and I can change the world if I wanted to because I don't have to accept what the people or the system is giving me.

Read more biographies of Young People's Project Leaders.
March 2002

Do The Math

By Elizabeth Kirkland

On a rain–drenched December evening in Jackson, Mississippi, a multicultural crowd files into the Crown Room of the Clarion Hotel for a formal dinner honoring math educators. The room is dressed up in typical ballroom style: A podium is set for speeches, and round tables decorated with white tablecloths and candles await a sumptuous meal. But something decidedly unconventional has taken over the parquet dance floor:

Carnival–esque booths snake around its perimeter.

The setup is unusual, but the guests are into it. Teachers, state government workers, lawyers, activists, parents, and students all line up eagerly to try their luck at various games. At one stall, participants are using probability to calculate their chances of rolling a specific combination on three color-coded dice. It looks like a craps game—except for the people scribbling X’s and Y’s on scraps of paper before they place their make-believe bets with a “banker.”

At another booth, Sammie Myers, a light-hearted and outgoing 21-year-old, is manning a hula hoop activity. “This is an averaging game,” he says, grabbing one of the plastic circles lying haphazardly on the floor in front of him. He explains that, during three rounds, three groups of people will compete to see how fast they can step through the hoops. In each succeeding round, the allotted time will increase, and participants will note how many of the people who run through the hoops varies. With a graphing calculator, they’ll then plot their data and perform a linear regression to determine a line of best fit, which illustrates trends in the data. Armed with this information, they’ll try to predict what will happen in future rounds.

Laughter and squeals of surprise punctuate the goings–on. The scene’s a far cry from the tedious math classes many of the guests endured in high school, so it’s not surprising that they don’t notice they’re actually practicing math skills.

Tonight’s activities were arranged by the Young People’s Project, a Jackson–based group of teens and 20–somethings who teach mathematics through games, and they illustrate the theory that drives the organization: When people aren’t intimidated by the subject, they’ll learn and use math. It’s an idea that works particularly well with young kids and adolescents, says Myers, who helped found the organization. “If young people are having fun, that’s what they want to keep doing. We use the games as a tool to get their attention.”

The group may be devoted to making math fun, but YPP’s origins lie in a serious truth: Rigorous math courses in school lead to economic success later on. According to one U.S. Department of Education study, Mathematics Equals Opportunity, only 36 percent of students who don’t take algebra I and geometry go to college. Yet, the report finds, fewer than half of all low-income students take these courses.

Can playing games teach kids about numbers?

Leaders of the Young People's Project bet it can.
YPP’s origins lie in a serious truth: Rigorous math courses in school lead to economic success later on. 

For Bob Moses, a math educator and a civil rights activist who works in Jackson and Cambridge, Massachusetts, these numbers have dramatic implications. “We’re growing serfs in our cities,” he notes, adding that without higher-level math to open the door to college, kids are condemned to dead-end jobs. And he argues: “If they don’t have an income to support family in some legitimate enterprise and they hit the streets, then pretty much they’re into the criminal justice system sooner or later. So this is a huge problem.”

In the early 1980s, Moses started the Algebra Project, an organization that teaches algebra to low-income and minority middle schoolers using creative techniques and real-world examples. Since then, he and his team of adult tutors have taught thousands of kids in 28 cities, the majority of whom perform above average on standardized tests and go on to study upper-level math.

Moses’ four children—Maisha, 31; Omowale (Omo), 29; Tabasuri (Taba), 27; and Malaika, 25—grew up alongside the Algebra Project, and all have assisted with the program in various capacities. But by the mid-’90s, his two sons—Omo, a math major, and Taba, who was still in high school—were itching to add a student-driven element to their father’s work.

“I could feel that there was a need for young people to do something [for themselves],” Omo explains. “The Algebra Project intervenes in the classroom with teachers and administrators. We were trying to figure out some things we could do to impact our peers.” Several 8th graders from Brinkley Middle School in Jackson who were studying with the Algebra Project at the time, including Sammie Myers, suggested creating a group in which students could help each other understand and practice math skills.

The Moses brothers tested out the idea by having the 8th graders join them in supervising math games for other kids their age at a nearby Algebra Project site in 1996. “It was intensive work,” Omo says, but the kids who were being tutored admired the team leaders and enthusiastically participated in the program. The group decided to become a collective, in which members plan activities together as equals, and to remain affiliated with the Algebra Project. As the original batch of 8th graders moved up through school, they stuck with the effort and recruited their peers to help spread the math message.

Today, YPP’s volunteers, mostly high school but some college students, work out of two offices, one in Jackson with about 100 members and one in Cambridge with 50 members. The groups meet weekly outside of school hours to create games, first deciding what skill they want to teach, then brainstorming activities around the concept. Bob Moses often helps refine game ideas, and members test them out. When an activity is ready, it’s used at one of the group’s sessions—held, on average, once a week—for 6th to 8th grade kids at schools, Boys and Girls Clubs, and other locations. During school breaks, YPP workers often travel across Mississippi and other states to create a buzz about math, and some of them teach at the summer day camp for 3rd through 8th graders that the group runs in Jackson.

Omo Moses says operating a startup nonprofit, which supports itself through grant writing and other fund raising, is more difficult than he first anticipated. “There’s been a learning curve in terms of learning how to run an organization,” he admits. Yet he’s pleased with the way YPP has developed over the past five years. As members have helped kids with its programs—thousands of youngsters to date—they’ve also reinforced their own math skills. What’s more, it’s shown them that “they can really design and help implement things in their communities.”

All along, the organization has made a special effort to document its work, so the YPP model can be replicated in the future in other communities. And though it’s too soon to measure the long-term impact of YPP, Algebra Project research shows that more students are on the college-prep track at high schools with YPP members than at schools without.

Bob Moses couldn’t be prouder. His children’s organization has grown from a tendril of the Algebra Project into “a solid root,” as he describes it. “That’s probably one of the main blessings of our lives,” he says.

When People aren’t intimidated by the subject, YPP believes, they’ll learn and use math.

Rita Wilkerson (right) was shocked when daughter Gina wanted to quit cheerleading to study math.
—Greg Jenson

Gina Wilkerson wanted to quit cheerleading to study math.
—Rita Wilkerson
Gina Wilkerson considers YPP a major blessing in her life. No one would call her a math nerd—in green cargo pants, a stiff black cotton shirt with a tie around the waist, and black chunky-soled shoes, she looks every bit a cool teenager. But tonight, helping YPP provide the educational entertainment at the Clarion Hotel dinner, the Lanier High School junior sounds like a young Emmy Noether—the early 20th-century mathematician known as “the mother of algebra”—as she explains inductive reasoning at one of the game booths. “Before I joined YPP, I didn’t like math,” she confesses during a break. “I hated it. It was just the way our teachers taught math—it wasn’t interesting. They taught it straight out of the book without using different things to explain it. But when I went to YPP, they had developed games, and it became easier. I applied what they showed me to my work, and it made it fun instead of being boring. Now I love math.”

YPP’s Omo Moses believes math skills add up to success in life.
—Greg Jenson

Before any of this could happen, though, Gina had to convince her mom that YPP was for real, even though it was run by teens. Rita Wilkerson, a tiny dynamo of a woman standing nearby, remembers how she was highly skeptical when, two years ago, her daughter approached her about quitting cheerleading to study math of all things.

“I had to get in there and see how these young people do their math,” Wilkerson recalls. So she went to a few YPP meetings. She liked how the group leaders showed their peers different strategies for approaching math problems. And she was excited to see that YPP gave the kids some access to Bob Moses. “When Bob comes in, everyone gets quiet; everyone gets in their seat,” she observes. “They’re very attentive toward him, and they absorb everything that comes from this man.”

YPP piques kids’ interest in mastering the challenging subject, Wilkerson says, because “they’re excited that they can take the math and do it. The confidence level and self-esteem are there. I wouldn’t want [Gina] to be any place else.” Wilkerson’s so keen on the group that she’s become known as “the YPP mom,” regularly shuttling group members to events in her car.

Changing perceptions about the kinds of kids who do well in math—and in school, in general—is a crucial focus of YPP, notes Maisha Moses, who helps oversee the group’s projects. “We don’t try to find the best math students but just the people who are interested in doing the work,” she says of choosing the YPP workshop leaders. “They come from the same communities as the other kids and deal with the same issues.”

Because of that, she explains, learning math becomes OK.

Changing perceptions about the kinds of kids who do well in math is a crucial focus of YPP, says project organizer Maisha Moses.

Equally valuable, Maisha argues, is the group’s familylike embrace, which encourages the kids to stick with the subject. “It’s not often you can work with students like this over a number of years,” she says. “I’ve gotten a sense that, for a number of them, this is a stabilizing part of their life. There’s nothing else really like it around.” YPP members often help each other with their school lessons, Gina Wilkerson reports. They quiz each other and use the games to clarify algebra principles.

The group has certainly affected Gina’s high school experience. She’s taking trigonometry, computation in business, and chemistry this year, and she wants to major in psychology at college, with an eye to becoming a guidance counselor in the future. “I want to be someone [students] can look up to, like Maisha,” she says.

And YPP’s transformed Sammie Myers’ life, to hear him tell it. Myers was 15 when he helped start the organization. Although he was struggling with math at the time, he was looking for something to do after school. YPP offered a positive option. Had he not signed on with the project, Myers says, he probably would have gotten caught up in the rough street culture. “That’s not to say that the Young People’s Project saved me,” he observes, “but I made a decision to help with the process. It gave me another choice. I chose YPP and not the streets.” Now he’s studying business and accounting at Hinds Community College in Raymond, Mississippi, and also to attend a four-year college. Myers is particularly...
“I want to attend a four-year college,” Myers says. “I’m particularly proud of the fact that I’ve visited 30 different states to teach workshops with YPP, something he says he would not have been able to do otherwise.

“Some people call me an activist,” Myers says. “I don’t want that title just yet. I don’t think I’ve done enough.” And, he adds, he’s uncomfortable with titles in general. He thinks for a minute, then reconsideres. Just call him a “math literacy worker,” he says.

Elizabeth Kirkland is a staff writer at the Mississippi Business Journal in Jackson.

**On the Web**

The Algebra Project is the parent organization of the Young People's Project. Read about its mission and programs.

The Next Civil Right: Success in Math

By Amelia Newcomb

source: The Christian Science Monitor

CHARLESTON, S.C.—

What's happening at the Rivers School on this sunny South Carolina morning has to be one of the more unusual civil rights initiatives in the United States.

Before the first bell rings, a bus pulls up to the front of an imposing brick edifice in a low-income neighborhood of Charleston. Its occupants, about three dozen African-American students from Jackson, Miss., pour out and swing into the auditorium. Within a few short minutes, they have a roomful of restive middle-schoolers swaying and singing - rapping, actually - about the most unhip of subjects: math.

"God split the numbers down to prime!

But he never said that you couldn't rhyme 'em!

Now YPP, we thinks to zap 'em!

But truth be told, we likes to rap 'em!"

From his perch at the side of the room, Bob Moses, who initiated this boisterous effort, watches with authoritative serenity. For two decades, African-American children's access to math education has consumed his attention. To this soft-spoken veteran of the civil rights movement, the demands of a high-tech age make math literacy as much an issue today as voting was in the Jim Crow South a half century ago.

The result is the Algebra Project, an effort he started in the 1980s to push a college-preparatory math program for low-income students, particularly minorities. The initiative is organized around lessons he learned almost 40 years ago, when he left his post as a teacher in New York to take part in the dramatic birth of the voting-rights movement in Mississippi. The only difference is that instead of lifting a generation through access to the ballot, Dr. Moses is now using his grass-roots expertise to give young people a seat in the New Economy - through integers and investigation.

"The [educational] system has been set up to keep low-income minorities out," says Moses, who holds a PhD in math from Harvard University. "If we can figure out how to get children to make the system
work for them, this will change the system in ways we may not understand now."

This week, for the Mississippi students, that means giving up spring break to travel hundreds of miles by bus across the South, preaching the math gospel. The teens are part of the Young People's Project (YPP), run by Moses' son Omo. It evolved within the Algebra Project and, at times, acts as a sort of roadshow. Members see themselves as math-literacy workers and seek to demystify the science of numbers, in this case through a blend of rap, civil rights history, and games.

"When you combine music and math, they're learning from it and doing something they like at the same time," says Jessie Sims, a ninth-grader who is part of YPP and an aspiring rapper.

At the root of Moses' initiatives is a simple goal: motivate often-marginalized students to embrace math and encourage their peers to do the same. Moses, who chronicles his efforts in "Radical Equations: Math Literacy and Civil Rights" (Beacon Press), hopes systemic change will flow outward as the needs of those historically at the bottom are addressed.

It's perhaps appropriate that Moses has chosen math to try to inspire a new generation. His focus is as much citizenship as equations, and math study often spurs kids to excel in many pursuits. Too, minorities are not well represented in the field at a time when emphasis on math instruction is growing nationwide, including a move to start algebra in earlier grades.

Indeed, according to a report of the US Department of Education, 83 percent of students who took algebra I and geometry went on to college, versus 36 percent of those who did not. A study by Lesley University in Cambridge, Mass., which looked at the Algebra Project's impact in that city, found that a significantly higher percentage of Algebra Project students enrolled in college-prep math courses in high school than did their peers citywide.

"The most important thing the Algebra Project shows is that kids from all backgrounds can succeed in math," says Freeman Hrabowski, who is president of the University of Maryland at Baltimore and an African-American mathematician. "It bridges the culture of the child and the world of math. It's too rare to find people focusing on this."

In many respects, the 740 students here at the Rivers School represent the target group Moses is trying to reach. Economically, the school, which sits in a modest neighborhood across the street from a Food Lion, lies near the bottom of the scale. Some 92 percent of its largely African-American student body receive federally subsidized lunches, and many deal with violence on a regular basis.

Principal Benjamin Gadsden, a congenial man who has worked hard to stem problems of discipline and violence at the school, wants to see steady progress. Test scores went up last year, but they need to improve to meet changing state standards.
Mr. Gadsden has taken the Algebra Project to heart. "We can tell the kids that math is fun, but when you can put it into action, that promotes confidence - and the kids can compete with each other," he says.

Overall, the project reaches about 10,000 students at 28 sites around the country, the vast majority being in the South. The program's curriculum materials, which can be integrated with what schools already use, emphasize experiential and in-depth learning.

The cornerstone is a five-step process that helps kids make the often-difficult transition between what's familiar and the abstract language of math. Students take a trip, riding on a bus or walking through a neighborhood, and then construct a model of their travels. They write about the event in their own terms and learn to identify the numerical elements - the math - such as speed. They then construct a symbolic representation of the whole process.

Jacqueline Johnson, the Algebra Project liaison at Rivers, says it has changed how she teaches math - for one, she feels more able to reach a variety of children. "My use of terminology has changed, and I make real-world connections with the kids' environment," she says.

The YPP has arrived at Rivers this spring morning to reinforce many of the lessons of the Algebra Project.

Like the project, YPP doesn't target math stars. The kids who are now so actively trying to interest others in factors and polynomials wouldn't have been tagged automatically as math leaders, nor would their schools.

James Roach, a YPP student, was senior class president and is now a resident assistant at Hinds Community College in Raymond, Miss. "I got those titles because of the knowledge Mr. Moses gave me," he says quietly. "I thank him to this day." His father was murdered when he was in middle school, and before he joined the Algebra Project, he didn't care to get involved in much.

Moses worked hard to draw him out in class and gain his trust at Lanier High School in Jackson, where Moses travels from his home in Cambridge, Mass., each week to teach. Now James points to a new responsibility, one he shares with his peers: Each one, teach one.

At the front of Rivers's large hall, where handmade math posters are tacked up next to curls of paint peeling off the walls, Kevin Edmundson and Frankie Johnson ask everyone to stop fidgeting long enough to read a quote by civil rights worker Ella Baker. Then they pass the mike to ninth-grader Bertha Holden, who starts the rap.

The volume rises as a math "game" gets under way. Flanked by YPP facilitators, student teams begin to compete in an algebraic-like version of College Bowl. Each group takes a number, breaks it into prime factors, translates that into algebra form (two 2s become A2, for example), and comes up with an
answer. Once judges sign off on those, kids use their answers to "walk the flag," a color-coded maze of sorts laid out on the floor.

The competition intensifies, and by the end the atmosphere is electrified. Some students are told to head out for their lunch break, but plead to stay.

That doesn't mean everything has gone smoothly. When lunchtime does arrive, the YPP students take time to review with Maisha Moses, Bob Moses' daughter, who trains teachers in using the Algebra Project. They agree that the raps have to be shorter, the transitions tighter. A break helps them get energized for the afternoon.

While the activities are successful at engaging the audience, they have also proven transforming for the students who have made the journey here from Mississippi.

Jessie, the aspiring rapper, likes sharing something that, for him, was literally life-altering. "I used to act real challenged," he says, chipping away at a hearty lunch from the nearby supermarket. "But I got smarter mentally and physically."

He pushes his chair back and continues earnestly. "I used to have a fear of success. Now, I can be smart and down to earth. YPP helps you focus and they change your whole vocabulary. It gave me a joy of helping people out."

The esprit de corps the group has formed while inspiring students across several states is palpable. They speak reverently, too, of Moses, who endured jailing and physical attacks in his efforts to help black people vote in Mississippi. "In the 1960s, he pushed his own generation," Bertha says. "Now, he pushes ours."

Yet for all their obvious authority, Moses and the other adult supervisors on the trip conduct themselves as guides more than directors. The idea is to get the kids to take responsibility - and to make demands. The program may be about math, but the subtext is more fundamental: Kids can shape their own destiny.

The Rivers School is hoping to tap more of the transforming power of math. Kids are already involved in setting up a YPP of their own, and 25 children will be trained this summer at a YPP camp.

Already, changes are evident, in students and in the community. Three years ago, a family math night attracted maybe six participants. This year, the YPP pulls in a standing-room-only crowd - something Gadsden attributes directly to the project.

The next morning, as the bus pulls out for Savannah, Ga., silence attests to the previous day's effort. For two hours, lulled by a driving rain, the kids doze. As they close in on Bartlett Middle School on the
south side of Savannah, Maisha starts nudging them awake. Students drag slightly as they exit the bus.

They perk up almost instinctively, though, at the sign of another pool of potential converts - an expectant assembly of seventh- and eighth-graders. The kids start to sense they're going to nail this one. The prime-number rap begins. Moses, standing off to one side, is pleased.

"Since the kids started in Arkansas, there have been great improvements," he says. "As they've gone along, they've been figuring out how to run it."

Bartlett is the only school in Georgia to use the Algebra Project. The principal, Roy Davenport - himself a mathematician - brought it in because he, too, wants to prepare his students better in math.

Dolores Washington, an eighth-grade math teacher and former accountant, is confident of the project's ability to help kids. "It really helps students' reasoning," she says. "I have kids jumping out of their seats who wouldn't move before.

At this assembly, Bartlett students are showing their zest: They're jumping up on tables by the end of the program, waving answers. "I loved this group," says Calvin Cain, a YPP student. "I like the idea of rivalry with intelligence. It gets me hyped."

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YPP in the news.
ROBERT MOSES

After spending the 1960s risking his life to organize voter registration drives in Mississippi, former civil rights leader Robert Moses has moved on to a less sexy project: math literacy. But he thinks that today's tech dependency makes this crusade just as important as his last.

The Civil Right to Radical Math

By Diane Cole

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Harlem-born, Harvard-educated Robert Moses is a radical in the most traditional definition of the word: He goes to the root of the problem.

First as a civil rights leader and now as an advocate for the poor and founder of the math literacy program the Algebra Project, Moses has looked at the ideal of equal opportunity and compared it with the reality-then set about balancing the equation.

In the 1960s, that meant leading voter registration drives in Mississippi, even if it led to pistol-whipping by white supremacists and the murders of colleagues who had marched alongside him. Staying with the work was the only way he could make sense of the injustice-and he has continued to stay, just in another mode.

In 1966, he left for Canada when, at the age of 31, he received a draft notice. After a stint teaching math in Tanzania, he returned to the United States when President Jimmy Carter granted amnesty to draft resisters. Soon after, he started working on a different formula for breaking down racial and economic barriers: teaching inner-city kids math-algebra, to be precise.

As Moses explains it, the connection between civil rights and the right to math literacy is logical. The civil rights movement ensured that minorities had a voice; now they needed economic access-and that started with education, specifically the math and science skills essential to succeeding in a tech-dependent society.

Connecting. The Algebra Project, at its peak, has provided help for some 40,000 minority students annually, in the form of kindergarten-through-high-school curricula guides, teacher training, and peer coaching. "I've been in the classroom and watched these students ... soar and grow," says actor Danny Glover, an Algebra Project board member.

These days, Moses divides his time between Jackson, Miss., and Miami, where he teaches high school math. His son Ormo, who runs an Algebra Project offshoot, says Moses "has always been able to connect with young people. He's never embarrassed or uncomfortable; he'll try a math rap song, share his lunch, or sit on a bus with 50 students on a spring break trip," he says. "He has a genuine interest in them as people."
Despite a packed travel schedule, Moses gives no visible sign of fatigue. A vegetarian of long standing, he practices yoga regularly and tries to swim at least 1/4 mile daily. He portrays an aura of stillness that suggests that he'd rather listen than speak.

Introducing Moses at a recent conference, Shirley Ann Jackson, the president of Rensselaer Polytechnic Institute, commended Moses for “getting to the heart of the issue,” which, as a physicist, she knows well: “You can't do calculus, physics, or engineering if you can't do algebra,” she points out—which is exactly the point and why Moses originally founded the Algebra Project.

It was 1982—the year that Moses won a MacArthur Foundation genius grant—and Moses was completing his Ph.D. in philosophy at Harvard. His oldest daughter, Maisha, entered eighth grade, ready for algebra only to discover that the local public school did not offer it. Moses, who had taught math decades earlier at New York’s Horace Mann High School, was determined that Maisha would take algebra—even if he had to teach it at the school himself. Which he did.

Algebra, Moses perceived, was a “gatekeeper” subject: Without it, middle school students couldn't advance in math, technology, and science. And without those courses, they wouldn't be able to meet the requirements for college.

So far, research has judged the Algebra Project a success. At Lanier High School in Jackson, 55 percent of the students following the project’s curriculum passed the state exam the first time, compared with 40 percent of students in the regular curriculum. At junior high school sites, Algebra Project students scored better on standardized tests and went on to more advanced math classes at significantly higher levels than other schoolmates.

In part, the success is due to innovative curricula (developed by Moses) that translate the abstract language of algebraic equations into understandable, concrete activities. Moses also employs his leadership lessons from the civil rights movement. “You can't make change on a large issue just by advocating from the top,” he says. “It has to be a demand from the bottom. That means building grass-roots networks pushing that demand forward.” It means working within the community, he says, with families and students and schools.

**A listener.** Another way to put it is that Moses is always listening to the community. “I got into the habit of listening as a youngster,” Moses says, explaining that he would tag around with his father and “hear him talk about events of the day from the point of view of the little guy.”

Later, in Mississippi, civil rights leader Ella Baker set another example. “I don't know how many meetings I sat through with her not saying anything, not contravening,” he says. She taught him the importance of “creating a space where someone else can step in and lead,” he says. “There had to be a real laying down of the groundwork,” a sense of participation that allowed people to direct the movement themselves.

And then, after Moses has listened long and hard and intently, he speaks, in a gently modulated voice that hits its target all the more powerfully for being so understated. In that regard, “Bob is like an alligator,” says Timothy Jenkins, past president of the University of the District of Columbia and a longtime civil rights activist. “He might seem passive, but he's incisive. What he says is considered-and people listen.”

Just the way they have been listening for 40 years and counting—and perhaps years beyond counting, as his algebra lessons grow exponentially from student to student, generation to generation, and from equations to equality.