



Lawrence King, Editor

Special points of interest:

- Google Steps Up
- Support for ESEA
- 2015 NIHOF Inductees
- Minorities in Mainstream Technology

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STEM NEWS

Perceptions Impact Risk to Students

For girls, as with boys, the failure to receive a high school diploma often places individuals on a pathway to low-wage work, unemployment, and incarceration. The imposition of harsh disciplinary policies in public schools is a well-known risk factor for stunted educational opportunities for Black and Latino boys.

Such punishments also negatively affect their female counterparts, as do other conditions in zero-tolerance schools. Yet, the existing research, data, and public policy debates often fail to address the degree to which girls face risks that are both similar to and different from those faced by boys. This silence about at-risk girls is multidimensional and cross-institutional. The risks that Black and other girls of color confront rarely receive the full attention of researchers, advocates, policy makers, and funders.

As a result, many educators, activists, and community members remain under-informed about the consequences of punitive school policies on girls as well as the distinctly gendered dynamics of zero-tolerance environments that limit their educational achievements. *Black Girls Matter: Pushed Out, Over policed, and Underprotected* endeavors to shine a spotlight on the various factors that direct girls of color down dead-end streets while obscuring their vulnerabilities.

Source: AFRICAN AMERICAN POLICY FORUM

www.aapf.org // info@aapf.org



Elementary and Secondary Education Act – ESEA

As a part of 90 organizations from across the country **DEBLAR & ASSOCIATES, INC.** has signed a letter to Senate Health, Education, Labor, and Pensions Committee leaders to support STEM education as a priority. The letter is signed by a diverse array of local, state, and national organizations that includes teacher and education groups, and professional and civic societies, and major corporations.

STEM jobs make up 20% all jobs today and the top 10 bachelor-degree majors with the highest earnings are all in STEM fields. Despite the growth in STEM jobs, the U.S. is still falling behind. The percentage of U.S. companies who are unable to hire due to the growing skills gap has jumped from 14 percent in 2010 to almost 40 percent in 2013. At the same time, by the 4th grade, only 13% of African-American, 29% of Hispanic, and 40% of White students are considered “proficient” in math, with similar results for science. These numbers all go down by the 8th grade.

Our letter calls for states to assess performance in math and science and incorporate rigorous standards. It also urged a high priority to funding STEM education related programs in teacher quality and recruitment.

"Thanks Larry! Your newsletter was excellent, as always! "

Linda Patterson, Science Department Chair, Wheeler High School and The Center for Advanced Studies Magnet,

"The idea of STEM education is a big deal for America's history and future. It is one thing to have students read about engineering, but something else when they experience it for themselves." **Peter Buca**, President Fluid Connectors—Parker Hannifin Corp

Why we keep beating the STEM Drum

Researchers at the Educational Testing Service, which is based at Princeton, recently set out to [measure the literacy, numeracy, and problem solving in technology-rich environments skills of workers aged 16 to 34 in 23 countries](#) with a test called the **Program for the International Assessment of Adult Competencies (PIAAC)**. Their findings showed that American students were poorly equipped for the modern-day workforce, lacking in every category of skills development required for success.

"One central message that emerges from this report is that, despite having the highest levels of educational attainment of any previous American generation, these young adults on average demonstrate relatively weak skills in literacy, numeracy, and problem solving in technology-rich environments compared to their international peers,"



Google Makes a Move

Google is backing a new pilot program from **CODE2040** in three cities. Starting this year in Chicago, Austin and Durham, N.C., the San Francisco nonprofit will give minority entrepreneurs in each city a one-year stipend and free office space.

Code2040 is a nonprofit founded in 2012 that focuses on getting more African Americans and Hispanics into the tech workforce. It has graduated nearly 50 fellows, many of whom have gone to work for companies such as Facebook, LinkedIn and Uber. The group's name refers to the year the population of minorities in the U.S. is expected to overtake whites.

While building their start-ups, the three **CODE2040** entrepreneurs in residence will build bridges to technology for minorities in those communities. While admirable, building a student pipeline of future techie entrepreneurs would be a way to insure sustainability.

According to a 2012 report by the National Survey of Science and Mathematics Education, science is taught daily in only one out of five classrooms in kindergarten through third grade. When science is taught, students frequently spend little time on it — the average student receives approximately 19 minutes of science instruction per day.

Request for reader Input

Over the years we have been involved in creating opportunities for minority youngsters to enter science and engineering career paths, we have noticed that many college graduates lack quality information when preparing for job interviews.

We are planning to develop a resource to address our concern to help these entrants to our technical workforce and request your assistance.

We have our thoughts and ask that you offer two or three questions that science or engineering entry level applicants need to be prepared to answer during interviews? Also, if there is a general statement of your perspective of the value of such a resource we might use, we will provide you or your organization recognition in the completed booklet.

Please provide your input to **Dr. Deborah King**, DEBLAR & Associates, Inc. kdeb24@bellsouth.net If you have any questions, she may be contacted at 770.319-8189.

"Equity is such an important, cross-cutting issue in all of the things that need to be done. We're at a time in our history when we need to make clear that Latino, African-American, Native-American attainment is about our collective well-being in the country — not simply a matter of social justice for those groups."

Jamie Merisotis, Lumina Foundation

Why Our Classrooms Benefit From Minority Teachers

The number of minority students enrolled in U.S. schools is growing at a rapid rate, yet student enrollment is not matched by minority teacher representation. The **National Center for Education Statistics** tells us that nearly 82 percent of public school teachers are white -- and Black and Hispanic students are two to three times more common than teachers of the same ethnicity. The gap is typically the widest in areas of the country with high percentages of students of color.

The education gap is a serious obstacle our country faces - and I think that the "diversity gap" is a major part of our struggle. The education gap is staggering and it is hindering our country socially and economically. We have to find ways to get more teachers of color in the classroom. Students perform better when they can relate to their teachers, and teachers who can relate to their students are less likely to have a preconceived idea of how each student will perform. We need more teachers of color in our schools acting as strong role models for our minority students.

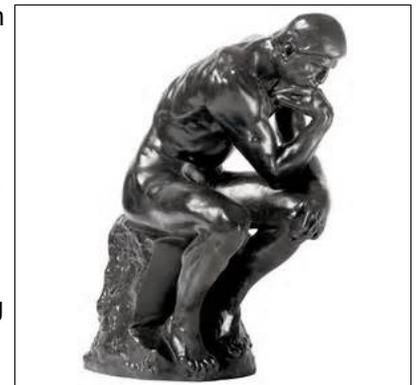
2015 Inventors Hall of Fame Inductees

May 12, 2015, the National Inventors Hall of Fame will induct a class of fourteen scientists and engineers that have brought innovation to useful purposes in the world and for our lives. Among the group are two African Americans and four women. The ceremony will be held at the Smithsonian.

The African Americans are;

Dr. Georgia Alcorn is recognized for his development of an X-Ray Spectrometer which allowed for the detection of radio signatures at a more distant and accurate rate than previously possible. Alcorn is also a founder of Saturday Academy, a weekend math-science honors program for inner-city middle school students

Dr. Charles Drew has been at long last recognized for his work on the storage of blood plasma and becoming the first Director of the American Red Cross Blood Bank. He is recognized for his work to create the surgical needle. Drew's research into the storage, processing, and shipment of blood plasma saved the lives of hundreds of Britons during World War II and it continues to save lives today.



The women are;

Dr. Kristina Johnson is honored for her work in Polarization Control Technology. She like Dr. Alcorn are also leaders in creating greater access for women and minorities in science and engineering. She produced work that formed the basis for 3D films, rear projection systems for televisions, digital mammograms, faster screening of pap smears for cervical cancer, and foundational work that has resulted in near-to-the-eye displays.

Marion Donovan is being inducted for her invention of the Waterproof Diaper cover. Unlike other products on the market, her product was made of a cloth that allowed the skin to breathe and also included snap fasteners instead of safety pins.

Dr. Edith Clarke is being recognized for the creation of a graphical calculator. Her invention greatly simplified the calculations necessary to determine the electrical characteristics of long electrical transmission lines. Among her accomplishments, Clarke was the first professionally employed female electrical engineer in the United States, the first female full voting member of what would become IEEE, and the first full time female professor of electrical engineering in the country.

Dr. Mary Dell Chilton is being inducted for her invention of the transgenic plants. Her groundbreaking research is the basis for one of the main methods used throughout modern plant biotechnology. Chilton built one of the world's leading industrial agricultural biotechnology programs, making it possible to develop crops with increased yields, resistance to insects and disease, and the ability to tolerate adverse environmental conditions such as drought.

MMST Celebrating Thirty Years of Success



Minorities in Mainstream Technology began 32 years ago for the purpose of increasing the number of minority students entering the University of Akron, who major in engineering or science and graduate. From a humble beginning with enrollment of less than three, 235 under-represented minority students are enrolled in the School of Engineering today.

The measure of success of MMST can be seen in the increases in Akron Public School minority science and math achievement, the underrepresented minorities enrolled in engineering majors at the university, and the graduation rate of these students that exceeds the national average for Black engineering students.

Spring of each year signals the Mayor's Award banquet to recognize academic achievement of Akron Public School students with a 3.2 gpa with interest in a career in a STEM field. The visionaries launching MMST were John David Jones— COO JDJA, William Graham-Akron Urban League, Joseph Coleman— Inroads, Dr. Louis A Hill— Dean College of Engineering, former mayor Thomas C Sawyer, and myself.

P.O. Box 723214
 Atlanta Georgia 31139
 Tel: 770.319-8189
 E-mail: info@deblarassoc.com

**"FRESH APPROACH TO
 PROFESSIONAL CONSULTING"**



The program is now managed by Dr. Julie Zhao, Director of the IDEAS program at UA. Mayor Donald Plusquellic has faithfully presented certificates of recognition to over 2100 of students since 1985.

The longevity of this program is a testimony to the vision we had, the investment of resources from the university, and the commitment of the Office of Mayor.

Mayor Donald Plusquellic and King

Vital to the sustainability of the MMST program are those who steadfastly work behind the scenes, motivating and encouraging students, insuring commitment of the University of Akron administration, and coordinating with community organizations and the Akron School System.

Dr. Julie Zhao, Director IDEAS Program, Joseph Coleman, and Dr. John Velaso, Associate Dean College of Engineering have kept the wheels on the vehicle, the interest high in the greater Akron community, and the commitment for continually living the vision of Dr. Louis A. Hill for a program that would endure and flourish.

With a freshman retention rate of 80%, MMST has and will continue to be a pathway for underrepresented minority students into higher education pursuit and achievement and into careers in business, medicine, and a host of industries across Ohio and America.

