

Original Members of our K-12 Math and Science Acceleration Team

Dr. Diane Briars is Senior Program Officer for Pittsburgh Public Schools' math and science curriculum. Dr. Briars is responsible for systemic reform of the district's math and science curriculum using research-based materials and reforms. She has been the recipient of two consecutive NSF grants. Dr. Briars has several publications and has been asked to sit on several advisory boards around the country.

Professor James Middleton is presently Division Director, Curriculum and Instruction; Associate Professor in Mathematics Education; and Associate Director, Center for Research on Education in Science, Mathematics, Engineering, & Technology at Arizona State University. His teaching interests include mathematics methods for elementary and middle school teachers and graduate courses in children's mathematical thinking and technological innovation, and his research interests focus on motivational processes in education, children's mathematical thinking especially in the area of rational number and geometry, and technological innovation in mathematics instruction and assessment. Professor Middleton has

Dr. Shemeca Crenshaw, principal at predominately black Westinghouse High School in Pittsburgh, has been identified also as an excellent math teacher.

Ms. Sarah Darden, of Dayton, Ohio, was formerly named public school Teacher of the Year. Presently, she is lead teacher of the Urban League's Academic Enrichment Program which emphasizes working with students and parents to accelerate achievement in math and science across grades 7-12. Enhanced classroom grades and standardized scores have been documented.

Dr. Regina Holly is principal at the predominately black Lincoln Elementary School in Pittsburgh. Under her leadership, AYP targets under NCLB have been met the last four years in reading and math; Lincoln has been the highest achieving predominately black elementary school in the district; and a higher proportion of Lincoln's students enroll in the Scholars Program than in any other black school in the district.

Dr. Junlei Li, Carnegie Mellon University, a developmental psychologist with an interest in cognitive processes involved in science learning.

Professor Ken Koedinger of Carnegie Mellon University is co-director of the Pittsburgh Science of Learning Center and has deep experience in both mathematical cognition and instruction. He has been in charge of developing algebra tutors that is in very wide use in high schools.

Elida Laski, Ed.M. of Carnegie Mellon University is a doctoral candidate in the developmental psychology program under the supervision of Robert S. Siegler. She brings classroom teaching and professional development experience at the early childhood level in both urban and suburban public schools. She has an interest in cognitive processes involved in learning. Her current research focuses on children's numerical development, particularly how children develop an understanding of numerical magnitude.

Professor Lloyd Bond, a measurement and evaluation scholar at Carnegie Foundation and Stanford University, also brings high-end expertise in structural equations modeling.

Professor Jimmy Calloway, Georgia State University, has conducted evaluation research on youth at risk.

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Professor Rodney Hopson at Duquesne University has NSF support currently and has served recently on a NSF review panel.

Jerome Taylor, Ph.D., clinical psychologist, completed his doctoral training at Indiana University where his research focused on the neurotransmitter acetylcholine and HPA-axis activation. He then completed postdoctoral training in child and adolescent psychology at the Menninger Clinic. He has served as director of the Clinical Psychology Center and chair of the graduate program in Social Psychology at the

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<p>published numerous articles and book chapters. He has co-authored one book (Middleton, J. A., & Goepfert, P. (1996). <i>Inventive Strategies for Teaching Mathematics: Implementing Standards for Reform</i>. Washington, DC: American Psychological Association.), and he has a second book in preparation (<i>Designing Mathematical Experiences for Elementary and Middle School Learners</i>. Book under contract with Houghton Mifflin & Co).</p> <p>Ben Roy, M.D., s graduate of Howard University Medical School with subsequent internship in internal medicine, residency in psychiatry, and clinical fellowship in neuropharmacology, has conducted research in neuroimmunology and psychoimmunology with particular applications to human antibodies for β-endorphin; opiate receptors; somatostatin; dynorphin, neuropeptides, and staphylococcus. He holds two patents for his research applications in this field. Dr. Benjamin has assembled an impressive range of internet resources that have been used to pique the interest of students and their parents in various scientific fields such as math, biology, chemistry, and astronomy with specialized attention in most of these fields to little known contributions from people of color.</p> <p>Distinguished Professor Abdulalim Shabazz is the former chair of math</p>	<p>Ms. Terri Knaebel is a science teacher at Sterrett Elementary School in Pittsburgh. She has success with all students and is sensitive to the racial achievement gap. Ms. Knaebel is considered a “teacher leader” in the district and has presented at inservices and served on curriculum committees. There is great respect in the district for Ms. Knaebel’s teaching abilities.</p> <p>Ms. Afiya Madzimoyo has designed culturally sensitive and instructionally effective methods for introducing math progressions with African American students.</p> <p>Teaching Fellow Robin Shoop, Educational Outreach Advisor at Carnegie Mellon University’s Robotics Institute, teaches robotics in the Pittsburgh Public School system at Schenley High School the first three periods of the day and works at Carnegie Mellon University the rest of the day. This provides a testbed where results may be measured. Schenley has a 75 percent minority population. He also has contacts of teachers in minority schools across Southwestern Pennsylvania. The Robotics Academy at Carnegie Mellon features an online curriculum for teachers is structured to conform with National Science Standards. Evaluation studies indicate that this curriculum is associated with accelerated rates in the academic of students exposed to it.</p>	<p>Dr. Edwin Nichols, retired administrator with the National Institute of Mental Health, has had longstanding experience nationally and internationally with children of African ancestry. His general interest in epistemology in this application would entail understanding how African American students acquire math and science knowledge.</p> <p>Professor Leona Schauble, a cognitive developmental psychologist at Vanderbilt University, has conducted research on the relations between everyday reasoning and more formal, culturally-supported, and schooled forms of thinking, such as scientific and mathematical reasoning. Also she has conducted research on the design and study of instruction.</p> <p>Dr. Christian Dieter Schunn of the University of Pittsburgh’s Learning, Research, and Development Center is co-director and the large SCALE grant with Professor Lauren Resnick. This project works with schools (Wisconsin is a partner) on science. Dr. Schunn has a strong research record in the cognitive science of problem solving. For someone relatively junior, he is very well known in the applied world of cognitive science.</p>	<p>University of Pittsburgh where he has held faculty appointments in psychology, education, and Africana Studies. In psychology, he was chair of more than 25 dissertation committees of black students—historically the record number of black PhD’s supervised by any faculty member in Pitt’s department of psychology. On the clinical side, he has developed 33 primary, secondary, and tertiary intervention protocols for children, families, neighbor-hoods, and communities. On the methodological side he has drawn heavily on psychometric theory in introducing 24 assessment instruments for children, families, neighborhoods, and communities and on structural equation theory in developing, testing, and revising alternative models of health and illness outcomes and disparities. He is currently chair of the Committee on Common Causation which includes an interdisciplinary team of 22 scholars from five predominately white and four historically black institutions. Here he has collaborated with members of the committee in publishing studies on how three foundational constructs—cultural, spiritual, and axiological—affect a wide range of health outcomes and disparities: physical (diabetes and cardiovascular risks), mental (depression, anxiety, aggression), and social (under-achievement, delinquency, community violence, teenage sexuality). His work has been</p>
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<p>departments at Atlanta University, Clark Atlanta University and Lincoln University, where he currently teaches. Professor Shabazz began his graduate teaching career at Atlanta University (now a part of Clark Atlanta University) in 1957, where he found only two students pursuing master's degrees in mathematics. During the next six years, he recruited and graduated 109 students with master's degrees in mathematics. Of this group, 30 went on to earn doctoral degrees from some of the Nation's leading universities. In 1986, Professor Shabazz returned to join the faculty at Clark Atlanta University. Within six years, 155 undergraduate students were majoring in mathematics at Clark Atlanta University. He has personally been credited with training directly and indirectly nearly half the Blacks who earned doctorate degrees in mathematics in the United States. The Mathematical Association of America cited that department as one of the top 10 for students in America. President Clinton awarded Professor. Shabazz with a National Mentor award in September 2000. In 2001, the Association of African American Educators awarded Shabazz with its Lifetime Achievement Award for outstanding work with African Americans in mathematics.</p>	<p>Ms. India Wright-Myles is a chemistry teacher at Peabody High School in Pittsburgh. India has success with at risk students and has been a member of the National Academy of Curriculum Leadership. She is currently piloting a reform-based curriculum in chemistry</p>		<p>recognized by the Chancellor of the University of Pittsburgh</p> <p>(Distinguished Public Service Award for his work in the community), the Association of Black Psychologists (Distinguished Research Award for his work on the development of assessment instruments and intervention protocols for black families and communities), former Pennsylvania Governor Tom Ridge (for developing one of the three best violence prevention interventions in the State), and former President Bill Clinton (letter of commendation for his work with families and communities) Also the Center for Family Excellence which he founded and directs has been recognized as one of the best managed non-profit organizations in the region (Alfred W. Wishart Jr. Award).</p>
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