Highly Successful Schools or Programs for K-12 STEM Education Committee Biosketches

Adam Gamoran (CHAIR) is the John D. MacArthur professor ofsociology and educational policy studies and the director ofthe Wisconsin Center for Education Research at the University ofWisconsin-Madison. His research focuses on inequality in education and school reform. His most recent edited works are *Standards-based reform and the poverty gap: Lessons for No Child Left Behind* (Brookings Institution Press, 2007) and, with Yossi Shavit and Richard Arum, *Stratification in higher education: A comparative study*(Stanford University Press, 2007). Current studies include two large-scale randomized trials: the first, supported by the NSF, focuses on the impact ofprofessional development to improve teaching and learning in elementary science in the Los Angeles Unified School District; the second, supported by the National Institute for Child Health and Human Development, examines the impact ofa parent involvement program to promote family-school social capital and student success in school districts in San Antonio and Phoenix. With support from the U.S. Department ofEducation's Institute ofEducation Sciences, he also directs an interdisciplinary training program that prepares social science doctoral students to conduct rigorous research on pressing problems of education policy and practice. Dr. Gamoran is a member ofthe National Academy ofEducation, and he has served on various NRC committees, including the Board on Science Education. Currently he chairs the congressionally-mandated Independent Advisory Panel ofthe National Assessment ofCareer and Technical Education for the U.S. Department ofEducation. Dr. Gamoran earned his Ph.D. in education from the University ofChicago.

Julian Betts is professor ofeconomics at the University ofCalifornia, San Diego, research associate at the National Bureau ofEconomic Research, and an adjunct fellow at the Public Policy Institute ofCalifornia (PPIC). His research focuses on the economic analysis ofeducation. Dr. Betts has written extensively on the link between student outcomes and measures ofpublic school spending, including class size, teachers' salaries, and teachers' level ofeducation. More recently, he examined the role that standards and expectations play in student achievement. His current research includes studies ofschool choice, San Diego's controversial Blueprint for Student Success, and California's High School Exit Examination. He also serves on the board of directors ofthe Preuss School at UCSD, a charter school on the UCSD campus that admits disadvantaged students from the local area. Dr. Betts is currently serving on the Technical Review Panel for the Longitudinal Study ofNo Child Left Behind. Dr. Betts has served on two National Academy ofSciences panels, including (from 2005-2007) the "Committee on Evaluation ofTeacher Certification by the National Board for Professional Teaching Standards (NBPTS)". Dr. Betts obtained a B.A. in chemistry from McGill University, an M.S. in economics from Oxford University, Oxford, England, and a Ph.D. in economics from Queen's University, Kingston, Ontario, Canada.

Jerry P. Gollub (NAS)is professor in the natural sciences and professor ofphysics at Haverford College. He is a member ofthe National Academy ofSciences (NAS), a fellow ofthe American Academy ofArts and Sciences, and a recipient ofthe American Physical Society's Fluid Dynamics Prize and the Award for Research in Undergraduate Institutions. A past member ofthe NAS governing council, Dr. Gollub was co-chair ofthe National Research Council study Learning and Understanding: Improving Advanced Study ofMathematics and Science in U.S. High Schools. He has served on the board ofthe National Science Resources Center. His research is concerned with nonlinear phenomena and fluid dynamics. He is coauthor of *Chaotic Dynamics: An Introduction*, an undergraduate textbook. Dr. Gollub teaches science courses designed for a broad audience, including "Fluids in Nature," "Predictability in Science," and "Energy Options and Science Policy." He has been provost ofHaverford College and chair ofits Educational Policy Committee, and is also affiliated with the University ofPennsylvania.

He served as chair ofthe Division ofFluid Dynamics ofthe American Physical Society and as a member ofits executive board. Dr. Gollub has also been affiliated with the University of Pennsylvania since 1981, and in 2008-09 he served as Leverhulme visiting professor at the University ofCambridge and overseas fellow ofChurchill College. He has served on the editorial boards of *Physical Review Letters* and *Physics ofFluids* , and has been an invited columnist for *Physics Today.* Dr. Gollub received his Ph.D. in experimental condensed matter physics from Harvard University in 1971.

Glenn 'Max' McGee is president ofthe Illinois Mathematics and Science Academy. Prior to becoming IMSA's president, Dr. McGee served as superintendent ofthe Wilmette School District 39 in Wilmette, IL. He also previously served as senior research associate at Northern Illinois University Center for Governmental Studies, as state superintendent ofeducation in Illinois, and as a principal and teacher in several settings. He is a past chairman and current member ofthe board ofthe Golden Apple Foundation. He also serves on the board ofthe Illinois Association ofGifted Children and the Great Books Foundation. He is a member ofthe Governor's P-20 Council, the Diversifying Higher Education Faculty in Illinois Board, and the Museum ofScience and Industry's Advisory Council. Dr. McGee has researched high-achieving, high-poverty schools that have closed the achievement gap. Dr. McGee earned an M.A. and Ph.D. in educational administration from the University ofChicago.

Milbrey W. McLaughlinis David Jacks professor ofeducation and public policy at Stanford University, and director ofthe John W. Gardner Center for Youth and Their Communities. Her research combines studies ofK-12 U.S. education policy and work on the broad question of community-school collaboration to support youth development. Her research on public education focuses on how school teaching is shaped by "context" issues such as organizational policy, and the social-cultural conditions ofthe schools, districts and communities. Dr. McLaughlin is involved with local efforts to engage whole communities (schools, community organizations and agencies, parents, faith-based institutions) in developing new strategies for promoting youth development. Dr. McLaughlin is co-director ofthe Center for Research on the Context ofTeaching, an education research center that analyzes how teaching and learning are shaped by their contexts and the connection between teacher learning communities and educational reforms. Dr. McLaughlin has served on numerous NRC committees, including the Committee on Adolescent Health and Development and the Committee on Community-Level Programs for Youth. She earned her Ed.M. and Ph.D. in education and social policy from Harvard University.

Barbara M. Means is the co-director ofthe Center for Technology in Learning at SRI International. She directs SRI's study ofscience learning in California afterschool programs and a national study ofhow schools are using student data to inform instructional decision making. Dr. Means' research focuses on ways to foster students' learning ofadvanced skills through the introduction oftechnology-supported innovations. She led the recently completed comprehensive meta-analysis ofresearch on the effectiveness ofonline learning for the U.S. Department ofEducation. Other recent work includes a synthesis ofcognitive, curriculum, and intervention research on secondary mathematics learning and an examination ofhigh schools with a science, technology, engineering, mathematics (STEM) focus. Dr. Means served as a member on the NRC's Board on Testing Assessment and on the Committee on Developments in the Science ofLearning, which produced the volume *How People Learn.* Her published works include the edited volumes *Evaluating Educational Technology, Technology* and *Education Reform,* and *Teaching Advanced Skills to At-Risk Students.* Dr. Means co-authored *The Connected School* and *Comparative Studies ofHow People Think*. Dr. Means earned her A.B. in psychology from Stanford University and her Ph.D. in educational psychology at the University ofCalifornia, Berkeley.

Steve A. Schneider is program director of WestEd's Science, Technology, Engineering, & Mathematics program and serves as the principal investigator of the NSF Center for Assessment and Evaluation of Student Learning (CAESL). CAESL is designed to improve student learning and understanding in science through focusing on effective assessment. WestEd is responsible for overall management of CAESL and leads the professional development for practicing teachers. Dr. Schneider also directs the California K–12 Mathematics Implementation Study, the National Assessment Governing Board's 2009 National Assessment of Educational Progress (NAEP) science framework development project, and the 2012 National Assessment of Educational Progress Technological Literacy framework project. He and his fellow NAEP Framework Team members received WestEd's Paul D. Hood Award for Distinguished Contribution to the Profession for their work developing the NAEP science framework. He is the lead evaluator of numerous large-scale evaluation efforts for NSF and the U.S. Department of Education. He has over 35 years of science, mathematics, and technology education experience, including K–12 pre-service teacher education at Stanford University and the University of California, Santa Cruz; high school science teaching in biology, physics, and oceanography; and planning and conducting teacher and administrator professional development. Dr. Schneider received a Ph.D. in the design and evaluation of educational programs with an emphasis in science, mathematics, and technology education from Stanford University. In addition, he has a State of California Life Teaching Credential from California State University, San Jose.

Jerry D. Valadez is director of the Central Valley Science Project at California State University, Fresno. Along with 30 years experience in education as an assistant superintendent, school site administrator, supervisor, curriculum coordinator, program director, instructor and science teacher, he has authored or co-authored significant grants and research pertaining to the preparation of science and mathematics teachers, professional development, teacher quality, student support, English learners, and systemic reform in STEM education. He served as K-12 science coordinator for 15 years with Fresno Unified School District and directed several NSF grants including the Fresno Systemic Initiative, USI, LSC, and USP. He also served as director of the Fresno MSP; and PI on an NSF Informal Science Project and Congressional FIE project. Dr. Valadez served a 3-year appointment with the National Academy of Science as a member of the Committee On Science Education (COSE) and the Congressional Commission for STEM Education in the 21st Century. He served as president of the National Science Education Leadership Association and on numerous committees and task forces for the National Science Teachers Association. In partnership with California State University, Fresno, he also participated in the leadership of award winning efforts in preservice teacher preparation, including the Science and Math Preservice Partnership Program (SMP^3 -97-01), and the Fresno Collaborative for Excellence in Teacher Preparation (00-04). In 2001 he served as special advisor to South Korea with AAAS in developing the first joint international high school summer science academy; 2009 delegate to China to discuss Climate Change policy; 2010 delegate to Shanghai to the first US-Sino STEM Education Symposium; and Chair of the 2011 National Conference on Science Education. Dr. Valadez has specialized training in assessment, evaluation, curriculum, science and technology education, and English Language acquisition. He has a Ph.D. in educational leadership, with a concentration in science education. He earned his M.A. in administration and evaluation. He also holds a professional administrative services credential, a single subject credential in Life Science and Chemistry, and degrees in Animal Science, Biology, and Chemistry.