CEOSE Advisory Committee Virtual Meeting
June 11-12, 2020
Meeting Minutes

Day 1: June 11, 2020

Welcome, Introductions, Opening Remarks

Dr. Jose D. Fuentes, CEOSE Chair, opened the meeting with special greetings to all, pointed out the meeting goals, and welcomed the new CEOSE members. After the CEOSE members introduced themselves, opening remarks were shared by the CEOSE Chair and Vice Chair, highlighting the Executive Meeting with the NSF leadership and the proposed ideas for the 2019-2020 CEOSE report to Congress.

Report of the CEOSE Executive Liaison

Dr. Suzanne Iacono, CEOSE Executive Liaison and Head of the Office of Integrative Activities provided an update of selected NSF activities and relevant broadening participation events/projects. She highlighted the funding rates for FY 2019 proposals, leadership change in the MPS Directorate, CISE's fellowship program for Postdocs, the upcoming meetings of ERE and EPSCoR, and NSF's internal committees and public webpage related to COVID-19. She pointed out that NSF has support over 600 RAPIDs and EAGERs to advance the knowledge base about the COVID pandemic. CEOSE would like to have more information about these awards in terms of the demographic data of the PIs and how projects are addressing issues of disparities, diversity, inclusion, etc.

Panel: BP Implications of Institutional Practices and COVID-19

A special feature of the June meeting was a panel focused on the impact of COVID-19 on minority serving institutions. The panelists were:

- HSIs – Dr. Anne Gates, Professor and Chair of the Computer Science Department, University of Texas at El Paso
- TCs – Dr. Robert Megginson, CEOSE Member
- HBCUs – Dr. Vernon Morris, CEOSE Member
- EPSCoR – Dr. Loretta Moore, Section Head of EPSCoR/OIA/NSF

Dr. Gates pointed out that COVID-19 exposed several inequities, especially in the areas of access to laptops, broadband, and appropriate study environments. The loss of job security greatly impacted student internships. Other challenges included learning 1) how to have high impact as universities transition to a virtual world and what adjustments are needed to ensure that students know the processes of how to move forward in receiving a high quality education and 2) how to effectively use digital tools

to be competitive in a global setting. Dr. Gates noted that there are new opportunities to incentivize community engagement, enhance education with on-demand collaborative environments, and extend access for virtual research and professional experiences. The response of the higher education community must: include more flexible academic pathways, promote collaborative team building, focus on skills that are needed in an increasingly automated workplace, and provide social-behavior support services.

Dr. Megginson directed CEOSE's attention to a message from the American Indian Higher Education Consortium that described the pandemic as a "tremendous, disruptive change that is requiring TCUs to move to online learning." Most TCUs have little on-line teaching capabilities and nearly all lack the needed IT infrastructure. He shared information about the instructional status of 32 of the 40 TCUs, and in several cases, he pointed out the unique role of instruction in serving the community. In addition to helping students deal with remote learning, these institutions had to address student support services related to funding for travel and access to housing and food. He pointed out the important role that NSF can have in helping with the IT infrastructure needs of TCUs.

Dr. Ross discussed the multiplying effects for some HBCUs due to the state of unrest in urban communities and that the timing of the campus shutdown at Howard University was during Spring Break, confounding unexpected costs in a very short period of time with students having to make fast decisions. The situation revealed poor communication, limited readiness, and inflexibility to deal with catastrophes. Other specific challenges included limited access to on-line connectivity, limited or no access to student support services, issues related to quality of instruction, faculty attrition, and disruption to immersive mentoring and research experiences. He also pointed out that the unstable environments created by COVID-19 require new models for the delivery of STEM research and education.

Dr. Moore, noting that EPSCoR jurisdictions have varying racial diversity and a diversity of MSIs, discussed how limited access to the Internet, no laptop or home computer, modest income, and family responsibilities are contributing to underrepresented minority students falling behind during this current period of distance learning. To counter these and other COVID-19 challenges, she shared that EPSCoR resilience strategies have included the following:

- Revising project strategic plans to adapt timelines due to the COVID-19 disruptions
- Conducting outreach initiatives and summer undergraduate research activities using virtual technologies, if possible
- Keeping project personnel, including students, employed on non-laboratory projects while labs are closed or open with limited operations
- Supporting rural and MSI Internet connectivity via EPSCoR's Inter-Campus and Intra-Campus Cyber Connectivity investment.

She stated that jurisdiction-wide projects have flourished with investments in virtual communication tools to link education institutions, from research institutions to MSIs.

Following the panel, other CEOSE members freely shared their own institutional experiences during the current pandemic. For example, Dr. Juan Gilbert shared diversity tips from his statement, "Guidelines for Diversity and Inclusion in Crisis" (http://www.juangilbert.com/CrisisGuidelines.pdf).

Presentation: NSF INCLUDES Update

Dr. Sylvia James, Deputy Assistant Director/Directorate for Education and Human Resources, provided the briefing about the progress of NSF INCLUDES—an investment portfolio comprised of launch pilots, conferences, EAGERs, supplements, co-funded projects, alliances, and a coordination hub. Active funding opportunities included the solicitations for planning grants (#19-600) and alliances (#20-569). Some of the specific awards highlighted were the intersectionality work of the Computing Alliance of Hispanic-Serving Institutions, the MSI-led SEAS Islands Alliance supporting emerging aquatic scientists, and the engagement of disabled individuals and communities in sign-related technology at Gallaudet University. She also emphasized partnership efforts with NASA and the Department of Education. Forthcoming efforts include the shared measurement framework for the National Network, the STEM Diversity and Inclusion Video Exhibition, and the Special Report to the Nation.

CEOSE members would like for NSF INCLUDES to make more visible the economic drivers for workforce development and advancement. Members appreciated the sharing of exemplary projects related to current CEOSE themes.

CEOSE Discussion

An overview of the next CEOSE Report was given by Dr. Alicia Knoedler, CEOSE Vice Chair. Comments included the following. A single recommendation that is bold would be powerful and need to be in the context of "how do we do better." A key message is that broadening participation is a solution for transformational change in the STEM enterprise. It is okay to connect actions to leadership and point out that the impacts of diversity tend to be invisible to institutional leadership.

Dr. Jose D. Fuentes, CEOSE Chair, reminded the Committee of the plans for the next day and began the discussion of possible topics to share with NSF leadership. Initial thoughts included: highlighting what is exceptional about NSF INCLUDES, stressing intersectionality and the work of the ADVANCE program, calling attention to invisible gaps such as missing people and vulnerable groups, and pointing out the need for infrastructure programs/activities to address issues of inequities.

Day 2: June 12, 2020

Welcome and Recap of Day One

Dr. Jose D. Fuentes, CEOSE Chair, opened the meeting, provided a summary of the first day, and reviewed the agenda for Day 2. He also organized the discussion points for the upcoming leadership session with the NSF Acting Director.

Working Session: CEOSE 2019-2020 Report

The working session focused on the 2019-2020 CEOSE report and was facilitated by Dr. Alicia Knoedler, CEOSE Vice Chair and Dr. Kaye Husbands Fealing, CEOSE Biennial Report Co-Lead. Potential areas to be addressed in the forthcoming report included the need for more diverse leadership in STEM, an increased focus on being responsive to issues of intersectionality, increased awareness of the role and contributions of MSIs to STEM workforce and innovation, and the need for better and more innovative measurement tools to address data issues. Previous CEOSE meetings had special presentations on these various areas, and this meeting continued the discussion on diverse STEM leadership.

Members pointed out the need for a cultural change to address false narratives about people of color and leadership selection bias due to misperceptions. One member noted what can be discussed as the invisibility of culture and its influence; another member explained it as being two-fold: "I'm standing in front of you and you don't see me. I am not in front of you and you don't notice." Mid-career was identified as a danger zone when future/aspiring leaders need mentoring, coaching and sponsorship. Members agreed that NSF has a role in promoting both informal and positional leadership opportunities.

Reports of the CEOSE Executive Liaisons

After the lunch break, several CEOSE Liaisons shared highlights of their work with the Directorate Advisory Committees. Relevant broadening participation topics included the following. Dr. Gilda Barabino commented that the ENG AD Com is intrigued with the CEOSE's messaging of making visible the invisible. Dr. Barbour reported that the no deadline requirement in BIO has resulted in increased funding rates due to fewer proposals and that more information is needed about who is not applying. Dr. Charles Isbell reported on CISE's welcoming of the new AD and the impact of the virus on the CISE community. Dr. Lydia Villa-Komaroff highlighted SBE's new opportunity, Build and Broaden Majority-Minority Institution Collaboration, ensuring mutually benefitting engagement for MSIs. Dr. Nai-Chang Yeh discussed OISE's response to the US relationship with China and the visa situation for Chinese students. Dr. Jose D. Fuentes reported on GEO's need to move beyond the awareness of the importance of a more diverse GEO workforce to the need for actions and strategies to produce and advance diverse geoscientists. Dr. Kaye Husbands Fealing pointed out that the EHR's AC is ensuring that equity, diversity, and inclusion are fundamental principles for thinking about STEM education of the future.

Discussion with NSF Acting Director and Chief Operating Officer

Dr. Kelvin K. Droegemeier, NSF Acting Director and Dr. Fleming F. Crim, NSF Chief Operating Officer had a rich discussion with CEOSE about several broadening participation concerns. Dr. Droegemeier thanked CEOSE for their commitment and service to the STEM enterprise and applauded them for having the attention of Congress via the recent and upcoming CEOSE reports. After providing some update about the NSF budget, leadership positions, and telework flexibilities, Dr. Droegemeier stressed the importance of broader impacts being an institutional responsibility with a strong emphasis on scaling up broadening participation activities. He also noted that data in the recent agency MSI report indicated that these institutions receive approximately 13% of IHE funding and that we need to work

together to find strategies to increase this percentage. He challenged the Committee to consider solutions to "move the needle" in a big way.

CEOSE called attention to several of NSF successful and/or emerging efforts (e.g., the ADVANCE program focusing on women of color, the use of infrastructure programs to address the digital divide). On the other hand, members commented that NSF must be a change agent in promoting cultural change in majority institutions as well as use data to hold the research community accountable for equity, diversity, and inclusion. Additionally, NSF leadership expressed support to CEOSE for "leaning in" on the leadership challenges, agreeing that the nation cannot afford to lose any STEM talent.

Panel: From Leadership Development to Leadership at the Top

Dr. Bruce DeRuntz, NSF Principal Investigator and Director of the Leadership Development Program in the College of Engineering at Southern Illinois University Carbondale (#1644166-Pathways to STEM Leadership Careers) presented a student leadership model that is answering the call from industry for work-ready STEM graduates who are future technical leaders. Pathways to STEM Leadership Careers, funded by EHR, is a relationship-based, social interdependency approach emphasizing mentoring, tutoring, and improvement of both the community and the environment. Over 15 student-led projects per years are developed and implemented in three phases: 1) learning about leadership and how to lead, 2) learning how to become a high performing team member, and 3) learning how to lead a team.

Dr. Robert Kirsch, NSF Co-Principal Investigator and Faculty of Leadership and Interdisciplinary Studies at Arizona State University and Rebecca Batchelor, NSF Co-Principal Investigator and Education and Outreach Associate at Colorado University-Boulder, described the GEO-funded Sparks for Change award. The project used a triad model of connecting junior faculty interested in broadening participation ("sparks") with more senior partners in the same or other departments within the college ("partners") and experienced broadening participation experts ("sponsors") to drive change needed to increase diversity in the geosciences. An important feature of this model is the use of action plans to focus efforts and spark change, providing a clear structure to align diversity/equity/inclusion goals with actions and metrics.

Announcements, Closing Remarks, and Adjournment

The Vice Chair will continue to work on a compelling visual for the upcoming report and members will continue to share relevant reading materials to help crystalize the ideas and recommendation(s) of the 2019-2020 CEOSE report. The aim is to have draft sections of the report by the Fall meeting. The next meeting will be a two-day virtual meeting in October 2020. The Committee will continue to explore the possibility of a future workshop on diverse STEM leadership.

The CEOSE Chair adjourned the meeting.

Committee on Equal Opportunities in Science and Engineering (CEOSE)
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June 11 – 12, 2020
National Science Foundation
Alexandria, VA 22314

MEETING PARTICIPANTS

CEOSE Members Present
Dr. Jose D. Fuentes, CEOSE Chair, Pennsylvania State University
Dr. Alicia Knoedler, CEOSE Vice Chair, Exaptive, Inc.
Dr. Gilda Barabino, CCUNY
Dr. Suzanne, Barbour, University of North Carolina at Chapel Hill
Dr. Ryan Emanuel, North Carolina State University
Dr. Juan Gilbert, University of Florida
Dr. Kaye Husbands-Fealing, Georgia Institute of Technology
Dr. Charles Isbell, Georgia Institute of Technology
Dr. Daniela Marghitu, Auburn University
Dr. Robert Eugene Megginson, University of Michigan
Dr. Vernon Morris, Howard University
Dr. Lydia Villa-Komaroff, Intersections SBD
Dr. Nai-Chang Yeh, California Institute of Technology

CEOSE Member Absent
Dr. Gabriel Lopez, University of New Mexico

CEOSE Designated Federal Officer – Executive Liaison
Dr. Suzanne Iacono, Office Head, OIA/OD/NSF

CEOSE Executive Secretary
Dr. Bernice Anderson, Senior Advisor, OIA/OD/NSF

CEOSE Scientific/Technical/Administrative Staff
Ms. Una Alford, Program Analyst, OIA/OD/NSF
Mr. Steven Buhneing, Communications Specialist, OIA/OD/NSF
Mr. John P. White, IT Specialist, OIA/OD/NSF