INTRODUCTION AND STATEMENT OF NEED

According to the United States Department of Education (2020 Matrix), there are 436 Hispanic Serving Institutions (HSIs) around the country educating nearly 70% of all Latinx students who are enrolled in higher education (Excelencia in Education 2020). Title V of the Higher Education Opportunity Act and the HSI Program at the National Science Foundation, among other federal agencies, provide critical support to institutions defined by enrollment of Latinx students. These funding streams are meant to improve educational attainment and graduation rates as well as improve the quality and capacity of undergraduate STEM education at HSIs. These easy-to-measure and report metrics (i.e., retention, persistence, and graduation rates) insufficiently reflect service to diverse students in some cases, and mask institutional cultural advantages and deficits in other cases. This conference will pose and begin to answer a critical and timely question: How do we measure progress toward becoming an institution that serves the diverse set of students at HSIs?

The goal of this proposed conference is to develop a series of measures that reflect institutional change specific to HSIs. In order to improve the likelihood of institutional success of HSIs, this conference aims to develop a consensus definition of institutional change specific to the goals of the HSI Program and then a set of measures to reflect successful change. In the ideal, the measures will be developed with respect to the diversity of institutional types (Nuñez et al. 2016) and focus on outcomes related to:

1. research development and success (including research collaboration and networks);
2. faculty engagement with STEM curricular change and students;
3. faculty success measures
4. STEM undergraduate student success measures
5. community engagement
6. diverse cultural engagement and recognition.

The measures should include quantitative metrics, qualitative case studies, and community experiences so as to provide nuance to the stories.

While there is prior work on measuring change at HSIs, it falls short of measuring broad-based institutional change at HSIs because, in part, that work focuses more on individual actions. For example, the Center for Urban Education’s instructive and useful Self-Assessment Toolkit is framed around how individuals or teams contribute to the process of change (see References). It is most appropriately used to measure how individuals, teams, and leaders contribute to the success of change efforts at HSIs. Individuals move around institutions and often that means programs change or even end; change at the institutional level helps us assess the sustainability of change. Excelencia in Education! also provides tools and incentives to become agents of change and to make meaningful change through a variety of programs including the Seal of Excelencia. The organization presents a collection of effective practices to improve education outcomes and attainment at HSIs. In fact, the PI was a co-lead on one of the first awards made by Excelencia on STEM learning at HSIs. The PI of that project and the PI of this project both moved on to other institutions and the program did not continue.
While professional development for change leaders at all levels of the institution of higher education is absolutely necessary to achieve the goals of the National Science Foundation’s HSI Program, it will not measure how substantive educational goals are achieved. The goals are to enhance the quality of undergraduate STEM education, build capacity for excellence in undergraduate STEM education, and increase retention and graduation rates of students at HSIs. We know that in order to accomplish those goals, we must seek change in all parts of the institution and understand the impact of those efforts. And that change must be absolutely intentional and threaded throughout the institution. Research has shown that the retention and graduation of Hispanic students in STEM, and from other diverse backgrounds, depends on institutional intentionality and commitment on an institutional level (Kelly et al. 2010; Kuh et al. 2008; and Quintero 2015). As such, measures and metrics about institutional change necessary to serve diverse students must be part of the change process.

Malcom-Piqueux and Bensimon’s incomparable Policy Brief (2015), Design Principles for Equity and Excellence at Hispanic-Serving Institutions, importantly draws out necessary elements of institutional change and gives concrete examples of practices that would constitute a changed institution. Harris and Bensimon (2007) also frame how to foster institutional change at HSIs, but not explicitly how to measure it. More recent work by Garcia, Nuñez, and Sansome (2019) has established a broader set of indicators of Hispanic “servingness,” aligned along various axes, such as outcomes, experiences, academic, nonacademic, organizational, and external. This proposed conference builds on that these frameworks to propose, test, and communicate measures and metrics of how multiple parts of the university contribute to student success and the STEM learning processes.

Why focus on institutional change? People continually change at institutions of higher education. Leadership is key but so is changing practice and process. If practices change to create new processes or structures, then the change is more likely to be lasting even if the leaders change. For example, if all STEM gateway courses must demonstrate cultural relevant curriculum and pedagogy, that is something that could and should be measured, especially the extent to which culturally relevant curricula and pedagogy become the norm at an HSI.

RECENT MEETINGS ON THE SAME SUBJECT

There have been no recent meetings on the subject that we have been able to find in our review. Several annual conferences (HACU, AHSIE) and some recent one-off conferences focus on transforming STEM undergraduate education at HSIs (e.g., the 90 minute ASCN Symposium Towards Servingness: Transforming STEM Education at Hispanic Serving Institutions (lead by Advisory Committee member Marla Franco). The annual HACU Deans’ Forum on Hispanic Higher Education was instituted in 2012, and typically addresses the potential for HSI leadership in enacting “servingness,” such as the upcoming forum on “From Hispanic Serving to Hispanic Thriving: A Blueprint for Success,” planned for November 2020. However, the specific issue of how to assess and measure institutional change across the institution has not been systematically addressed in the HSI community.

The HSI STEM HUB has a focus on program evaluation, but this is in reference to assessment of individual programs at HSIs, and not the HSI itself. While program evaluation is absolutely
essential to the change process at HSIs, or for that matter at any institution that is undergoing a change process, there has not yet been a focused attempt to measure how the institutions change business practices, curriculum, professional development, and many other aspects of institutional activity that contribute to serving the diverse set of students at HSIs.

A number of professional associations also provide professional development to individuals about becoming change leaders, but not about how the institutional processes will need to change to achieve the stated goals. Leadership development certainly helps us achieve change and developing measures of success will help us understand what has happened as a result of those efforts. The annual meetings of associations such as AAHHE, AHSIE, and HACU often offer leadership development and sessions around evidence-based assessments, but these do not focus on a broad-based measurement of how the institutions change. The very useful and insightful Excelencia in Education website has numerous examples of effective programs and activities.

Why now? As noted above, they are becoming increasingly diverse. As such, the conditions and activities necessary to construct meaningful and lasting change on each campus are also becoming more and more diverse. Older concepts of success developed in reference to the original set of HSIs may no longer be widely applicable. The US Department of Education began awarding “Developing HSI” grants in 1999 (55 recipients), with several federal agencies\(^1\) eventually following suit with a variety of grant mechanisms to build capacity, institute student and faculty programming, purchase equipment, and catalyze new research, among other activities, at HSIs. The NSF HSI STEM program joined this targeted effort more recently.

As funding has expanded in recent years, particularly with the advent of NSF funding, many institutions are beginning to institute pilots and new programming. For those to be successful, a much broader set of institutional changes will need to emerge around student and faculty success. While each federal program requires assessment and reporting of individual projects, little attention has been paid to measuring and identifying the totality of transformation that over two decades of HSI funding has yielded, and hopefully sustained.

As HSIs have become more prevalent, so has rigorous research on student success, minority serving institutions, and broadening participation in STEM more generally. This brings us to a current confluence in which we have a) a longitudinal sample of diverse institutions and HSI programming, b) a rich set of theoretical and methodological approaches to understand broadening participation and institutional transformation, and c) an engaged community of HSI scholars and practitioners poised to collaborate effectively and innovatively on developing new measures and tools informed by both theory and practice. The proposed conference therefore has the goal of bringing together these people and ideas to think deeply about how to measure the successes and remaining challenges after two decades of change at HSIs. The proposed conference will lead to the development of a set of measures that are specific to HSIs and specific to the institutional change necessary to improve diversity, equity, and inclusion in and around STEM education.

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1 Such as US Department of Agriculture, National Oceanic and Atmospheric Administration, Department of Defense, and National Endowment for the Humanities.
CONFERENCE CONCEPTUAL FRAMEWORK

This conference is based on several frameworks to support the work: CREDITS, Funds of Knowledge, impact evaluation, and “servingness”. The four frameworks together support how we will interact during the conference, how we will think about using knowledge based in homes and communities as fundamental for student success, and how we can evaluate results of institutional change efforts.

How we interact:
CREDITS stands for Center for Research, Excellence and Diversity in Team Science (HRD#1464064) and is a University of California and California State University collaboration to promote equity in research activities. PI has presented at the retreats at the administrator track and at the recent institute to talk about the social science behind effective change projects aimed at making institutions of higher education more equitable. Diversity on teams is known to have positive effects on creativity, innovation, and productivity. The proposed conference sessions will utilize principles of effective team science discussed and developed at those retreats to enhance the likelihood of innovative outcomes.

Honoring diverse cultural knowledge and engagement:
Funds of Knowledge (e.g., Gonzalez et. al 2005) is an approach to honor diverse backgrounds and knowledge such that they inform and improve the learning process. While this approach is often used in secondary schools, it is an excellent reminder of ways that faculty and staff may bring diverse backgrounds directly into the learning environment in STEM education as well. This will be proposed to the conference participants as one effective way of understanding the what multiple diverse populations bring with them to the institution and to their STEM learning.

Focus on impacts and outcomes:
Impact evaluation attempts to assess outcomes relative to a situation where the intervention has not occurred (e.g., Khandker 2009). The PI used a similar approach when conducting a portfolio analysis while a program officer at NSF and found statistically significant differences in faculty hiring, faculty advancement, and the demographic diversity of leadership between paired institutions with and without ADVANCE awards. In this case, it will be critical to benchmark changes relative to specific kinds of institutions, in particular the diverse types of institutions that constitute HSIs.

Adapting Servingness:
Garcia et. al (2019) propose a framework of “Servingness” that includes a list of Structures for Serving (see Figure 1). The framework suggests that those structures directly relate to academic outcomes and non-academic outcomes as well as the experiences within the structures. We use those structures as a starting point to measure the extent to which the institution is progressing to servingness and measure the extent to which the institutions' structures are changing. While the six areas to measure noted above do not map directly onto the structures below, the Framework of “Servingness” (Figure 1) is an excellent place to focus on institutional changes needed to achieve the goals of improving student outcomes and broadening participation in the STEM workforce.
For example, two areas that this conference will address (research development and success and faculty engagement with curricular change and students) are not included directly in Structures for Serving, but nonetheless are institutional changes necessarily embedded within the “HSI grants” category under the Structures for Serving list above. From an institutional change perspective, we will develop easily to calculate measures of how institutional and STEM departmental research networks are changing. Several potential metrics we can propose would relate to the inclusion of diverse students on awards and workforce outcomes, new institutional research networks, and who the PIs are on the STEM grants at HSIs. While it may be difficult for institutions to report on these kinds of measures, most institutions do have the capacity to monitor and evaluate the research enterprise. Then within the faculty engagement with curricular change and students area, some possible measures could be the extent to which STEM courses are actually changed in a lasting way to include culturally relevant curriculum and research-related pedagogy such as Course-Embedded Undergraduate Research Experiences (CURES) (also related to funds of knowledge). This would measure structural changes within the institution that would point to success. This is just one example of how the conference participants could develop new measures and tools by expanding on existing evidence-based frameworks.
CONFERENCE STRUCTURE

The chair of the advisory committee will be the PI, Beth Mitchneck, and members of the advisory committee include John Crockett, Associate Vice President for Research Advancement at the San Diego State University; Barbara Endemano Walker, Special Assistant to the Executive Vice Chancellor for Diversity Initiatives at the University of California at Santa Barbara; Anne-Marie Nunez, Professor, Department of Educational Studies at the Ohio State University; Marla Franco, Assistant Vice Provost, HSI Initiatives at the University of Arizona; Marie Mora, Provost at University of Missouri St. Louis and previously associate vice provost for faculty diversity at the University of Texas Rio Grande Valley. The advisory committee is intentionally small as the conference itself is not large. Crockett and Walker have worked together for over five years on the CREDITS project (Walker is PI), and Mitchneck has been included in that project for the last four years following her departure from NSF. They bring with them extensive experience in the formation and functioning of multi-disciplinary teams and institutional change. Nunez is a national scholar and expert on student success at HSIs. She will bring essential knowledge about the diversity of HSIs and the concept of servingness. Her focus on collaboration between faculty and administrators to advance inclusivity resonates well with the other members of the Advisory Committee and will be fully integrated into the conference. Franco is herself a practitioner scholar of student access and success at an HSI and has participated in conferences on STEM education at HSIs which will complement the expertise of other Advisory Committee members and participants. Mora brings tremendous long-term experience at HSIs including University of Texas Rio Grande Valley. Along with the PI, this group has substantial expertise in HSIs, student success, faculty success, research development and all aspects of institutional change on which the conference will focus. In addition, the group is demographically diverse, and highly interdisciplinary with expertise in geosciences, geography, higher education, and economics.

Pre-conference preparation

Each participant and member of the Advisory Committee will be asked to identify a reading that the PI will compile for distribution and reading prior to the conference start. The readings could be something that the participant wrote on the topic or has found helpful in thinking through institutional change and/or about HSIs. The readings will constitute, in part, a Common Read for the participants that will be a basis of the review and discussion for the measures of institutional change for HSIs and for the focus areas by HSI institutional type. Because participants will include both practitioners and scholars, we intend for the readings to be in various formats and will help the PI and the Advisory Committee members better understand the perspectives of participants.

The common read for participants will also include four papers that serve as the foundation for our discussions. The PI will write a white paper for the participants on institutional transformation models and measures in higher education and include her co-authored piece in Science about institutional change and gender equity (Mitchneck et al. 2016). The article, Recipe for Change, identifies critical aspects of successful approaches to intentionally shifting institutional culture and workplace practices. The authors believe that the recipe may be used for multiple types of diversity, equity, and inclusion transformations. Institutional changes meant to enhance student success and undergraduate STEM learning, occur within a larger
institutional environment that is the context in which the change process occurs, succeeds, or fails to achieve goals. The measures and metrics that will be developed and tested during the conference process are focused broadly on institutional change. Conference participants will also be asked to read Nuñez (2016) on the diversity of institutions and Garcia et. al (2019) on servingness.

Also prior to conference, the PI will send additional information to participants about virtual conference etiquette and how to use Zoom break out rooms during the review and discuss portions of the sessions. Zoom will be the primary platform for the virtual conference and is well-known to most people working in an academic environment.

TENTATIVE SCHEDULE FOR CONFERENCE

**Fall/Winter 2020/2021**

**Conference Session 1: Measuring Institutional Change Across Diverse HSIs (5 hours)**

- Introductions (critical for team science success)
  - Will include an exercise meant to increase trust and promote collaboration
- Roundtable on pre-conference readings by theme (continuation of trust-building)
  - Approaches to institutional change
  - Diversity within HSI designations
- Critical indicators of institutional change for all HSIs (include Funds of Knowledge and impact evaluation)
  - Review
  - Discuss
- Group discussion and ownership
  - Finalize subgroups

**Conference Session 2: Discussing Draft Measures of Outcome Focus Areas (5 hours)**

Previously identified groups (two to three participants) will send a white paper of 5 pages or less to the conference participants one week prior to the next meeting that summarizes proposed measures of change for each of the 6 areas identified below:

1) Research development and success (including research collaboration and networks)
2) Faculty engagement with curricular change and students
3) Faculty success measures
4) STEM undergraduate student success measures
5) Community engagement
6) Diverse cultural engagement and recognition

- Critical measures of institutional change for all HSIs
  - Review
  - Finalize
- Critical measures of institutional change for Outcome Focus Areas
  - Review by institutional type
  - Discuss changes
- Group discussion and ownership
  - Finalize measures for PI and members of the Advisory Committee to present at the Action Collaborative (see below) for discussion and recruitment to beta-test.
**Spring 2021**

**In-Person Participation at the Action Collaborative For Enhancing STEM Success**

- Participants are encouraged to take part in all sessions and will be part of a roundtable in which the PI and advisory committee members present Measures of Outcome Focus Areas and Measures of Change for HSIs from Conference Sessions 1 and 2 for discussion and to recruit participants at the Action Collaborative to beta-test the proposed institutional change measures.
  
  - Crocket is the organizer of the SDSU event and Walker is on the organizing committee; Franco is a presenter; Nuñez is giving a keynote talk and Nuñez and Mitchneck are invited participants in a session entitled: Intentional Change Leadership and the Relationship Between HSI Identity and Research Activity. The Advisory Committee of the proposed conference will select six participants from that conference to fund their attendance at the larger-scale event sponsored by SDSU for professional development purposes.
  
  - Participants of this proposed conference will also be asked to have their institutions to beta test the measures.

**Summer or Fall 2021**

**Conference Session 3: Findings from Beta Tests of Institutional Change Measures (4 hours)**

- Review reports and commentary from institutions that beta test the measures.
  
  - Specific focus on impact evaluation

- Discuss positives and negatives of beta testing as well as possible changes from the diverse institutional perspectives.

- Modify measures to improve facility to collect and analyze information as well as track institutional change measures.

- Prioritize communication avenues for institutional change measures and their efficacy.

**Conference Session 4: Measures of Institutional Change Across Diverse HSIs (2 hours)**

- Review the modified measures for broad communication.

- Discuss status of communication plan implementation.

- Finalize measures and future plans.

The PI will organize and moderate the sessions, along with assistance from a graduate assistant. The Advisory Committee commits to attending three half day virtual writing retreats in the month after the conference ends to synthesize and write initial reports and plan manuscript outlines and the division of labor for publications. The results of the conference will be disseminated in multiple ways using the extensive networks of the Advisory Committee members and the conference participants. (See below.)

**LIST OF POTENTIAL PARTICIPANTS REFLECTIVE OF THE DIVERSITY OF HSIs**

This conference’s success depends upon a careful recruitment of twenty participants that reflect the diversity of HSI institutional types and individuals with expertise in institutional change, diversity, equity, and inclusion as well as STEM education. The participants will be selected by the Advisory Committee to include mainly practitioners at HSIs as well as a few scholars to add
additional expertise during the sessions. We expect to recruit participants based upon the following characteristics:

- Experience and knowledge of a diverse set of HSIs;
- Experience and knowledge of STEM learning practices;
- Experience and knowledge of institutional change management and assessment;
- Content area knowledge through practice in one of the six areas mentioned above;
- Practical or scholarly expertise related to student and faculty success and community engagement at HSIs.

Invitations will be sent from members of the Advisory Committee and suggestions will be solicited from a number of people who are currently involved in research projects at HSIs and at professional associations related to HSIs. Members of the Advisory Committee have agreed to participate in the conference as well. We intend to recruit participants based on the following additional criteria: geographic proximity to clusters of HSIs, direct work experience at HSIs related to at least one of the 6 topics to be covered, demographic diversity, diversity of institutional types, demonstrated interest in improving STEM undergraduate education at HSIs. The advisory committee will work with the PI to ensure participation by recent PIs and Co-PIs from recent NSF HSI Program awards in particular. The focus on practitioners from a variety of HIS institutions and from a variety of leaders from HSIs is meant to create a group that that has on the ground experience in the programming to make changes happen as well as administrators who may have the responsibility to assess those programs for embedding those programs and practices into institutional structures and for insuring that the institutions can produce the change measures of success at diverse HSI institutions according to Carnegie designations (e.g., deans, provosts).

Invitations will be sent to individuals with the background and expertise similar to the following individuals (in alphabetical order) with an emphasis on work and direct engagement with community colleges (e.g., student transfer coordinators):

<table>
<thead>
<tr>
<th>Names</th>
<th>Title</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>John Crockett</td>
<td>Associate Vice President Research Advancement</td>
<td>San Diego State University</td>
</tr>
<tr>
<td>Lordes Echegoyen</td>
<td>Director, Campus Office of Undergraduate Research Initiatives</td>
<td>UTEP</td>
</tr>
<tr>
<td>Barbara Endemaño Walker</td>
<td>Special Assistant to the Executive Vice Chancellor for Diversity Initiatives &amp; Director, Research Development</td>
<td>UC Santa Barbara</td>
</tr>
<tr>
<td>Marla Franco</td>
<td>Assistant Vice Provost for HSI Initiatives</td>
<td>University of Arizona</td>
</tr>
<tr>
<td>Heather Galloway</td>
<td>Dean, Honors College</td>
<td>Texas State University - San Marcos, DUE# 1928696</td>
</tr>
<tr>
<td>Gina Garcia</td>
<td>Associate Professor</td>
<td>University of Pittsburgh</td>
</tr>
<tr>
<td>Name</td>
<td>Position</td>
<td>Institution/Project</td>
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<tr>
<td>Ann Gates</td>
<td>Chair, Computer Science</td>
<td>UTEP, HRD# 1834620</td>
</tr>
<tr>
<td>Jose Herrera</td>
<td>Provost, Vice President for Academic Affairs</td>
<td>Mercy College</td>
</tr>
<tr>
<td>John Juarez</td>
<td>New Mexico State University Regents Professor; Chair of the Computer Information &amp; Technology Department at Dona Ana Community College</td>
<td>New Mexico State, Dona Ana Community College, DUE#1832338</td>
</tr>
<tr>
<td>Kathie Maynard</td>
<td>Associate Dean, College of Education, Criminal Justice and Human Services</td>
<td>University of Cincinnati, OIA# 1812795</td>
</tr>
<tr>
<td>Jeff Milem</td>
<td>Dean, Gevirtz Graduate School of Education</td>
<td>UC Santa Barbara</td>
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<tr>
<td>Marie Mora</td>
<td>Provost, Economics</td>
<td>University of Missouri St. Louis</td>
</tr>
<tr>
<td>Anne-Marie Nuñez</td>
<td>Professor of Higher Education &amp; Student Affairs</td>
<td>Ohio State University</td>
</tr>
<tr>
<td>Mayra Padilla</td>
<td>Dean of Institutional Effectiveness and Equity at Contra Costa College</td>
<td>Contra Costa College, CA</td>
</tr>
<tr>
<td>Amanda Quintero</td>
<td>Executive Director of Academic Student Success &amp; Equity Initiatives</td>
<td>CSU Chanel Islands</td>
</tr>
<tr>
<td>Maria Reyes</td>
<td>Dean of Industry &amp; Public Service Academic Affairs of Phoenix College</td>
<td>Maricopa County Community College, DUE# 1953763</td>
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<tr>
<td>Laura Sanders</td>
<td>Audrey L. Reynolds Distinguished Teaching Professor, Earth Science</td>
<td>Northern Illinois University, DUE#1759566</td>
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<tr>
<td>Elba Serrano</td>
<td>Regents Professor, Biology</td>
<td>New Mexico State, DUE# 1832338</td>
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<tr>
<td>Benjamin Van Dusen</td>
<td>Assistant Professor, Science Education</td>
<td>CSU Chico, HRD# 1928596</td>
</tr>
<tr>
<td>Mariaelena Zavala</td>
<td>Professor, Biology</td>
<td>CSU Northridge, DUE# 1832345</td>
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INTELLECTUAL MERIT

To date, there is little consensus on metrics that reflect outcomes that effectively enhance the quality of STEM undergraduate education that meets the students where they are and promotes their rise through the educational ranks. While Bensimon (2019) has developed a useful set of tools, the tools are not broad enough to pertain to a diverse set of institutions. At the same time, Garcia et al. (2019) identifies a useful framework for conceptualizing servingness at diverse institutional types but does not establish mechanisms for measuring servingness. This project
builds on the work of Bensimon, Garcia, Nuñez, and Sansone, among others, by accounting for the diversity of HSIs that increasingly encompass institutions along the spectrum of the Carnegie classification, as well as institutions that have sizable constituents from several racial-ethnic groups. This work also builds upon the equity scorecard to broaden assessment of the underlying forces that contribute to student success. We expect these metrics to approach servingness (Garcia et al. 2019) at HSIs. This is a challenge that is particular to HSIs, which have developed in response to changing demographics, rather than HBCUs and Tribal Colleges, which had an explicit cultural context at their founding. To date, the approach has been to articulate case studies of programs in concert with enrollment and graduation rates (e.g., Seal of Excelencia, NASEM STEM Workforce Report) and to train individuals to lead change. This approach alone is presently insufficient to capture the activities and impact of the diversity of HSIs. The PI, Conference Advisory Board members, and other participants will form a novel collaborative team with substantial experience using metrics to measure the effectiveness of institutional change related to diversity, equity, and inclusion in STEM and to intersect with in-depth knowledge of the institutional context of HSIs. The team will also have broad experience in the formation and function of multi-disciplinary teams, which will enable the diversity of thought and experience to stimulate innovation and impact. This background will provide a new lens through which to develop measures of success of national funding to improve education attainment and graduation rates at HSIs.

BROADER IMPACTS

The broader impacts of this conference include broadening STEM talent and engaging a wider audience. The main product of the conference is the development of a much needed and nuanced set of measures of success – and related measurement tools – at a diversity of HSIs. These include and build beyond academic indicators such as graduation rates, to encompass nonacademic and institutional measures as well. Increasing the number of Latinx entrants into the STEM workforce in the United States has been identified in a number of key national reports and strategies. For example, the National Science Foundation’s Strategic Goal 2 and Strategic Objective 2.2 explicitly is to broaden participation in the STEM workforce and to include historically underrepresented groups such as the diverse student populations at HSIs (see references for URL). NASEM has recently focused on the unique role of Minority Serving Institutions (MSIs) in ensuring the diversity of the nation’s workforce in order to innovate and compete in a global economy and maintain our competitive advantage in STEM (see References).

The measures developed through the proposed conference will assist HSIs in operationalizing “servingness,” and thus success in expanding the Latinx STEM workforce. Conference participants will create a set of practical actionable measures and related tools and activities to help HSI stakeholders understand and improve their ability to attract, retain, and graduate Hispanic students within a context of broader institutional transformation. As such, the project will not only broaden STEM talent through its impact on students, but will also contribute to broadening participation among faculty, staff, and intuitional leadership. Because HSIs also enroll large numbers of Black and Native American students, this project also has implications for decreasing inequities for multiple racially and economically minoritized groups.
The conference will engage a wider audience than is typically represented in NSF-funded grants, because it purposefully includes HSI practitioners as fully vested participants, such as program directors and student affairs professionals. A major goal of the conference is to articulate research-based knowledge with decades of practitioner experience at HSIs. This engagement will expose HSI community members to the cutting-edge science of student success and broadening participation, while enabling HSI-related scholars to build new theory and knowledge in the science of broadening participation through dialogues with practitioners. The conference outcomes will be broadly communicated through conference presentations and engagement with key stakeholders, through organizations such as SACNAS, HACU, AHSIE, and Excelencia in Higher Education. Additionally, the outcomes will be published in a range of journals such as Research in Higher Education and Journal of Hispanic Higher Education.