Inclusive Science Initiative Program

8-17-2018

USD-HHMI 2018 FACULTY FOCUS GROUP REPORT

BEN MICHAEL SCHAAP
University of South Dakota

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Introduction

Improving the behaviors and policies which lead to inclusive excellence requires continuous evaluation. One of the most influential members in this process are faculty. These individuals are responsible for educating students and additionally serve as representatives for the values of the university. The Howard Hughes Medical Institute (HHMI) grant awarded in 2017 aims to develop an understanding of inclusive excellence. One aspect of this grant is a faculty mentorship training that will continually enhance the cultural sensitivity of faculty, as it pertains to underrepresented minority (URM) STEM majors. However, a baseline should be established to best understand the effects of the mentorship training program.

Background on the HHMI study

Annual focus groups involving faculty will be conducted during the HHMI grant period to evaluate how mentorship training will be conducted. Starting in the 2017-2018 academic year, student focus groups will also be conducted to evaluate the effects of faculty mentorship training, as well as other aspects of inclusive excellence at USD.

The semi-structured focus group was conducted for the 2017-2018 academic year. It was initially designed to include six faculty with a minimum rank of assistant professor, representing bench sciences, psychology, math, and other STEM disciplines, as well as a balanced representation across genders. However, due to weather and scheduling constraints, the final participant total was three male professors in chemistry, environmental sciences, and physics. They were offered a $25 gift card to the MUC for their participation, however, future faculty focus groups may not need enticements, given this year’s participants were not expecting it in exchange for their involvement. Targeted emails were used
to ask faculty members to participate once generic emails to STEM faculty failed to provide sufficient participation.

**Focus Group Questions and Procedure**

The following are instructions on how the focus group was conducted. Questions and statements used can be found in Appendices A and B. Before participants were asked any questions, they were handed a demographic survey to fill out. Once completed, an opening statement was read that explained the study and thanked them for participating. USD’s Inclusive Excellence statement was then read to help frame the context of the upcoming conversations about inclusive excellence (IE).

Five warm-up questions were asked, followed by 7 questions targeting certain aspects of inclusive excellence that served as barriers and supports to IE. The focus group was concluded with a question asking them to forecast the future academic challenges of diversity in STEM. Analysis of participant responses helped identify specific themes specific thoughts mentioned during the focus group. This paper is separated into two main sections. The first discusses the successes and supports that faculty members feel exist currently, while the second discusses the perceived barriers and challenges that exist, according to the faculty participants.

**Successes and Supports**

The following section identifies the faculty observations of successes and supports at the University of South Dakota with regards to inclusive excellence.
**Diversity on Campus**

Throughout the focus group the topic of supports and success focused on inclusive excellence and diversity for students was mentioned frequently by participants. Participants felt that the topics of diversity and inclusive excellence have been brought more to faculty’s attention, and have been mentioned more in faculty meetings in terms of how departments can do better in this way to further students. There is greater dedication by staff to improve inclusive excellence as well as an increased amount of communication from campus administration on the topic.

Inclusive excellence has begun to offer more opportunities on campus for events that address the topic of diversity with students. Opportunities on campus include the diversity center that provides meetings and diversity events to involve more students and to bring forward awareness of diversity on campus. One participant mentioned that the diversity center had not been around when they first began at the university and now see it as a great asset for students to use.

**Classroom Environment**

A main area of concern for faculty is that they provide a classroom environment that fosters inclusive excellence and diversity for the students to be more successful and to feel supported in their education. All participants include the inclusive excellence statement in their syllabus which states that the campus embeds diversity in every dimension and sector to create a welcoming community and how this prepares students to work and live in a diverse society. Participants all agreed that no conversation has been facilitated by that statement but would all be open to have that conversation if a student were to come forward. When asked about how participants support inclusive excellence and diversity in their own class, the topic shifted to their own assessment and teaching styles. One participant felt that the main way he is able to support students is by making himself accessible to all students by flexible office
hours and understanding when significant life events happen that interfere with class assignments. All participants felt that exams which offered short answer questions gave students a better chance to express their thinking and understanding of the course material, rather than relying on multiple choice test. This allowed for more student success and to support students in their learning as they were able to apply their knowledge to the questions and still receive credit even if they did not have all the correct points.

All participants taught in science-related fields of chemistry, earth science and sustainability, and physics which left them all feeling that it is difficult to include diversity into their particular fields of science, but try to do so when able. However, all participants tried to explain the topics in multiple ways to help students understand and learn if it did not make sense the first time. One participant mentioned that as they taught earth science and sustainability they would try to incorporate information and ideas from other parts of the world. This allowed students to see how our part of the country is different and similar to other parts of the world to try to include diverse thinking by students. Another participant focused on the physics principles by discussing how in the past individual’s interpreted ideas differently and that there is nothing wrong with looking at the principles in a different way, but it is important to find the most reasonable principle.

**Barriers and Challenges**

The following section discusses the most salient themes identified as barriers and challenges by focus group participants, as well as observations made based on those statements that limit the success of inclusive excellence at USD.
Classroom Environment and Pedagogy

It is important to begin by stating that the faculty participating in this focus group each made references which indicate an awareness of how to make the classroom a more inclusive learning space while citing the limitations which hindered the ability to improve IE. One of the most common factors discussed was that of class size. All three mentioned that the size of their introductory courses made it challenging to give individual attention to student issues, or otherwise felt it made the course an impersonal introduction to what college is. Special mention was made that this may give students the impression that all college courses are conducted in a similar format. It is important to note that first-generation students may be more susceptible to this given the decreased likelihood they are academically prepared for college (Cataldi, Bennett, & Chen, 2018) nor do their parents have the experience of attaining a postsecondary credential with which to share with them.

Assessment methods are also different in large-format courses. Participants mentioned the use of exams and evaluations that require less time to assess, despite their desire to use more complex or otherwise varied methods of assessment. However, those that teach upper division or graduate courses, incorporate deeper and more varied evaluation methods into their course assessments. In large-format, undergraduate courses, participants felt that they had no other choice but to rely upon exams with true/false and multiple choice. Such question formats are often selected because they can be efficiently graded, as was indicated by the participants. Despite this benefit, they can sometimes lack inclusivity and fairness in how they assess the learning of URM students (Kaur, Noman, & Nordin, 2017; Montenegro & Jankowski, 2017). Participants identified that they use accompanying lab sections for these courses as a means to offset some of the impersonality of large-format classes and to provide deeper learning and discussion, especially since each lab involved a smaller group of students than the lecture.
Participants reported their praxis was largely influenced by how they were taught. They did not indicate any specific teaching methodologies, theories, or common practices informed by their fields or by teaching research. However, it is important to mention that participants did discuss varied teaching strategies that were used on occasion, identifying their willingness and capability for adapting different strategies and technologies into how their teaching. Furthermore, participants noted their desire to vary content in a way that includes different cultures but felt confined by the fact that the content they are covering is often decades old, yet needs to be taught since it is essential for subsequent courses.

Another issue identified in the environment was the lack of diversity in their undergraduate classrooms. Participants identified the typical student as a South Dakotan, white male or female undergraduate, approximately 18-22 in age. The definition they provided closely fits the contemporary definition of a traditional student (NCES, 2018). Many of the participants, however, did recognize that graduate students were a bit more diverse compared to undergraduates, and not uncommonly originating outside the U.S. In terms of how different groups of students engage in class, the number of undergraduate students who were non-white was small, making it difficult for them to report differences among these groups with much certainty. Despite this, Mr. Hyde identified that international students, as well as Native American students, were less likely to answer questions or participate in discussions. All three also responded in a manner that indicated that students who were shy or sat in the back of the classroom were also less likely to engage. Students who come from social groups that are less individualistic may also lack the assertion to volunteer answers or engage in discussion (Hofstede, 2011).
Cultural and Personality Differences

Students who emerge from cultures that are different from those found at USD may also have difficulties feeling included into the local culture. International students especially are susceptible to these difficulties, even more so for non-native English speakers. One participant shared a salient example involving chemical terminology. In Chemistry, the English word for Cobalt is different for students native to certain Southeast Asian countries. One day a student approached him and was unfamiliar with the term to which the professor referred. The professor had noted his confusion after the student’s question, thinking that the term for Cobalt was universal. However, the student shared the translation of what it was in their native country. This changed the professor’s way of approaching instruction, and now makes fewer assumptions of what students know, thus making more effort to check ensure content aligns with students’ understanding. Davis (2009) supports this consideration, saying that faculty should not make assumptions about students’ existing knowledge regarding certain “cultural, literary, or historical references” (p. 64). Additionally, Davis also notes that faculty should remain aware of any changes to the terminology that identifies different groups of students (minority versus historically underrepresented, gay versus homosexual, etc.).

However less likely to cause classroom issues in the United States, different regions within this country have different terminology for the same thing. One commonplace example would be how one region may call a carbonated beverage a soda and another could call it a pop or Coke. It is with this in mind that faculty should check whether their existing assumptions about content have a similar meaning to those that may be held by their students. Bridging from this, it is may be important for faculty to consider whether their preferred methods of instruction are ones where their students are familiar or practiced with. This is where various scholars recommend applying varied instructional and assessment methods to mitigate the likelihood that any one student is left behind (Davis, 2009; Fink, 2013).
In their discussion of inclusive excellence, all three participants recognized their lack of understanding of Native American culture, especially when they started at USD over a decade ago. They reported that being unaware of the particular expectations of these students during certain life events left them lacking the tools to ensure students were able to fulfill family obligations during these events, yet support their students’ success. Talking in a more current perspective, participants identified that they possess a better understanding of Native American students’ family obligations, yet were not at a level of understanding they would like. Student success was still a concern for them, noting some students who return home after certain family situations do not return or do not communicate with professors about their situations. As a result, these students fall behind and often fail or withdraw from the course. Participants indicated that USD needs better support structures for students, and improve faculty training to support students in these situations.

Available Resources

Another theme that emerged during the focus group was the lack of resources at USD available for students from certain backgrounds that support their academic success, in particular, Native American students. It was reported that students were given initial support to adapt to college life (TRIO program, etc.), but the support was eventually discontinued; something which some respondents felt should have been ongoing for some students.

Participants also reported the current services for students facing academic and personal challenges limited how comfortable students felt about approaching support services with their problems. They suggested that these services need to be offered in a more personal way to encourage students to take advantage of them. Furthermore, participants commented that the Dean of Students’ office could do better to serve students who “fall through the cracks,” and to better serve as a liaison
between faculty and students. It was also discussed that all students who are facing issues that challenge their academic success should receive support comparable to the support that athletic students receive. One professor in the group commented on this, saying “There’s never any problem accommodating student-athletes.” They all continue to discuss, highlighting the fact that the same supports used for supporting student-athletes could be applied to all students.

Campus Adoption of Inclusive Excellence

The final theme identified during the focus group involved the participants’ perceptions of how the university adopted and implemented its inclusive excellence policies and procedures. It’s not surprising that all three participants agreed that inclusive excellence is a worthy cause that can improve the quality of life for students at USD. However, some voiced their criticisms in how it is executed and how it was adopted.

Two participants indicated that IE felt more that it was something that was enforced by the university administration downward, rather than developing with influence from the ground level. More specifically, they mentioned that its adoption felt like it was done with marginal or token input from faculty, and were skeptical that students had much input either. Additionally, participants felt that USD’s adoption of IE was encouraged by forces external to USD, thus compounding the notion that those at the ground-level had little chance to provide feedback on how to best execute inclusive excellence at the university. As a result, there was a general feeling that they were forced to take part rather than it being an inclusive process.

It becomes important to reiterate that these professors discussed matters of inclusiveness with genuine commitment and have discussed it as a benefit to their students, yet the way all three discussed the adoption of IE signaled a general feeling that some aspects of the process were insufficient, or were
in conflict with decisions made by USD administration. One example that came up was that of the prospective vendor, Chick fil a, in 2015. Given the vendor’s stance on the LGBTQ community, one participant mentioned that the administration decided to accept them onto campus even though their beliefs did not align with the campus’s commitment to IE, eluding to a lack of dedication toward the mission of inclusive excellence on the part of USD’s administration.

Another point discussed by the group was the fact that often, the university’s commitment to IE is expressed a sole statement written in course syllabi, along with the occasional event on campus that celebrated certain cultural events. They discussed it needs to be more than a statement, something that contains various approaches that can enrich its meaning. As such, some in the group felt the term inclusive excellence is becoming a buzzword rather than something with meaning that represents a core mission of the university.

Conclusion
The purpose of the focus group interview was to gain an understanding from faculty about inclusive excellence and diversity on campus to help underrepresented minority students engage in undergraduate STEM education. The focus group identified specific ways that diversity is supported on campus and what barriers exist to students and faculty. Supports and successes were limited to the faculty’s knowledge and even though strides have been made all felt that more could be done to help students succeed in their education.

Although there were many successes and supports, faculty participants definitely noted more issues than successes with regards to inclusive excellence at USD. There were more barriers mentioned by participants in the interview in the areas of resources on campus and classroom environment. Each participant felt that it was challenging to provide diversity in the subject matter they taught and that the
best support they can offer their students is through accessibility and expressing their want for each student to succeed. Additional consideration was mentioned that campus administration needs to ensure they act in accordance to the principles of inclusive excellence they established as an example for faculty and students to follow.

Another area of significant discussion circled the topic of Native American student success. The academic success of this particular group of underrepresented students has been a mission for many at USD. It is clear that these participants were aware of the challenges to these students. It is also interesting to note their willingness to focus their discussion on Native American students, as none of the questions were designed to mention any particular group of underrepresented student population. Eventually, participants mentioned they wished their new faculty orientation would have included a deeper training on how to work with Native American students. Furthermore, they felt that even after having over a decade of experience in the classroom that they did not feel very comfortable with the best ways to support these Native American students, especially after they encounter challenging family events that force them to shift focus away from their coursework. It was clear participants felt that more needs to be done to help faculty understand and be better prepared to work with students in order to support their students’ academic success.
References


Appendix A

Focus Group Outline and Questions

Make sure demographic survey has been filled out by all participants.

Opening Remarks:

Thank you for agreeing to take time out of your busy schedule to participate in this focus group. You were selected because you are a faculty member in a STEM field. The information shared in the group today will be used to understand and improve participation of historically underrepresented students at USD within the STEM disciplines. This focus group is expected to take approximately 90 minutes. I cannot guarantee the anonymity of your participation or your statements, but I would strongly encourage you all to keep confidential the content discussed and all participant identities. You are not obligated to participate and can terminate your participation in this study at any time. Before I begin, are there any questions regarding this study?

USD inclusive excellence statement:

“Before we begin, I would like to frame the context of our conversation by using USD’s Inclusive Excellence statement.”

USD embeds diversity and inclusiveness throughout every dimension and sector of the University. This inclusive excellence creates a welcoming community engaged in diversity. It provides an environment that prepares all students for living and working in a diverse society.
**Opening Questions**

1. What is your content area?
2. How long have you worked at USD?
3. Describe your typical student.
4. How do you define diversity?
5. What kind of teaching style and assessment do you implement?

**Faculty**

6. How have you come to adopt the teaching and assessment methods used in your classes?
   a. Theory-based, Mentors, modelled off prior learning experience?
7. How do you think these methods support inclusive excellence?
8. How do you think these teaching and assessment methods hinder inclusive excellence?
9. To what degree do you adapt your content to accommodate the unique personal difference of your students?
   a. Do you have any examples of what you have done?
10. To what degree do you think students should receive flexibility when making up assignments/exams/other points?
11. What are the key factors that contribute to the success of students from diverse backgrounds?
   a. Can you identify any conditions that limit student success here at USD? (Policy, culture, community, etc.)
12. Can you provide any examples of when your content included concepts from other cultures?

**Concluding Questions**

13. What challenges do you foresee in STEM when teaching in an increasingly diverse academic community?
Appendix B

Demographic Survey:

1. Gender: _______________________

2. With which race/ethnicity do you most identify? (Check all that apply)
   - American Indian or Alaska Native
   - Asian
   - Black or African American
   - Hispanic or Latino
   - Native Hawaiian or other Pacific Islander
   - Caucasian/White
   - Other ________________________________

3. How long have you been teaching at USD? _______________________________

4. What content area do you teach? ________________________________

5. What other regional areas have you taught in?
   - Northeast, US
   - Midwest, US
   - South, US
   - West, US
   - Internationally ________________________________