

AC 2009-302: I FEEL LIKE FOREST GUMP: MIXED-RACE NATIVE AMERICAN STUDENTS FIND COMMUNITY IN A COLLEGE OF ENGINEERING

Cindy Foor, University of Oklahoma

Cindy E. Foor is Associate Director/Research Associate at the Research Institute for STEM Education (RISE) at the University of Oklahoma. Ms. Foor received her MA in Cultural Anthropology from Western Michigan University. Her most current research is focused on ethnography of marginalized populations, critical cultural theory, issues of gender and underrepresented populations in STEM education. Address: Research Institute for STEM Education (RISE), University of Oklahoma, 1627 Cross Center B, Kelly House, Norman, OK 73019-7136. E-mail: cynthia.e.foor-1@ou.edu.

randa shehab, University of Oklahoma

Randa Shehab is an associate faculty member and Director of the School of Industrial Engineering at the University of Oklahoma. Before joining OU in 1997, she worked as an Ergonomics Consultant to the Manufacturing Ergonomics Laboratory at the General Motors Technical Center in Warren, Michigan. The focus of her research is in the area of human factors and ergonomics, with emphasis on human performance of special populations, technology and learning, and engineering education. Her most current research is focused on identifying factors related to success of underrepresented minority engineering students.

Address: School of Industrial Engineering, University of Oklahoma, 202 W. Boyd St., Room 124, Norman, OK 73019-0631; e-mail: rlshehab@ou.edu

Randa Shehab is an associate faculty member and Director of the School of Industrial Engineering at the University of Oklahoma. Before joining OU in 1997, she worked as an Ergonomics Consultant to the Manufacturing Ergonomics Laboratory at the General Motors Technical Center in Warren, Michigan. The focus of her research is in the area of human factors and ergonomics, with emphasis on human performance of special populations, technology and learning, and engineering education. Her most current research is focused on identifying factors related to success of underrepresented minority engineering students.

Address: School of Industrial Engineering, University of Oklahoma, 202 W. Boyd St., Room 124, Norman, OK 73019-0631; e-mail: rlshehab@ou.edu

“I Feel Like Forest Gump:” Mixed-Race Native American Students Find Community in a College of Engineering

Cindy E. Foor and Randa L. Shehab
Research Institute for STEM Education
University of Oklahoma

Defining, achieving and retaining diversity in undergraduate education continues to be an important focus of research, policy and programmatic efforts in the science, technology, engineering and mathematics (STEM) community.¹⁻⁸ The Research Institute for STEM Education (RISE) contributes to this discourse by identifying factors contributing to the successful completion of an engineering degree at a predominately white, research institution by under-represented and under-served minority students. Additionally, we seek to differentiate the strategies and obstacles affecting the success of students from various ethnicities and backgrounds. To achieve our goals, African American, Hispanic American, Asian American and Native American undergraduate engineering students are interviewed using theoretically grounded qualitative methods.⁹ As part of the broader project (NSF-DUE 0431642), different members of our interdisciplinary team analyze and report on strands and themes specific to one of four under-represented or under-served populations¹⁰⁻¹² as well as themes that lend themselves to cross group analysis.¹³⁻¹⁶

This paper reports on experiences of mixed-race Native American undergraduate students in multiple engineering disciplines. The coding of qualitative data generated from 29 ethnographic interviews brought forth certain unanticipated phenomenon.

- No Native American student was raised on or came to college from a reservation.
- Twenty-seven students report the racial category of Native American in combination with one or more other race/ethnicity.
- Fifty percent of students reported challenges to their identity claims from majority students, other minority students, including other Native American students.
- Student experiences in race and ethnic based organizations varied greatly.

The obstacles these successful students overcame in their undergraduate lives as mixed-race Native Americans engineering majors fell outside the experiences reported in the preponderance of literature that guided our research proposal and interview protocol. To better understand these phenomena the following questions guided our analysis:

- What do mixed-race engineering students reporting Native American status describe as salient challenges in their interactions with peers and university?
- What strategies do mixed-race engineering students reporting Native American status use to adapt to, resist or negotiate the boundaries around identity based social spaces?
- How effective are student organizations and university programs in providing all Native American students small social enclaves of other students with similar backgrounds and interests?

- How does finding community contribute to mixed-race Native American engineering students' successful completion of a degree?

The insights gained from this paper can be used to shed light on mixed-race student experiences in higher education, and in particular, the ways in which peer and university culture constrains or enables the choices students make in creating peer communities. The ability to find or create supportive peer communities is critical to student success.

Background

Native Americans remain the most under-represented and least persistent of all minority populations in STEM undergraduate programs.¹⁷ While Native American undergraduate enrollment in all higher education disciplines increased 86% from 1980-2001,¹⁸ Native American and Alaska Native undergraduates earning a degree in engineering and the physical sciences increased a mere 8.75% nationally from a total of 677 in 2000 to 773 students in 2006.¹⁹ Research focusing on Native American undergraduate experiences in STEM lags behind research focused on Hispanic, African-American, under-privileged white, and women's experiences.^{20, 21} The lack of emphasis on Native Americans is attributed to small student populations (small sample size) relative to other minorities, geographic clustering that increases standard errors in analysis, historical underfunding for Native American research and difficulties identifying Native Americans.^{20, 21}

Historically, research that reported on Native American undergraduate experiences generally focused on students from reservation or traditional backgrounds and the factors associated with failing to persist within the educational "pipeline." Factors associated with lack of persistence include difficulty overcoming cultural differences, social isolation, ties to family and responsibilities to the community and lack of academic preparation.²² More recently, research has focused on factors contributing to retention and success.²³⁻²⁶ Like other minority populations, most literature addresses the needs and concerns of Native American students as a mono-racial and homogeneous population even though Native Americans have the largest proportion of individuals from mixed racial/ethnic backgrounds.^{20, 27} Little is known of the different characteristics or performances of this population.

After decades of decline, the number of individuals who claim Native American status has increased over the last 30 years. Factors affecting this growth include, but are not limited to a rekindling of Native American pride as a result of the 1970's Red Power movement, the growth in wealth and power of tribal governments coupled with loosening tribal membership requirements, continued racial intermarriage, as well as changes to the way Native Americans were counted on the 2000 Census.^{28, 29} The State of Oklahoma is second to California in the number of Native Americans citizens living within its borders. Thirty-nine federally recognized tribes reside in Oklahoma.

The geographic location of our university and the legacy relationship with many college eligible individuals contributes to the high Native American enrollment. Financial incentives, including out-of-state tuition waivers for students who belong to one of the 39 tribes, tribal and university scholarships along with targeted recruiting efforts contribute as well. In fall 2005, 1,646 students identified themselves as Native Americans, making them the largest non-white ethnic group on

campus.³⁰ Slightly less than 10% were enrolled in the College of Engineering (CoE). Eighteen Native Americans graduated with an undergraduate degree in engineering during 2004-05; another 21 were on track to graduate in 2005-06.³¹ Historically, the CoE at the University of Oklahoma graduates the highest number of Native American engineering undergraduates in the United States. As a result of this geo-socio-economic synergy, the College of Engineering at the University of Oklahoma provides a good site to differentiate the strategies and obstacles affecting the success of Native Americans from various ethnic, racial and socio-economic backgrounds.

Methodology and Theory

Our quasi-longitudinal research design invited students to share their lived experiences as minority students in undergraduate engineering disciplines at this institution. Invitations to participate were extended to students in their sophomore, junior, or senior years and were repeated annually until graduation. Thirty-five Native American students responded to our requests. One to two hour semi-structured interviews were conducted by non-professional mixed-race and full-blood Native American graduate students beginning fall 2005 academic semester and concluding in the spring of 2007. This sample size represents on average, 21% to 26% of self-identified Native American students enrolled in the College of Engineering during this time period. Additional data was generated by participants completing a preliminary questionnaire regarding demographic information and an engineering attitudes survey. In several cases, second and third interviews were completed a year apart to provide longitudinal perspectives and to track the progress of participants still attending the university as engineering majors. Thirty-nine ethnographic interviews of 29 students are used in this analysis. Six students did not persist in an engineering major and do not meet the narrow criteria of success as defined in the larger project. Their narratives are not included here.

Each interview was transcribed, coded for analysis, and then assessed using an interpretive analytic approach.⁹ The quotations have been edited for clarity and brevity. Digressions, restarts, and fillers such as “you know,” “uhh,” and “like” have been removed. These edits are represented by ellipses (...) in the quotation. Square brackets [] indicate the addition of a word or words to help with contextualization. Text within a quote that is enclosed in parentheses () indicates a verbal cue (pause, laugh, chuckle). In most cases, individuals are identified as student or participant only. Tribe and state of origin are not given to insure anonymity.

Understanding the difficulties faced and strategies employed by mixed race Native American students requires the use of a theoretical framework that addresses identity claims made in relation to institutional and peer culture. We take a constructionist position that rejects the notion that identity is primordial but is, instead, a social artifact. This perspective suggests that many influences may invade upon a student’s desire to enact a particular racial or ethnic identity. These are not limited to rational calculations of the costs and benefits accompanying such a choice. They interact with a range of forces, including the history of Native Americans in the United States, family and cultural expectations, institutional policies and programs and the influence of peers that affect the student’s ability to express a particular identity.^{27, 28, 32-40} For example, many students are not only Cherokee and White, or Creek and White, or Chickasaw and Hispanic, but may in fact have ancestry from two or three different tribes in addition to

multiple races. In their parents' home or at clan gatherings they consider themselves Creek. However, if enrollment in the Creek Nation was closed to their blood quantum, they may have enrolled in another tribe in which they qualified to secure access to resources that make college attendance possible. Furthermore, one parent may be Native American and African American, the other parent Native American and White. Constrained by tribal regulations individuals may foreground a tribal membership in one context, but reclaim their Creek identity when returning home or foreground African American identity to find community in a high school where African American students are the majority.

Individual identity development occurs within certain delimited social spaces. We draw upon Renn's model of identity based space to guide our interpretations of the ways mixed-race students' interactions with peers, student organizations and institutional programs influences the kinds of identity based spaces students choose to occupy.²⁷ In this model, social spaces are viewed as a series of articulated spaces whose borders are defined and disciplined within relations of peers and institutional structures. Student choices of spaces in which to form communities of peers are shaped by historic and contemporary conceptions of social difference (race, ethnicity, gender, sexuality), attempts to claim and resist social boundaries, and the work of individuals as they negotiate their social identities in various contexts. Integration into small racial/ethnic based social enclaves has been demonstrated to be important to minority student success.^{26, 41, 42} Finding racial/ethnic enclaves for mixed-race students can be problematic. Most race based groups operate as mono-racial groups and mixed-race students are often rejected if they express their multiracial heritage or demonstrate deficits in cultural knowledge.³⁹

In the following sections we first provide detailed demographics of the 29 students to demonstrate the wide range of backgrounds and experiences these students bring with them to college. Next we offer two challenges students faced and the strategy to overcome: identity contestation, intersections and tensions and finding community. We conclude by summarizing findings and offering recommendations for consideration in order to better serve mixed-race students.

Results and Discussion-Being an Indian-Being Indian

All 29 Native American participants are mixed-race individuals. We use the term 'mixed' coupled with 'race/ethnicity' because in most cases students report more than a single tribal affiliation with one or more race. The term 'mixed' seems to capture the complexity best. Twenty-six of 29 participants are Native American and White. Three are Native American and Hispanic. One of the three Native American/ Hispanic individuals foregrounds her identity as a national from a South American country. This student identifies as a <citizen of foreign country> rather than Native American. Though born in the U.S., she grew up speaking Spanish as her first language when she returned to < mother's country of origin > at the age of 6.

Native Americans are the only race who must legally document that they are Indian.²⁹ Twenty-eight students possess a Certificate of Degree of Indian or Alaska Native Blood (CDIB). The "white card," as it is also known, legitimizes individual status as *an* Indian. A CDIB must first be obtained before petitioning for specific tribal citizenship. In 1995, the University of Oklahoma became one of the first schools to require proof of tribal citizenship to qualify students for specific scholarships.³⁰ The lone student who does not have a CDIB belongs to a

tribe that is still petitioning for federal recognition. In the lexicon of Native American status and identity debates, he is known as an “outofluck.”²⁸ The fact that 28 of 29 participants possess a CDIB is important. One of the critiques of extant research on Native American student life concerns the difficulty identifying Native Americans for participation in research.²⁰ Possession of a CDIB confirms these students as *an* Indian.

Participants possess a wide range of blood quantum ranging from one-half to 1/516th. Phenotypic expression ranges from attributes characterized as stereotypically Native American (dark skin, hair and eyes, high cheek bones, broad noses) to those stereotypically Caucasian (blue eyes, blond hair, fair or freckled skin). With the exception of two students, none strongly identify *as* Indian. As reported earlier, none were born or raised on a reservation or speaks a tribal language as their first or second language, though three participants’ parents or grandparents do. Participants demonstrate a wide range of knowledge of and experience with Native American culture and socialization. Two males had danced in Pow Wows or Stomp Dances as children and young adults, but had not actively participated in recent years and did not foresee participation in the future. Other students told stories about summer trips to visit grandparents where they would hear family history and bits of spoken language:

I didn’t really know anything about what we do as Chickasaws and Native Americans because I grew up in a place that was about 2 1/2 hours away from the Mexican border and I grew up with Mexican traditions and all of that. We didn’t do them, but all of my friends did. I didn’t know too much about American Indians until, late. My mom would talk about them and we would come up to Oklahoma to see my grandparents we would talk about them, but I didn’t know too much.

A few remember attending religious ceremonies as small children. None lived the traditional ways on a day to day basis. Eight are out-of-state residents. Out-of-state students exhibit less cultural competence than in-state students. The following student offers this explanation when asked if opportunities existed to engage with his/her tribe prior to coming to college:

Not really, I knew a little bit about it, I did some personal research for class projects, that sort of thing. But in <home town in another state>, there wasn’t much opportunity to learn about the Cherokee or to interact with the Cherokee.

The 29 participants are members of 13 different tribes. All but nine belong to the Cherokee, Choctaw or Creek Nations. Twenty-two are male and 7 female. They attended high school in two different states and one foreign country. Fifteen attended high school in an urban or suburban environment, 8 in small towns and 6 in rural communities. Twelve students are the first in their family to graduate from a 4 year institution. Nine of the twelve have one or both parent whose highest degree is a GED or high school diploma. Conversely, 17 students have one or both parent who graduated from a 4-year institution. Of the parents who earned a degree from a 4-year institution, twelve earned degrees in a STEM related field. Fourteen parents of 8 different students graduated from this university.

Academic preparation coincided most closely with geography. The 15 students attending urban/suburban high schools reported feeling very well prepared for college. The remaining 14 students from small towns and rural communities generally reported poor high school instruction, narrow curriculum and unchallenging curricular content. Eleven participants were

not calculus ready upon entry and began their math sequence in a remedial class. However, six students passed the advanced placement exam for Calc I and one student received advance placement credit for Calc I-IV. By any standard, these 29 students would not be considered a homogenous group. The differences in experiences and expectations as a result of ethnic/racial background, geography, socio-economic status, academic preparation and cultural capital are significant.

Next we examine one of the challenges these students face negotiating peer culture and an institutional program informed by mono-racial and homogeneous notions of racial identity.

Contestations to Identity and Status

A salient challenge experienced by mixed-race students can be characterized as contestations to Native American identity and status claims. Fifteen of 29 students talked openly of challenges they had experienced. Five students indicate they had not encountered direct challenges because as one student explains, “I don’t look Native American, whereas some people may look more. I mean, I am not 100% American Indian, whereas some people are. I just look white to most people. I don’t usually talk about it.” For those who do share with peers, contestations are brought from more traditional Native Americans questioning whether students are “Native enough.” Embedded in the concept “Native enough” are expectations of individual cultural competency, language proficiency, religious practices, and ways of thinking and knowing. Additionally, mixed-race students’ ‘authenticity’ was challenged by other minority and majority students based on appearances. Darker skin was often equated with being more ‘Native,’ though in actual practice this assumption was not always true. Appearance and cultural competency were used by peers as powerful boundary marking devices that included or excluded based on the particular context.

Attempts to interact with more traditional Native Americans are a source of tension and confusion especially if a student has no prior experience dealing with highly identified individuals. The following student perceives the boundary as a function of “bloodedness.” Because he is not full-blood, his identity as a Native American is contested, regardless of cultural competency.

Sometimes, whenever I tell people, and it’s more obvious, them being full-blooded Native American, it’s kind of a “laugh thing,” but you know I acknowledge that [being mixed-race] is where I’m coming from and I’m definitely not ashamed of it, or anything.

Other contestations result from peer resentment of resources distributed through tribes or the university that accrue to Native American status. The following student feels compelled to continually qualify his financial assistance. Because (s)he is not easily identified as a Native American, (s)he feels the need to “add a footnote” explaining that (s)he may not be 100% Native American though (s)he does qualify for financial aid. Feelings of guilt accompany the contestation.

I do have some Indian background and it’s kind of funny because all my friends know I’ve got Indian background just from being around me so long and you know they do

make kind of funny comments every now and then. It's almost like people think Indians get things easily ... you have the casinos and some money coming in... so you know you get a few jokes like that. And I don't know if I've ever really been offended, but some things are said that you're kind of like, hey, you know? I don't know, it's a little touchy at times. I always want to write a footnote, "I'm not entirely Native American." I'm sure you probably know that by looking at me, but so you know, I'm not trying to claim that... Yeah, I almost feel bad sometimes because I feel that people are like, "That person's not Native American," because I don't know if anybody that just meets me will be able to know for a while that I'm Indian. So, I feel like I'm cheating a little bit, regrettably so.

Some are challenged due to a perceived deficit in cultural competence. In the following narrative, the student speaking is another minority student and her understanding of identity suggests that if the mixed-race Native American peer knew something about his/her culture, it would make up for the lack of blood quantum. For this contesting student, identity is grounded in culture, not blood.

I have a lot of friends who consider themselves Native Americans, yet they don't know anything about their culture, or Native America. And they're less than one hundredth Native American which to me, if I was one hundredth Hispanic, and I didn't know anything about my culture then I probably wouldn't consider myself to be Hispanic.

Participants describe challenges brought by peers because the participants appear White. In a society where skin color retains the power to regulate and discipline, the 'natural' order is turned on its head when individuals attempt to claim membership in a historically oppressed group. The group's borders are marked with a qualifying color different from the skin color the participant exhibits. Regardless of the student's cultural competency, he is marked as White and inclusion in the category Native American is continually challenged.

When I was a freshman I made the mistake of telling a few friends or people my bloodline and there are people who think that's the only measure of a Native American...It's hard dealing with being a White Native American. Unfortunately people still see color and skin as what makes you who you are and that's something that I think I'll probably be struggling with until I die.

Though some of the contestations occurred within undefined social spaces, two particular spaces within the university presented points of intersection where identity negotiations were contested. In the next section we will examine a university program and a student organization where intentions and impacts did not always best serve mixed-race students.

Points of Intersection-Intent and Impact

The American Indian Scholars Program (AIS) is a university level scholarship program administered under the auspices of the Center for Student Life. AIS scholarships are available to non-residents with documented affiliation to one of the 39 federally recognized American Indian tribes in Oklahoma. Five of eight out-of-state students are American Indian Scholars. The director of the program feels strongly that merely providing an individual the opportunity to

show up and claim scholarship money is not the intended use of tribal membership enrollment.³⁰ To fulfill obligations as scholarship recipients, AIS participants are required to help set-up and serve at the annual American Indian Student Association sponsored spring contest PowWow. Open to the general public, this annual celebration has taken place on the University of Oklahoma campus since 1914. Dancers from all corners of the state take part in the day long festivities. For the out-of state engineering AIS students, this occasion places them in face to face contact, often for the first time, with Native Americans who live the traditional ways. Serving at this function might also be their first direct experience with cultural traditions.

The following student offers an example of a contestation based on appearance that is brought by more traditional Native Americans during the PowWow.

Because I am not 100% Indian, sometimes some of the Native Americans will look at you differently and treat you differently. It really sort of bothers me because I respect my heritage and I really enjoy learning about it. I feel like a lot of times full-blooded Native Americans will pretty much disrespect me by putting that look on their face like, “You have no idea [about being Indian], you don’t know, you are not part of this”... You can feel that... a lot of times... [T]he American Indian Scholars had to serve food at the Pow Wow/Stomp Dance. There are [full-blooded] people who will just look at you...eye to eye and just look at you with the worst looks on the face of the Earth.

Though the intent of the scholarship requirement is embedded in the traditional Native American concept of “giving back for things received” the effect may not be what is intended. Another intention may be to expose less culturally competent students to Native American traditions and to encourage identity development, but the impact is felt as a contestation by the student.

An additional intention may be to facilitate finding a community of peers, but for some, this is not the community they would choose.

It’s something that’s just... it’s... I’m not... culturally, I mean, I wasn’t raised on a reservation. You know, for me, it’s just something that this scholarship’s allowed me to kind of gain an insight into, into my, the parts of my culture more. But the scholarship, it’s not like I came here and it gave me, you know a community where I can continue doing these things because I wasn’t doing it beforehand. It’s just kind of shown me that hey, these things are still here. This party is still here and that is good stuff.

Though the student recognizes that the intent of the scholarship requirement is to help students “gain insight,” he also understands that this is not where he will find community. It wasn’t his community before coming to the university and that community is not going to change with participation in this program.

For the following student, the PowWow proved to be confusing. Her limited cultural exposure prior to attending the university did not prepare her for different forms of cultural expression.

Interviewer: Now you said that the American Indians Scholars did this stuff at the Pow Wows. Is that something that you were familiar with before?

Participant: No, I was confused because I didn't know why we were there, what it was about. I called my Mom and I asked her and she said we didn't do that, we do the Stomp Dance.

A second social space where identity can be challenged and must be negotiated is the American Indian Student Association. The American Indian Student Association (AISA) is advertised as "The place where American Indian students come to promote American Indian heritage. The role of AISA is to provide a means for the 1400 American Indian students to celebrate their heritage and traditions through, cultural, educational and social events."⁴³ Students from the Schools of Journalism and Social Work, and the Native American Studies Program fill its membership roster. According to a faculty member in the Native American Studies Program, students who are more traditional tend to choose majors that provide opportunities to give back to their communities. One mixed-race participant noted, "I was like one of the few engineers there." In addition to the annual spring competition PowWow, AISA sponsors other functions including a Stomp Dance and the Miss Indian Pageant. Unlike race or ethnic specific technical and professional societies whose primary focus is to encourage professional development and technical proficiency, AISA serves as the center of activity for Native American cultural, social and political life on campus. Eight participants acknowledged either direct experience with or indirect knowledge of AISA. Only two of 29 participants were actively involved in AISA. Both were more culturally identified than other participants.

Boundaries around AISA were marked by appearance, cultural competency or both. In the following narratives, the speakers understand that blood trumps culture competency. Even though one of the students who did not feel welcome is "more Indian," a code used to signify cultural competence, the speaker still did not feel welcome because of appearance. In both examples, though the students had not attended an AISA meeting, boundaries around this space based on appearance are so well communicated they transcend direct experience.

I've heard of AISA, I heard that I probably wouldn't fit in. I heard it from someone that is more Indian than I am. I heard it from friends and my cousin went to one of the meetings and he said he didn't feel comfortable so. He just said, because my cousin has blonde hair, he just said he didn't feel comfortable at it.

I always thought about getting involved in the American Indian Student organization, but I felt like since I don't look very Indian, that I would be uncomfortable in it, you know

Boundaries to inclusion in AISA can be overcome if a student demonstrates an interest and a willingness to explore cultural practices and develop a broader Native American identity. In this example, the willingness to explore culture trumps blood quantum. However, cultural exploration can be an uncomfortable undertaking for some students when traditional cultural practices are counter to personal beliefs and practices.

Interviewer: You mentioned AISA and you wanted to get more involved with AISA, why is that an organization that you want to get more involved with?

Participant: My suite mate, he is involved with them and says it's a real good time. He is also a Native American, and he lives on a reservation in Florida, he says that you get to meet a lot of other Native Americans that go here. And they do more culture stuff than other groups...I am interested because we're all in the same boat, I guess. My suitemate

he invited me to a stomp dance, and I'm not traditional, I'm a Indian Methodist Church goer, so he invited me to a traditional stomp dance, and I took two of my cousins and their both Indian Methodist so we felt so out of place, even though we knew they want us there, but we still felt removed... and kind of weird.

While the student acknowledges that he is a Native American like AISA peers [we are all in the same boat"] there exists enough difference to create uncertainty ["I guess?"] in AISA as the community of peers in which to best enact his particular Native American identity. In the final narrative below, there is no uncertainty that the speaker does not find community in AISA.

Interviewer: Does it make a difference to you whether there are other students of color in class, especially American Indians?

Participant: No, it doesn't, because I was raised around mostly white people, so it doesn't really affect me...I feel out of place when I'm at the AISA meetings, because I don't know a lot of stuff they're talking about and I feel so out of place. And I feel like Forrest Gump because I don't know what that stuff means, I have no idea.

In the next section, we turn our attention to a social space where many Native American engineering students find community.

Finding Community

The American Indian Science and Engineering Society (AISES) was founded on this campus in 1977. Originally known as First Americans-Tomorrows Engineers, FATE was conceived as an organization to identify and remove the barriers to academic success for Native American and Alaskan Native students in the STEM disciplines.³¹ Nationwide there are over 2000 collegiate members. The university web-site for this organization foregrounds benefits associated with becoming a trained science and engineering professional.⁴⁴ AISES promotes three activities for its members: AISES Gives Back, an annual community service project; the annual Spring Regional Conference where members learn about new programs, hear talks by industry professionals and network with other university chapters; and the AISES National Conference which provides an opportunity for students to attend professional development workshops and seek career advice. Ten participants were actively involved in AISES, four served or were serving as officers at the time of their interview. Six students either had attended or were planning to attend the National Conference. Five students had been active previously, but were forced to limit their involvement due to curricular and work constraints.

For mixed-race students who are not culturally identified, AISES is a place to be involved and learn about Native American cultural "stuff" but not in an over-bearing or threatening way. In AISES, students can foreground an engineering identity and background a Native American identity.

Interviewer: What got you into AISES?

Participant: Mostly the people I knew...When I came here, several people I knew were in AISES or involved in AISES and so I was interested in finding out what kind of stuff they do, if it was all cultural stuff or more professional stuff, or just fun stuff. AISES mostly does fun stuff and like a little bit of the cultural and the professionalism mixed in. It makes it really easy for new people to come in and feel welcomed, I guess you could

say, without all the boring stuff coming at you all the time. So it really makes it fun to get to know people and make those friendships with you know, the teachers and the students alike. I kinda joined AISES thinking I will learn a little bit, at least a little bit more [about Native American culture]. And I have learned at least a little bit more especially going to the national conferences. I am learning a lot about cultural type things.

For this student, the cultural deficit, “all the boring stuff coming at you” that would have been overwhelming in AISA was mixed in with fun activities and professional development. Learning about “cultural type things” within the context of engineering conferences did not contest a Native American identity. In this narrative it is not clear if the “new” people referred to are new engineering students or engineering students “new” to exploring a Native American identity. Applying either interpretation, the cultural competency boundaries around AISES are more relaxed and secondary to professional and technical competency.

AISES was similarly constructed as a welcoming place for those who do not “look” Native American. In both of the following narratives, the student juxtaposes experiences in AISES against those in AISA:

Interviewer: Well when you got involved in AISES, did you feel comfortable coming in?

Participant: Well at first, before I got there, I was wondering “am I going to be the only white boy there” (I). But when I got there I kind of figured out that about three quarters of the people were just like me that were there.

Interview: What do you mean when you say “just like you?”

Participant: They were Native American, but not very much. You could tell that they looked more white, than Native American. I was more comfortable (I) because I feel like just being so little Native American in AISA they just kind of look at you. That the ones that are about half or a quarter, just kind of look at you, “why are you here, you’re not very much” (I). But when I got in AISES, I was totally comfortable... Well the difference was that a lot of the AISA and AISES [students] weren’t exactly in the same groups. I’m not exactly sure, because I try to go to both, and be involved in both of them, I’m not exactly sure why. I guess one thing I did notice though is that the more, you know Native American looking students were in AISA and then the whiter, I guess the more whiter looking Native Americans were in AISES.

The presence of a mixed-race, but culturally competent advisor contributed to the creation of a space in AISES where students unsure of their Native American identity could find community. Though the advisor encouraged students to explore aspects of their heritage and give back to the community, blame was not placed on the students for not having cultural knowledge. As she explained, “it is not their fault that they do not know where they came from or who their family is, it’s the parents. They never exposed them to anything or gave them a chance to learn. I feel it is part of my responsibility as AISES advisor to encourage them to look into that part [of their identity].

Not all students found community in AISA or AISES, but most found a community that nurtured and sustained their identity development as either an engineer or as a non-majority student, or

both. Two students were involved in the Society of Hispanic Engineers (SHPE), two found a community in the National Engineering Society of Black Engineers (NSBE), one in the Society of Native American Gentleman (SNAG), one in the Society of Women Engineers (SWE), one in the Brotherhood Under Christ (BYX) and one in Triangle, an engineering oriented fraternity. For students whose status as Native American was often not revealed and whose identity was not grounded in Native American culture, finding community outside the two Native American student organizations is not surprising.

Conclusion

Negotiating identity and status as Native Americans with peers and within specific social spaces proved to be one challenge faced by mixed-race Native American engineering students. Boundaries around the social spaces of AISA and AISES are understood along color lines. Darker skinned, more 'authentic' Native American students occupied the social space of AISA. Students who "looked white" gravitated to the social space in AISES. In addition, demonstrated cultural competence contributed to the boundaries around AISA. While differences based on skin color are difficult to overcome in AISA, differences can be transcended if a student demonstrates an interest in learning about and participating in cultural practices. Students who are comfortable exploring and expanding cultural knowledge can and do find community in AISA. The two students who found a primary community in AISA were more culturally competent before coming to college and conformed to the stereotypical appearance understood as Native American. As a result, they were able to create a community of peers more readily in AISA than were less culturally versed and fairer skinned peers.

Cultural competency did not serve as a boundary marker in AISES, but was instead gained as a bi-product of participating in an organization whose primary focus was on developing technical and professional competency. AISES, is a social space where mixed-race students who are less culturally competent and do not "look" Native American can comfortably explore the Native American aspect of their social identity without judgment or contestation. As one student explains, "most of us don't really look very typically Indian, so we all kind of fit in." In AISES, students' identity as engineers was as important as that of a mixed-race Native American. A community of peers based on professional interests rather than cultural interests helped 15 mixed-race students succeed in engineering. When asked what advice she would give to a Native American student to encourage success, a senior engineering major responded, "I would say, like if I was to tell a freshman that was coming and they were Native American, I would talk to them for just a couple of minutes. I would say join a club like AISES or AISA. You are always going to need that help and that support from other people."

We encourage educators and administrators to think and act beyond homogeneous racial assumptions. When developing advising or mentoring programs go beyond racial/ethnic match and consider cultural competency as well as cultural capital and regional differences. As the following student recognizes, assigning advisers or mentors based on homogenous racial assumptions may not best serve a heterogeneous under-represented population:

The best thing you can do is have someone that was raised in the white community verses like on the reservation or in tribal community... know how they were raised, their values seem to be different, I've learned. Because there are certain things where I kind of clash with the other Native Americans because I wasn't raised on the same ideas that they

were.... you need someone of that understanding in order to help them... Because it's like someone raised on it, say you have a white person raised on a farm, as compared to one raised in a city, they are from two different worlds.

We also recommend evaluating the intentions of certain programs designed to serve a particular population. Beware of intent/impact conflict. Not one size fits all. For example, some of the 29 mixed-race Native American students' pre-college experiences and backgrounds are not distinguishable from majority students. Programs should be sensitive to students negotiating difference, not just to the white majority, but to other ethnic and racial minorities, language difference and sex/gender differences along with their own identity development as a mixed-race person. Assuming that the obstacles and challenges faced by members of a racial or ethnic group are understood and experienced universally does not serve the best interests of all students.

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