Promoting Native American College Student Recruitment & Retention in Higher Education

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Introduction

This is the third report of a longitudinal project to improve recruiting and retention of Native American students at a large open-enrollment teaching university in the intermountain West where such students are greatly underrepresented. In the first study (Mosholder, et. al, 2013a), grounded theory was employed to create and evaluate a survey used to generate Native American student perceptions and experiences as they related to the key elements affecting recruitment and retention.

In that survey emergent themes were used to generate focus group questions. Two focus groups were conducted. A report of that study detailed the negative perceptions found by these methods that the Native American students at the university held about the level of academic support that they were receiving and about their feelings of isolation at school. The needs identified served as a basis for creating programs, curricula, and events that were culturally responsive and reflective of divergent viewpoints and were funded by a National Science Foundation grant.

In a follow up study (Mosholder, et al., 2013b) the researchers duplicated methods used during the prior year. They found an improvement in the perceptions of Native students towards the institution. In contrast to the group in the previous study, almost all now felt that a college education was important and supported

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by their parents and that they fit in at the university. In the year between the first and second studies, enrollment and retention of Native students increased, by 20% and 15%, respectively.

These two earlier studies suggested that several factors were important in increasing the rate of retention of Native American students at a large, open enrollment, teaching focused university in the intermountain west. These include: (1) mentoring of Native American students by other Native Americans; (2) a perception by Native American students that they, their traditions, values, and communities were valued and respected; (3) adequate communication to facilitate awareness that the first two factors were in place; (4) adequate preparation or remediation to enable academic success at the post-secondary level; and (5) sufficient resources to pay for school and living expenses

In our report on this second study, the researchers noted a number of limitations. The data were not disaggregated by gender, age, marital or parental status, or by tribal, nation, or other indigenous group. Further, since the surveys were conducted by intercept, not all Native American students had an equal chance to respond. Since qualitative methods were used, there remained a need for statistically significant evidence of the correlates or causes of recruitment and retention trends and to evaluate other interventions for their impact.

The researchers also noted a number of implications for future research. Students in the previous study had identified a number of issues about Native American students that the researchers wanted to know more about in terms of their effects on recruiting and retention. These included expressed desires for additional activities, programming, and courses, for external community involvement, for transitional and outreach programs, and for dedicated space. There were unresolved issues about

how best to communicate with Native students and to establish effective mentoring and advising relationships.

Current theoretical models of persistence often assume a deficit-based lens and assume students must conform to institutional norms (Harper, 2010; Hurtado & Carter, 1997; Rendon, Jalomo & Nora, 2000; Tierney, 1992). In extending the results of our previous two studies and to develop the survey that we used for the current study, we employed an assets-based approach. We wanted to understand what contributes to Native American student success in a very Eurocentric environment and what role an institution could play in facilitating that success.

Literature Review

Two multicultural theories concerning the effects of cultural background knowledge were of particular interest in guiding survey development. These are funds of knowledge theory (Gonzales, Moll, & Amanti, 2005; Moll et. al, 1992) and cultural wealth theory (Yosso, 2006). Examining these fields of research can help us better understand what knowledge and experiences influence diverse groups, like Native Americans, in their institutionally related thoughts and behaviors.

Funds of Knowledge Theory

Funds of knowledge theory is based on the idea that every individual is a competent, knowledgeable person with their own experiences that can be a basis for productive future learning. By extension, treating students in the classroom like they do have valuable experiences and knowledge has pedagogical value (Gonzales, Moll, & Amanti, 2005). These researchers used a Vygotskian (Vygotsky, 1980) and neo-sociocultural paradigm in creating methodologies that value students' common, everyday language, and practices. They claim that an attempt to

understand this knowledge can help others, like teachers, better understand their students and their communities and thus tailor their instruction to help them be more successful in the classroom.

A central tenet of funds of knowledge research and practice is a call for teachers to establish a sense of community with students in their classrooms. Teachers should get to know their students, their families, and their communities. Once this sense of community is established, teachers can identify ways that students can benefit each other and their extended groups. "Through this approach the teachers begin to see their students through new eyes as they discover the amount of knowledge students bring to the classroom" (Ramirez, 2009, p. 23).

Gonzalez, Moll, and Amanti (2005) examined the cultural background knowledge of Mexican American students at the University of Arizona (UU). They found that Latina/o students had a wealth of cultural background knowledge that connects to the UA curriculum. For example, many Latina/o students had knowledge of historical settlements, demographics, and land use that could be used to enhance the learning of all history students. Other Latina/o students had knowledge on the history of early copper mining including basic economic principles related to running businesses. A third group of students had a variety of science knowledge about minerals, gems, and the impact of the mining industry on the environment.

Banks et al. (2005) argue for a dynamic understanding of students within the full complexity of their social circumstances in order to gain a more complete and valid understanding of them. Without such an understanding, teachers normally do not create lesson plans that enable marginalized students to fully display their intellectual capabilities. For example, one of the researchers, Luis Moll, believes that the key to literacy instruction is for schools to learn about and tap into the "hidden" home and community resources of their students—those are not often explored in traditional-mainstream classrooms (p. 241).

In order to test this, Moll has done extensive research in the Mexican-American communities in Arizona where they have helped teachers learn how to talk with their students and their families to better understand how to adapt their teaching to their students' experiences and needs. Teachers involved in Moll's work have learned about the different funds

of knowledge of their students and have been able to create lessons and pedagogical strategies to enhance their learning.

The National Center for Research on Cultural Diversity and Second Language Learning has published a report on funds of knowledge research (Gonzalez, et al., 1995). This report maintains that:

> An underlying assumption of many educational institutions has been that linguistically and culturally diverse working-class students do not emerge from households rich in social and intellectual resources. This inaccurate perception, that diverse minority students have language disadvantages and deficiencies in school-sanctioned knowledge that they bring from the home to the classroom, has too often led to lowered academic expectations for these students… This Digest describes a research model that has shown that classroom practice can be developed, transformed, and enriched by drawing upon the existing *funds of knowledge* in minority students' households. Funds of knowledge refers to those historically developed and accumulated strategies (e.g., skills, abilities, ideas, practices) or bodies of knowledge that are essential to a household's functioning and well-being.

Moll et al. (1992) report on the methods that they used. Through participant-observer visits to minority student households, researchers and teachers became aware of these funds of knowledge. Although it is not a new concept for teachers to visit their students' homes and get to know their families, the difference within the funds of knowledge paradigm is the search for culturally connected knowledge and experience that they can bring back into the classroom in order to help their students connect with the curriculum. Through these home visits and the teacher-student relationships that have been formed, teachers are able to perceive their students as competent, knowledgeable, and deserving of higher academic expectations (Moll & Greenberg, 1990).

Cultural Wealth Theory

Cultural wealth theory builds on Bourdieu's (1986) theories of cultural capital. Bourdieu observed that society tends to place more value on the knowledge that is inherent to individuals in the upper and middle classes. As society accepts this knowledge as superior, it creates a form of cultural capital—i.e., ideas and mores that are more valued and thus can be used to gain more within a particular society.

What makes these forms of cultural capital problematic is that they tend to

be less accessible for lower socio-economic or underrepresented individuals who are therefore at a societal disadvantage. In her review of the literature, Yosso (2006) observes that deficit thinking is commonly found within today's educational system. Students in the United States who come with cultural backgrounds other than White and middle class, or who have first languages other than English, are often viewed by the system as problematic students who need to be "fixed."

Ramirez (2009) claims that once students are seen as academically and culturally deficient, they are more prone to being "fixed pedagogically" by teachers so that they develop knowledge of what teachers deem to be important (p. 27). Zambrana and Zoppi (2002) observe that many marginalized students come into school believing that they have useful knowledge and other cultural assets. Unfortunately, if these assets are not valued in the school or by the teacher, students may quickly begin to think that their experiences and backgrounds do not matter and are of no worth in the school. Hence, they are more likely to drop out. In light of this, Ramirez (2009) says, "a cultural wealth approach attempts to help students and teachers realize what diverse students bring from their home cultures is of value to themselves and to the school" (p. 27).

Yosso (2006) has identified various categories of cultural wealth which we will briefly discuss here. Although Yosso's work is directed to the Latino community and the resources and knowledge those communities can bring to the mainstream classroom, we believe that these same categories and ideas can be applied to any underrepresented group, and in particular, to Native American communities. The categories explored by Yosso (2005, 2006) that we feel apply well with this study on Native American students are aspirational capital, navigational capital, social capital, familial capital, and resistant capital:

> *Aspirational capital*. Aspiration capital deals with the attempt of helping underrepresented students believe in themselves, their hopes and their dreams despite the difficult situations they find themselves in. Aspirational capital can be seen as an aspect of cultural capital and can be manifested in many ways including parents or family members passing along inspirational stories and giving advice or hope to the younger generation. Although there is limited research on the effects of aspirational capital, Villenas and Deyle (1999) believe it can be of value to children.

Navigational capital. Navigational capital refers to the competence individuals use in order to better navigate through political, social, workplace, and educational systems which have not traditionally been set up with minorities' best interests in mind. The knowledge people have and how they use it within the different social contexts they find themselves is another aspect of cultural capital. People with navigational capital can be a great service to others in their communities by sharing their different and unique knowledge and skill sets. Navigational capital can be complex or simple in nature. It can be as simple as the knowledge of how to use multiple public transportation routes (Yosso, 2006) and as complex as knowing the daily exchange rate between monetary systems. Underrepresented groups tend to recognize navigational capital more readily since they more often experience or observe the negative results that occur in its absence (Yosso, 2006).

Social capital. Yosso (2006) describes social capital as the coming together of resources from people and the community in which they find themselves. It is the knowledge, resources and support of people, often other underrepresented individuals in a community, and the enhancement of benefits for individuals that can ensue when these are assembled. Social capital can be particularly beneficial for individuals who are new to, or otherwise unfamiliar with, a particular community. Social capital can be manifested in the sharing of knowledge developed by utilizing navigational capital (Yosso, 2006).

Familial capital. Familial capital has to do with the extended families of individuals and the benefits and knowledge these family member can provide. It includes the cultural knowledge which is shared between family members and often has to do with what is necessary to be a part of that family. Family relationships and the connections we have with our families are often what ground us, especially when entering new and different social situations. There are many social entities that can support this familial capital such as, sports, school, religious gatherings, and other social community settings (Yosso, 2006).

Resistant capital. Resistant capital is a category of particular interest to the Native American population. This concept refers to the verbal and nonverbal cues and lessons many underrepresented groups share with one another that help create a sense of worth. This is often done to help protect the self-efficacy of individuals in marginalized groups from the negative messages these individuals get from the larger society. An extreme form of resistant capital is addressing and then challenging the inequalities within society. This can, of course, become a burdensome

task for individuals and may sometimes even become self-defeating. However, the promise of resistance capital is that these challenges can become consciousness-raising (Freire, 2000) and serve to better the community as a whole (Yosso, 2006; Villenas & Deyle, 1999).

Culturally Congruent Instruction

Au and Kawakamie (1994) argue that culturally congruent instruction does not necessitate changing the goals or principles of educational institutions. They synthesize research establishing that faculty and staff can learn to be culturally congruent even though they are not from the students' culture.

Research Questions and Hypotheses

The current study utilized a survey (See Appendix A: The On-line Survey) constructed to evaluate the cogency of factors surfaced during two previous qualitative studies on the recruitment and retention of Native American students at the university on a statistically significant sample. In addition, funds of knowledge theory, cultural wealth theory, and the concept of culturally congruent instruction were used in survey construction with the hope that a more comprehensive list of factors would be surfaced.

The framework for survey item development was a hypotheses, the context of which is that Native American students at the university and the members of their communities, including friends, families and elders, both within and outside of the university, reflect the following:

1. Feeling that you and your community are welcomed and valued encourages persistence.

2. Participation in activities and designated spaces increase a sense of community and acceptance.

3. Mentoring increases a sense of community and acceptance.

4. More effective communication is associated with more mentoring and participation in activities.

5. Adequate preparation and money are needed for retention.

6. There will be differential effects observed about the correlations within one or more of these hypotheses related to one or more of the categories tracked, i.e., age, gender, marital status, and/or number(s) of children.

We hoped that finding whether these hypotheses were correct would inform best

practices for recruitment and retention of Native Americans at the college level.

Methods

Survey Development

Utilizing the results of the previous study and a review of the literature, one of the researchers developed the hypotheses listed above and an initial set of survey questions related to key elements affecting mentoring, cultural inclusiveness, and strong and supportive communities. These questions were designed to evaluate the perceptions of Native American students at the university about their views and experiences.

The initial questions were independently evaluated and adjusted by the other two researchers as a check for consistency with the key concepts that had been identified. Three undergraduate students from within the larger population were recruited as Native American Student Researchers (NASRs) and given training in survey data collection procedures. The NASRs evaluated the adjusted list of questions to ensure that they were both culturally relevant and appropriate for the population. The final instrument and the on-line informed consent form used with it are in Appendix A.

Population, Sample and Data Collection

A list of students identifying themselves as Native Americans was obtained from the university's Institutional Research Office. There were 328 names on that list. Of these, 168 were female or slightly more than half. The university does not collect data on tribal affiliation, age, or marital status.

Survey Monkey was used to distribute the survey to respondents. A link to the survey was sent to each of the 328 students. Participants in the study earned a chance to win an Apple iPad with Retina display Wi-Fi 16 GB—4th generation. The NASRs created posters advertising the survey as part of a larger effort to help make the university more responsive to, and supportive of, Native American students in addition to providing the students with the opportunity to win the iPad.

Statistical Analyses of the Survey Data

In addition to the categorical data, 22 of the survey questions requested responses on the Likert scale presented in Appendix A. Each of these questions was coded for analyses. To explore relation-

ships between and among the variables, correlation tables were generated using SPSS. Where significant relationships existed, they were used to conduct multiple regression analyses. Tables displaying the results are presented and discussed in the results section.

Qualitative Analyses of the Survey Data

The NSRSs were asked to contact as many of the un-surveyed Native American students as possible by telephone and e-mail to ask them to participate in focus groups. As with survey completions, students were told that the focus groups were part of a larger effort to help make the university more responsive to and supportive of Native American students.

Two focus groups were conducted, one with eight students and another with six. The focus group script is presented as Appendix B.

The students completed an informed consent waiver prior to the start of the session. Two of the researchers took field notes. In addition, focus group meetings were recorded and transcribed. The transcriptions were used to check and compare with the field notes taken by the researchers.

Directed content analysis was used to categorize the focus group data by hypothesis. Researchers use directed content analysis when "prior research exists about a phenomenon that…would benefit from further description" (Mayring, 2000, p. 1281). This approach has also been referred to as deductive category application. The hypotheses listed above were used as coding categories. All of the data were then compared and analyzed independently by each of the faculty researchers and the NASRs.

Results and Discussion

Descriptive Statistics

There were 130 respondents, or about 40% of the total population. Fifty-six (43%) were 18-24 years of age; seventy-four (57%) were 25 or older. Seventy-one (55%) were

male and 59 (45%) were female. Ninety-one (70%) were single; thirty-nine (30%) were married. Eighty-six (65%) had no children; fourteen (11%) had one child; eleven (9%) had two children; and 20 (16%) and three or more children.

In response to the statement "I am descended from ancestors that include the following Tribe(s), Nation(s), or Indigenous Group(s)— type all that apply into the text box," 45 groups were entered. Of these, 70, or 54%, said that at least some of their ancestors were Navajo or Dine (Navajo for "the people"). No other group had more than four people who responded.

Hypothesis One:
Feeling That You and Your Community Are Welcomed and Valued Encourages Persistence

To test this hypothesis, the responses to survey questions one (home community knowledge valued), seven (students welcomed and valued), and eight (elders welcomed and valued), and nine (Native community involved) were regressed against question number twelve (enough courses and activities to make a culturally informed career choice). The significant correlations resulting from this analysis are presented in Table 2.

As can be seen from the table questions 8 (parents and elders are valued) and 9 (the Native community is involved) are significantly associated with perceptions of courses and activities that enhance culturally influenced career selection involving Native American culture. This relationship was explored in the focus groups. We asked students about whether they intended to return to the university and the factors involved in their decisions.

Ten of the 14 students in the focus groups said they would. Most volunteered graduation as their reason for staying. Three of them were more explicit. One said:

Yeah I plan on coming back. I'm coming back because of the opportunities I have here. I haven't really heard of any schools

that have Native American dance groups. That is really what is keeping me here.

The second said:

Here I feel growth and the train is speeding up here. That is why I would like to stay.

The third said:

I like (the university); it is a really good school. I feel a lot of connection.

More could apparently be done in order to demonstrate that Native American communities are welcomed and accepted. One student said:

Honestly I've been to the Navajo Nation Fair and I haven't seen a (university) presence. (The Native American student adviser) says they are there and they have a float in the parade but I have never seen it.

Hypothesis Two:
Activities and Designated Space Increase Community and Acceptance

Two regression analyses were conducted to test this hypothesis. In the first, the responses to survey questions three (attractive programming), four (enough dedicated space), and 11 (enough outside activities) were regressed against question number twelve (funds of knowledge). The significant correlations resulting from this analysis are presented in Table 3.

Table 1
Descriptive Statistics

Respondents/Population (%)	130/328 (40%)	
Age (%)	18-24 =56 (43%)	25 and older = 74 (57%)
Gender (%)	Male = 71 (55%)	Female = 59 (45%)
Number of children	None = 86 (65%) Two= 11 (9%)	One = 14 (11%) 3 or more = 20 (16%)
Tribe/group	Dine/Navajo = 70 (54%)	45 others (maximum/group) = 4

Table 2
Multiple Regression Analysis Results for Research Question One with Survey Question One (funds of knowledge) as the Dependent Variable

Question	B	SE β	B
three	.226**	.111	.209
four	.352*	.112	.313

Notes:
* significant at the $p<0.05$ level;
**significant at the $p=0.01$ level

Table 3
Multiple Regression Analysis Results for Research Question One with Survey Question 12 (course activities) as the Dependent Variable

Question	B	SE β	B
eight	.337**	.129	.367
nine	.249**	.092	.271

Notes:
*significant at the $p<0.01$ level;
**significant at the $p=0.01$ level

In the second, the same predictor survey questions were regressed against question number seven (welcome and valued). The significant correlations resulting from this analysis are presented in Table 4.

Enough dedicated space is very important when survey question seven (welcomed and valued), as opposed to survey question one (funds of knowledge), stands in for the concept of "community and acceptance." These data lead to the conclusion that all three independent variables are important for creating a sense of community and acceptance. We explored this conclusion in the focus groups.

Although students in an earlier study at the university (Mosholder, et al., 2013b) had expressed a desire for dedicated space for Native students, the perception of these groups was that enough space was all that mattered. When asked about this, one of the students talked about the Multicultural Center (MC) which had been identified in an earlier study as being "taken over" by another ethnic group. This situation changed for the better as far as the Native students in our focus groups were concerned. One student observed:

> They brought down half of the posters and put up Native posters too. (Now) the MC is a place for gathering between classes even though other ethnic groups use it as well.

Several other students talked about the MC as a place where relationships with other Native students are initiated and maintained. One student said that:

> The MC really helped with that (making friends) because when I came here I knew I wasn't going to know anybody but I found new friends.

It is also a place to go for help and to find out what is going on in the Native community. As one student said "what I see when I come to the MC is the students helping each other" in things like picking courses or instructors or applying for schol-arships. Another pointed out a positive trend: "It's getting better, the atmosphere, more people are involved and coming to the MC to take a break."

Native students at the university are able to find other spaces that suit them as well. One student said: "I invite people to the library for Navajo tea parties...prior to closing." Lots of Native students show up including many who are Native but from other tribes. Several students mentioned congregating at other students' houses.

There was a strong sense of community expressed by the students in both groups that was focused on the campus but extended beyond. As one student said, she did not have to leave campus experience camaraderie, but could "get (her) relationships here on campus." Another student said "I have more of a social life when I come to school."

This perception is dramatically different than when the researchers conducted their original study (Mosholder, et al., 2013a). Then the Native students perceived their population to be fragmented and students did not know one another. Now the "majority of us are part of a group" and "people are more unified." As one student said "right now I feel it is strongest and still growing...the sense of community finally happened about two years ago." Another student said:

> I think we have more students here then we used too. Now we have a lot of Natives that come in to support each other. It seems like we're getting more attention.

The programming that the students mentioned was not that set up by the university or by one of the university sponsored clubs. It was instead activities that the students arranged for themselves, like rock climbing or bowling. One factor aiding a feeling of community was religion. Many of the students in the focus groups said they practiced the same religion. One said: "I like the support"...and church is my "home away from home." Another said: "religion is a main part of...(me) not feeling as homesick"

Hypothesis Three: Mentoring Increases a Sense of Community and Acceptance

We tested this hypothesis by using the responses to survey questions 15 (outreach during transition), 16 (guidance during transition), and 17 (mentoring relationships) as the independent variables and survey questions one (funds of knowledge), seven (welcomed valued), eight (elders valued), and nine (Native community involvement) as the dependent variables to find the regression that represented the hypothesis the best. The significant correlations from that regression are presented in Table 5.

What these data indicate is that there is a moderately strong association between feelings of community and acceptance, guidance during transition, and mentoring relationships. In order to understand this correlation we explored how these constructs related to one another in the focus groups. The evidence provided by these students was that the feeling of community preceded the mentoring relationship. As one student said:

> Honestly, Natives are too shy to talk to each other. You (the current member of the community) have to be the aggressive one and say 'hey'. They look at you and turn and look down. You have to be the one to be more welcoming to them.

Another student in one of the focus groups mentioned a girl who she had not seen for a long time. She thought the other girl had returned to the reservation. The focus group participant approached the girl and found out that she felt homesick. She went on to say:

> Recently we invited her out to hang out with us. She was going to go home back to (the reservation), but she said since you guys wanted to hang out with me I wanted to stay longer.

Although there have been efforts to establish formal Native American lead mentoring programs and to hire Native American counselors, the students in the focus group expressed a strong preference for informal mentoring approaches. One student said: "The formal mentoring I'm not too sure about. The informal part I have learned a lot." A second student followed up with:

> I agree on informal. I don't go to counselors unless I really have too. I ask my friends what are good classes to take. Questions

Table 4
Multiple Regression Analyses for Research Question One with Survey Question Seven (welcome and valued) as the Dependent Variable

Question	B	SE β	B
Three	.191*	.094	.271
Four	.403**	.090	.367

Notes:
*significant at the p<0.05 level;
**significant at the p<0.01 level

Table 5
Multiple Regression Analyses for Research Question Two with Survey Question Seven (welcome and valued) as the Dependent Variable

Question	B	SE β	B
16	.278*	.087	.305
17	.331*	.088	.359

Note:
* significant at the p<0.01 level

I should be asking a counselor, I ask my friends. I prefer it that way because they had experiences with the teacher. They know how they are treated as a student. A counselor wouldn't help me that way.

A third student in that group then said: "The trust aspect is a big part of it. It's an informal mentorship. We can ask each other questions."

Evidence about how these informal mentoring relationships are established was found in the other focus group. One student said:

My first year here. I had problem with financial aid. I didn't know what I was doing. I didn't understand the system for PEL grants, FAFSA, and other stuff. I think they should teach ahead on that. Now people are coming to me for help. I know everything from the book now because I have been here for so long.

A second student then said: "I introduce friends to other friends that can help them. That is how they become friends."

One opportunity to help with the recruiting of Native students by the university would be to send members from the current Native student group on recruiting trips. One student expressed what appeared to be the feelings of many when he said:

We could go around the reservation and get students and it will add up, and if we could just let student know about the MC. If we could we could have students volunteer their time to go there and show pictures of us hanging out and showing what we do there.

Hypothesis Four:
More Effective Communication Is Associated with More Mentoring and Participation in Activities

In order to test this hypothesis, survey questions five (using technological communication) and six (communicating through the "grapevine") were used as independent variables with survey question 17 (mentoring and advising relationships) as the dependent variable. There was only one significant correlation identified with this regression and it is shown in Table 6.

Thus, only communicating through the "grapevine" was significantly associated with mentoring and advising and it is a moderately weak association.

When survey question 12 (enough course activities to help me make a culturally related career choice) is used as the dependent variable a strong correlation with survey question five (using technological communication) was revealed. This data is displayed in Table 7.

In the focus groups we asked about communication, whether it occurred through the grapevine or technology and how that related to students feeling valued. The Native students saw technical and word-of–mouth communications as being intermingled and both were important in establishing and maintaining their community. Among the comments were:

I think where it starts is in the MC, we talk about it. It branches and people tell each other.

Everything comes from the word of mouth especially with Native American people.

I think where it starts is in the MC, we talk about it. It branches and people tell each other.

I get everything by word of mouth, I heard it from you guys before I see it on Facebook or from emails.

We get notices of events. It has to be personal. I prefer talking one-on-one with a person.

Yeah, not only by phone. We post something on Facebook like, "this is happening this weekend come out if you can."

More could be done to improve communication and foster mentoring and participation. The subject of the Native Sun Club (for Native Americans at the university) came up in the focus groups. One student said: "Students don't know who the officers of the Native Sun Club." A second student responded:

I wonder about that too. I don't really know our Native Sun President or officers. I don't know how they get appointed. I don't know how they get positions. Yester-

day was the first time I saw the President in two months.

Another student said:

I see students have their own events outside the MC. That is how they create bonds. We know each other by going to movies or cooking and doing stuff outside the MC. The President should do that for us inside the MC.

These statements encouraged other students to talk. A fourth student said:

I have to agree with that because I know colleges that are closer to the reservations they do a lot of activities in their multicultural center. They would butcher a sheep as a club and do stuff together. I don't notice that here.

Another conversational thread in the focus groups mentioned additional possibilities for activities that would encourage participation and mentoring:

We can do a Native culture night. I think a cultural night that would emphasize the Navajos and the people of the Southwest. We could talk about the Code Talkers, about traditional hairstyles and tell people we don't live in Teepees. I think a lot of people don't know of what we are capable of.

Another student was encouraged to speak because of this statement and said:

We could show people about our traditions like blue corn mush. And have a Grandma here and teach us how to weave. That would be cool.

Hypothesis Five:
Adequate Preparation and Money Are Needed for Retention

In order to test this hypothesis we tested for correlations between survey questions 13 (academic preparation), 14 (preparation for transition), 19 (enough money to pay for school), 20 (knowledge of financial aid), and 21 (comfort in applying for scholarships). Table 8 contains the correlation coefficients with indications of their level of significance.

Thus the data reveal that measures of preparation are moderately related to measures of having knowledge of financial aid and having enough money. What this appears to say is that people who are prepared academically seem to be a bit better off financially than those who are not prepared. This could come from underlying socioeconomic causes rather than specifically from preparation. Thus students that come from better funded schools that prepare them better may be

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Table 6
Multiple Regression Analyses for Research Question Three with Survey Question Seven as the Dependent Variable

Question	B	SE β	B
6	.281*	.115	.269

Note:
*significant at the p<0.05 level

Table 7
Multiple Regression Analyses for Research Question Three with Survey Question 12 as the Dependent Variable

Question	B	SE β	B
5	.410*	.087	.462

Note:
*significant at the p<0.01 level

wealthier than those from poorly funded schools.

The students in the focus groups talked about getting enough money to pay for school. One student said:

> It goes back to non-formal mentorship. People hanging out in the MC help each other out and tell each other about scholarships.

Another said:

> It's like when we work together with the AIS Scholarship. We know the deadline. One time at the very last day when it was due we got everything done and all carpooled over to the AIS office together. We just help each other out. The question comes up all the time, "Do you have a ride to AIS? Do you need a ride to AIS? Who needs a ride?

This informal network of encouragement is not, unfortunately, universal. As one student said:

> I know a lot of my friends who are Natives don't hunt or scholarships because they don't really know how to get scholarships.

Hypothesis Six:
Differential Effects

There were no differential effects noted based on any of the categories. One aspect of this that we chose to explore in the focus groups was inter-tribe friction. It seemed possible that Navajos, represented by 54% of the respondents, might exclude Natives from other tribes or groups. We mentioned in the focus groups that the data indicated that all Native students treat other Native students as equals and with respect here at the university. We asked the students if they thought that was true. All agreed that it was. One student commented:

> I think we bond together because we all go to school together. The idea, that whole tribal mindset we have, that we have to be bonded to a group. So we either are part of it or we are not. The majority of us are part of a group.

Conclusions

This study added a great deal to our understanding of the factors that contribute to Native American student success at the university, which is a very Euro-centric environment. The faculty and staff at the university created a significant number of Native American-centered programs and curricula (Mosholder, et al., 2013b). Parents, other family members and elders were invited to attend the programs and many did.

The implementation of these programs and curricula correlated with Native American student perceptions that they and their communities were welcomed and valued and there were enough courses and activities to make a culturally informed career choice. During this time Native American student persistence increased.

Native American student mentoring of other Native American students was found to be an important element to increasing persistence. It is important to recognize that, with the students at the university, feelings of community preceded mentoring relationships. Current students needed to take the initiative with new arrivals. In addition, with this group of students, informal mentoring was more important than formal mentoring programs and that there was a reciprocal relationship, i.e., informal mentoring increased a sense of community and acceptance.

Space where Native American students can socialize with other Native American students, make friends and also help each other is important to building a sense of community and acceptance. For the Native American students at the university, this did not have to be dedicated but just had to be subjectively "enough."

In addition, more effective communication is associated with more mentoring and participation in activities. Further, informal mentoring is associated with knowledge of, and action about, scholarships as well as guidance during transitions.

For the Native American students at the university, effective communication most often occurred through the "grapevine" and had to be personal, i.e., between people who know one another.

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Table 8
Pearson Correlation Table for Research Question Five

	Question 13	Question 14	Question 19	Question 20	Question 21
Question 13	-				
Question 14	.611**	-			
Question 19	.217*	.267**	-		
Question 20	.101	.234**	.511**	-	
Question 21	.145	.315**	.615**	.511**	-

Notes:
** significant at the p=0.01 level (2 tailed); *significant at the p=0.05 level (2 tailed)

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Appendix A
The On-line Survey

This online survey should take about 10-15 minutes to complete. Individuals must be 18 years of age or older to participate. In this study, researchers are interviewing (institution)'s Native American, American Indian or Alaska Native students to discover how (institution) can better serve them. In it, you will be asked to share your opinions and understandings. In addition, you will be asked to provide some information about yourself. The data will be used to assess how (institution) departments can better meet the needs of its students. In addition, your answers will be confidential. That is, your individual information will not be shared with anyone outside of the research group and the supervising professor. Only a summary of information will be made available to others. Your participation in this study is completely voluntary. You may choose not to participate, you may choose not to respond to particular questions, or you may also discontinue participating at any time without penalty. By returning this questionnaire to the researchers, you consent to participate in this study. All participants in the study will earn a chance to win an Apple iPad with Retina display Wi-Fi 16 GB – 4th generation. The drawing will be held on April 8, 2013. You must complete this survey and be a (institution) student in order to participate. Thank you for your participation.

- I am (male; female)
- My age is (18-24; 25 or older)- select one
- I am (single; married)-select one
- I have (no children; 1 child; 2 children; 3 or more children)-select one
- I am descended from ancestors that include the following Tribe(s), Nation(s), or Indigenous Group(s) – type all that apply into the text box

The following survey uses the term Native to include other similar terms including Native American, American Indian, Alaska Native and Indigenous Groups.

To what degree do you think or feel that the following statements are true:
1 = not at all; 2 = not very often; 3 = about half of the time; 4 = often; 5 = always

1. My home community knowledge and experiences are recognized and valued at (institution).
2. Being a student at (the university) will help me realize my hopes and dreams.
3. (The university) has the course work, activities, and programming needed to attract large numbers of Native students
4. (The uiniversity) has enough space dedicated to Native students to attract large numbers of Natives here.
5. Technological communication with and among Native students is pretty good at (the university).
6. (The university) and other Native students do a good job of communicating through "the grape vine" at (the university).
7. Native students feel welcome and valued at (the university).
8. The parents and elders of Native students feel welcomed and valued at (the university).
9. The Native community is very involved with the course work, activities and programming at (the university).
10. There are enough activities and programs that compliment regular classes, but aren't part of them, to attract large numbers of Native students at (the university).
11. There are enough activities and programs outside of regular classes to attract large numbers of Native students at (the university).
12. There are enough courses, activities and programs at (the university) to help me make a career choice that takes into account cultural influences.
13. My academic background strongly prepared me to be a student at (the university).

Appendix A
(continued)

14. The various ways that I was prepared for the transition into (the university) strongly set the stage for my success.
15. There was enough outreach towards me during my transition into (the university) to help me be successful here.
16. There was sufficient guidance during my transition into (the university) and I was able to make a good match between my desired schedule and the available courses.
17. I have strong mentoring and advising relationships at (the university) and I am able to get the direction that I need to be successful.
18. I have a very active social life at (the university) despite my need to commute to school and home and work, and to take care of my family.
19. I have enough money to pay for school at (the university) and get my degree in a reasonable amount of time and at the same time take care of my family when and if I need to.
20. I know enough about financial aid and how to get the loans, grants, and scholarships that I need to get my degree at (the university) in a reasonable amount of time.
21. I feel comfortable in applying for scholarships and grants and applying for the loans that are necessary for me to get my degree at (the university) in a reasonable amount of time.
22. I know a number of supportive staff and faculty members at (the university) and I have good relationships with them.

Appendix B
The Focus Group Script

Good afternoon everybody. Since this focus group is part of a research project, we need you to understand what's going on and to get your permission to proceed with the discussion. I'm passing out a letter. Please read through it. If you're OK with what it says, please sign and date it. Thank you.

OK. At this point, I think it's appropriate to frame why you are here and what we researchers are hoping to accomplish. For those of you that don't know, university received a National Science Foundation grant. The purpose of the grant is to improve digital literacy and college readiness among Native Americans. As part of the overall effort, we are trying to improve the recruitment, persistence and retention of Native Americans here at university. The survey that we just implemented and this focus group are part of a longitudinal study with those ends in mind that started four years ago. We started with a literature review to find out what Native authors have said about why Native students are successful or not successful in post-secondary education. That information served as the basis for a survey that we used in qualitative studies in the springs of 2011 and 2012. Each of those surveys was followed by focus groups like this one. Based upon what Native students told us, and using the money from the grant, we have been able to work with Native students and staff to initiate and support a number of programs and events that we hoped would show our respect for Native traditions and values, encourage Native community involvement, and thereby help achieve our goals of increased recruitment and retention. I'm happy to be able to report that the Native student population at university has increased 25% during that period. In addition, semester to semester retention for Native students has increased from less than 66% to over 77%.

Does anyone have any questions before we begin the session?

As you probably know, this year we switched from a face-to-face qualitative approach where we asked people to write answers to a series of questions to an on-line approach where we asked people to indicate their degree of agreement or disagreement with 22 statements about their experiences and perceptions about coming to university and going to school here. This approach allowed us to conduct statistical analyses of the responses and develop the following questions which we hope will help improve our understanding of what's going on and do a better job in accomplishing our objectives. Our main purpose today is to share with you what the statistics told us and get your perspectives on what they mean.

We had 130 respondents to the survey, which is 40% of the total of 328 Native students enrolled here this spring. Of these 71 said they were Female and 59 said they were male. How many of you took the survey? Is there anything about that experience that we should know about?

As those of you who took the survey know, we asked a question about the Tribes, Nations, or Indigenous Groups that your ancestors belonged to. The people who responded listed 45 groups. If you are comfortable in doing so, would you please share the group or groups to which you or your ancestors belong?

Of the 130 who responded, 70, or 54% said at least some of their ancestors were Dine, or Navajo, or part of the Navajo Nation. No other group had more than four people who responded. One neat thing about the data is that none of the connections along Navajo-non Navajo lines was significant indicating to us that, in general, all Native students treat other Native students as equals and with respect here at university. Do you think that's true?

Appendix B
(continued)

There was one significant difference between Navajos and students from other tribes: Navajos were more likely to communicate technically. What do you think about that?

Another thing that the data indicated is that that communications with and among Native students, either through technology or the grapevine, is important to students in feeling valued. Do you find that to be true?

What media are parts of the technical communication? Is this networking by text, on Facebook or other social media? Do you have examples? Could either grapevine or technical communications be improved? If so, how could they be improved?

The data indicated that Native students perceive that the relationship in the families, tribes, and clans has extended into the university. Do you find that to be true?

Among the strong relationships that were found in the data is that mentoring and outside activities are significantly correlated with feeling valued. This relationship was also connected to communication. How do people decide to go to outside activities? Is it because a friend sends a message through Twitter, or is a face-to-face request more important? Are these activities associated with forming mentoring relationships? How else are mentoring relationships formed?

The data also showed that mentoring and guidance are clearly valued. What forms of mentoring are taking place? What might be done to encourage and support these kinds of relationships?

Mentoring and guidance were also associated with a sense of community. Which comes first? What else could be done to build a sense of community?

In the survey data results, the concept of space that is dedicated to Native students was strongly linked to the concepts of feeling welcome and valued and of community and acceptance. Where do Native students hang out? Is that place or those places adequate for the groups' needs? Is that space or those spaces available at the right times?

Another connection that we saw in the survey responses was a connection, not surprisingly, between not having enough money to pay for school and not knowing enough about financial aid and how to get loans, grants and scholarships. We expected to see that the married students had more challenges with financing, but that's not what the data showed. In the past, we've held some evening programs during the week on how to take advantage of the financial aid, scholarship, and grant opportunities that are available, but these weren't well attended. Are more programs like this needed? When would be the best time to have them? What would be the best way to get the people that can use this information to attend?

One difference between married and single people was that married people were significantly more likely to rank themselves lower on academic preparedness. Why do you think that might be?

Do you plan to return to the university? When? What are the factors involved in that decision?

Is there anything important about recruiting and retaining Native students that we have missed?

Thank you for your participation.