

**2007 Interdisciplinary Faculty Retreat
Recruiting and Retaining Diverse Graduate Students
Lied Lodge & Conference Center - Nebraska City
Wednesday, May 16**

**Keynote Address: Building an Inclusive Graduate Community
Dr. Scott Bass, Vice President for Research and Dean of the Graduate School
University of Maryland, Baltimore County**

Dr. Bass began by describing the implementation and impact of the Meyerhoff Scholars program at the University of Maryland, Baltimore County (UMBC). He emphasized that students aren't numbers, they are people; and he talked about encouraging excellence, not lowering standards. "Diversity is not the same thing as inclusiveness. Inclusiveness means a welcoming environment where students are comfortable in the setting. Diversity initiatives will not succeed without inclusiveness."

About 200 universities grant Ph.D.s in STEM fields; underrepresented groups are a tiny fraction of domestic Ph.D.s (e.g., 10 African Americans received Ph.D.s in physics in 2005). More Ph.D.s are granted to foreign than to domestic students in STEM fields.

An important question Dr. Bass posed was, "Why aren't there more underrepresented students in STEM fields?" A common misperception is that few minority students are interested in math and science, and those who are will go to medical school. The fact is that interest in STEM fields is very high, especially among African American students, but few students are retained in those programs. The retention problem is especially notable in physics. Biological sciences programs do a little better.

The Meyerhoff Scholars program began with focus on undergraduate African American males. The program is no longer race- or gender-based but open to all high-achieving students. The program was expanded to include graduate students, and there are currently 146 Ph.D. students in UMBC's program, with a retention rate of 73%. Program components include a summer bridge experience, cultural arts, and an explicit goal to earn the Ph.D. The program has been instrumental in increasing both the number and retention rates of underrepresented, domestic students.

Other effective recruitment programs are Graduate Horizons, Summer Horizons, and Faculty Horizons. In Graduate Horizons, the school invites 80 to 100 students of color to spend a weekend on campus; it also sends students on summer trips to local agencies that offer careers in their fields of study. Retreats and programs such as AGEP for underrepresented students are very important—these activities help them feel less isolated.

There are moral and pragmatic arguments for increasing diversity in graduate education. Developing minority leaders and professionals provides more qualified people to address economic, health, public policy, and social problems. Elevating the educational attainment of

minority citizens gives them an opportunity to influence the nature and content of the nation's research agenda, shape public policy, become role models, and teach later generations.

Dr. Bass gave an example of successful efforts in UMBC's chemistry department. The department coordinates an undergraduate research symposium, has high faculty involvement, maintains its website, participates in Horizons programs, uses direct mail, gives personalized follow up on applications, provides application fee waivers for domestic students, has a campus visit program, and sends kind emails. Dr. Bass emphasized that the tone of communication should be kind and caring, never cold or intimidating.

Another very helpful program is Summer Bridge, a 10-12 week program required for all newly enrolled domestic Ph.D. students. Retention strategies include personal attention, standardized core classes and requirements, community-building programs, a student lounge, and seminars. After implementation of the Summer Bridge program, Ph.D. completion rates increased from less than 26% to 90% in ten years.

Some of the investments UMBC has made include hiring a program director and fulltime program coordinator, providing travel funds for students to present their research, bringing in guest speakers, improving web sites, and paying the application fee for all domestic students. Key to recruitment is involvement of the faculty. Potential graduate students are matched with faculty members with related interests, who continue to personally contact students.

And success brings more opportunities for funding. Funding sources are listed in the handout. UMBC has used additional funding for Ph.D. completion seminars, health and wellness seminars, and problem-solving support systems. The university conducts an annual retreat, during which students and faculty participate in group activities, and a "dissertation house" where from 8:30 a.m. to 11:00 p.m. students focus on their dissertations with assistance from their coaches. The goal of all these programs is to build a supportive environment and retain students. UMBC also hosts a conference, conducts a research symposium, and has a peer mentoring program in which more advanced students work with incoming students.

"10 Lessons Learned," a guide for recruiting and retaining underrepresented students, was published by Council of Graduate Schools in 2007. The lessons are listed in Dr. Bass's handout.

Plenary Address: Increasing the Number of Minority Ph.D.s
Dr. David Manderscheid, Chair and Professor of Mathematics
University of Iowa

Dr. Manderscheid reminded the audience that recruiting minority Ph.D. students is not rocket science, but it does require a fresh perspective on how to approach the recruitment process.

In the STEM fields, funding is necessary; however, many ways of approaching graduate education differently don't involve monetary costs. Attrition rates in every area show that there is a great deal to be done at no cost. He challenged that if it can be done in Iowa, it can be done in Nebraska.

Background

Manderscheid began with a definition of underrepresented students in the field of mathematics. In the U.S., Asian students are not a part of this classification as they are not underrepresented. (However, American-born Asian Americans are underrepresented in the field.) Of the 1245 Ph.D.s awarded in the mathematical sciences in the U.S. in 2005-2006, 42% were to U.S. citizens, 3% were to U.S. underrepresented minorities, and 32% were to women.

The Problem

Many students in high school are interested in STEM fields; however, that number exponentially decreases at each progressive level (undergraduate, master's, Ph.D.). Some call it a leaky pipe; Manderscheid calls it a bursting pipe. It cuts across STEM fields—physics and computer science are worse than math, while biological sciences fares a little better.

University of Iowa

Of the 29,000 students at the University of Iowa, 6 percent are underrepresented minorities. The math department has a 70 percent retention rate, which is very good. In 1994, the department had no minority students. In 1995, they received a GAANN grant which allowed for minorities to increase to 10 percent of their department. For the last six years enrollments of minority students have been above 20 percent.

Grant Sources

Grants came from U.S. Department of Education (GAANN grants), Alfred P. Sloan Foundation (five years ago), and National Science Foundation (NSF gave Iowa the presidential award). Funding sources are available.

Student Profiles

The overall numbers of minority Ph.D.s won't increase if programs simply recruit students who would otherwise go to graduate school at another program. Programs should look to recruit students who weren't initially considering going to graduate school. Manderscheid shared the stories of several students from institutions that are not typically known as the best recruitment sources. These students are completing their Ph.D.s, receiving tenure, or finding permanent positions at prominent organizations. The key is identifying students at schools which don't send many graduate students.

Initiatives

Mandershceid shared several examples that have helped with student retention at Iowa. These initiatives include: a one-class summer session for all incoming students, which helps them transition to a large campus; peer mentors and faculty advisers; summer preparatory courses for comprehensive exams; a holistic approach to admissions; partnerships with REUs and alliances; multi-year offers; and a reform of the first-year curriculum and exam system.

Success to Date

There has been a significant change in the culture at Iowa. They expect students to succeed. They create community and friendships among students. They encourage them to work together and play together. It's very difficult for students to isolate themselves.

Lead by Example

To replicate this success, we don't need whole departments to buy into it at first. A core of senior faculty is necessary and then a critical mass of students. Also, have reasonable expectations. If you recruit from new schools that aren't used to sending students to graduate school, be willing to accommodate for varying levels of student knowledge. We have to change the culture: we want students to get their Ph.D.s more than we want to maintain the traditions of the discipline. The standards will be maintained as we get students to succeed. Make sure the success will continue. It can't be about the person in charge, it's about the program. Hire new faculty who have worked with diverse students.

Transformation and Expansion

Diversity is not just about recruiting minority students. It's about making the program better. Take your Ph.D. students and consider where they received their bachelor's degrees. Seventy percent of graduate students receive their undergraduate degrees from institutions that grant a Ph.D. In Nebraska, the majority of students are at the Ph.D.-granting institutions, but in California and other places, the majority of students are from non-Ph.D.-granting institutions.

Questions and Answers

How much interaction do your students have with other parts of the university in respect to critical mass and reasonable expectations?

We built efforts for our students to meet other underrepresented students from other departments. We worked with other students. It's formalized through the AGEP program. Most of the students are not taking courses outside of the math department. Only applied math students have to work outside of the department generally.

Of the 41 faculty members, only three are minority and six are women, so there were some role models for the students, but not a lot of diverse role models. It helps to have more role models. But if you don't have them we bring in outside minority people to speak to our students. The way to achieve diversity is in the front of the classroom. The numbers are small right now but be sure to invite them to campus, give them an interview, even if they are on the cusp. There's good evidence to show that letters of recommendation for women are different than for men.

Concurrent Sessions: Recruitment and Retention Strategies that Can Work at UNL
Recruitment Strategies
Facilitator: Dr. Jim Takacs, Chemistry

The session on Recruitment Strategies was an open-ended discussion that began with the question, "What works?" Participants gave the following answers:

- Competitive stipends (\$30K doctoral-engineering)
- Fellowships (more like Othmer, need stand-alone and multi-year)
- View as long-term investment (undergrad or earlier, invite to events)
- Faculty encourage undergrads to pursue graduate education
- Faculty as recruiters (part of evaluation)
- Recruit on campus (at the museums and school field trips)
- Build community through pipelines
- Host visiting scholars
- International scholarships (Muskie, IREX, USAID, World Bank)
- Campus visit
- Interview weekend (top 10%, hosted by current grad students, meet dept families, use dept and recruitment grants to fund travel)
- Coordinate interview weekend, host with other departments
- Recruit at disciplinary conferences
- Full page ad in conference programs (has been very successful for the School of Music)
- Summer Research Program
- Host a national meeting
- Interdisciplinary programs (more attractive to students)
- Doctoral consortium (presented by current doctoral students, late March or early April- invite prospective students)
- 3 plus 2 and 4 plus 1 programs (master's degree in 5 years)

The next item discussed was "Strategies for Inclusiveness." Participants offered the following strategies for making their graduate programs more inclusive:

- Research programs (e.g., Latino Research Initiative)
- Faculty mentor program (selling point)
- Feature multicultural center, minority grad student associations in recruitment materials
- Link to diversity page on Graduate Studies web site:
 - <http://www.unl.edu/gradstudies/prospective/diversity.shtml>
- Participate in Big XII exchange program

**Concurrent Sessions: Recruitment and Retention Strategies that Can Work at UNL
The Role of Summer Programs
Facilitator: Dr. Don Becker, Biochemistry**

Dr. Becker has directed a summer research program involving three departments for the past three summers. The program admits 11 -15 undergraduate students (preferably juniors) who are assigned to a faculty member and work closely with a post-doc or graduate student.

Recruiting for graduate programs is the main goal of the program, as well as partnering with smaller institutions that usually cannot provide research experiences to better education in Nebraska.

Several benefits result from the program: the department stays connected over the summer, the graduate students get a chance to mentor undergrads, and prospective students are introduced to the possibility of pursuing graduate study at UNL. Last year, a former program participant applied to UNL. (The student went to Iowa but an application is a step in the right direction.)

The program is funded through NSF and lasts for three years. Dr. Becker hopes it will be renewed and it can be long term. NSF provides \$190,000 in the grant, approximately \$60,000 per year. Students receive a \$4,000 stipend and room and board for the summer. Some departments use the funds to pay GAs as well, but Becker does not.

Summer research students are on campus for 10 weeks, stay in dorms, have weekly seminars, participate in ethics training, and learn what graduate school life is like. One staff member from the department helps administer the program: travel arrangements, lodging, events. The Office of Graduate Studies helps keep the program centralized. They can take care of rooming, travel, and logistics if the department would like.

Becker's program does not reimburse faculty for the summer. Ten faculty members participate because they enjoy it and want to be investing in undergrad students who will end up in graduate school. Beyond the demand of social events, faculty members meet and train students.

The Office of Graduate Studies has helped with developing a centralized Summer Research Program for the campus. Adding a new summer program to the already existing ones would not be difficult. Of 100 applications to the program, 11 were admitted to Redox Biology program. Becker's program usually has around 25 percent participation from minority students and is looking to increase the number of domestic students as well.

The only negative feedback about the program was that there were too many social events.

Summer alumni newsletters are a possible method of increasing the chances of applicants enrolling in graduate programs. Maintaining relationships with faculty at other institutions seems to be more effective. Having support staff to help maintain communications is helpful. A good question to ask key faculty (those who write letters of recommendation) is "Have you seen changes in your student because of our program?"

Representatives from various departments exchanged ideas and suggestions about summer programs. Participants' experiences with summer programs ranged from just exploring the option to already running a program and looking to expand. Some departments wanted to discuss how to revitalize summer programs in light of new challenges, and others came for ideas on how to run a non-traditional recruiting program, but not necessarily in the summer.

Besides wanting to learn more about summer programs in general, issues that participants raised included the following: how to judge the chances of revitalizing a program; how to use the summer to recruit for degree programs; and how to use the summer to prepare students with academic weaknesses.

**Concurrent Sessions: Recruitment and Retention Strategies that Can Work at UNL
Making Admissions Decisions
Facilitator: Dr. Ralph De Ayala, Educational Psychology**

Dr. De Ayala shared the holistic admissions model used in the Educational Psychology department, whose “Ethnic and Minority Affairs Committee” (EMAC) reviews applications upon request of the applicant.

Although the Board of Regents has a mandate on having diversity on campus and UNL has a general statement supporting diversity, there is no specific admissions policy regarding diversity. Each academic department’s strategic plan can define its own admissions goals.

Sources of information in making holistic admissions decisions:

- Entrance examinations (including GRE, LSAT, GMAT and MAT)
- GPA
- Personal statement and program match with student interests
- Letters of reference
- Personal knowledge of student and references
- CV
- Work samples
- Transcripts
- Undergraduate institution
- Interviews
- Year of graduation
- Willingness of a faculty member to become a mentor
- Funding availability
- Diversity criteria (such as geography, socio-economic status, race and ethnicity, generation and undergraduate institution)
- Leadership activities

By balancing the use of quantitative, objective data, which can be exclusionary, with the use of qualitative subjective data, which can feel risky, an admissions committee can more accurately assess indicators of future performance in a multidimensional way.

Conditional Admissions

Although it is possible to admit students with certain deficiencies on a conditional basis, it is important to note that students of color are more likely to be relocating to Nebraska, which represents a big commitment on their part, and the program needs to be as committed to the student. Conditional admissions should be reserved only for individuals with strong ability who has some undergraduate deficiencies.

Concurrent Sessions: Recruitment and Retention Strategies that Can Work at UNL
Critical Aspects of Retention
Facilitator: Dr. Marcela Raffaelli, Psychology/Ethnic Studies

Dr. Raffaelli began this discussion with a challenge: Find ways to increase retention without generating a large amount of money. Each table was asked to discuss among themselves some creative processes to accomplish this challenge. After lengthy—and thoughtful—discussions had taken place, a list was generated:

- Have an adviser and faculty mentor per student. Mentoring is more personal as opposed to only describing the nuts & bolts. Create a community for students.
 - A community must support mentoring in order for mentoring to be effective. Many times mentoring is associated with advising, but it should be different.
 - There is also a difference between the way men and women approach graduate development. For example, a professor invites students for a social activity. The men wanted to discuss mathematics, while the women want to discuss mathematics in addition to other topics. This is due to differences in communication styles between men and women. The mentor must have the ability to crossover between these communication styles. This requires constant attention, and you can't take this for granted.
- There needs to be a supportive environment. Qualified people expect to succeed. Invite students to become part of the student community within their department.
 - Students often incur culture shock. Take them to the barber shop, connect to business groups, meet the family and facilitate with the transition to campus. Provide proactive counseling; help them connect before they ask for help connecting. Send the Ethnic Studies Guide to minority students, which sends a message of importance. Have Graduate Studies centralize these connections.
 - Learning communities exist at the undergrad level. Perhaps these could be expanded or duplicated for graduate students.
 - Have a picnic during the first weekend of classes open to all graduate students, but especially minority students.
 - Get-togethers should also revolve around research clusters, and allow for collaboration. Build it as part of the infrastructure of the University.
- Host families could be beneficial, not just for international students.
- Many students have interests that are not in line with faculty. This causes students to feel alienated. Faculty must be open to learning about these interests, and expanding on them.

**Concurrent Sessions: Being Successful with Diverse Groups
Establishing Productive Relationships with HBCUs and Minority Serving Institutions
Facilitator: Dr. Colleen Jones, Management/Assistant to the Chancellor**

When trying to create a personal relationship with a Historically Black College or University (HBCU), make sure there is a natural progression from its curriculum to your program. You need to get to know the institution and find out how you may help prepare its students for success in your graduate program while they are still undergraduates. You will also need to cultivate relationships with faculty so they can appropriately advise their students.

Recruitment Strategies

A list of HBCUs can be obtained from the Office of Graduate Studies. When you are at a conference or any other event, make an effort to meet faculty from schools of interest and begin to create relationships and connections with the faculty. Once you have a contact, you can send information about your program or arrange for a campus visit. Invite faculty advisers from the HBCUs to visit your department and UNL. Bring them here so they can see campus and learn about UNL and your program. Alums at other institutions can serve as ambassadors and they can be places we can not.

One strategy for recruiting students from an HBCU is to send Recruitment Liaisons (either faculty or graduate students) to the HBCU to speak to students on behalf of the department. Current graduate students could return to their undergraduate institutions and do presentations of the research they have done at UNL.

Summer research programs are another recruitment strategy that can be effective, since students spend a significant amount of time on our campus doing research to prepare them for graduate school. It also gives them an opportunity to learn more about the program and the community.

Offering internships to students from HBCUs is another approach. Alcorn State funded a student to come to UNL for an internship and to study library science. The student then returned to Alcorn and is currently in its program but still has contact with UNL.

The final idea that was presented was to have a faculty or student exchange with an HBCU. Resources would need to be invested in order to keep this initiative active.

Retention Strategies

Have the students visit campus and department so that they have realistic expectations about the environment before they arrive. The department should be as transparent as possible from the beginning, as the student needs to fully understand campus before they arrive. Create a sense of community outside the department with people of color. This way when students visit they can learn about the community from someone with a similar perspective. This would also allow the students to feel more at home and learn what is available in the community to meet their needs. Once the Multicultural Center is completed, make sure students are aware of this and what services they offer. Get the students in contact with various student associations to help reduce the sense of isolation.

Concurrent Sessions: Being Successful with Diverse Groups
Recruiting Hispanic Scholars: Lessons Learned from Undergraduate Admissions
Facilitator: Ms. Amber Hunter, Associate Director of Admissions; Dr. Ed Forde, Art and Art History; Dr. Aaron Dominguez, Physics and Astronomy

Demographics

The demographics of UNL's underrepresented minority populations have improved significantly in the past few years. With our National Hispanic Scholars we have a 77 percent retention rate, which is good considering the high GPA expectations (3.5) to keep scholarships. Retention is 83 percent for National Merit Scholars, so the Hispanic program is close.

Statistically, girls perform better than boys in Hispanic as well as in White communities. The female population is a prime target for recruitment. Approximately 60 percent of UNL's Hispanic population is first-generation and from low-income families.

Analyze the culture and climate in your department

It's important to ask current students questions before you start putting together recruitment plans. What would have helped them during their admissions process? Talk to them about their experiences with recruitment. The campus culture for minority students is much better than five years ago, but it's still easy to hurt someone's feelings if we're not sensitive.

The important role of staff

Staff members in some departments understand how undergraduate students are doing better than faculty do. Staff members stay constant for undergraduates, while professors change every semester. If you don't have Hispanic professors, look for Hispanic staff. A Hispanic Student Association is helpful, but not as much as someone in the department.

Improve culture and climate in your department

Colleges need to adopt openness and inclusiveness for the students more than they currently do. There should be a handoff from admissions staff to your department. Equity, Access, and Diversity Programs (EAD) offers diversity training. The undergrad admissions staff can also do some training. We need to be culturally sensitive. It's also important to realize that the Hispanic population includes many different cultures--it is not monolithic. In Nebraska it's primarily Mexican, but even then, there are different socioeconomic levels.

You need Hispanic faculty. Latino students, especially those who come from out of state, need a "padrino" or sponsor - a faculty mentor who will help take care of them. Mentoring is important, not just for Latinos, but especially for them. Also, connect students with resources. Hispanic sororities and fraternities, OASIS, and programs for Hispanic students are good places to begin.

Recruit family and teachers

Personalized contact and contact with families and teachers is important. Undergrad admissions used football recruitment as a model. The family is an overriding concern for Hispanic (and Native) students. Many are likely to commute, if possible, so they can stay home.

Explaining the financial package is crucial since many parents are not college-educated and aren't aware of the financial possibilities. Since community is so important, it's helpful to talk to students' parents and teachers. Faculty at other institutions won't send their students to UNL unless they believe in us.

Key National Programs

The National Hispanic Scholars program is part of the National Merit program. Five years ago we had four National Hispanic scholars at UNL; this fall there will be close to 60. These students have a 77 percent retention rate. There's also a similar African American program. Approximately 90 percent of these students are interested in going to graduate school.

A new retention program is just starting: the Academy of National Hispanic Scholars. These students want faculty support. They have a plan to look for help from faculty and deans in the fall. As this group grows, it will open up some doors and begin to be a great resource.

There's also the Latino Research Initiative made up of community professionals, faculty, students, and staff interested in Latino issues, who meet regularly. This is a critical multidisciplinary resource for recruiting Latinos (and non-Latinos).

K-12 Initiatives

UNL has a unique opportunity because it is the center of higher education in the state of Nebraska. We can go to the elementary and middle schools to recruit and build awareness about graduate education. Most families are not college-educated so they want to help their kids succeed but they don't know how to begin. This relationship with elementary and middle schools can be built through high school-college mentoring groups such as LAMP.

Key Recruitment Markets

Good states to recruit in include Texas, Colorado, Utah, and California (somewhat). Florida has not been a good source for us. Key Texas recruitment locations are San Antonio, Houston and El Paso. Also, here in Nebraska, Wayne State and Chadron State are schools where you'll find good students.

Concurrent Sessions: Being Successful with Diverse Groups
Establishing Networks and Resources to Recruit and Support Native American Students
Facilitator: Dr. Dan Hoyt, Sociology

What are the barriers and challenges to Native American recruitment? Only 2 percent of Nebraska residents are identified as Native American. Of the graduate student body, there are 17 Native Americans or about 0.5 percent. What strategies could work to increase enrollment of Native American students (0.5% to 2%)?

Some ideas generated:

- Start recruiting before high school, as interest in higher education is sometimes lost during high school. Tribal Colleges could also provide incentives.
- Recruit from colleges with a higher number of Native American students (South Dakota schools have close proximity to tribes, therefore generating more undergrads. These don't have Ph.D. programs.)
- Create a position in the Graduate College to focus on building relationships with the Native American community. Develop trust and long-term ties.
 - Oklahoma and ASU have successful programs which go out and actively involve the tribal communities. They provide someone on campus as a liaison between all departments and the Native American students. The University must make a financial commitment to assist in this. Tribes could subsidize activities.
 - Having a recruitment liaison from a local tribe would provide many benefits.
- Distance education delivered to the students on their reservation.
- Many of this starts by addressing the department cultures. How does each department welcome the single mom? Sociology has created a lactation station in the building to assist new mothers. Flexibility at the department level is crucial. Discussions need to take place. Open-minded faculty are important to understanding diverse cultures and the new generation.
- Determine research projects happening in tribes and reach out to assist, or, better yet, get help from the tribes. Partner with tribes for proposals. If a proposal doesn't come through, don't leave the tribe hanging. Maintain relationships; perhaps more funding will become available.
 - People need to make connections and follow through with tribes. Create respect among tribal councils. Bring the research back to the tribe. Use these research projects to engage potential students.

Hurdles and challenges:

- For every 10 students offered funding, only one will come. Proximity to home and family is important. Current students are single mothers.
- UNL is not perceived as a warm and inviting place for Native American students.
- Native Americans don't consider themselves minorities. Many take offense to this.