



To Promote an Inclusive Campus

The 2014 Interim Climate Study Report
On the Cultural Climate at
Michigan Technological University

Spring 2014

<http://www.mtu.edu/equity/diversity/climate-study/>

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Overview—Michigan Technological University Climate Study (2005-2014)

Michigan Tech initiated a University-wide Climate Study in 2005. Several years prior to this, a working group of faculty and staff conducted a climate survey aimed at understanding the concerns of women at Michigan Tech; 385 female faculty, staff, and students completed the survey. The survey's final report (1994) provided a number of recommendations that were implemented to improve the working and learning environment on campus. Related follow-up included a set of recommendations from a Retention Task Force (1994)¹ and a University-wide diversity plan, the *Diversity Framework* (2003).² Both of these documents provided guidance and supported actions that have significantly impacted the Michigan Tech cultural climate and sharpened its focus on diversity.

To continue this work, President Glenn Mroz supported the implementation of an extensive Climate Survey that provided baseline information for an ongoing, longitudinal Climate Study. A variety of methods and tools contribute to this Climate Study and are used to determine if progress is being made in response to Climate Study recommendations. These methods and tools include annual review of the demographic diversity of faculty, students, and staff over a period of years; formative evaluation of workshops and professional development activities designed to address issues identified by the Climate Study; use of other related Michigan Tech and national survey responses as comparisons; evaluation and updating of academic diversity plans; focus group discussions; and responses to the periodic, follow-up Climate Surveys. Change in policies, procedures, language, and physical spaces are also visible indicators of a more inclusive environment. Change in behavior related to inclusiveness will be the most significant measure.

The Survey instrument was created with the assistance of a consultant from the University of Michigan Center for Research on Teaching and Learning and with input from various National Science Foundation ADVANCE campus offices. The purpose of the Surveys is to gather data from faculty, staff and students to help bridge the gap between people's general understanding of climate (and the impact of diversity) and the specific behaviors, actions, and attitudes that create it. The questions are designed to have the respondents see connections between the climate and their own experiences and perceptions. The Survey also includes questions that ask individuals to consider various aspects of diversity and how these issues have or may affect them and their work or study. The Climate Survey provides necessary information for the University to initiate, plan, and implement steps toward achieving an inclusive and diverse campus community. Focus groups then help clarify response trends and written comments provided by respondents to the Survey.

The desired outcome of the Climate Study is recruitment, retention, teaching, and research practices that reflect a fully engaged, diverse community that supports the University mission and strategic plan.

¹ <http://www.admin.mtu.edu/admin/nca/goals/goal1-2/goal1-2.htm>

² <http://www.mtu.edu/equity/diversity/framework/>

Based on an extensive review of the 2005 Climate Survey results and subsequent focus groups, the **2007 Report and Recommendations on the Cultural Climate at Michigan Tech**³ included five categories of recommendations, with some recommendations overlapping more than one category:

- Definition of Diversity
- University Communications
- Recruitment and Retention
- Dialogue and Training to Improve Campus Climate
- Work Environment and Space

The **definition of diversity** was of considerable concern for all 2005 Survey respondent groups. The ongoing Climate Study and resulting recommendations continue to emphasize the importance of identifying diversity in all its forms as a core value that requires ongoing education, exposure, and recognition of the value it brings to our enterprise.

In order to ensure that diversity remains a core value at Michigan Tech, it is clear from Climate Survey responses and from focus group feedback that the University must be mindful at all times of how important clear **communication** of this message is through our mentoring and professional development programs, language, publications, and other written and spoken messages.

Climate Survey results support the need for an inclusive, welcoming cultural climate that will help attract and sustain a more diverse campus community. However, many challenges remain in **recruiting and retaining** students, faculty, and staff that are underrepresented in the University community; as well as critically absent from some of the disciplines that are Michigan Tech strengths, engineering in particular. Strategies to build the University's capacity to develop and implement innovative programs, policies, and processes; create strong partnerships with schools, community colleges, and the local community; and increase collaborations with other research institutions to help meet a national need for diverse engineers and scientists are critical factors in this effort.

It is also apparent that the University community seeks increased **dialogue** about diversity and what constitutes a truly welcoming and inclusive climate. An awareness and discussion of the importance of diversity to a healthy, robust university that values teaching, learning, and research must continue to be integrated into the education and professional development of students, faculty, and staff.

Work Environment and Space activities have primarily focused on the physical environment, work/life balance (more recently described as work/life flexibility), and the professional development that is available for supervisors. In addition, the interest and demand for a variety

³ <http://www.mtu.edu/equity/diversity/climate-study/pdfs/climate-study.pdf>

of strong mentoring options is an important issue that affects the work environment for faculty and graduate students, as well as staff, and continues to be examined and addressed.

The Interim Report is organized by these five categories. The Interim Report provides examples of actions taken over the 2011-2014 period of the Climate Study in response to Climate Study recommendations; initiates discussion of some issues that have emerged, are emerging or remain a concern; and provides new recommendations to address some of these issues.

In the future, questions concerning the ongoing Climate Study can be directed to your supervisor or Dr. Jill Hodges, Office of Institutional Equity.

Introduction –Michigan Technological University Interim Climate Study Report

The University's longitudinal Climate Study defines "climate" as how the campus community perceives and experiences life and work.⁴ The Climate Survey, administered every five years, explores the extent to which individual University students, staff, and faculty recognize, understand, and are involved in Michigan Tech's goal of being an inclusive, diverse community. The 2010 Climate Survey data, and over forty (40) related focus group discussions that followed, provide a significant amount of information describing faculty, staff, and students' perceptions of the University's cultural climate (See Attachment 1—2011-2014 Focus Groups). The Interim Climate Study Report is written as a brief update that highlights some of the 2007 Climate Study recommendations, provides examples of the University's responses to these recommendations, and offers new recommendations based on recent campus-wide feedback that is described in this Report. In preparation for the 2015 Climate Survey, the interim report provides a review and comparison of responses to past Survey aggregate and subset results and a set of recommendations.

The initial 2005 Survey data was extensively analyzed by a Steering Committee, and an external consultant. (See Attachment 2—2005 and 2010 Climate Study Steering Committee Members.) The outcome of this analysis was the 2007 publication "**A Report and Recommendations on the Cultural Climate at Michigan Tech.**"⁵ This report was distributed across campus and shared with external groups. Michigan Tech's president requested that the report be used as a resource for developing department, school/college, and University strategic plans. Follow-up has included periodic focus groups; discussions with the deans and campus leadership groups such as WISE (Women in Science and Engineering) and the Staff Council; and regular review of Michigan Tech's diversity numbers, policies, procedures, and programs by University staff and through the University's Corporate Advisory Board for Institutional Diversity.

The second Climate Survey was administered in late fall 2010. The response rate to the Survey closely mirrored the 2005 response rate. The number of responses indicates a pool that was clearly representative of the faculty, staff, and student respondent groups. In both Surveys, there was over a 45% response rate from all groups⁶ and the percentage of respondents by various subgroups, e.g., female/males, college of engineering, underrepresented minority, international, etc. reflected the University population. (See Attachment 3 for a detailed breakdown of Survey respondent subgroups.) This very strong response rate to each of the campus-wide surveys allowed the Steering Committees, and other subsequent reviewers, to identify and address significant trends in responses. Extensive written comments for each Climate Survey were also examined for patterns of response.

⁴ "Work" refers to the experience of both employees and students.

⁵ <http://www.mtu.edu/equity/diversity/climate-study/pdfs/climate-study.pdf>

⁶ The one exception was a 38% response rate from students in the 2010 Survey.

Table 1: 2005 & 2010 Number and Percentage of Climate Survey Responses by Group

	2005			2010		
	Total Responses	Total in Group	% of Response	Total Responses	Total in Group	% of Response
Faculty	260	451	58%	252	443	57%
Students	3,077	6,550	47%	2,653	6,957	38%
Professional Staff	288	506	57%	402	562	72%
Employees	143	362	40%	183	399	46%

The 2010 aggregate responses were analyzed by a second Steering Committee (Attachment 2). The Committee compared 2005 to 2010 responses, helped identify trends in responses, and requested that several focus groups be held to clarify a number of the Survey responses and written comments. At that time, the special assistant to the president, Chris S. Anderson, provided updates to the president, provost, and deans.

Following the Steering Committee review of the 2010 Climate Survey results, aggregate results by a number of subgroups of respondents were distributed to administrators for their review and use with staff and faculty. For example, data outlining survey responses from international, gay lesbian bisexual transgender and questioning (GLBTQ), underrepresented minority; and graduate and undergraduate students was forwarded to the appropriate Student Affairs offices. All deans and chairs were provided subgroup responses for their faculty, staff, and students. Human Resources received the aggregate responses for all employees, and specific data for represented staff and professional staff. Attachment 4 is a complete list of individuals and units that received these reports. They were asked to examine the data and use it to develop and test strategies and policies to address issues for which they could directly have impact.

The aggregate responses to the 2005 as well as the 2010 survey are also available on the Institutional Equity website.⁷ The 2005 and 2010 data can be used to compare results, taking a longitudinal view of the information to determine what change, if any, has occurred in the perceptions and experiences of staff, students and faculty; in addition to the demographic make-up of the respondents.

During the period spring 2011 to spring 2014, administrators and units used this data to initiate discussion about the perceived or real issues affecting the climate for students, faculty, and staff; and to develop strategies to address critical concerns. The special assistant to the president met with the deans, directors, and various faculty teams preparing external proposals, to review Climate Study recommendations and assist them in writing their diversity plans.

Again, the objective of sharing the data across campus is to ensure that the information provided by the Climate Study is used by the individuals and units that can make the most

⁷ <http://www.mtu.edu/equity/>

direct impact in the University's effort to continually improve the climate. This approach engages all administrators, other individuals, and campus units and encourages them to take a leadership role in addressing climate issues.

The 2010 aggregate responses 1) demonstrated an overall positive trend from 2005, and 2) identified issues that remain to be addressed or are emerging issues. The University will use the 2015 Climate Survey to determine if there continues to be a positive trend in how faculty, staff, and students perceive and experience Michigan Tech. Most likely the 2015 survey responses will confirm and help define new perceptions and experiences, emerging issues, and some recurring items that will need to be re-examined and addressed.

The data collected through the ongoing Climate Study, in particular from the Climate Surveys, will continue to be widely distributed to both on- and off-campus stakeholders. Many of the actions that need to be taken by campus units should be reflected in their diversity plans. It will be the responsibility of the upper administration, deans, chairs, and directors, as well as the newly formed (fall 2013) Diversity Council, to evaluate and track progress and identify ways to determine accountability for progress in each unit and University wide. The long-term goal is that Michigan Tech will be recognized as a place where people are valued, diversity is maximized, and members of our University and local community, state, and nation benefit from the University's efforts.

The **Interim Report** continues the review of Climate Study data, highlights some of the actions that have been taken to address Climate Study recommendations, and provides additional new recommendations to help sustain successful work and encourage actions related to the current diversity and cultural climate at Michigan Tech.

The Interim Report

The Michigan Tech Climate Study **Interim Report** is intended to provide an update on the ongoing University Climate Study. The Interim Report includes examples of University-wide and unit actions taken in response to the 2007 Climate Study recommendations; the 2010 Climate Study Steering Committee and University unit analyses of shared 2010 Climate Survey results; information gathered during the 2011-2014 focus groups (Attachment 1) and; discussions and written feedback from a number of individuals and groups on campus such as Women in Science and Engineering (WISE), the ADVANCE Steering Committee, the academic deans, Staff Council, the vice president for administration, the Provost's Office, Student Affairs and various academic department chairs. This Report also includes new recommendations for discussions and/or future actions to address issues that were frequently raised during the extensive 2011-2014 campus-wide reviews of various Climate Study data.

The Interim Report follows the outline of the 2007 **Report and Recommendations on the Cultural Climate at Michigan Tech.**⁸ The main categories of that report are: **Definition of Diversity, University Communications, Recruitment and Retention, Dialogue and Training to Improve Campus Climate, and Work Environment and Space.**

The Interim Report will be used as a resource in preparation for the 2015 Climate Survey, and in the analysis and update of the University's diversity strategic plan, the *Diversity Framework*.⁹ The additional recommendations in this Report may also be integrated into individual unit diversity plans or identified as topics for further University-wide study and possible inclusion in future external grant proposals.

Definition of Diversity

The University's Strategic Plan states the goals of attracting and supporting a world-class and diverse faculty, staff and student population; and providing an outstanding work environment and support opportunities for all members of the Michigan Tech community.

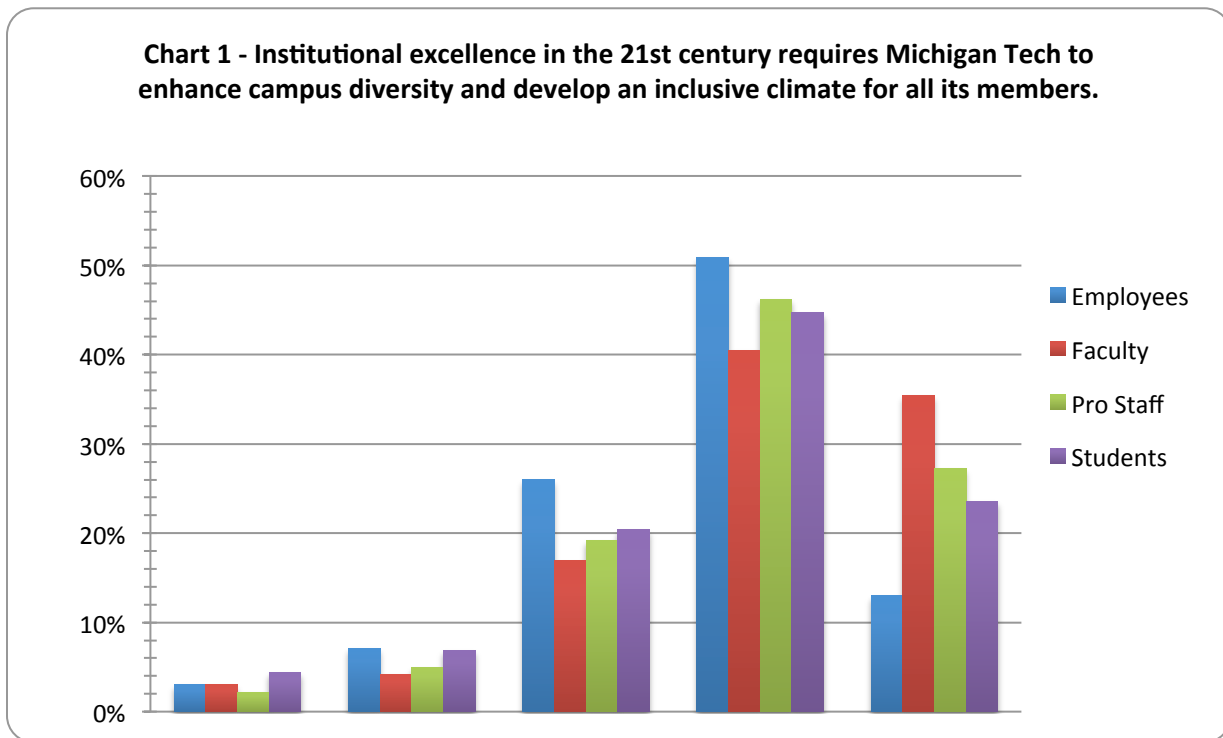
The 2007 Climate Study Report and Recommendations clarifies the University's definition of diversity as broadly applying to a range of human differences including race, sex, age, sexual orientation, gender identity, physical and cognitive ability, social class, religion and culture to identify a few.

The 2010 Climate Survey aggregate response rates continued to show a strong agreement by all respondent groups with the statement, "*Institutional Excellence in the 21st Century requires*

⁸ <http://www.mtu.edu/equity/diversity/climate-study/pdfs/climate-study.pdf>

⁹ <http://www.mtu.edu/equity/diversity/framework/>

Michigan Tech to enhance campus diversity and develop an inclusive climate for all its members.” (See Chart 1)



These positive response trends are strong and indicate that efforts instituted over the five-year period between the two Climate surveys to create a more diverse and welcoming campus environment continue to be recognized and supported by the University community. This provides an additional incentive for Michigan Tech to work towards accomplishing diversity goals.

The 2007 **Definition of Diversity** category included several recommendations that reflected the need to create a more diverse and inclusive campus environment. The recommendations are intended to be applied broadly across the campus and thus were included in this category. Four of these recommendations are listed with examples of strategies that were implemented to address them:

2007 recommendation: Integrate diversity in all University functions. Examples of current related activities: faculty are encouraged to and more readily work with the Center for Diversity and Inclusion (CDI) and the Center for Precollege Outreach (CPO), as well as with external partners, to include diversity components in research projects, teaching examples and education outreach initiatives.

2007 recommendation: Regularly assess all academic and administrative units' progress in meeting unit and University diversity-related goals and report results to the University community. Examples of current related activities: the colleges, schools and individual academic departments have initiated a process of assessing and updating unit diversity plans on regular intervals with their overall strategic plan review (see individual academic department websites); the *Michigan Tech Diversity Facts Book*¹⁰ provides an annual description of the University's ongoing diversity programs related to outreach, recruitment, retention and student success; and current student and faculty demographics. The *Diversity Facts Book* is a possible means of demonstrating accountability to both the University community and external partners. It is also used to promote unit discussions and support faculty proposals for external funding.

2007 recommendation: Ensure that professional development programs and University policies and procedures address issues related to students, faculty and staff who are not in the majority. Examples of current activities: the ADVANCE initiative supported the development and implementation of the Bias Literacy course and Legal Aspects in Hiring workshop, now required for all faculty; an established Safe Place program is offered annually to faculty, staff and students to support awareness, sensitivity and education about GLBTQ students, faculty and staff; resources are available for further study of diversity-related issues through the Office of Institutional Equity and CDI. See Attachment 5 for additional research publications and related recommended resources.

2007 recommendation: Continue to strategically expand the degree programs and interdisciplinary collaborations to increase the diversity of thought and the diversity of faculty and students. Examples of current activities: there has been an expansion of degree programs and interdisciplinary collaborations that continue to flourish—such as the doctor of physical therapy and expanded programs in visual and performing arts; the University's strategic faculty hiring initiative and increased research collaborations with other institutions result in faculty and student opportunities to interact with individuals and teams from around the world.

In response to a critical national need to attract greater numbers of females and underrepresented minorities (URM) to science, technology, engineering and mathematics (STEM) careers, the 2007 recommendations in the Climate Study **Definition of Diversity** category also focus on increasing the percentages of female and African American, Hispanic/Latino and Native American students and faculty. These are groups significantly underrepresented in the STEM disciplines and at Michigan Tech. For example, over the past three years, there has been an intensive emphasis on increasing the gender diversity on

¹⁰ <http://www.mtu.edu/diversity-center/resources/students/facts>

campus. This effort was strengthened by the National Science Foundation (NSF) ADVANCE grant that was awarded to Michigan Tech in 2009. The ADVANCE project goal was to increase the recruitment, hiring and retention of female faculty in STEM fields. The project website¹¹ describes the ADVANCE outcomes.

Ensuring an inclusive learning, teaching and research climate that is enriched by its diversity is a long-term commitment—a “work in progress.” Many additional strategies need to be applied broadly across campus to ensure that the University address diversity in all of its forms and communicates a clear, ongoing message related the definition of diversity. The following new recommendations for action will enhance the current activities and are key items that were identified in focus groups, and with campus leaders and organizations:

- The new Diversity Council needs to review and update the *Diversity Framework*¹² based on the existing University Climate Study, ADVANCE project and other extensive data now available to the Council.
- Unit diversity plans remain in the early stages of implementation and should be fully implemented, critically assessed by unit members, updated, and displayed on individual department websites as part of an inclusive strategic planning process. These plans will be powerful tools for change at the unit level and models for other units.
- The University should develop programs to integrate diversity in the academic and professional development for students and as components of faculty professional development programs. The aggregate response rates of agree/strongly agree with the statements “ Michigan Tech would benefit from having more women students and women faculty on campus” and “ Michigan Tech would benefit from having more racial /ethnic minority students and racial/ethnic minority faculty on campus” by each respondent group were well over 3.0 on a Likert scale of 1-5. Students remain the least aware that the University community benefits academically from having more racial/ethnic minority and female students and faculty on campus. Creating awareness of the benefits of diversity can often be addressed most effectively in the classroom and laboratory environments. See charts 2 and 3 below for additional detail.

¹¹ <http://www.mtu.edu/advance/>

¹² <http://www.mtu.edu/equity/diversity/framework/>

Chart 2: Michigan Tech would benefit academically from having more women students and women faculty on campus

Likert scale: 1 Disagree; 5 Strongly agree

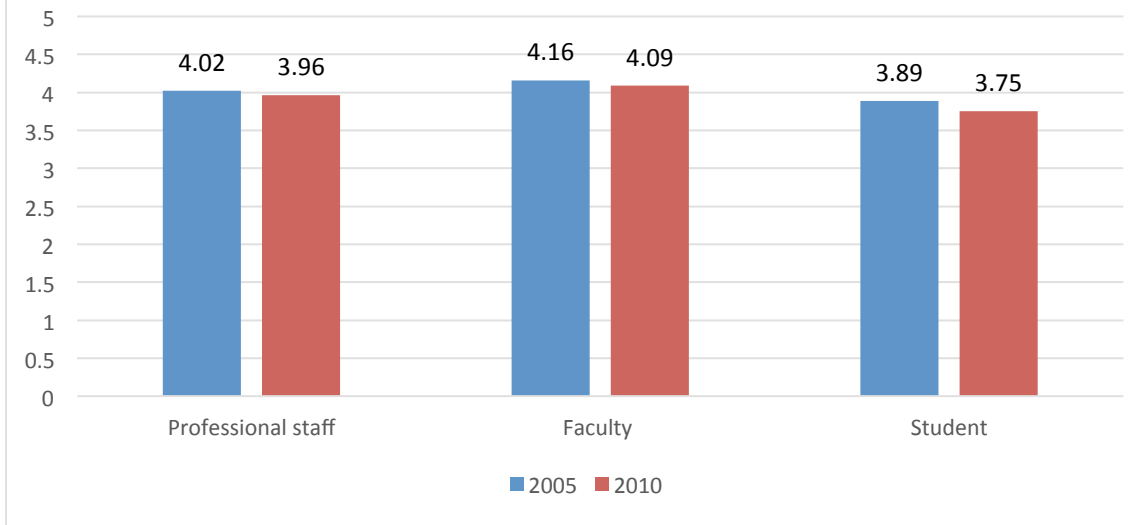
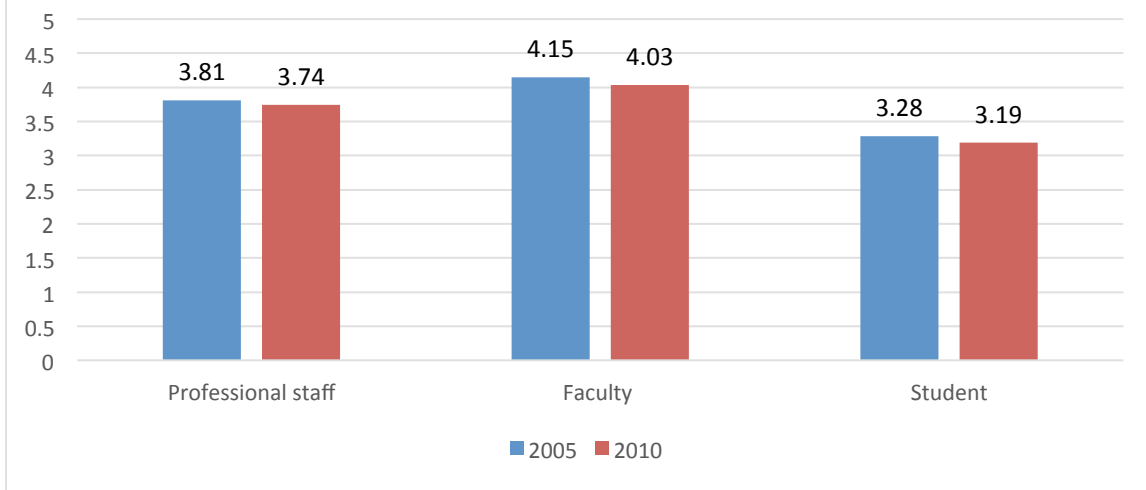


Chart 3: Michigan Tech would benefit academically from having more racial/ethnic minority students and racial/ethnic minority faculty on campus

Average rating on Likert scale: 1 Disagree; 5 Strongly agree



Actions taken to improve the working and learning environment for women, underrepresented minorities (URM), and international or other groups that are considered in the University's definition of diversity are generally beneficial for all members of the campus community.

Building cultural understanding and knowledge, and valuing diversity of thought are especially critical for student and University success in a global environment.

University Communications

Effectively communicating the University's diversity plan, and the challenges and successes of implementing the plan require that internal and external messages reflect the importance of these efforts. The value of a diverse faculty, staff and student body for all University constituents; and how this commitment helps fulfill Michigan Tech's mission must be clearly understood. The expectation that diversity will significantly improve the education provided to all students, and enhance the creativity, opportunity, and productivity of the University's research, teaching and learning environment must be clearly articulated by campus leaders, as well as the University community.

To accomplish this, a 2007 recommendation emphasized the need to provide University Marketing and Communications (UMC) staff with opportunities for diversity training and other professional development to support their ability to successfully lead this effort. For example, since 2007, the UMC staff have regularly participated in awareness and sensitivity training pertaining to issues of diversity and to communication of the University's diversity message. They then applied their skills by 1) working with the ADVANCE team to review and improve faculty position descriptions and University websites so position announcements increasingly attract interest from more diverse applicants; 2) reviewing documents and publications across campus to ensure the use of inclusive language; and 3) more aggressively seeking out stories for University communications that highlight the work and success of diverse faculty, students, and staff from a greater variety of disciplines, research foci, personal backgrounds, while also promoting outreach efforts and other factors that promote a community that benefits from diversity.

The 2010 Climate Survey written comments and subsequent focus group discussions indicate that students are concerned that a focus on diversity and increasing the diversity of the student body or faculty may mean that the quality of their education is compromised.

2010 student quote: "...The purpose of a university is academic achievement. If you allow academic performance as the main goal of a school you might find less social diversity but you will have a strong university. The point that I am trying to make is that awareness of social diversity is good to have but not all important. The university needs to see students without labels....."

2010 student quote: "...It is not right to accommodate people of other genders, sexual orientations or races any more than what is ruled the majority. Equal opportunity comes

from treating everyone the same and not trying to compensate and make it easier for them..."

Focus group comment: *"...People should be hired and sought out based solely on their credentials and qualifications instead of religious beliefs, race, gender or sexuality..."*

It remains a critical issue that this perception or experience be addressed. New recommendation:

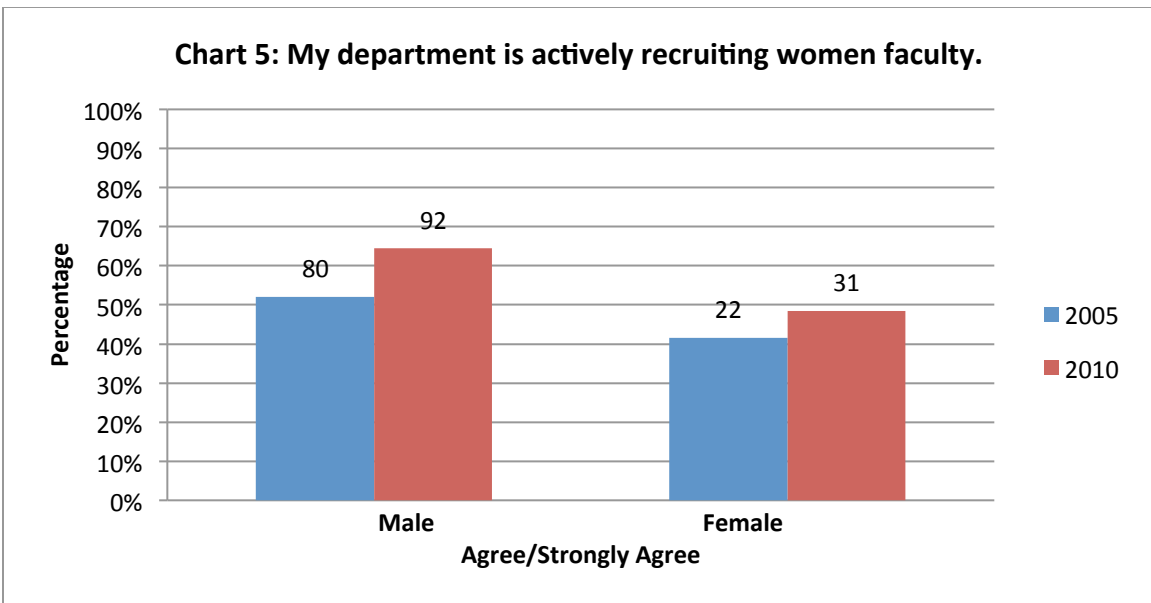
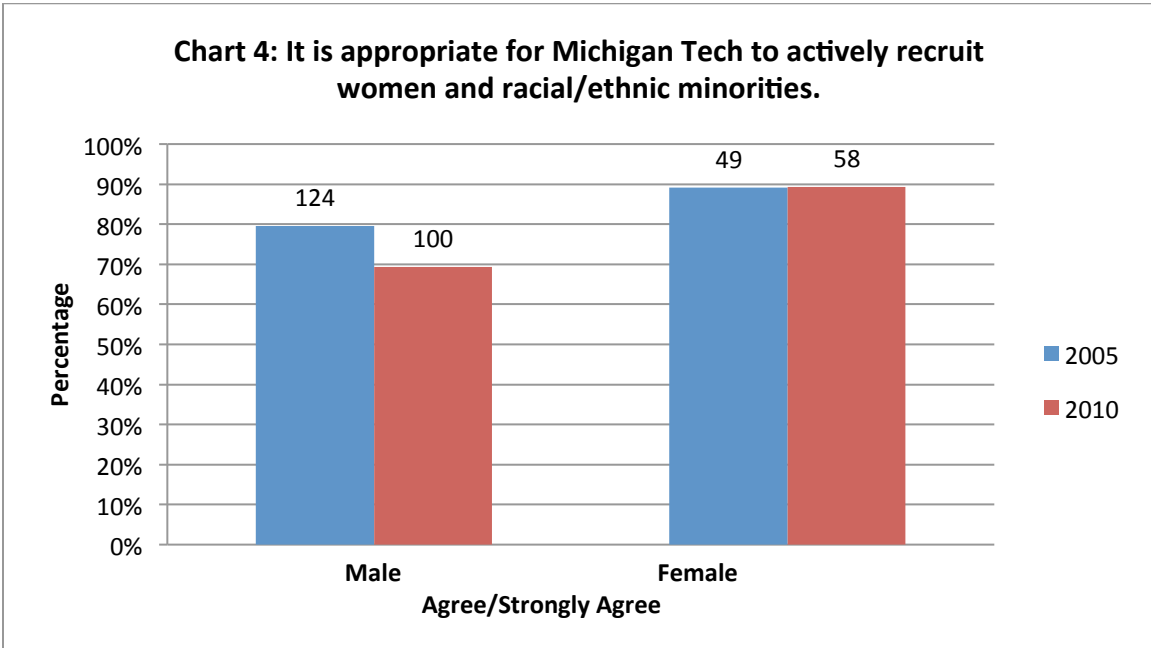
- Faculty, staff, administrators and our external partners must clearly communicate and help demonstrate using both qualitative and quantitative information, that promoting diversity, particularly racial/ethnic and gender diversity, will allow the University to maintain and enhance academic excellence in teaching, learning and research. This includes the benefits of successfully fostering an academic environment where intercultural skills and communication are developed and enacted among campus constituencies that are demographically diverse. (See Attachment 5; especially the Michigan Diversity Report and The Difference.)

Sharpening the University's actions to ensure an inclusive, welcoming and supportive climate for each member of the Michigan Tech community is reflected in the general spirit of the ongoing Climate Study.

Recruitment and Retention

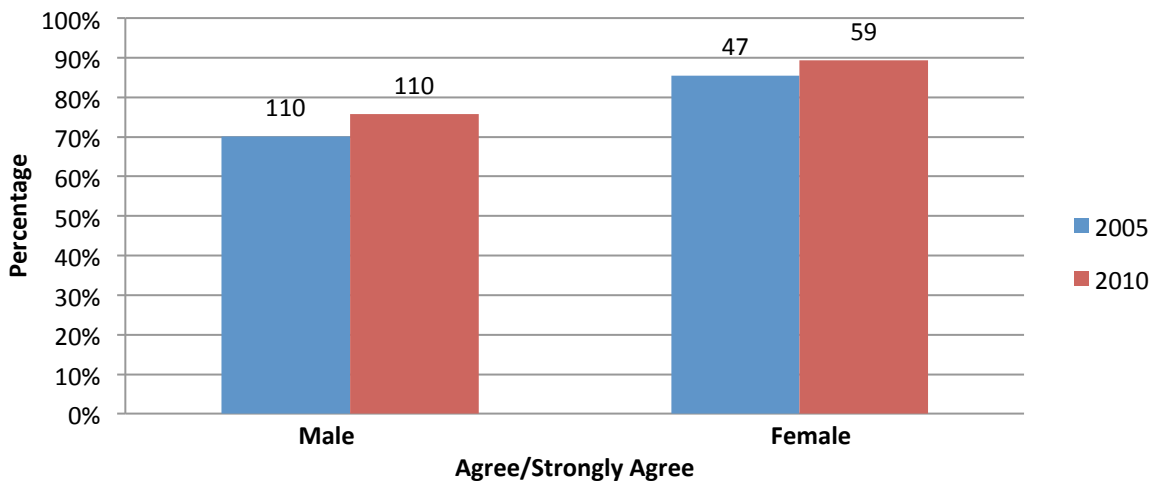
Hiring and Retention of Faculty and Staff

The 2010 Climate Survey results by each respondent group (faculty, staff and students) continued to support the need for greater numbers of female and URM students, and faculty. (Faculty example—Chart 4) Aggregate responses by faculty also indicate that respondents believed their academic units and the University were actively recruiting female faculty and students. (Faculty example—Chart 5)



Similarly, there was an indication that faculty, staff and students, more so than in 2005, believed that “Faculty (as well as staff and students) at Michigan Tech benefit from gaining knowledge, skills, and experiences that support diversity-related goals.” (Faculty example-Chart 6)

Chart 6: Faculty at Michigan Tech benefit from gaining knowledge, skills, and experiences that support diversity-related goals.



In general, comparisons between 2005 and 2010 faculty responses showed an increase in positive responses to the diversity and inclusive environment questions, especially related to satisfaction and workload. (See Faculty examples—Chart 7 and Chart 8.) These faculty outcomes reflect some success in addressing related issues since the 2005 Survey. However, from a longitudinal perspective there remains the persistence of significant differences between female and male faculty (as well as male and female staff) responses. It is particularly important for the University to understand more clearly what might be influencing the increased disparity between several male and female 2010 responses. There were three areas of considerable difference—questions about considering leaving, satisfaction with mentoring, and feelings of isolation. Continued discussion and actions (see new recommendations) are needed to clarify and address these differences.

Chart 7: Faculty Satisfaction and Workload - 2005
Average Response on Likert scale: 1 Strongly Disagree - 5 Strongly Agree

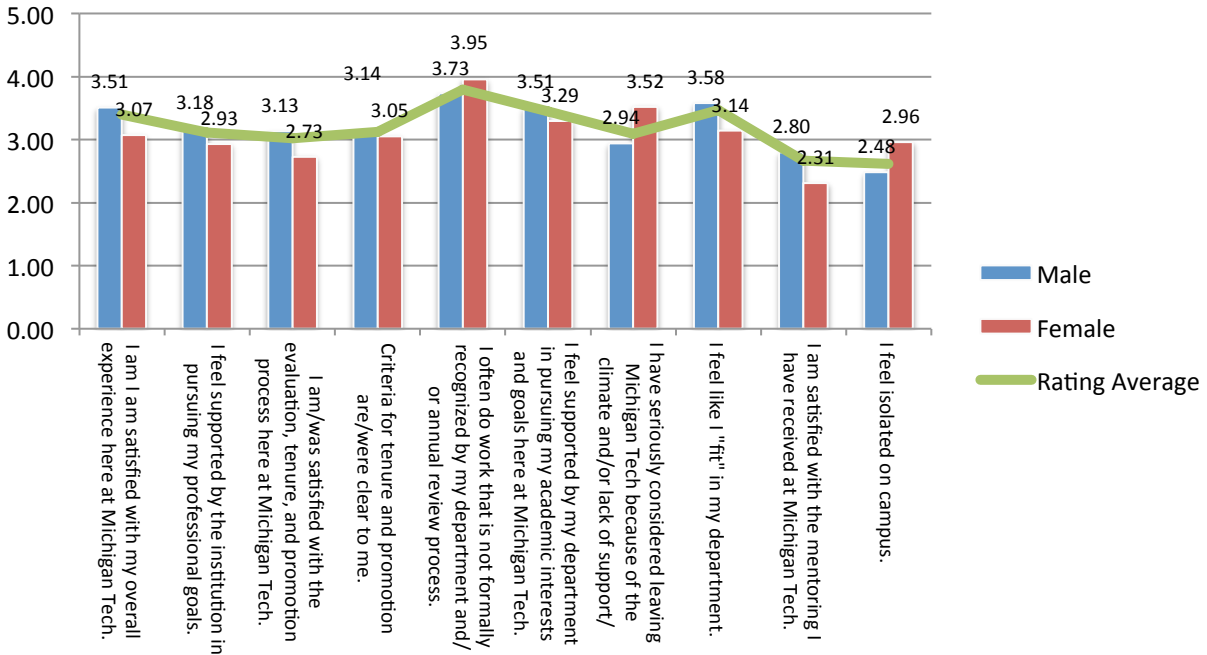
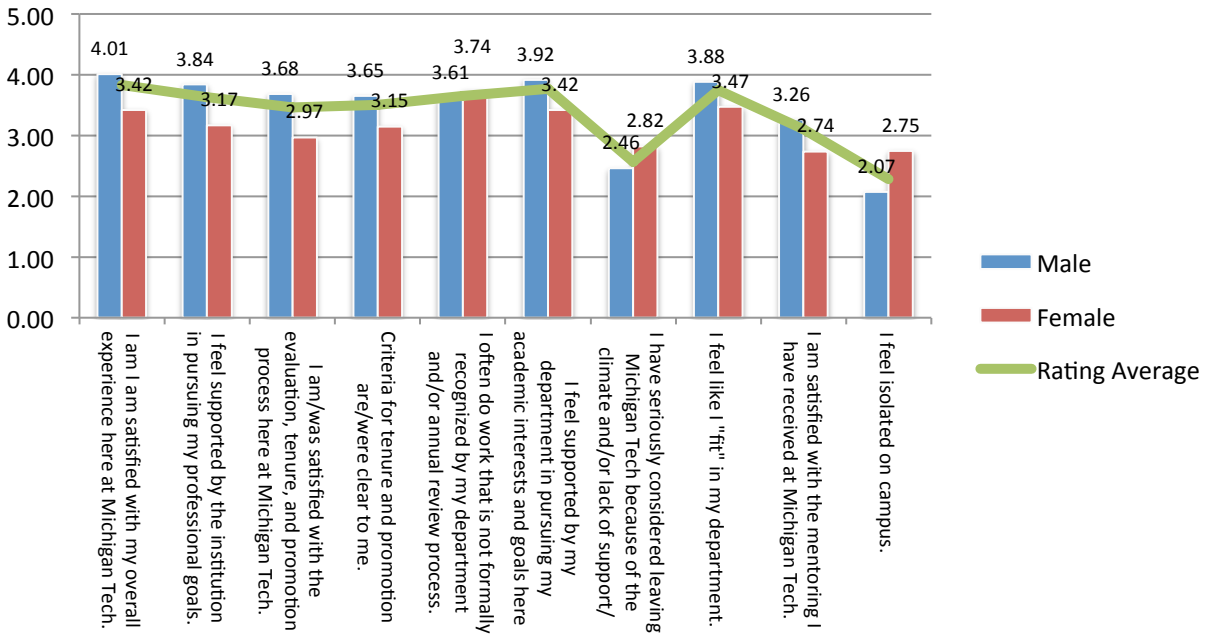


Chart 8: Faculty Satisfaction and Workload - 2010
Average Response on Likert scale: 1 Strongly Disagree - 5 Strongly Agree



A number of programmatic and policy actions were implemented in response to the 2007 Climate Study recommendations related to the hiring and retention of faculty and staff. Examples of these actions that impact faculty and staff hiring and retention are:

The University's NSF-funded ADVANCE initiative focused on hiring female STEM faculty. This initiative was comprehensive in terms of ongoing discussion, review of websites and position descriptions, emphasis on interdisciplinary research opportunities, and awareness of bias in the hiring process. It also included retention strategies and initiated oversight of academic department faculty mentoring programs by the Provost's Office. (The Bias Literacy and Legal Aspects workshops were noted as a model program when Michigan Tech was awarded the 2012 and 2013 Higher Education Excellence in Diversity Award from the national publication **Insight Into Diversity**.)

The College of Engineering (COE) and individual faculty increased active participation with national groups such as the Women in Engineering Pro-Active Network (WEPAN), Society of Women Engineers (SWE) and the American Association of Engineering Education (ASEE) diversity section.

Academic units now use the King-Chavez-Parks Visiting Women and Minority Scholars/Lecturers series to invite potential research collaborators, education experts and role models to campus on a regular basis.

Academic departments have increased their interactions with the Presidential Council of Alumnae (PCA) to provide role models for students and collaborators with faculty and the department.¹³

The academic deans adopted a set of strategies to increase faculty (and graduate student) diversity (see Attachment 6-Recommendations for Academic Action).

Primarily led by the Graduate School, the University enhanced its visibility and work with nationally recognized minority organizations such as The National Consortium for Graduate Degrees for Minorities in Engineering and Science, Inc. (GEM), and with universities as partners in grant-funded projects to improve the recruitment and retention of underrepresented minority (URM) graduate students and future faculty, i.e. Alliance for Graduate Education and the Professoriate (AGEP).¹⁴

Increasing numbers of faculty and staff include education and diversity-related components in their external proposals. When funded, these activities provide another means of impacting diversity efforts and also may provide funds to support staff diversity, e.g., the

¹³ <http://www.mtu.edu/alumni/notables/pca/>

¹⁴ <http://www.mtu.edu/gradschool/administration/dean/agep/>

University received a two-year grant from the Arcus Foundation to develop a Gay Lesbian Bisexual Transgender Questioning program/office and hire a coordinator. The successful implementation of the project resulted in a permanent University budget line for this office and position.

Examples of actions taken that focus on the needs of diverse faculty include: a Dual Career Office was established and deans, chairs and others both across and off campus are collaborating to increase our dual-career capacity; new staff are working to ensure that there is a seamless employment transition for international faculty; and the University is exploring ways to support families and their child care, as well as elder care, needs.

Michigan Tech faculty and staff have much to contribute to diversity initiatives and ensuring a truly inclusive climate at Michigan Tech. To address ongoing and emerging concerns identified since the analysis of the 2010 Climate Survey results and subsequent campus-wide review of these results, several new recommendations related to the hiring and retention of faculty are provided:

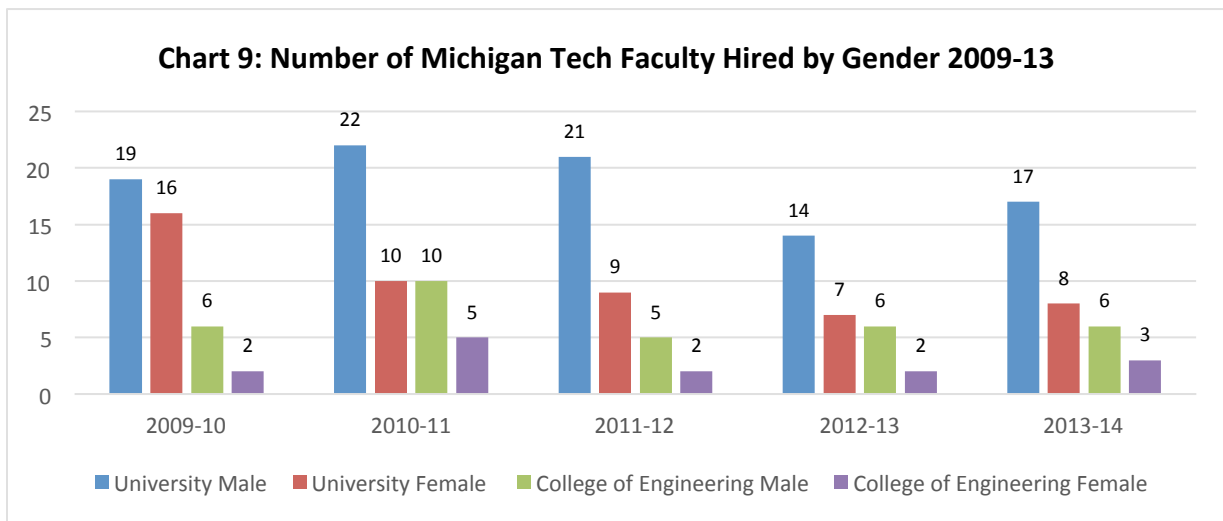
- Encourage and support the submission of NSF Broadening Participation in Engineering proposals; re-apply for a second ADVANCE or to programs with similar goals; and continue to strengthen partnerships with SWE, WEPAN, GEM, the state of Michigan King-Chavez-Parks (KCP), etc. –organizations that will connect Michigan Tech with diverse faculty and graduate students.
- Use and refine the Dean’s recruitment and retention strategies (Attachment 6) to increase the diversity of the graduate student body and eventually the pool of diverse future faculty. Strengthening the outreach to and active recruitment of URM and female graduate students coupled with a transparent review of and adjustment to recruitment and outreach programs will ensure long-term success.
- Continue to invest in Bias Literacy training for all faculty that enhances awareness and provides skills necessary to break down barriers to inclusion; regularly examine organizational and cultural assumptions and practices; and addresses second-generation gender bias which is often more subtle, covert, systemic and, at times, unintentional.
- Expand the Bias Literacy training to include all staff.
- Continue to develop and promote strong formal and informal mentoring opportunities. (This remains a priority for female faculty.) The Women in Science and Engineering (WISE) organization is providing female faculty opportunities for informal mentoring support. The depth and breadth of the information that is shared between established faculty and new faculty continues to improve. WISE has the potential, through continued maturation, to be a significant mentoring format for young faculty. The administration, in particular the Provost’s Office and deans, should work with WISE to

determine how best the University can support this faculty group and adopt some of the WISE agendas for use for all faculty. Mentoring programs should be intentional in determining what faculty need in order to be successful at Michigan Tech.

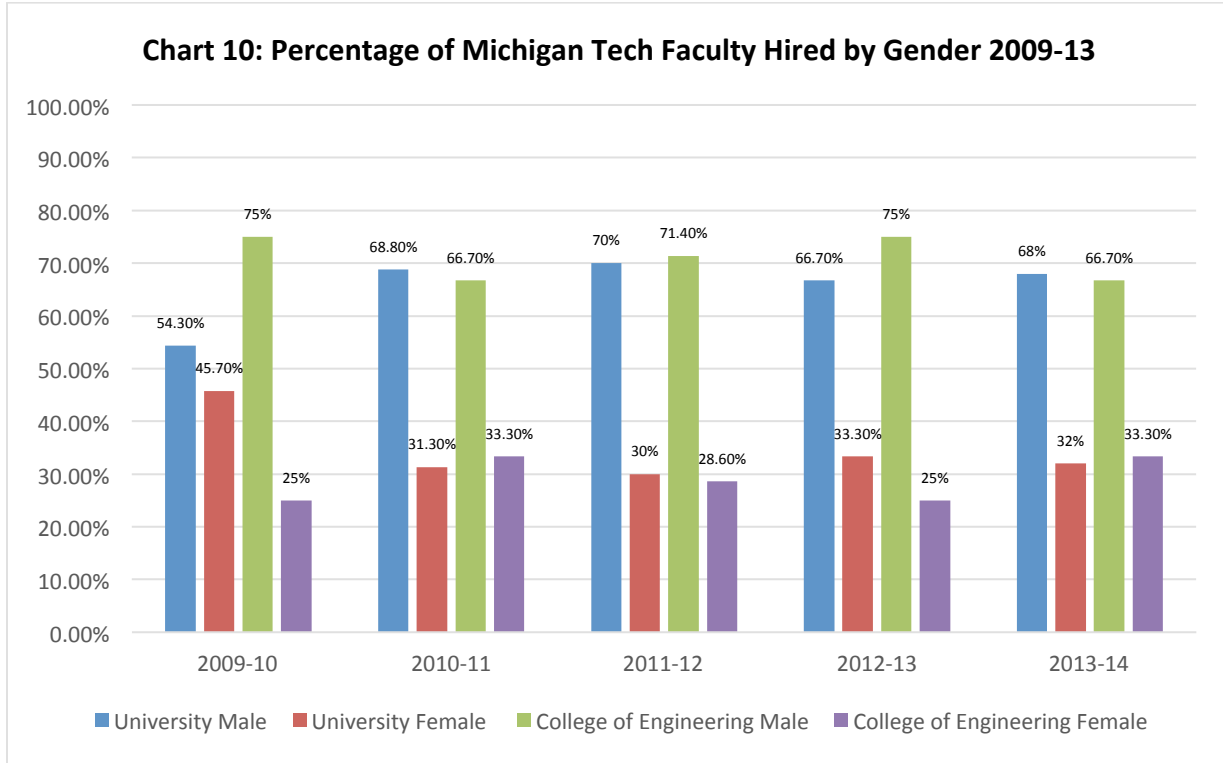
Administrators should not “check the mentoring box” but work with faculty to provide appropriate mentoring that supports long-term faculty success.

- Bullying by colleagues, and for some faculty and staff by students, is a more recent emerging issue that was articulated in several focus groups but is not specifically explored in the Climate Survey questions. The impact that this behavior has on faculty retention, in particular female faculty, needs to be clarified and then addressed through very intentional messages and actions by University leaders.
- It will take additional changes in Michigan Tech’s culture to assure faculty, especially female faculty, that taking time off to address child/family needs will not impact their ability to succeed as teachers and researchers. Centralized funding for maternity/paternity leaves would help send the message to chairs that retaining faculty and supporting families is important and necessary in order to maintain and grow a nationally recognized faculty.
- There is an ongoing need to support the process of managing work and family throughout a faculty member’s career (this is true for staff as well). Department chairs and mentors play an important role in helping faculty navigate the challenges of tenure, promotion and ongoing development as scholars and researchers. They can also ensure a “culture of use” with an emphasis on the fact that both men and women are dealing with work and family concerns and that flexibility in accommodations is important when developing policies. The University should continue to establish and promote effective institutional policies and programs that do this.

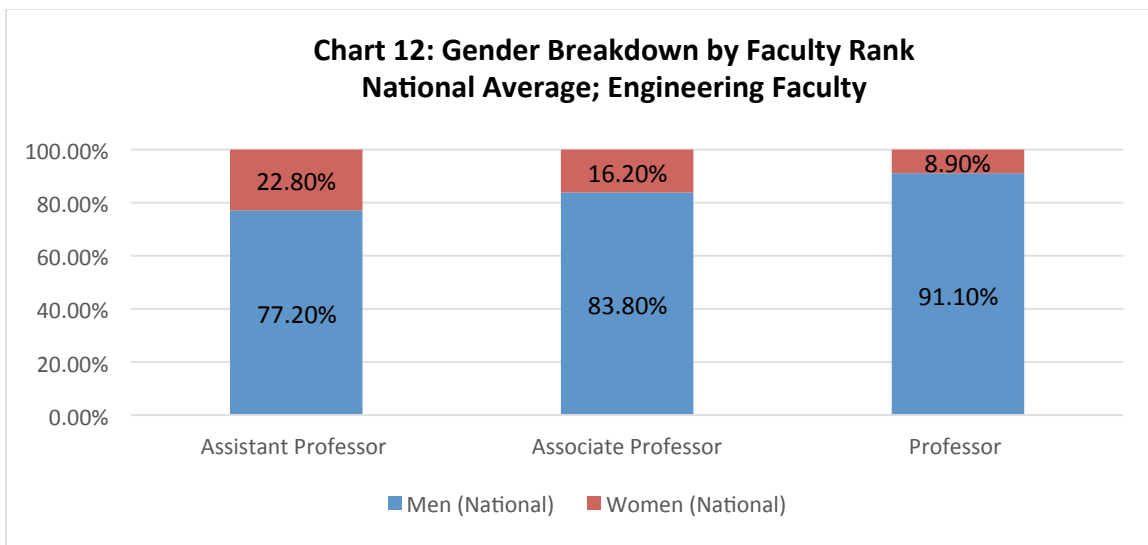
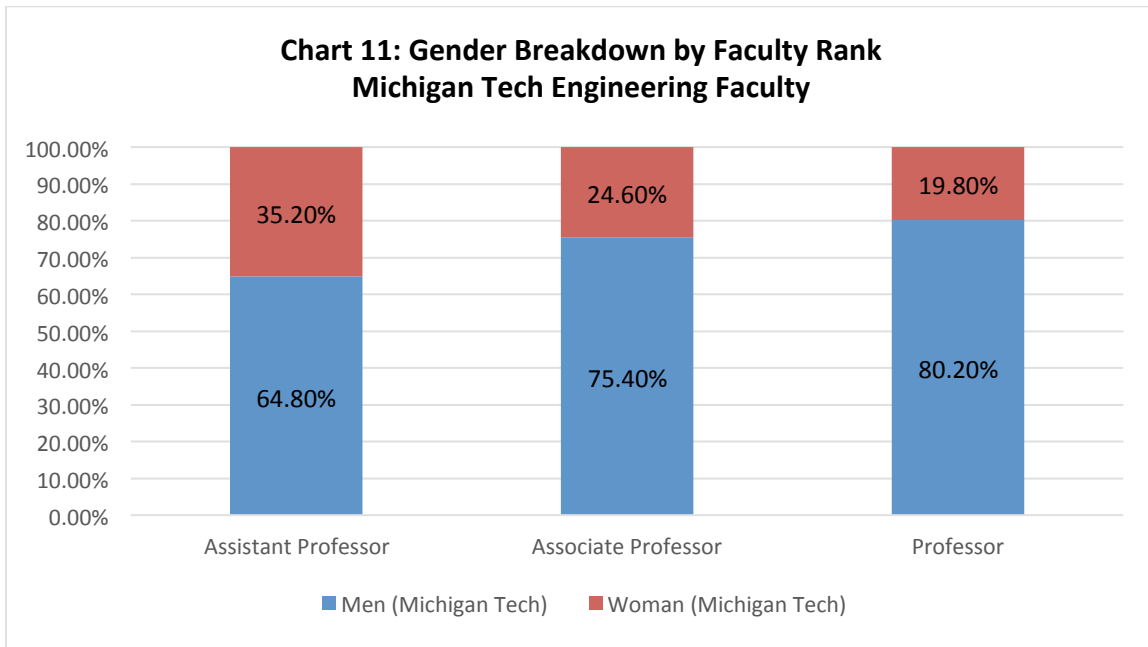
The following charts demonstrate some success in hiring and promoting female faculty.



The percentage of tenure/tenure track female faculty hired over the period of 2009-10 through 2013-14 has remained fairly stable around thirty percent (30%) both in the University and in the College of Engineering with small percentage increases periodically.

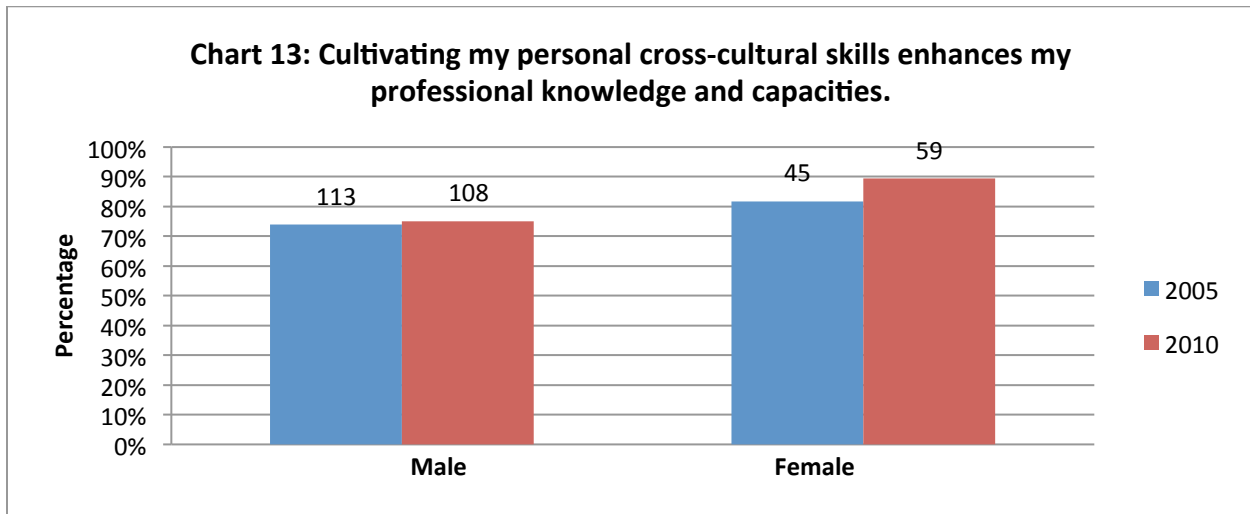


The percentage of female faculty in the ranks of professor and associate professor in the University and in the College of Engineering has remained fairly constant with slight decreases in the COE from 2009-10 to 2013-14. However the percentage of female assistant professors has increased significantly from 11% to 29% in the College of Engineering. In addition, Michigan Tech’s College of Engineering does compare well to the 2013-2014 national statistics for assistant, associate, and full tenured/tenure track female faculty rank percentages.



Initiatives to increase the hiring and retention of female faculty are having some success, but numbers and percentages also show that there remains much to do to meet the University goal to recruit diverse faculty and staff and to retain the excellent faculty and staff that Michigan Tech currently has. New recommendation:

- The challenge to recruit and retain a diverse faculty requires continued analysis and sustained attention by deans, department chairs, the provost and other administrative directors.



Finally, in terms of gender equity, male faculty Climate Survey responses indicated that they were engaged in and working to support equity. However, although the positive response rates increased from 2005-2010, there remained meaningful differences between male and female responses.

New recommendation:

- In order to increase the propensity of both male and female faculty and staff to take action, and to sometimes lead, on diversity-related initiatives; the University must strive to increase the diversity of the composition of faculty, chairs, deans and upper administrators; continue to build awareness of research on diversity issues through professional development; and decrease explicit and implicit biases through regular review of climate, policies and procedures.

Partially due to the ADVANCE grant project, much of the in-depth review of data over the period of the grant (which overlapped this Interim Report period) focused on faculty. In general for staff, their 2010 response rates to the Climate Survey questions were considerably more positive than the 2005 response rates. More recent staff focus groups did describe at least three issues that were common to faculty concerns: a need for improved mentoring for advancement, the need to recruit and retain more URM staff, and concerns related to bullying primarily by supervisors and some colleagues. New recommendation:

- Although several of the new recommendations in the Recruitment and Retention of Faculty and Staff section can be applied to staff, a more concentrated look at staff climate is encouraged.

Recruitment and Retention of Students

A number of programmatic and policy actions have been implemented to address 2007 Climate Study Recommendations related to the recruitment and retention of students. Examples are:

The College of Engineering (COE) and science, technology, engineering and mathematics (STEM) faculty have increasingly joined other universities across the country as participants in climate surveys, national data collection and other funded projects to increase understanding of the factors that impact student selection of and retention in STEM programs; and to improve STEM teaching.¹⁵

Over the past three years, multiple strategies have been developed and implemented to increase the number of female students who apply to and enroll at Michigan Tech, especially in STEM disciplines. A process beginning with research (including activities sponsored through the NSF ADVANCE grant) through careful selection of action items to yield results has occurred. This process has, most often, been led by Enrollment Management in close collaboration with academic units.

The recruitment of International students has intensified resulting in greater numbers on campus each year.

Michigan Tech continues to lead its peers in providing precollege academic outreach programs, especially targeting underrepresented students in STEM. These programs introduce students to University departments, degree programs, and future opportunities as students and STEM graduates. The University's partnerships with community colleges through the KCP Michigan College and University Partnership (MICUP) program provide a model for increasing the diversity of our undergraduate population.¹⁶ In addition, outreach programs continue to develop in various units across campus and provide a rich source of

¹⁵ PACE—Program to Assess Climate in Engineering, a 5 year study that examines the factors affecting the retention of undergraduate engineering students, particularly women and minority students, with an aim to improve climate and create a more inclusive environment (funded by the Sloan Foundation).

ENGAGE—Michigan Tech faculty were awarded mini grants to use everyday examples in their class and to share learning outcomes with their colleagues (funded by NSF).

CUSTOMS: Consortium for STEM Success. Is a longitudinal retention study with approximately 40 other institutions, mostly smaller ones and a larger percentage of Historically Black Colleges and Universities (partially funded by the Thurgood Marshal Fund).

See also <http://www.mtu.edu/cls/research/stem/>

¹⁶ <http://www.mtu.edu/diversity-center/programs/students/micup-milsamp/>

potential future undergraduate students, e.g. Great Lakes Research Center and the Mobile Lab.

Academic units such as the College of Engineering have supported recruitment/ retention initiatives, i.e. the Women in Engineering (WIE) Learning Community, the Region-H Society of Women in Engineering (SWE) conference (2014), and have significantly increased interaction and collaboration with the campus SWE organization. Increasing the number of female STEM faculty is also a component of the coordinated effort to attract more female students.

Table 2: Michigan Tech Student Enrollment by Gender

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Female	1,557	1,523	1,576	1,658	1,719	1,780	1,809	1,839	1,790	1,812
Male	4,983	4,987	4,974	5,100	5,299	5,368	5,167	5,195	5,157	5,167
Total	6,540	6,510	6,550	6,758	7,018	7,148	6,976	7,034	6,947	6,979

Michigan Tech is now a member of the NSF-sponsored Michigan Louis Stokes Alliance for Minority Participation (LSAMP) and the Alliance for Graduate Education in the Professoriate (AGEP). Other Alliance members include the University of Michigan, Michigan State University, Wayne State University, and Western Michigan University; as well as a number of Michigan community colleges (LSAMP only). Participation in these Alliances provides new opportunities for external funding for diversity-related activities as well as increased visibility for the University with NSF and potential URM students.

The new Honor’s College can be an important venue for encouraging and recognizing the value of diversity of thought and has the potential to attract diverse students.

URM students are only a percentage of a growing number of students who enter the University underprepared. Underprepared students require careful assessment to determine the tools they will need to be successful. Ensuring that students use the University academic and personal support services to help them be successful is an ongoing challenge. University units such as the Waino Wahtera Center for Student Success, academic advisors and individual faculty serve as valuable resources for all students, helping direct them to the appropriate support programs. In addition, ensuring that support services address the needs of a diverse student body requires that an investment is made in training student and staff coaches, as a result, departments/units such as Engineering

Fundamentals, Student Affairs and various Learning Centers now include aggressive recruitment of diverse students, as customers and coaches, and participation of all coaches and mentors in diversity training related to learning styles and cultural differences.

The University maintains a full-time staff person with responsibility for Veteran Services.

The University now supports a full-time coordinator of Student Disabilities.

Academic departments such as Electrical Engineering have recognized that departments' physical spaces play a part in helping students feel welcomed and valued, e.g. Engineering Computer Engineering (ECE) Lounge, the ECE Women's Center, and the first floor Lactation room.

Graduate students—Graduate students who are underrepresented in masters and PhD programs, especially in STEM areas, frequently indicate that they selected Michigan Tech graduate programs because of, and are most often satisfied with, the quality of the research in which they are engaged.

Michigan Tech students, as well as faculty and staff, have much to contribute to the University's commitment to diversity and a truly inclusive climate at Michigan Tech. To address ongoing and emerging concerns identified since the analysis of the 2010 Climate Survey and through subsequent campus-wide review of these results; several new recommendations related to the recruitment and retention of students Climate Study category are provided:

- Like other underrepresented groups, students (and employees) with disabilities and veterans have specific needs to support their academic success. An important University responsibility will be to build awareness of these groups, and continue to develop systems of support for them. In addition, ensuring that across campus physical barriers are removed will signal a commitment to an inclusive environment for all students (and faculty and staff) with physical disabilities.
- The intensive and focused development of recruitment strategies for women in STEM has resulted in increased percentages and numbers of new female students. This intentional, researched-based approach needs to be applied to URM students with a sustained, deliberate commitment to build a pipeline to the University. Michigan Tech's established academic precollege and community college programs should be examined to determine how best to leverage their current successes to help increase the URM student composition at the University. Alumni also have to be engaged in this process, as they are with Michigan Tech's traditional students.
- Research supports the idea that students from underrepresented groups, fare better academically, socially and personally, if there is a "critical mass" (See Attachment 7—

Critical Mass). A “critical mass” is not a specific number, but if the campus is aware of issues related to recruitment, retention and graduation of diverse student (and recruitment and retention of faculty); the community will know/feel when that critical mass is met. The University should determine critical mass indicators to assist in evaluating success in achieving a more inclusive, welcoming environment.

- Related to critical mass is the more immediate concern that there be faculty and staff role models who “look like” the ethnically diverse students that the University recruits and hopes to retain and graduate. Additional strategies for recruiting a more diverse staff should be identified.
- *Graduate students*—The positive perceptions and experiences that URM and other graduate students have during their research experiences are powerful selling points. The quality of and opportunities to be part of these research experiences should be strategically promoted to attract increasing numbers of potential URM graduate students.
- *Graduate students*—Minority, and especially first generation, graduate students indicate that they often feel isolated (small numbers and few role models); and that communication with faculty advisors needs to be more frequent, with increased clarity of expectations especially during transition periods—undergraduate to masters level, masters to doctorate and doctorate to post doctorate. Programs to address these issues need to be part of the graduate student professional development plan. (These issues most likely impact all graduate students and when addressed will also benefit all students.)
- Although there was a small number of respondents who indicated in the 2010 Survey that there were times “when I felt physically unsafe on campus,” and/or she/he had “personally experienced or witnessed harassment or discrimination at Michigan Tech,” this data and other University information should be continually examined to further determine solutions to addressing real or perceived safety issues and eliminating discrimination and harassment. (See Attachment 8—Student Personal Safety Response and Rates and Attachment 9—Student Harassment and Discrimination Responses.)

International students—As the number of international undergraduate students grows, the University needs to determine how best to facilitate their transition to Michigan Tech and support their academic success. Current perceptions and experiences of undergraduate international students were described by student, staff and faculty focus group participants:

- Students repeatedly emphasized that they have many positive experiences with staff, faculty and their American peers and that the International Programs Office and the English as a Second Language faculty are supportive.

- The University’s sensitivity and care to address religious accommodations were often noted.
- Students perceive that the amount of time spent on their language skill development was excessive (two years); especially because the work does not directly relate to or use the language of the discipline in which they came to study at Michigan Tech
- Students perceive that they are treated as “underprepared” academically and, thus, there are lower expectations for their academic success. (This is very similar to feedback from URM students.) Student believe that they represent their countries best students, yet their confidence is often tested, adding an additional stress on their ability to be successful.
- There are few opportunities for the majority student body to interact/work with international students beyond the celebrations of food and music.
- As individuals, and as a group, they often feel unwelcomed and isolated.

In preparation for growth in numbers of international students (and faculty) and in the number of countries from which undergraduate students are recruited, the University must be prepared to provide relevant academic and personal support for international students. The diversity that international students bring to the campus should also benefit domestic students.

New recommendations:

- Develop or enhance programs or activities that facilitate intercultural discussions to encourage all students to exchange cross cultural concerns, information, and views; and address social barriers such as stereotyping, disinterest and fear that keep students from reaching across cultural lines and learning from each other in a meaningful way.
- Continue to review the admission criteria, including English language fluency. Ensure that students have coursework schedules and support services that match their individual needs.
- Review the current model of supporting international student language development to provide increased connections between their language and disciplinary course work during students’ first year on campus.
- Consider expanding the Multiliteracy Center and services to accommodate and support non English as a Second Language (ESL) students (those not enrolled in the ESL program) in order to provide targeted assistance throughout their studies to ensure academic success.

In response to the Climate Survey statement “Michigan Tech would benefit academically from having more racial/ethnic minority students and racial/ethnic minority faculty on campus,” a significant percentage of faculty, followed by professional staff and then students indicate that

they agree or strongly agree. However the average responses in 2010 are consistent with the 2005 responses (see Chart 3) and indicate that students are less likely than faculty and staff to recognize the benefit of learning in a diverse environment. There is a need to develop students' understanding and appreciation of the intellectual and professional benefits of diversity.

There is an extensive body of University and national campus climate data concerning students' academic and personal experiences and perceptions of campus life and work (study), as well as research data related to diversity, that can be useful in engaging students in meaningful and relevant discussion about equity, diversity, inclusion and other related topics to increase their intercultural, communication and problem-solving skills. New recommendation:

- Establish and facilitate a *Student Study Group* that will work with the Diversity Committee, deans and Student Affairs staff. This study group should complete a comprehensive examination of the student climate at Michigan Tech, including student safety, a deeper understanding of the value of all types of diversity, and the status of ethnic and gender diversity issues that remain barriers to education equity. (The 2015 Climate Survey could provide baseline data for an ongoing 5-year student climate study.) The goal would be to implement student recommendations and/or incorporate them in the University and/or unit diversity plans.

Finally, the academic department chairs are often the culture holders in a University. They also represent an intersection between the faculty and administration. Thus, chairs are positioned to be critical diversity change agents within Michigan Tech. They can affect students' direct experiences in curricular content, interactions with the faculty, classroom and laboratory environment, overall climate, and identity formation by building a more diverse faculty, providing professional development opportunities, addressing climate issues and access and retention issues. New recommendation:

- Chairs need to facilitate inclusive teaching, learning, and research environments that serve a more diverse faculty and student body and support student and faculty success. Deans and the provost need to provide Chairs tools to lead this effort.

Dialogue and Training to Improve Campus Climate

The 2007 recommendations described in the **Dialogue and Training** section emphasize the desire for access to a variety of training (diversity, leadership, communication, harassment and discrimination, intercultural, mentoring, supervision and career development) as well as a need to provide staff, faculty, and students the opportunity to contribute to the University's strategic plan for ensuring a diverse, welcoming and inclusive campus community.

Since the 2007 Report, at every level of the University, many of these recommendations have been met, and various units continue to fine tune and add to the current training and professional development that is available.

Comparisons of the 2005 and 2010 Climate Survey aggregate response rates, and review of written comments to a number of related questions, do indicate a positive increase in respondents' perceptions or experiences related to their own participation in the dialogue and training. An excellent example is the implementation of the new Diversity Award to recognize a University faculty or staff member who contributes to diversity and inclusion through exemplary leadership and actions.

Current review and focus group discussion suggests a new recommendation:

- The University needs to broaden participation in and continue to enhance professional development opportunities, especially to include bias literacy, mentoring, intercultural and communication skills; and career development training, topics that were most often identified as crucial. Ongoing professional development opportunities should increase awareness, overcome misperceptions, increase relevance and provide a richer learning environment and higher level of excellence for the Michigan Tech community.

Work Environment and Space

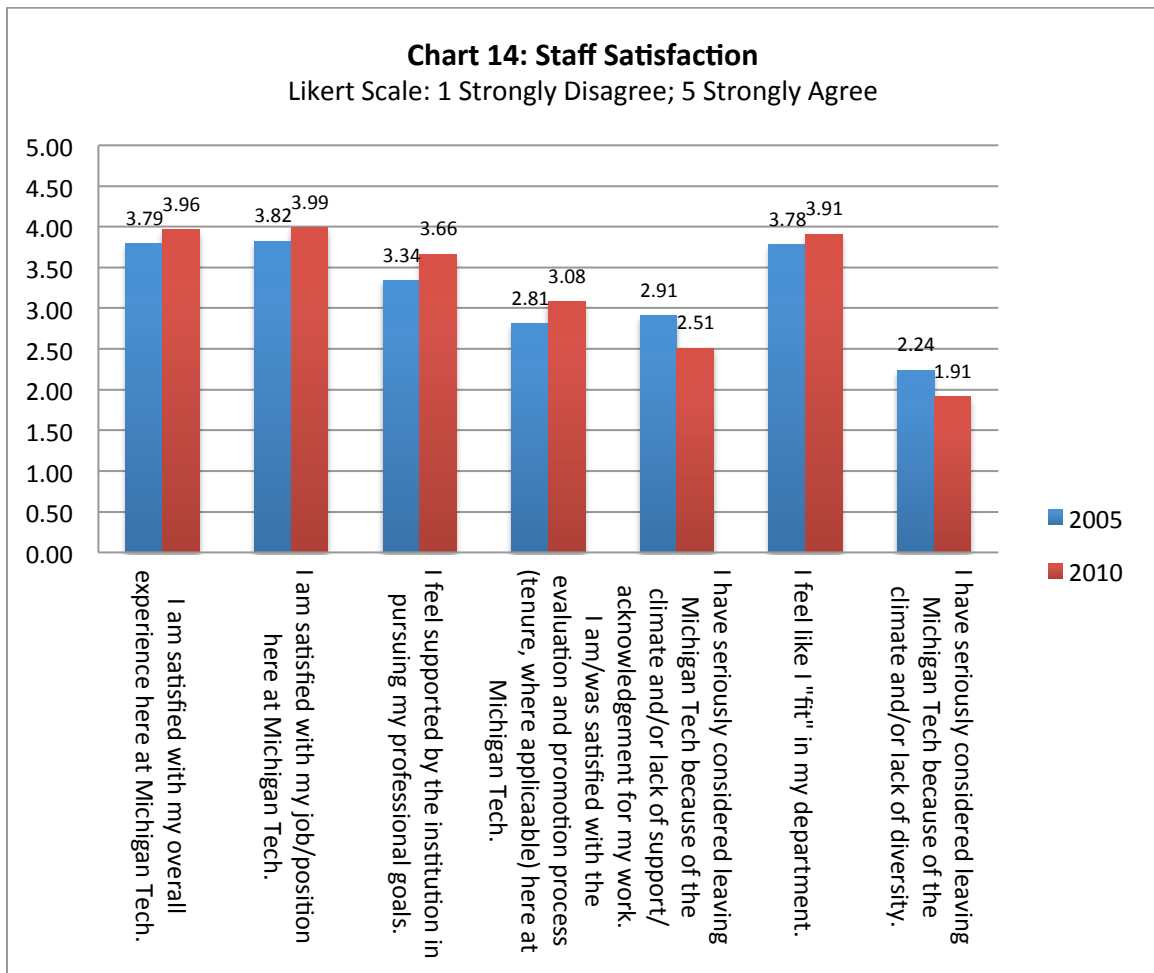
2007 Climate Study recommendations related to campus esthetics, inappropriate workspace décor and the need to work with the local community have been addressed in a number of ways. Examples include:

Over the past four years, significant improvements to the indoor and outdoor space on our campus have been made. The most recent focus groups were overwhelmingly satisfied with the direction that the University is taking to make the campus more welcoming and showcasing the natural beauty of the area, e.g. plants, trees, water and even rocks both in landscaping and in newer buildings.

Insensitive work space décor was identified and removed across campus.

Partnerships with the local community have resulted in improved bus transportation; collaboration with the President's Corporate Diversity Advisory Board; programs provided by University faculty and students at the Portage Lake Public Library and in a number of local schools; and support for major events, such as the Society of Women Engineer's regional conference and the Parade of Nations.

Related to “environment,” there was an overall increase in the positive responses to the satisfaction and workload questions by staff. (See Chart 14 Staff Example—Satisfaction and Workload.)



Finally, although local community involvement with campus activities and partnerships has increased, recent student and staff focus groups noted a need for the University to strengthen its efforts to involve the local community in diversity-related programs. New recommendation:

- Identify ways to encourage local community members to participate in programs related to the University’s diversity efforts and increase opportunities for interactions between students and the community through community/University projects, course work, seminars, speakers, and other activities. A sample suggestion was to create a community diversity award that would recognize individual or group community contributions to diversity-related efforts.

Conclusion

The Climate Study recommendations reflect an ongoing process that demands engagement and collaboration across campus, and with external partners, so that all Michigan Tech students, faculty, and staff will benefit from diversity's collective benefit.

The challenges of recruiting and retaining diverse students, faculty and staff can be partially addressed with increased funding for hiring diverse faculty and staff, scholarships to attract talented students, and training to ensure a welcoming and inclusive campus climate. Student Affairs, Advancement, and Corporate Relations staff; working with the academic chairs and deans and the University's key external partners are positioned to increase financial support for these areas. Faculty continue to seek external funding that not only supports their research but also provides funds to guarantee that their work has broader impacts and addresses diversity at some or all education levels.

An updated *Diversity Framework* (the University's diversity plan) will provide a model, comprehensive, University-wide plan that can be utilized and applied campus wide or by individuals and/or individual units. An alliance between Student Affairs and Academic Affairs is necessary to ensure continued success in supporting diversity initiatives.

The Diversity Council can help assess Michigan Tech's current climate, evaluate related programs, work with the president and provost to determine how individuals and units will be accountable for addressing the *Diversity Framework* and 2015 Climate Survey recommendations, support sustainability of successful programs, and communicate to and encourage their colleagues in ongoing discussions and actions.

Engaging the campus community (and the local community) and creating an awareness of the intellectual and personal benefits of learning from others who are different, and taking time to interact in meaningful ways will continue to be a priority. In meeting and achieving this goal, the culture of the University will be enhanced, becoming a more creative, vibrant, flexible, and productive University.

In 2015 the third Climate Survey will be administered. When comparing 2015 responses to 2010 and 2005 Survey aggregate and subgroup responses, and charting the 2015 responses; the University will look for trends in the perceptions and experiences of Michigan Tech staff, faculty and students, and that many of the emerging areas of concern highlighted in this Interim Report have been or continue to be addressed.

The University's strategic plan reflects the Institution's core values and encourages consistent and persistent attention to its critical interests and goals. Diversity remains central to the vitality of Michigan Tech's current and future life and success. The University's ongoing Climate

Study examines individual and collective perspectives and identifies problems and solutions consistent with achieving Michigan Tech's goals. The vision to be a premier research university of international stature requires an open and inclusive climate, which is best achieved when its students, faculty, and staff reflect different races, ethnicities, genders, ages, scholarly pursuits, points of view and ways of life. This will attract and retain the best and brightest from all walks of life who seek an inclusive environment where they will thrive.

"We all have a stake in Michigan Tech's success as a great place to work in support of our educational mission. Our Strategic Plan supports opportunities for meaningful interactions with people from many backgrounds who offer diverse perspectives.

Diversity is key to developing our creative potential. As educators by profession and by heart, we recognize that critical thinking skills are essential to student success. Certainly those skills can be partially learned in the classroom. But in large measure they are honed by experience—the experience that comes through day-to-day interactions with those who have different perspectives. The more we are challenged by differing viewpoints, the more we grow, both as individuals and as a community. Most importantly, we learn to relate better with others, to lead, and to adapt."

- President Glenn Mroz

Attachment 1 – 2011-2014 Focus Groups

Tenured Faculty by gender -2
Tenure Track Faculty by gender-2
International students (undergraduate and graduate students)-2
UAW Academic department employees-1
Society of Women Engineers students-1
Undergraduate students by gender, STEM (9) and non-STEM (5)
Undergraduate students by class level-2
Underrepresented minority undergraduate students by gender (Native American, Hispanic / Latino and African American)-6
Underrepresented minority staff-2
Represented staff by gender-2
Graduate students by gender-2
International tenure-track faculty by gender-2
White male tenured track faculty, STEM and non-STEM-2
Underrepresented minority graduate students in AGEP-1
Women in Science and Engineering (WISE) faculty [informal discussions]
Staff by gender-2

Attachment 2 – 2005 and 2010 Climate Study Steering Committee Members

2005 Climate Study Steering Committee

Faculty: William Melton – Social Sciences; Donna Michalek – Mechanical Engineering-Engineering Mechanics; Bill Predebon – Mechanical Engineering-Engineering Mechanics; Christa Walck – School of Business and Economics

Students: Akshay Patil – Graduate student; Kassa Prystalski – Undergraduate student; Tim Wong – Undergraduate student

Staff: Mike Abbott – Sports and Recreation; Chris Anderson – Institutional Diversity; Jill Arola – Writing Center; Les Cook- Office of Student Affairs; Suzanne Sanregret – Athletics

2010 Climate Study Steering Committee

Faculty:

Nancy Auer – Biological Sciences; Dan Fuhman – Electrical and Computer Engineering
Gil Lewis – Mathematical Sciences; Amlan Mukherjee – Civil & Environmental Engineering;
Linda Nagel – Forest Resources & Environmental Sciences

Students:

Lucia Gregorakis – Undergraduate Student Government; Emily Jensen – Undergraduate student; Jarod Maggio – Graduate Student Government

Staff:

Mike Abbott – Research, GLRC Operations; Les Cook – Office of Student Affairs; Jill Hodges – Humanities; Thy Yang – International Programs and Services

Attachment 3 – Number and Percentage of 2005 and 2010 Climate Survey Respondents by Subgroup

	2010 Number	2010 Percent	2005 Number	2005 Percent
Summary				
Faculty	252	7%	260	7%
Students	2653	76%	3077	82%
Professional Staff	402	12%	288	8%
Hourly Employees	183	5%	143	4%
Total	3490		3768	
Faculty				
Male	145	58%	159	61%
Female	66	26%	56	22%
Transgendered	0	0%	1	0.4%
Tenured	105	42%	119	46%
Tenure-track	60	24%	47	18%
Chair	10	4%	6	2%
Adjunct	6	2%	11	4%
Engineering	82	33%	85	33%
Business	20	8%	20	8%
Technology	10	4%	8	3%
Sciences & Arts	87	35%	90	35%
Forestry	12	5%	13	5%
White	170	67%	180	69%
African American/Black	3	1%	1	0.4%
Latino	7	3%	2	0.8%
Asian/Pacific Islander	28	11%	16	6%
Middle Eastern	2	0.8%	2	0.8%
Multiracial	4	2%	1	0.4%
Native American	3	1%	2	0.8%
South Asian	2	0.8%	5	2%
LGBT	3	1%	1	0.4%

	2010 Number	2010 Percent	2005 Number	2005 Percent
Students				
Male	1198	45%	1673	54%
Female	654	25%	667	22%
Transgendered	2	<1%	2	<1%
Lower Level	620	23%	898	29%
Upper Level	830	31%	1001	33%
Transfer	167	6%	191	6%
Graduate	340	13%	340	11%
Engineering	1072	40%	1450	47%
Business	132	5%	217	7%
Technology	121	5%	185	6%
Sciences & Arts	481	18%	486	16%
Forestry	106	4%	99	3%
White	1590	60%	2021	66%
African American/Black	34	1%	61	2%
Latino	43	2%	60	2%
Asian/Pacific Islander	133	5%	119	4%
Multiracial	32	1%	36	1%
Native American	31	1%	36	1%
Middle Eastern	20	0.8%	5	<1%
South Asian	26	1%	29	1%
LGBT	88	3%	78	3%

Attachment 4 – 2010 Climate Survey Dissemination of Subgroup Data

Undergraduate religious affiliation chart—Upper Administration

Undergraduate students by gender and by class level-Student Affairs and Academic Advisers

Faculty by gender – ADVANCE project evaluator and ADVANCE research team

Employee and staff by gender – Human Resources

Faculty and staff by college / school – Deans

Graduate students by gender – Deans and Department Chairs and Graduate School

All underrepresented minority students by gender and race – Student Affairs and Center for Diversity and Inclusion

International students by gender – International Programs

Gay, Lesbian, Bisexual, Transgender and Questioning – Center for Diversity and Inclusion

Undergraduate students in the residence hall and off campus – Student Affairs

Numerous bar charts for selected questions, aggregate response rates to selected questions and comparisons of 2005 and 2010 Survey response rates were also shared with various groups across campus, including Staff Council, Human Resource staff, Student Affairs, the Deans, Corporate Advisory Board for Institutional Diversity, and WISE.

Attachment 5 – Related Research Publications and Resources

AASCU/NASULGC Task Force on Diversity; Now is the Time—Meeting the Challenge for a Diverse Academy; 2005; American Association of State Colleges and Universities and the National Association of State Universities and Land-Grant Colleges

Babcock, Linda and Lascheve, Sara; Women Don't Ask—Negotiation and the Gender Divide; 2003; Princeton University Press

Bowen, William G. and Bok, Derek; The Shape of the River—Long Term Consequences of Considering Race in College and University Admissions; 1998; Princeton University Press

Brownell, Jayne E. and Swaner, Lynn E.; High –Impact Practices--Research on Learning Outcomes, Completion and Quality; 2010; Association of American Colleges and Universities

Castellanos, Jeanett and Jones, Lee; The Majority in the Minority—Expanding the Representation of Latina/o Faculty, Administrators and Students in Higher Education; 2003; Stylus Publishing, LLC

Council of Graduate Schools; Inclusiveness Series; 2003; Council of Graduate Schools

Generation Bias—A Subtle But Powerful Presence; Spring 2014; Society of Women Engineers

Guy, Sandra; Magazine of the Society of Women Engineers, *Second Generation Bias—A Subtle But Powerful Presence*; Spring 2014; Society of Women Engineers

Hanson, Katherine, Guilfooy, Vivian, and Pillai, Sarita; More Than Title IX—How Equity in Education has Shaped The Nation; 2009; Rowman and Littlefield Publishers, Inc.

Making the Right Moves—A Practical Guide to Scientific Management for Postdocs and New Faculty; Burroughs Wellcome Fund and Howard Hughes Medical Institute; 2006

Meiksins, Peter, Layne, Peggy, Camargo, Elsa, and Snead, Katie; Magazine of the Society of Women Engineers; *Women in Engineering: A Review of the 2013 Literature*; Spring 2014; Society of Women Engineers

Michigan Diversity Report; Michigan Student Study—An Assessment of Students' and Alumni's Experiences and Outcomes with Diversity; MichiganStudy@umich.edu

Moss-Racusin, Corinne A., van der Toorn, Jojanneke, Dovidio, John F., Brescoll, Victoria L., Graham, Mark J., and Handelsman, Jo; *Scientific Diversity Interventions*; Science; February, 2014; AAAS

National Academy of Engineering; The Engineer of 2020—Visions of Engineering in the New Century; 2004; The National Academies Press

National Academy of Engineering and National Research Council of the National Academies; Enhancing the Community College Pathway to Engineering Careers; 2005; The National Academies Press

National Academy of Sciences, National Academy of Engineering, and Institute of Medicine; Expanding Underrepresented Minority Participation—America’s Science and Technology Talent at the Crossroads; 2011; The National Academies Press

PACE: Project to Assess Climate in Engineering; Funded by the Sloan Foundation; 2006-2014; numerous published papers found at <http://depts.washington.edu/paceteam/method.html>

Page, Scott E.; The Difference—How the Power of Diversity Creates Better Groups, Firms, Schools, and Societies; 2007; Princeton University Press

Pascarella, Ernest T. and Terenzini, Patrick T.; How College Affects Students; Volume 2; 2005; Jossey-Boss

Pollack, Eileen, Why Are There Still So Few Women in Science?; October, 2013; New York Times

Rapoport, Rhona, Bailyn, Lotte, Fletcher, Joyce K., Pruitt, Bettye H.; Beyond Work-Family Balance—Advancing Gender Equity and Workplace Performance; 2002; Jossey-Bass

Smith, Daryl G.; Diversity’s Promise for Higher Education—Making It Work; 2009; The John Hopkins University Press

Smith, Daryl G. and Associates; Diversity Works—The Emerging Picture of How Students Benefit; 1997; Association of American Colleges and Universities

Steele, Claude M.; Whistling Vivaldi; And other clues how stereotypes affect us; 2010, Norton and Company Inc.

Tobias, Sheila; They’re Not Dumb, They’re Different—Stalking the Second Tier; 1994; Research Corporation a Foundation for the Advancement of Science

Turner, Caroline Sotello Viernes; Diversifying the Faculty—A Guidebook for Search Committees; 2002; Association of American Colleges and Universities

Valian, Virginia; Why So Slow?—The Advancement of Women; 1999; The MIT Press

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Attachment 6 – Recommendations for Academic Action—Deans’ Diversity Plan

Updated Climate Study Recommendations for Academic Action (initially provided to and approved by the Academic Deans on October 1, 2009)

APPROVED RECOMMENDATIONS FOR FOCUSED DIVERSITY EFFORTS: These recommendations may require additional work, or are continuations of what you are already doing, but might require that you be more purposeful about accomplishing them.

OBJECTIVES/ACTIONS:

1. Increase the domestic minority and gender diversity of the graduate student population.

To accomplish this –

- Increase the UGR/REU opportunities for potential undergraduate and graduate minority students (include UGR/REU seminars that educate student participants about the benefits of graduate education) – use the Center for Diversity and Inclusion and Institutional Equity Office to assist in recruiting from community colleges and other universities; partner with historically minority serving institutions
 - Help and encourage faculty and staff to improve and use their networks to identify potential graduate students (and post docs and faculty) who are female and/or underrepresented minorities (URM) – go beyond traditional networks, and call your friends and colleagues
 - Increase representation at targeted recruiting fairs and at other institutions with a high yield of target populations (see ASEE data); continue to mine the GEM lists and other published lists
 - Support campus visits for minority graduate student candidates
 - Annually review the status of graduate student stipends and benefits
 - Increase the diversity of recruiters
2. Continue to support the ADVANCE objectives (improved recruitment/hiring processes, mentor programs, training and accountability efforts) to ensure success.
 3. Continue to develop regular and clear messaging to department chairs, and from department chairs to faculty and staff about the value of faculty diversity.

4. Identify barriers to success (work/life balance issues, communication issues, Promotion & Tenure clarity, etc.) for our new faculty and address these issues on an ongoing basis. In order to accomplish this:
 - Collect feedback through provost/ female faculty forums, annual focus groups with new faculty, and review of climate survey results; work with Institutional Equity to identify outside experts to educate the campus.
 - Form small, ad hoc committees to address specific issues
 - Consider publishing a general guide to promotion and tenure at Michigan Tech to facilitate discussion
 - Formalize a list of current work/life balance policies and services, and create a website and brochure to use in recruiting faculty
 - Recommend to the VP for Operations a childcare committee to investigate further expansion of childcare and coordination with local schools to address expressed needs
 - **Be systematic and purposeful about communicating how issues are being addressed**
5. Continue to promote and support professional development that focuses on diversity and helps improve the climate for all faculty, staff and students. Create and maintain an environment that encourages and is open to new approaches or opportunities to increase diversity.
6. Continue to support and strengthen the Dual Career Program and make recommendations for enhancements, if need is determined.
7. Encourage (let the recruiters know that this is a priority) Enrollment Management and support (quality academic youth programs, etc.) the aggressive recruitment of a more diverse undergraduate population.
8. On a broader level, address the issues around start-up packages (not directly related to diversity goals, but was repeatedly noted as a major concern by the deans).
9. Establish annual measures of progress by department/school/college.

These actions will increase awareness, overcome misperceptions; enhance relevance; increase diversity numbers and the presence of role models on campus; and provide a richer learning environment and a higher level of excellence for all.

Attachment 7 – Definition of Critical Mass

Can be defined in percentages (%s) and numbers (#s)

Other Descriptive Terms

- A number that results in meaningful contact for majority students
- More than tokenism
- A moving range
- “Sheer numbers”
- “Presence”
- A “meaningful representation”

Influences

Faculty and staff representation

Strong Diversity Center/Office

Visible recognition of expanding array of cultural differences in:

- today’s global economy
- the classroom
- programming
- promotional materials
- strategic plans
- impact on problem-solving capacity

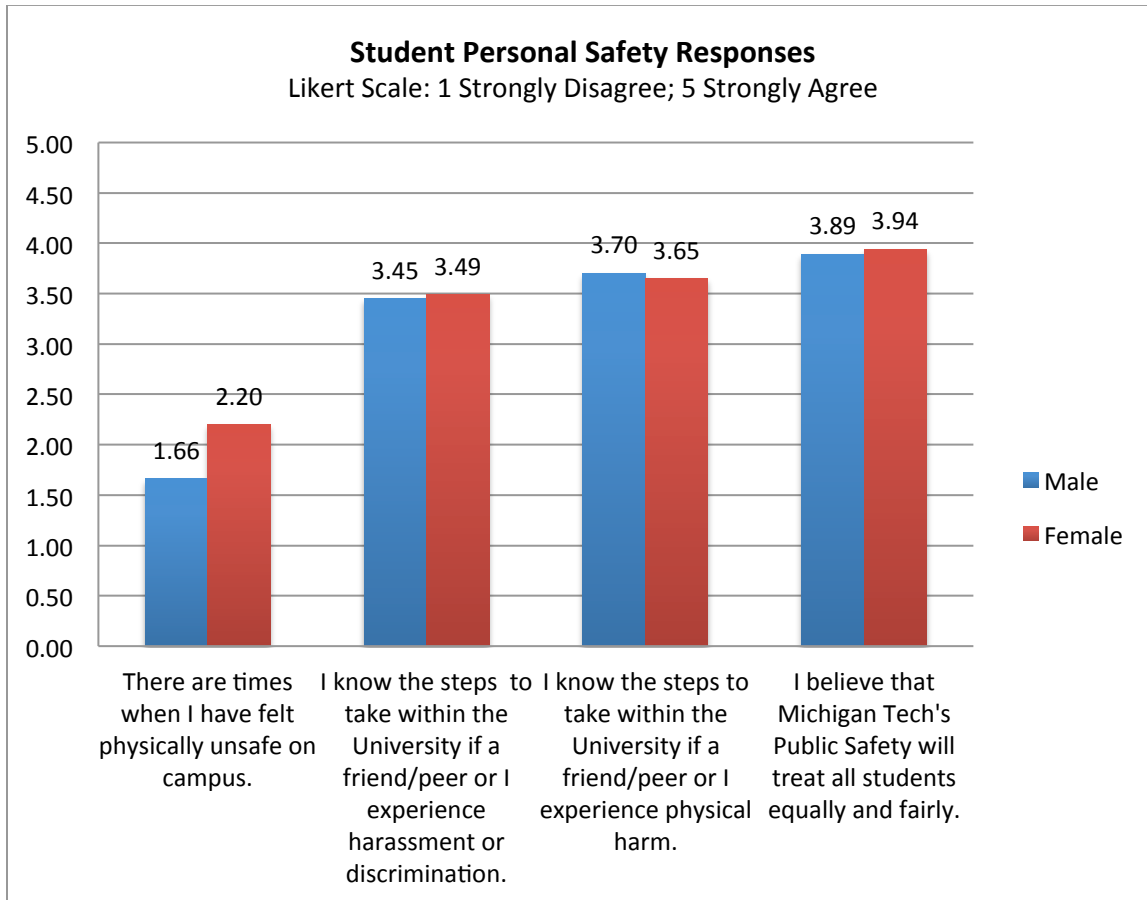
When Do We Know It Exists

- When there is a campus environment that encourages underrepresented students to participate in the classroom and not feel isolated
- Where there are active, vibrant, professional minority student organizations and noticeable representation in discipline specific technical organizations
- When minority students are not highly visible
- When racial stereotypes lose their force (no “minority viewpoint”)
- When the diversity promotes learning outcomes
- When all students are better prepared for diverse workforce and society
- When there is positive campus involvement in a pluralistic democracy
- When graduates learn at a critical level to accept differences in cultural identity
- When the diversity contributes to the enrichment of the University environment

Quote—“In addition, there must be a significant number of students of color present in the class so that they do not feel alienated. Alienation occurs when there exists only a token number of minority students. The token students become “highly visible” because their physical features set them apart from “the dominants.” The dominant group perceives the tokens as representatives of their group and maintains stereotypical generalizations of that group. This effect, known as the “assimilation phenomenon,” assures that “the token’s true characteristics are overshadowed ... by those stereotypes believed to identify the group to which the token belongs.”

-- Professor Patricia Gurin, University of Michigan

Attachment 8 – 2010 Student Personal Safety Response Rates



Attachment 9 – 2010 Student Harassment and Discrimination Responses

2010 Michigan Tech Undergraduate & Graduate Student Climate Survey				
Have you personally experienced or witnessed harassment or discrimination at Michigan Tech based on any of the following? (check all that apply)				
	Gender:			
Answer Options	Male	Female	Trans-gender	Response Count
Religious preference				
Experienced myself	157	103	2	
Witnessed	300	177	2	
Have not witnessed or experienced at Tech	799	426	1	
	1256	706	5	1967
Sexual orientation				
Experienced myself	50	22	2	
Witnessed	380	260	2	
Have not witnessed or experienced at Tech	775	373	1	
	1205	655	5	1865
Language/National origin				
Experienced myself	80	21	1	
Witnessed	469	306	2	
Have not witnessed or experienced at Tech	665	332	1	
	1214	659	4	1877
Gender				
Experienced myself	55	176	2	
Witnessed	316	202	2	
Have not witnessed or experienced at Tech	833	350	1	
	1204	728	5	1937
Race/Ethnicity				
Experienced myself	77	30	1	
Witnessed	426	253	2	
Have not witnessed or experienced at Tech	706	375	1	
	1209	658	4	1871
Physical/Mental ability				
Experienced myself	60	30	1	
Witnessed	308	162	2	
Have not witnessed or experienced at Tech	851	470	1	
	1219	662	4	1885
Age				
Experienced myself	71	46	1	
Witnessed	202	95	1	
Have not witnessed or experienced at Tech	932	525	2	
Totals	1205	666	4	1875

“Collective diversity, or diversity of the group—the kind of diversity that people usually talk about—is just as essential to good engineering as individual diversity. At a fundamental level, men, women, ethnic minorities, racial minorities and people with handicaps, experience the world differently. Those differences in experiences are the “gene pool” from which creativity springs.”

William A. Wulf, President of the National Academy of Engineering, 1998

The Climate Study was administered by the Institutional Diversity Office since 2005 and will now continue under the oversight of the Office of Institutional Equity. The Interim Report was prepared by Chris S. Anderson, a consultant and the recently retired special assistant to the president for institutional diversity at Michigan Tech, with input from all levels of the faculty, staff, administration, and students, over the period of 2011-2014.

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