

Suzanne & Richard Pieper Family Foundation
Endowed Chair for Servant Leadership



College of Engineering
UNIVERSITY OF WISCONSIN-MADISON

Annual Report
October 2017

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Servant Leader Chair for the UW-Madison College of Engineering

The Suzanne and Richard Pieper Family Foundation endowed a servant leader chair position at the UW-Madison College of Engineering in the fall of 2008. The mission of the chair is to “help prepare future leaders in their chosen fields to live lives of service to others by teaching and exemplifying character and moral values. Their examples and actions will lift up society, enrich organizations and communities, and have a positive effect on the least privileged.”

The current chair is Greg Harrington, who also serves as associate department chair for the Department of Civil and Environmental Engineering and is responsible for oversight of the department’s undergraduate program of over 400 students. Greg also teaches and conducts research in the area of drinking water engineering, which has given him opportunities to serve local communities with their drinking water needs and to help students perform drinking water development projects in developing countries. For these efforts, Greg was awarded the Ragnar E. Onstad Award for Service to Society by the College of Engineering in May 2015. Greg’s current appointment as chair runs through June 30, 2018.

Greg works closely with a Servant Leadership team to support the implementation of programs furthering the Foundation’s mission. Mark Kueppers has been collaborating with the team since 2014. Although he no longer has a formal appointment with the College of Engineering he has been instrumental in helping the chair with assessment efforts, particularly with the Multi-Institutional Study of Leadership (MSL). This month, Mark begins service as the Interim Director of UW-Madison’s Center for Leadership and Involvement and will oversee the direction and vision of the center during its search for a permanent director. Mark has been integral in helping to provide campus insight and connections to the Pieper Chair. We are excited for Mark as he continues his professional growth and are thankful that we remain closely connected to the Center.

Also assisting the team this year has been Morgaine Gilchrist-Scott, a graduate student in the UW Department of Library and Information Studies. Morgaine was an integral part of evaluating student data from the 2015 MSL and helped us write a report that was distributed to campus administrators in early January 2017. Morgaine received her MS degree in May 2017 and we are pleased to report that she has started a career in the Madison area.

In July 2017, we were joined by Lael Simmons, a PhD student in the UW Educational Leadership and Policy Analysis program. Lael is helping us coordinate efforts for our Year 2018 participation in the MSL. She is also tying up some loose ends from Morgaine’s work in analyzing the engineering student data from the 2015 MSL. With Lael’s help in the coming year, we are expecting a more detailed report on engineering students and a report on mapping of MSL outcomes to servant leadership competencies.

We are currently working with Manuela Romero and John Archambault search for a full-time faculty associate to work collaboratively with the Pieper Chair and the Engineering Student Development office. Within the College of Engineering, Manuela serves as the Associate Dean for Undergraduate Affairs and John serves as the Assistant Dean for Student Development. The Engineering Student Development office advises the 55+ registered engineering student organizations, providing student leaders with the leadership training, support and resources necessary to implement quality programs and events. The office also assists student organizations with special event planning, budgeting and financial oversight, organizational development and more.

We are pleased to provide the Pieper Family Foundation with this annual report summarizing our activities through August 2017 and our goals for Academic Year 2017-18. The report is organized in accordance with the criteria set by the foundation to conduct its annual evaluation. We have also included specific information identifying how the funding provided for the Servant Leader Chair has made an impact. We look forward to receiving feedback from the foundation on our activities and to continuing our work into the coming year.

Criterion 1 – Outcomes Baseline Data

Typical Thinking that Goes into Evaluating the Criterion

“The servant leader chairs, with the exception of one, established this criteria before the chair was awarded, expressed in the form of a graph. In all cases this has been done through standard student surveys that the school was already conducting. From those surveys, questions were selected that represent the values, characteristics, actions, and involvement of someone representative of a servant leader. Institutions were asked to plot this going back five or six years as a baseline. The document established the database that will then be used in the future. The alumni portion of this is more elusive and each school has its own unique process. Whatever the benchmark that is established for the school, it’s compared historically going back as many years as possible both for the school and their peers in other schools, which is then continued each year in the future. This is a one-time award.”

Academic Year 2016-17 Progress

As noted in previous reports, we continue to track data in the senior exit survey that is administered by Educational Benchmarking Inc (EBI). Our baseline data is from the 2007-08 academic year, the year prior to the one in which the college received the Pieper Family Foundation award. Our analysis of data since the baseline year is presented in our section on Criterion 3.

We acknowledge that the EBI survey measures important traits of leaders but does not directly address the attributes used to describe servant leaders. Thus, we helped fund the campus-wide and College of Engineering implementation of a survey used by the 2015 Multi-Institutional Study of Leadership. This survey also focuses on leadership knowledge, including servant leadership. This survey was administered in 2015 and we will continue to analyze the data from this survey into 2018. We have also begun our engagement with the 2018 edition of the MSL, which is conducted every three years. Our MSL work is described in more detail in our section on Criterion 3.

Academic Year 2017-18 Goals

We are taking a campus-wide leadership role with MSL in the coming year. Please see more in our discussion of Criteria 3 and 4.

Criterion 2 – Baseline Acceptance of Servant Leadership

Typical Thinking that Goes into Evaluating the Criterion

“Clear indication that the school is functioning with the qualities of a servant leader; building community, listening, awareness, stewardship, conceptualization and foresight, commitment to the growth of people and empathy. Displayed in multiple examples of what the school is actually

doing will validate this area. It is not unusual that the institutions that receive the Chair already have these types of programs underway. If they are of substantive magnitude, both locally, community, nationally, and internationally, one could expect to receive this one-time award.”

Academic Year 2016-17 Progress

Since our initial report for Year 2008, we have continued to refine our approach, increase our participation, and expand our involvement across campus in servant-leadership activities. Most notably, we have advanced from learning about servant-leadership toward a deeper adoption and commitment to the servant-leader model by aligning it with the broader college and campus commitments to leadership development. Based on the input of our Servant Leadership team, the recently developed UW-Madison Leadership Framework highlights specific leadership competencies and values that are directly connected to Servant Leadership characteristics. These include, but are not limited to, the following:

Servant Leadership Characteristics	UW-Madison Leadership Framework
Awareness	Self-Awareness
Persuasion	Fostering Bridge-Building & Collaboration
Commitment to the Growth of People	Supporting Learning & Development of Others
Building Community	Connection and Community

Most importantly, the Leadership Framework is based on the concept of leadership as the phenomenon of positive change in an individual, group or community’s beliefs, values or behaviors. This dovetails with the Servant Leadership philosophy of being in service to others and not for the purposes of power and authority. Since 2008, we have continued to explicitly integrate Servant Leadership into programming and courses and we have now helped to support campus by ensuring that these principles are being addressed on a campus level. Specific examples are further presented in our section on Criterion 6.

Our work with the Multi-Institutional Study of Leadership (MSL) is allowing us to map attributes of the MSL’s social change model to attributes of the UW Leadership Framework and of servant leaders. The Servant Leader chair is participating on campus committees to conduct this important work.

Academic Year 2017-18 Goals

Please see our discussion of Criterion 6.

Criterion 3 – Outcomes Measures Above Demographic Norms

Typical Thinking that Goes into Evaluating the Criterion

Measuring each year what was established in Criterion 1. The baseline data graphs represented in Criterion 1 are updated, both the peer group and the school. If this is considered qualitative data in the minds of the foundation, they will receive an award. If the alumni data is missing, the award will not be made at maximum. If the norms in the institution are reasonably above average, one can expect a higher level award. If there are things missing, one can expect a lower level.

Academic Year 2016-17 Progress

Senior Exit Survey

When receiving the Servant Leader Chair Endowment back in 2008-09, we used results from our senior exit survey to establish baseline performance for Criterion 1. In all of our annual reports since that time, we have continued to use results from that survey to provide longitudinal analysis for Criteria 3 and 4. Rather than provide all of the data from that survey for this report, we summarize and discuss the results of those questions that have relevance to leadership education. We also provide a comparison of our student perceptions with the perceptions of students at peer universities.

The senior exit survey is administered by Educational Benchmarking Inc (EBI) and is taken by seniors at numerous engineering programs across the nation. This allows us to compare the perceptions of our students with the perceptions of students at other engineering programs. For each academic year, we receive the mean response for engineering students from UW-Madison, for engineering students within participating Carnegie peer group programs (research intensive universities), and for engineering students from all programs that participate in the exit survey.

We use statistical analysis to determine:

- whether our students' perceptions are significantly better or worse than perceptions of students at our peer programs, and
- if our students' perceptions are improving or declining with time.

Because a change in educational practice will generally take four to six years to be observed in a senior exit survey, we evaluate the above items over four to six year time intervals.

We selected the following nine questions to analyze for this report:

1. Satisfaction with value derived from team experiences.
2. Satisfaction with value of engineering program student organization activities.

3. Satisfaction with leadership opportunities in engineering program extracurricular activities (Question asked on 2010-2014 surveys) / Satisfaction with the engineering program having extracurricular leadership activities (Question asked on 2015-2017 surveys).
4. Satisfaction with your fellow students' ability to work in teams.
5. Satisfaction with your fellow students' level of camaraderie.
6. Degree that engineering education enhanced ability to function on multidisciplinary teams (Question asked on 2010-2013 surveys) / I am confident that I can function on multidisciplinary teams (Question asked on 2014-2017 surveys).
7. Degree that engineering education enhanced ability to understand ethical responsibilities (Question asked on 2010-2013 surveys) / I am confident that I can understand ethical responsibilities (Question asked on 2014-2017 surveys).
8. Degree that engineering education enhanced ability to understand professional responsibilities (Question asked on 2010-2013 surveys) / I am confident that I can understand professional responsibilities (Question asked on 2014-2017 surveys).
9. Degree that engineering education enhanced ability to recognize the need to engage in lifelong learning (Question asked on 2010-2013 surveys) / I am confident that I can recognize the need to engage in lifelong learning (Question asked on 2014-2017 surveys).

An example of the data is provided in Figure 1 for the third question in the above list: "satisfaction with leadership opportunities in engineering program extracurricular activities." This figure shows our students' satisfaction with leadership opportunities and compares their mean satisfaction level with the mean satisfaction level of students at other engineering institutions. The scale on the y-axis has a minimum value of 1 (very dissatisfied) and a maximum value of 7 (very satisfied). The remaining data are provided in Appendix A.

For the time period from 2009-10 through 2014-15, there was no statistically significant improvement or decline in UW-Madison student perceptions of leadership opportunities, even though there was an apparent decrease in student perceptions over the previous year. However, for the same time period, statistical analysis showed that UW-Madison students had a significantly better perception of leadership opportunities at UW-Madison than did peer students of their own institutions. A change in survey question for the 2014-15 academic year likely contributed to the observed decline for all three cohorts (see Item 3 above).

When considering the other questions in the same manner, we reached the following conclusions from the EBI survey:

- Our students had significantly better perceptions of the following items than students at EBI-participating Carnegie peer institutions and at all EBI-participating institutions:
 - Satisfaction with value derived from team experiences.
 - Satisfaction with value of engineering program student organization activities.
 - Satisfaction with leadership opportunities in engineering program extracurricular activities.
 - Satisfaction with fellow students' ability to work on teams.

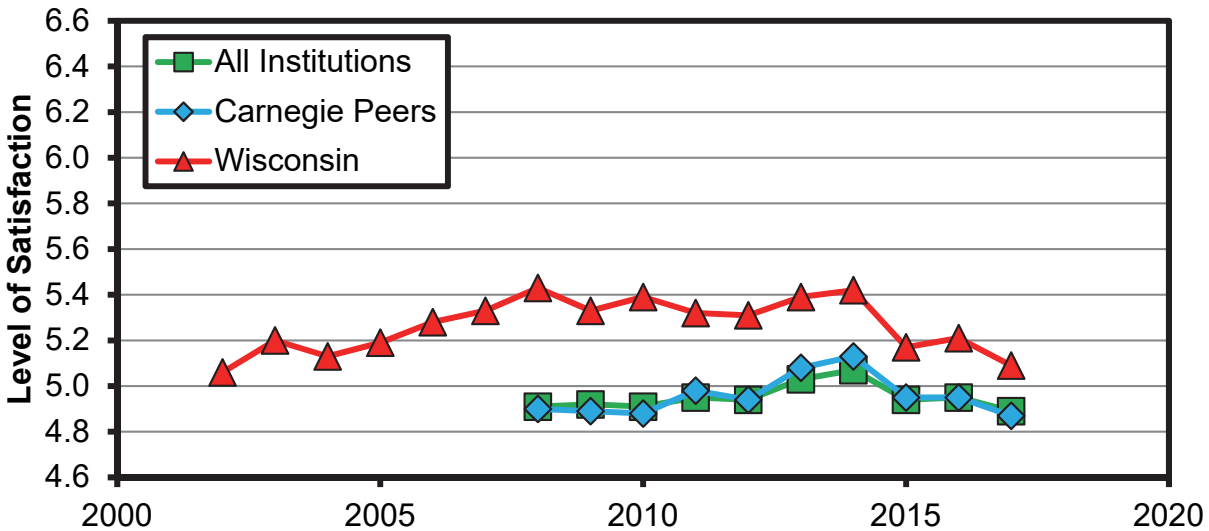


Figure 1. Mean level of satisfaction with leadership opportunities in engineering program extracurricular activities. The x-axis is organized on an academic year basis, so that 2015 refers to the 2014-15 academic year. The Pieper Servant-Leader Chair at the UW-Madison College of Engineering began in the 2008-09 academic year. A change in survey question for the 2014-15 academic year likely contributed to the observed decline for all three cohorts.

- Satisfaction with how engineering education enhanced ability to function on multidisciplinary teams.
- Satisfaction with how engineering education enhanced ability to recognize need to engage in lifelong learning.

Multi-Institutional Study of Leadership

As noted in Criterion 1, UW-Madison students participated in the MSL survey in 2015. Because this continues to be a new initiative for our team, we describe this activity in more detail in our section on Criterion 5. Furthermore, because the MSL survey provides more relevant information for the mission of the Pieper Chair, we have dropped using data from the National Survey of Student Engagement (NSSE) as an assessment tool for leadership outcomes.

Academic Year 2017-18 Goals

As noted in our last annual report, we continue to be interested in collecting assessment data that goes beyond the data collected from the EBI surveys. As noted in our section on Criterion 5, we have received a complete set of data from the MSL and we have evaluated a portion of that data. For the coming year, we will continue to participate with the UW Center for Leadership and

Involvement in hiring a graduate student to further dissect the data to better understand how our engineering students compare to the general student body.

Criterion 4 – Outcomes Measures Phenomenally Above Demographic Norms

Typical Thinking that Goes into Evaluating the Criterion

If Criterion 3 is profoundly above the norms and a result of the program indicates that they are continuing to track in that way, you can expect awards at this level. For example, on a scale of 1-10, a typical peer institution might be a 4 or 5. A typical institution that would have been considered for a chair might be a 6. Phenomenal performance might be an 8 or a 9. We would expect eventually most of the institutions will be tracking at a 9, which would tend to maximize this award.

Academic Year 2016-17 Progress

The primary distinction between Criteria 3 and 4 is whether outcomes measures are above demographic norms or phenomenally above demographic norms. In our section on Criterion 3, we described how our students perceive our college relative to how other students perceive their colleges. While we have shown that our students perceive items such as leadership opportunities to be above demographic norms (Criterion 3), we defer to the foundation's judgment on whether these perceptions are phenomenally above demographic norms (Criterion 4). As an example, the EBI database used for Criterion 3 is based on a scale of 1 to 7. Converting this to a scale of 1 to 10, our Year 2016-17 scores were in the range of 7.3 to 9.0, an improvement above our Year 2007-08 scores of 7.1 to 8.0. For comparison, our peer institutions' students had perceptions ranging from 6.8 to 8.1 in the baseline year and from 6.8 to 8.7 in Year 2016-17. While our scores are certainly at or near the level of 8 noted by the foundation for Criterion 4, the peer institution averages are also significantly higher than the 4 to 5 range noted for Criterion 4.

Academic Year 2017-18 Goals

As noted above, the primary distinction between Criteria 3 and 4 is whether outcomes measures are above demographic norms or phenomenally above demographic norms. Thus, our goals for Criterion 4 are similar to those already stated for Criterion 3.

Criterion 5 – Breakthrough Venture Promising New Beginnings in Acts of Goodness

Typical Thinking that Goes into Evaluating the Criterion

We are attempting to encourage the institution, its faculty and student body to think beyond their envelope, searching for new ways of networking and collaboration, whole new approaches to enrichment and effectiveness. This is not about ideas, it is about validated actions. If those actions include the institution, the community it lives in, the world it lives in nationally and internationally, and they are phenomenally above it or have exhibited a breakthrough and others are following, this would be a max award. If they have something that is really promising and covers all those areas, it might be on the lower end of the scale. An activity that has some promise will likely receive a rating of “1” while an activity that is transformational or systemic will likely receive a rating of “3.” An activity that is both transformational and systemic – the ideal synergistic nurturing – may receive a rating of “5.”

Academic Year 2016-17 Progress

In 2016-17, we continued to advance our work by supporting leadership efforts that focused on transformational and systemic change. The primary accomplishments we report below are: 1) efforts to launch a hiring initiative to provide support to the Servant Leader Chair, 2) campus and College of Engineering participation in the Multi-Institutional Study of Leadership, 3) further implementation of the UW-Madison’s Leadership Framework through the efforts of the Coordinated Leadership Initiative, and 4) our continued participation in the summit of the Big Ten Leadership Educators Network.

Hiring Initiative

In previous years, we have had several conversations with the Pieper Foundation Board about administrative hurdles that inhibited our development of programs and assessment tools. The primary hurdles were (1) a policy limiting us to \$35,000 in annual funding, regardless of annual income generated by the endowment, and (2) a policy preventing us from hiring personnel with appointments in excess of 100%. As an example, this funding was adequate to cover Mark Kueppers’ salary with a 20% appointment but we were only allowed to hire him for this purpose if he dropped his appointment at the Center for Leadership and Involvement to 80%.

In June 2017, we learned that the annual income made available by the UW Foundation had reached about \$100,000. This was a significant achievement because it was sufficient to cover the salary and benefits of a faculty associate that could devote full time to developing leadership programming and using assessment tools to ascertain the effectiveness of the programming. In light of this, the Servant Leader Chair began work with (1) the College of Engineering to reconsider the \$35,000 annual limit for the Pieper Chair and (2) several UW-Madison units to develop a position description for a full-time faculty associate. This work was not completed by August 31 (i.e., within the time period covered by this report) but has since been completed. We

are currently working with our human resources group to list the position as open for applications. Our goal is to have someone serving in this role by the beginning of the spring semester.

The position description is provided in Appendix B and some key responsibilities for the individual hired will be to:

- Create a sustainable course in leadership principles and practice for students in the College of Engineering.
- Partner with the College of Engineering's Student Leadership Center to provide leadership training and leadership opportunities for student organizations and their members.
- Connect the College of Engineering to campus-wide and national-level organizations with similar interests in leadership development.
- Continue assessment efforts with self-reporting instruments such as the MSL.
- Develop third-party assessment efforts to provide a more rigorous process of continuous improvement.
- Provide administrative support for more timely communication and reporting, as well as organizing meetings of Pieper Chairs.

We expect this hiring initiative to help us develop a more sustainable approach to leadership education and assessment in the College of Engineering at UW-Madison.

Multi-Institutional Study of Leadership

As noted in previous annual reports, UW-Madison participated in the 2015 Multi-Institutional Study of Leadership (MSL). The MSL is an international research program focused on understanding the influences of higher education in shaping socially responsible leadership capacity & other leadership related outcomes (e.g., efficacy, cognitive skills, and resiliency). Beyond a research program, the MSL is an international movement toward more effective, evidence-based college student leadership development (see Figure 2). A total of 80 institutions of higher education participated in this study.

This initiative had three key points of emphasis in 2016-17:

1. Write and distribute a report on our statistical analysis of leadership outcomes attainment on a campus-wide basis, on a College of Engineering basis, and on a School of Business basis. This report was distributed to campus leaders, including College of Engineering deans, in early January 2017. This report may be found in Appendix C.
2. Continue statistical analysis of campus environment variables and a more thorough question-by-question analysis of data for engineering students. This effort is coupled with an effort to map MSL outcomes to competencies of Servant Leadership. Our goal is to complete and deliver a report on this effort to the College of Engineering by May 2018.
3. Begin planning for campus-wide and College of Engineering participation in the 2018 MSL. The MSL survey is offered every three years and, after completing participation in the 2018, 2021, and 2024 editions of the MSL, we will likely have enough longitudinal

data to replace the EBI data used for Criteria 1, 3, and 4. Mark Kueppers and Greg Harrington are serving as UW-Madison's Principal Investigators for the 2018 MSL.

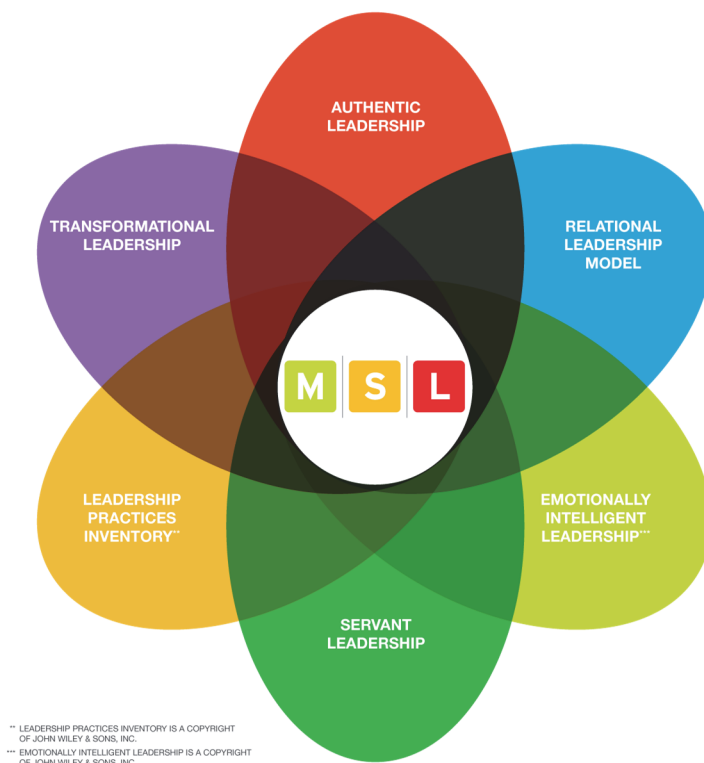


Figure 2 – Visual model of the Multi-Institutional Study of Leadership

Coordinated Leadership Initiative

The Servant Leadership team continues to play a critical role in supporting UW-Madison's Coordinated Leadership Initiative (CLI). As noted in previous annual reports, the CLI is a cross-campus effort sponsored by the Provost and Dean of Students to align and connect existing campus leadership development opportunities, shape and inform the development of new opportunities, and allow for a more formal and intentional analysis of campus needs. During the 2012-2013 academic year, a UW Leadership Framework was developed to be inclusive of leadership research and theory and was grounded in the concept of social change and service. We have previously reported on programming associated with this framework and focus this report on new activities conducted in the 2016-17 academic year.

As noted above, the CLI was intended to allow for a more formal and intentional analysis of campus needs. This suggests a need for data collection and analysis, along with interpretation of

analysis to make recommendations for program improvement. To meet this need, the Servant Leader team is participating in the mapping of MSL outcomes to UW Leadership Framework outcomes. We anticipate that this work will be complete by the end of December 2017.

Big Ten Leadership Educators Network

Through a grant from the C. Charles Jackson Foundation, the University of Illinois organized the second annual summit of the Big Ten Leadership Educators Network. We used Pieper Foundation funds to support the travel expenses of the Pieper Chair to this event, held August 1-3, 2017.

All 14 Big Ten member institutions sent one to two representatives to the University of Illinois for a three-day, intensive summit aimed at continuing to build a network, solve common problems, and generate innovative ideas in a way that promotes the work of leadership educators at their respective institutions.

The key outcomes of our participation in the first and second Big Ten summits can be summarized as follows:

- The Servant Leader chair visited the Northwestern University Center for Leadership in September 2016 to share information on leadership education programming. This visit resulted in the identification of items to add to our position description in the hiring initiative (see Appendix B).
- The Servant Leader chair initially participated in a committee effort to prepare a white paper on leadership education to be distributed to campus administrators. This was eventually deemed as overly ambitious for the network to do at its stage of infancy, so emphasis was shifted to best practices for assessment of leadership education. This led to the development of a Big Ten coalition as a participant in the 2018 MSL. The Servant Leader chair has been involved on the planning committee for the coalition and this will allow us to get a clear picture of how we compare with our peer institutions in the Big Ten.

Academic Year 2017-18 Goals

Hiring Initiative

The goals of getting college approval for policy changes and for hiring a full-time faculty associate have already been attained for the 2017-18 academic year. The remainder of 2017 will be used to move the position vacancy through human resources, advertise the position to a broad nationwide audience (including the Big Ten leadership educators network), review applicants with the College of Engineering, and hire a candidate to begin in the spring semester. This will put us in a better position to create and sustainably offer leadership education programming in classroom and co-curricular environments, develop 3rd-party assessment efforts to complement the MSL, initiate improvements suggested by the assessment efforts, and improve our ability to administer the Servant Leader chair program.

Multi-Institutional Study of Leadership

As noted earlier, we expect to complement the report provided in Appendix C with a more thorough analysis of engineering student data mapped to servant leadership competencies. We will continue collaborating with the Center for Leadership and Involvement and our graduate student assistant to do the statistical analysis and report writing during this academic year.

We are also serving as the campus-level Principal Investigators for the 2018 MSL. By this time next year, we will have a complete data set from the 2018 survey and will then need the next three years to complete a thorough analysis of that data, which will be compared to the 2015 data to begin developing a longitudinal assessment program.

Coordinated Leadership Initiative

We will continue our work to assist the Center for Leadership and Involvement in mapping MSL outcomes to the outcomes of the UW-Madison Leadership Framework. This will help establish a data-based continuous improvement program for coordinated leadership education programming.

Big Ten Leadership Educators Network

The Big Ten Leadership Educators Network is committed to meeting annually in an effort to advance the field of leadership education. Our next steps in the Big Ten MSL coalition are to identify data analysis methods that assist in identifying priorities for leadership education across the conference.

Criterion 6 – Carrying Out Mission of the Chair

Typical Thinking that Goes into Evaluating the Criterion

This is a follow-up of Criterion 2 and is an annual consideration. Is there a broad range of deliverable areas with some reasonable quantity of people involved carrying out the mission of the chair as agreed to and accepted by the institution?

Academic Year 2016-17 Progress

As we discussed at last year's meeting, we have decided to be more judicious in distinguishing between initiatives and routine work of carrying out the chair's mission. We continue to be involved in several campus-level and college-level activities as follows:

1. **Chancellor's Scholars Program.** Dr. Harrington continues to serve as a Chancellor's Scholar mentor, designed to increase educational opportunities for academically talented

underrepresented minority students. More information on this program may be found at <http://www.provost.wisc.edu/csp.htm>.

2. **College of Engineering Student Leadership Center.** We continue to work with student organizations in the SLC to offer financial support (up to a total of \$10,000) for UW-Madison College of Engineering students to lead service-learning or community outreach projects that “lift up society, enrich organizations and communities, and have a positive effect on the least privileged.”
3. **Community-Based Involvement in Engineering Classes.** We continue to work with connections at the Morgridge Center for Public Service and the UniverCity Alliance to bring community-based projects to the Senior Capstone Design course in the Department of Civil and Environmental Engineering. With facilitation from the Morgridge Center, students worked on building designs for the Bayview Foundation in Madison, which provides housing to low income citizens, many of whom are immigrants. The UniverCity Alliance facilitated connections to help create engineering designs for park and roadway improvements in the City of Monona.

Academic Year 2017-18 Goals

As 2017-18 approaches, we are looking to maintain our Servant Leadership programming opportunities while believing we can expand these opportunities with a new faculty associate in the coming year. As the endowment and annual income continue to grow in forthcoming years, we see building the capacity to hire additional supporters to continue carrying out the mission of the chair. This will help continue laying the foundation for a culture of leadership development within College of Engineering, and eventually across campus.

Criterion 7 – Servant Leader that Leads at an Element or Segment of our World

Typical Thinking that Goes into Evaluating the Criterion

Is there evidence that a professor in their nurturing locally, community, nation and world is consistently contributing or leading service model versus the power model? Are there multiple students participating in that level? Such a critical mass would be considered promising and obviously if such a leader or professor nurtures someone else who moves into that level, you could expect the maximum award. Examples are Nelson Mandela, Mother Teresa, and Mahatma Gandhi.

Academic Year 2016-17 Progress

As noted in our previous reports, we cannot point to an individual leader who is the caliber of Gandhi, Mandela, or Mother Teresa. However, we remind the foundation that there is a pervasive

desire among our student body to serve the world in positive ways that follow the vision set forth by such leaders. As an example, our university “consistently places on the Peace Corps’ annual list of schools that produce the most alumni volunteers” (<http://peacecorps.wisc.edu/>). Since the creation of the Peace Corps in 1961, 3000 UW-Madison alumni have served in the Peace Corps and this is second only to the University of California – Berkeley. In some ways, this desire for positive community service is ensured by UW-Madison’s holistic admissions process, in which admissions counselors look for “sustained involvement in activities in or out of school, leadership, community involvements” and other items in addition to standardized test scores and high school grade-point averages (<http://www.admissions.wisc.edu/appTipSheet.php>). In the 2010-11 academic year, 73 percent of UW-Madison seniors reported participating in community service or volunteer work (http://apir.wisc.edu/studentsurveys/NSSE_2011_Final_report.pdf).

Within the UW-Madison College of Engineering, active service-oriented student organizations include Engineers Without Borders (<http://ewbuw.org/>) and Engineering World Health (<http://ewh.slc.engr.wisc.edu/index.html>). Even the more traditional discipline-related organizations and honor societies are involved in community-level service activities (<http://slc.engr.wisc.edu/organizations.html>). Examples of service projects may be found by clicking on the links of some student organizations.

Academic Year 2017-18 Goals

While we wish to approach this criterion with some humility, we believe there are a significant number of our former engineering students who are bringing positive change to the world while exhibiting the attributes of servant leaders. This belief is reinforced by the large number of students who are planting the seeds for such service while they are on campus. It is clear that we do not track our alumni in ways that our fellow servant leader institutions do. This is a goal we have not yet delivered on and we have specifically spelled out this need as an item for our forthcoming faculty associate to take on.

In addition to this, we hope to use the Servant Leader Chair endowment to continue encouraging engineering students to participate in activities that serve underprivileged communities both locally and in developing countries. Our funding of student projects focused on providing clean water to impoverished communities and exposing the STEM fields to underrepresented communities is contributing to positive social change. Additionally, the CLI will look to partner with campus and community entities to address social issues, including the anti-bullying campaign that is being generated at UW-Madison. We look forward to participating with and supporting our communities in making the world more just and humane.

Appendix A – Senior Exit Survey Data for Questions Relevant to Leadership Education

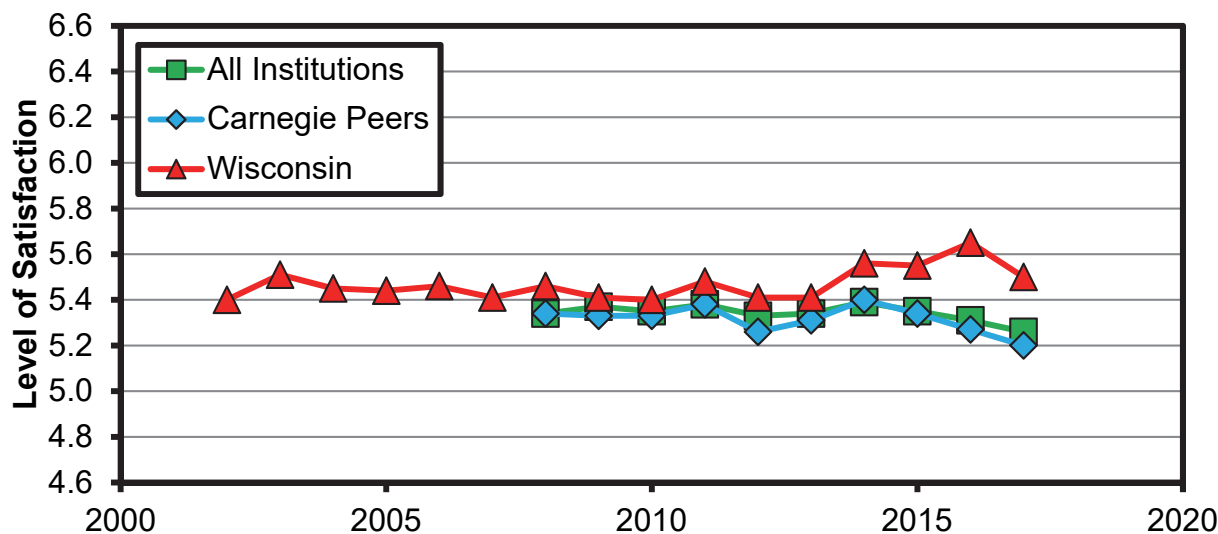


Figure A1. Mean level of satisfaction with value derived from team experiences. The x-axis is organized on an academic year basis, so that 2015 refers to the 2014-15 academic year. The Pieper Servant-Leader Chair at the UW-Madison College of Engineering began in the 2008-09 academic year. The scale on the y-axis has a minimum value of 1 (very dissatisfied) and a maximum value of 7 (very satisfied). For the most recent six years, the difference between Wisconsin and peer engineering institutions is statistically significant at a 95% confidence level. For the same period, there was no statistically significant improvement or decline in student perception at Wisconsin.

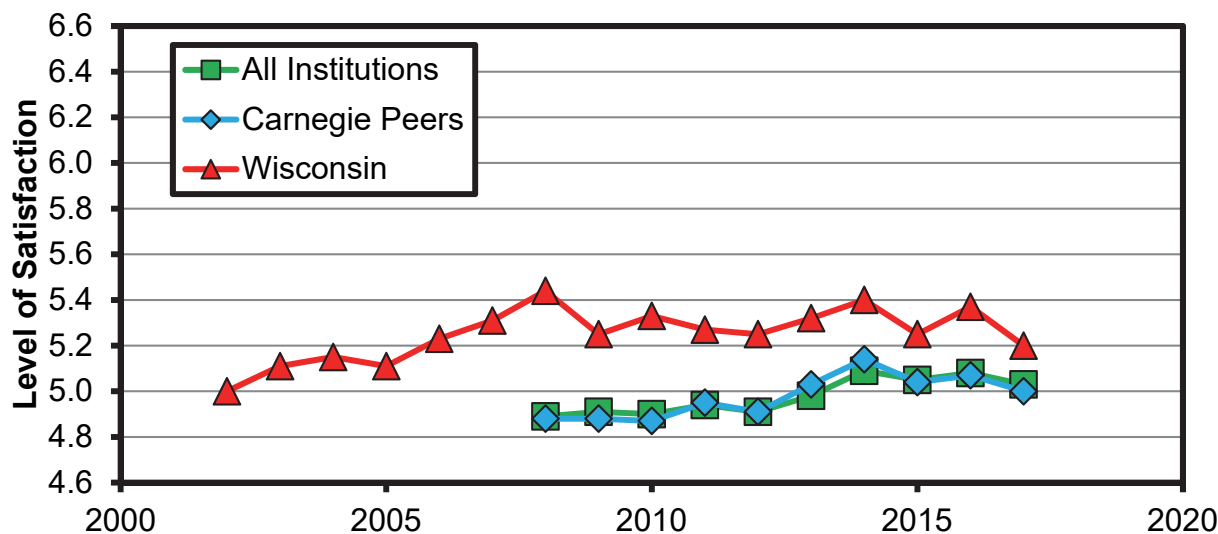


Figure A2. Mean level of satisfaction with value of engineering student organization activities. The x-axis is organized on an academic year basis, so that 2015 refers to the 2014-15 academic year. The Pieper Servant-Leader Chair at the UW-Madison College of Engineering began in the 2008-09 academic year. The scale on the y-axis has a minimum value of 1 (very dissatisfied) and a maximum value of 7 (very satisfied). For the most recent six years, the difference between Wisconsin and peer engineering institutions is statistically significant at a 95% confidence level. For the same period, there was no statistically significant improvement or decline in student perception at Wisconsin.

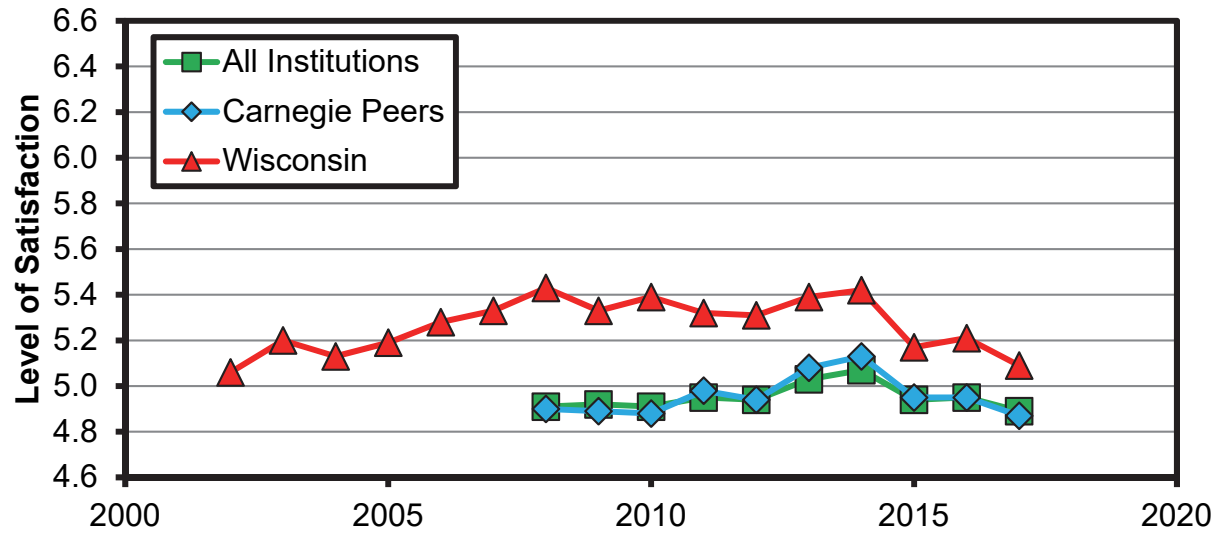


Figure A3. Mean level of satisfaction with leadership opportunities in engineering student organization activities. The x-axis is organized on an academic year basis, so that 2015 refers to the 2014-15 academic year. The Pieper Servant-Leader Chair at the UW-Madison College of Engineering began in the 2008-09 academic year. The scale on the y-axis has a minimum value of 1 (very dissatisfied) and a maximum value of 7 (very satisfied). For the most recent six years, the difference between Wisconsin and peer engineering institutions is statistically significant at a 95% confidence level. For the same period, there was no statistically significant improvement or decline in student perception at Wisconsin.

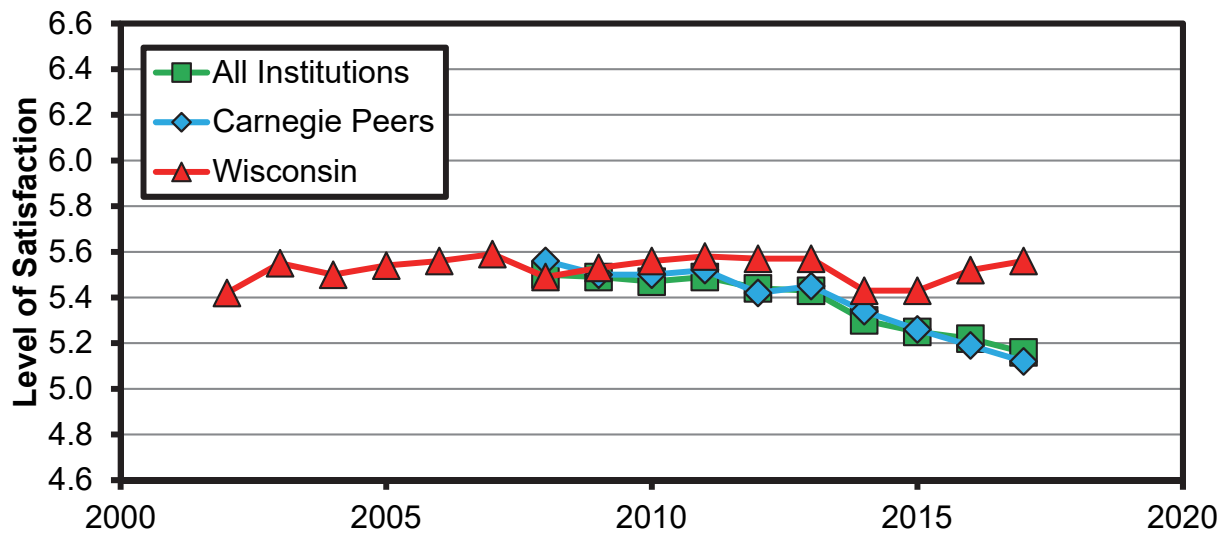


Figure A4. Mean level of satisfaction with fellow students' ability to work in teams. The x-axis is organized on an academic year basis, so that 2015 refers to the 2014-15 academic year. The Pieper Servant-Leader Chair at the UW-Madison College of Engineering began in the 2008-09 academic year. The scale on the y-axis has a minimum value of 1 (very dissatisfied) and a maximum value of 7 (very satisfied). For the most recent six years, the difference between Wisconsin and peer institutions was statistically significant at a 95% confidence level. For the same period, there was no statistically significant improvement or decline in student perception at Wisconsin.

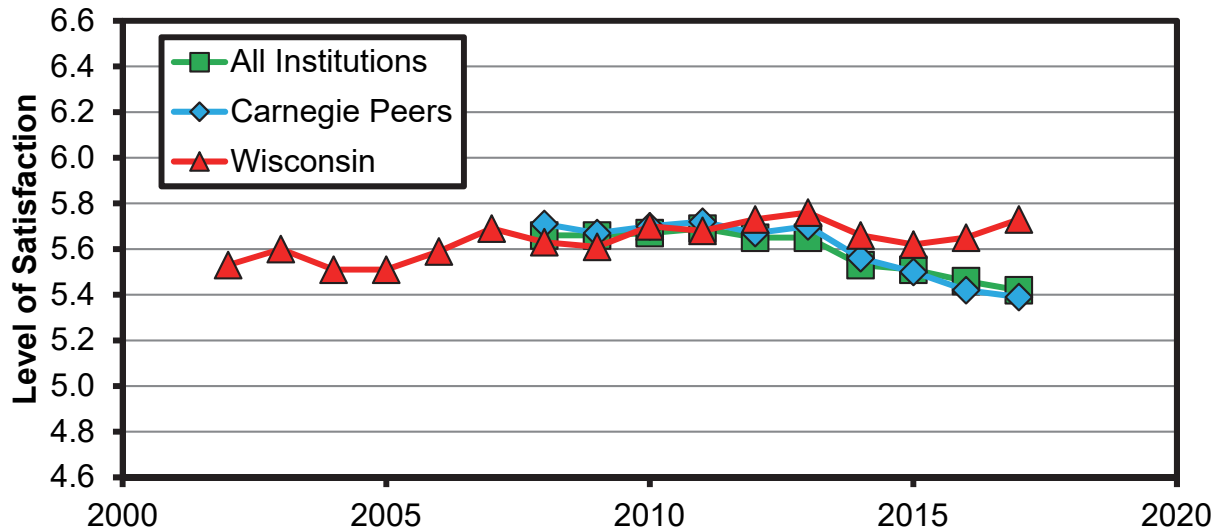


Figure A5. Mean level of satisfaction with fellow students' level of camaraderie. The x-axis is organized on an academic year basis, so that 2015 refers to the 2014-15 academic year. The Pieper Servant-Leader Chair at the UW-Madison College of Engineering began in the 2008-09 academic year. The scale on the y-axis has a minimum value of 1 (very dissatisfied) and a maximum value of 7 (very satisfied). For the most recent six years, the difference between Wisconsin and peer institutions was not statistically significant at a 95% confidence level. For the same period, there was no statistically significant improvement or decline in student perception at Wisconsin.

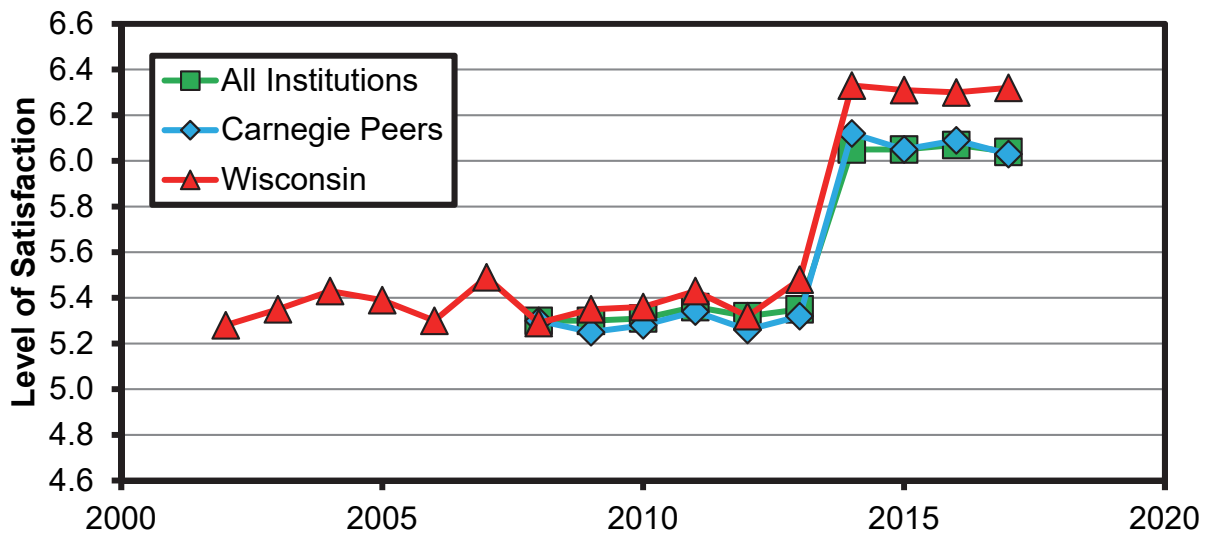


Figure A6. Mean level of satisfaction with how engineering education enhanced ability to function on multidisciplinary teams. The x-axis is organized on an academic year basis, so that 2015 refers to the 2014-15 academic year. The Pieper Servant-Leader Chair at the UW-Madison College of Engineering began in the 2008-09 academic year. The scale on the y-axis has a minimum value of 1 (very dissatisfied) and a maximum value of 7 (very satisfied). For the most recent six years, the difference between Wisconsin and peer institutions was statistically significant at a 95% confidence level. For the same period, there was a statistically significant improvement in student perception at Wisconsin. However, the large improvement for all institutions in 2013-14 is likely due to a rephrasing of the question asked by EBI.

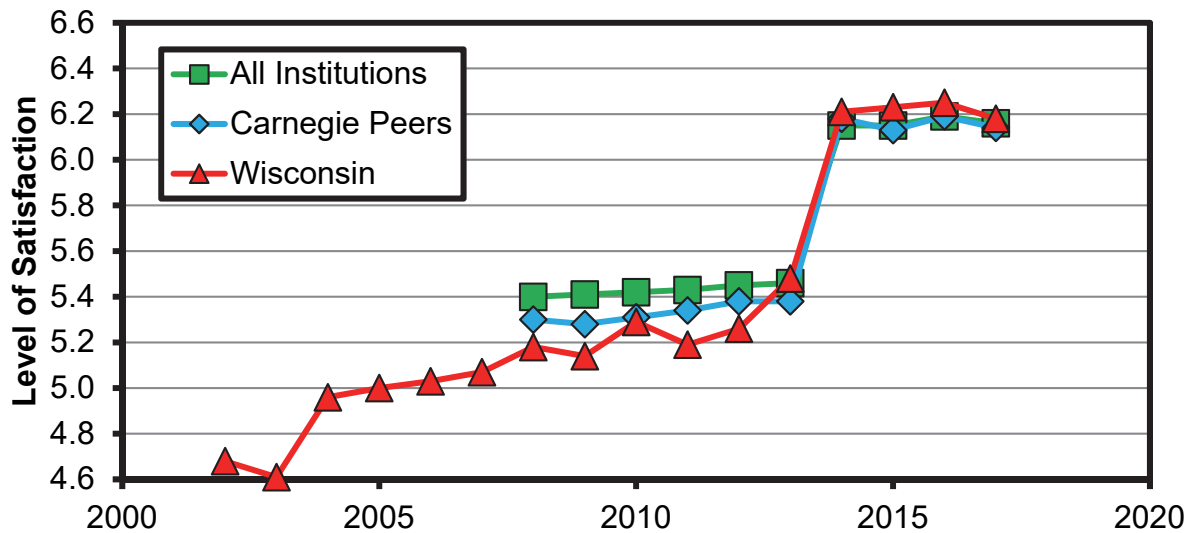


Figure A7. Mean level of satisfaction with how engineering education enhanced ability to understand ethical responsibilities. The x-axis is organized on an academic year basis, so that 2015 refers to the 2014-15 academic year. The Pieper Servant-Leader Chair at the UW-Madison College of Engineering began in the 2008-09 academic year. The scale on the y-axis has a minimum value of 1 (very dissatisfied) and a maximum value of 7 (very satisfied). For the most recent six years, the difference between Wisconsin and peer institutions was not statistically significant at a 95% confidence level. For the same period, there was a statistically significant improvement in student perception at Wisconsin. However, the large improvement for all institutions in 2013-14 is likely due to a rephrasing of the question asked by EBI.

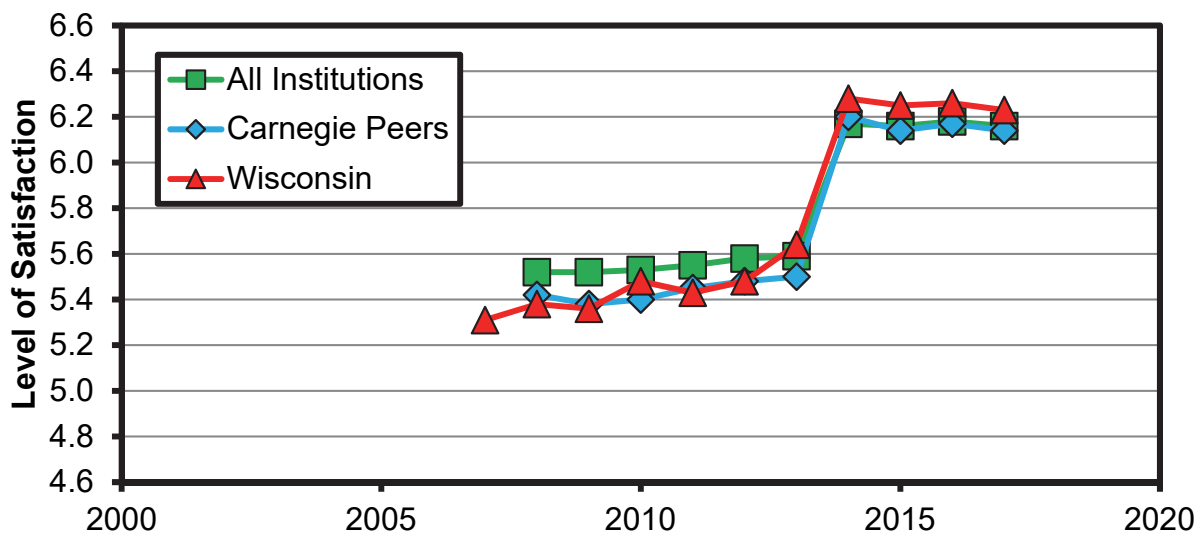


Figure A8. Mean level of satisfaction with how engineering education enhanced ability to understand professional responsibilities. The x-axis is organized on an academic year basis, so that 2015 refers to the 2014-15 academic year. The Pieper Servant-Leader Chair at the UW-Madison College of Engineering began in the 2008-09 academic year. The scale on the y-axis has a minimum value of 1 (very dissatisfied) and a maximum value of 7 (very satisfied). For the most recent six years, the difference between Wisconsin and peer institutions was not statistically significant at a 95% confidence level. For the same period, there was a statistically significant improvement in student perception at Wisconsin. However, the large improvement for all institutions in 2013-14 is likely due to a rephrasing of the question asked by EBI.

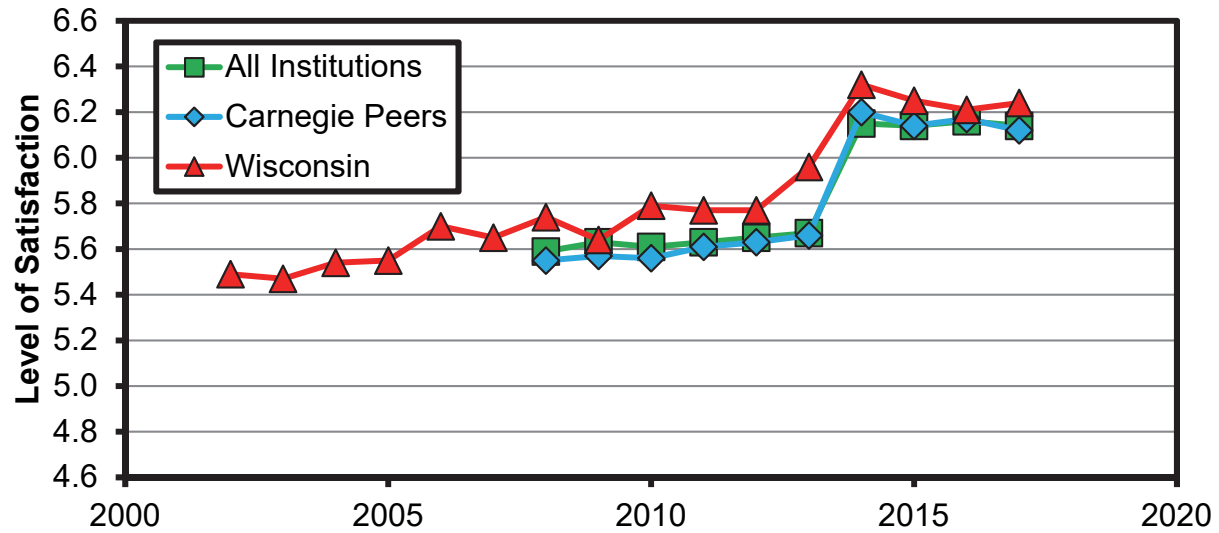


Figure A9. Mean level of satisfaction with how engineering education enhanced ability to recognize need to engage in lifelong learning. The x-axis is organized on an academic year basis, so that 2015 refers to the 2014-15 academic year. The Pieper Servant-Leader Chair at the UW-Madison College of Engineering began in the 2008-09 academic year. The scale on the y-axis has a minimum value of 1 (very dissatisfied) and a maximum value of 7 (very satisfied). For the most recent six years, the difference between Wisconsin and peer engineering institutions is statistically significant at a 95% confidence level. For the same period, there was a statistically significant improvement in student perception at Wisconsin. However, the large improvement for all institutions in 2013-14 is likely due to a rephrasing of the question asked by EBI.

Appendix B

Position Description for Hiring Initiative

Faculty Associate – Leadership Education in Engineering
(Faculty Associate – Academic Staff)
Vacant

Major Department: A191500/ENGR/CIVIL & ENVIRON ENG
Full Time Salary Rate: \$70,000 Annual (12 months)
Appointment Percent: 100%
Anticipated Begin Date: January 15, 2018
PVL Type: New Position

Degree and Area of Specialization:

Master's Degree or higher in related field is required.

Required Qualifications:

Minimum of 5 years experience working in organizational settings, preferably in the engineering profession, and/or 3-5 years experience with leadership development. Applicant should be self-motivated and able to demonstrate applied knowledge of theory and best practices in leadership development in an organization. Experience with curriculum development, classroom instruction, and third-party assessment and evaluation of educational programs is strongly preferred.

Principal duties include:

The selected candidate's principal responsibility will be to advance the mission of the College of Engineering Servant Leader Chair, funded by the Suzanne and Richard Pieper Family Foundation. This mission is to "help prepare future leaders in their chosen fields to live lives of service to others by teaching and exemplifying character and moral values. Their examples and actions will lift up society, enrich organizations and communities, and have a positive effect on the least privileged." The candidate is expected to assist the chair in producing an annual report to the foundation that shows the status of initiatives developed to meet the mission and to show results of assessment efforts developed to demonstrate that the mission is being met.

Specific duties will include but not be limited to assisting the Servant Leader Chair with:

1. Initiatives and programs, which include:

- Develop and deliver a leadership course targeting students in the UW-Madison College of Engineering. The expected work items will include:
 - Research leadership course options for the College of Engineering and recommend plan of action
 - Review leadership and/or teamwork courses in the College of Engineering
 - Review leadership and/or teamwork courses elsewhere at UW-Madison
 - Review literature to determine how this is done at other universities
 - Evaluate the incorporation of UW-Madison's Leadership Framework (<https://leadership.wisc.edu/leadership-framework.htm>)
 - Present results of review to the Pieper Chair
 - Get in timetable for Spring 2018 semester as a special topics course
 - Develop course content, assessment tools, and logistics, as needed

- Submit paperwork to create new course or change existing course, if necessary
 - Review existing course content for adequacy and timeliness, and create additional course content, if necessary
 - Develop and distribute promotional materials to generate student interest
 - Write and submit preliminary report
 - Instruct the Engineering Leadership Course
 - Develop partnerships with the COE Student Leadership Center to:
 - Encourage COE students to lead service-learning or community outreach projects. This includes development of a call for student proposals, evaluation of submitted student proposals, selection of student participants, funding of selected participants, monitoring of project progress, and reviewing post-project reports from the students.
 - Encourage COE students to participate in national leadership conferences such as LeaderShape. This includes evaluation of student proposals, selection of student participants, funding of selected participants, and reviewing post-conference reports from the students.
 - Conduct leadership training workshops for leaders of COE student organizations.
 - Ensure that the annual report is posted to the campus web site for the Pieper chair.
 - Additional activities that benefit leadership education efforts for students in the COE.
 - Connecting with similar individuals across campus, including the Center for Leadership and Involvement, Division of Continuing Studies, Morgridge Center for Public Service, Department of Athletics, Wisconsin Institute for Science Education and Community Engagement (WISCIENCE), and others to ensure consistency of programs and to potentially leverage support for campus-wide leadership initiatives. Participate in the continued development and operation of the UW Coordinated Leadership Initiative, with an appropriate committee appointment.
 - Work with COE leadership instructors to ensure consistency of COE programs with other university initiatives.
 - Connecting and, as appropriate, working with national-level organizations such as the Greenleaf Center for Servant Leadership, the Big Ten Leadership Educator's Network, the International Leadership Association, and COMPLETE (see Engineering Leadership Development Division of ASEE; Bernard Gordon Engineering Leadership program at MIT; Northwestern Univ Leadership Center). This may include presentations and attendance at annual conferences.
 - Develop new initiatives as appropriate to the mission of the Pieper Chair and the funds available.
2. **Assessment efforts, which include:**
- Use of self-evaluation tools
 - Evaluation of engineering student responses in the national survey conducted by the Multi-Institutional Study of Leadership. Results should also be mapped to:
 - Servant leadership attributes, and
 - Learning outcomes listed in the UW Leadership Framework
 - Annual evaluation of engineering student responses to the Educational Benchmarking Inc (EBI) senior exit survey.
 - Using a survey developed in 2014 with the assistance of the UW Survey Center, assess engineering students in leadership coursework (curricular or co-curricular) or in student organization leadership positions.
 - Work with UW APIR to examine engineering student data in the National Survey of Student Engagement (NSSE).
 - In addition to the self-assessment tools noted above (MSL, EBI, and NSSE), develop a third-party assessment program for analyzing student attainment of leadership outcomes as defined by servant leadership attributes and as defined by the UW Leadership Framework.

- Identify and work with appropriate UW entities to develop methods for tracking COE alumni and assess their contributions to servant leadership.

3. Administrative support, which includes:

- Organizing the biennial UW-Madison meeting of Pieper Chairs from MSOE and Ripon College.
- Production and delivery of the annual report, which is approximately 100 to 125 pages in length.
- Weekly meetings with the Pieper Chair for Servant Leadership to discuss progress on programming and assessment efforts.
- Attendance at periodic meetings with representatives of the Pieper Family Foundation, particularly the annual dinner held in November of each year.

Background:

In 2008, the Suzanne & Richard Pieper Family Foundation established an Endowed Chair for Servant Leadership at the University of Wisconsin – Madison College of Engineering in 2008. The chair’s mission is to “help prepare future leaders in their chosen fields to live lives of service to others by teaching and exemplifying character and moral values. Their examples and actions will lift up society, enrich organizations and communities, and have a positive effect on the least privileged.” The selected candidate for this advertised position will report to the Pieper Family Chair for Servant Leadership in the College of Engineering.

The Pieper Family Chair for Servant Leadership must measure performance and report annually to the Foundation. On the basis of the Chair’s results or progress, the foundation makes awards to increase the endowment. The Chair has developed a small team to advance the efforts of Servant Leadership in the College of Engineering. The individual appointed to this advertised position is expected to become a part of this team.

These efforts are intended to include educational opportunities (classroom and/or online) for engineering students. The educational opportunities need not focus solely on servant leadership, but need to include the leadership model as an alternative for students to consider. In addition to the educational opportunities, the chair distributes student awards that support extracurricular projects grounded in Servant Leadership philosophy, facilitates Servant Leadership focused events and introduces Servant Leadership concepts into academic environments. For further information please refer to the Pieper Family Servant Leadership website at <http://pieper.engr.wisc.edu/>.

Appendix C
Report to Campus on the 2015 Multi-Institutional Study of Leadership



2015

Multi-Institutional Study of Leadership Results and Recommendations

Submitted by: Morgaine Gilchrist-Scott, Greg Harrington and Mark Kueppers
On Behalf of the UW-Madison MSL Planning Team

December 30, 2016

UW-Madison's Multi-Institutional Study of Leadership (MSL) Planning Team

Dani Barker, School of Business; Coleman Carlisle, School of Business; Maya Holtzman, McNair Scholars Program;
Eric Knueve, Center for Leadership & Involvement; Heidi Lang, Wisconsin Union;
Hazel Symonette, Division of Student Life

Executive Summary

Introduction and Purpose

Student leadership development is a primary mission of institutions of higher education, including the University of Wisconsin – Madison. The Multi-Institutional Study of Leadership (MSL) provides a way in which to measure leadership outcomes, primarily using the Social Change Model of Leadership Development as the basis for measurement. The MSL version of this model defines the following as core values of leadership: Consciousness of Self, Congruence, Commitment, Collaboration, Controversy with Civility, and Citizenship. MSL also explores Leadership Efficacy, Complex Cognitive Skills, Social Perspective-Taking, Resiliency, Hope, Spirituality, Collective Racial Esteem and Sense of Belonging as additional values. The goals of the MSL research program are to advance institutional efforts in leadership development and broaden the knowledge base regarding college student leadership.

The MSL program provides data collection services and also provides data analysis comparing the general student population at UW-Madison with:

- the aggregate student population of participating institutions,
- the aggregate student population of Carnegie peer institutions,
- the aggregate student population of selected peer institutions, and
- selected subsets of the UW-Madison student body.

The data analysis provided by the MSL program focused on several general categories of the data, allowing the university to reach general conclusions but leaving a large body of data unanalyzed.

The purpose of this report is to supplement the MSL-reported findings previously delivered to UW-Madison (see Appendices A and B) by:

- Summarizing the findings of the 2015 MSL in general leadership categories
- More completely examining the 2015 MSL data set to:
 - Evaluate specific items within the general leadership categories
 - Better characterize the influence of gender versus field of study
- Summarizing the findings of UW-Madison-specific survey questions in the 2015 MSL
- Providing conclusions and prioritized recommendations for continuous improvement of curricular and co-curricular leadership education at UW-Madison, particularly in the context of the university's Leadership Framework (see Appendix C).

Methods

The MSL consisted of a survey with questions that generated a dataset containing more than 400 variables subdivided into categories of “input”, “environment”, and “outcome”, with the latter category consisting of the values noted in the previous section. UW-Madison added 10 custom questions to the MSL questions. The basic survey was conducted at 80 university or college campuses across the United States. At UW-Madison, the MSL was distributed via email to 4,000 randomly selected undergraduate students in all majors. Two cohorts of 500 randomly selected undergraduate students each from the College of Engineering and the School of Business were also selected. Approximately 30% of the invited students completed the survey, with females completing the survey at a higher rate than males. With the exception of the gender demographics, these students generally reflected undergraduate demographics as reported by the campus registrar.

The data generated by survey-takers at UW-Madison and other schools were compiled at MSL headquarters. The MSL made the raw data for UW-Madison available at no additional cost, but not the raw data from the national sample. The calculations done by MSL used two-sample t-tests with equal variances assumed and with significance defined as $p < 0.01$. The calculations done by UW-Madison were assessed at a significance level of $p < 0.05$.

UW-Madison also performed summary statistical analyses of the custom questions, which explored the ways in which students at UW-Madison think about leadership scholarship, participation and involvement. Because these questions were only asked of UW-Madison students, no comparative tests were done with national or peer universities.

Results and Conclusions

When compared with other institutions, UW-Madison has more students perceiving themselves as having the attributes represented by the social change leadership model. The difference was more pronounced with our custom peer institutions than it was for other institutions in the Carnegie class and in general. Gender comparisons at UW-Madison mirrored the comparisons at other participating institutions, with female respondents scoring higher than male respondents on most of the social change model attributes. Exceptions were with resiliency and hope pathways.

In reviewing the data within the institution, there are many factors which impact leadership outcomes as measured by the MSL. As noted above, one of these is gender. The perception of leadership outcomes was not correlated with race, when quantified as white students compared to non-white students, despite race being an important factor in the way in which respondents perceive and experience the campus community and climate. We were unable to make subgroup conclusions on race, sexual orientation, and first-generation student status due to an insufficient number of participating students in these subgroups. Economic status and gender identity were not included as variables by MSL.

UW-Madison School of Business respondents generally mirror the general student body in both demographics and most leadership outcomes. The key differences were with consciousness of self, leadership efficacy, hope agency, and private collective racial esteem. Business students had higher scores on these outcomes.

UW-Madison College of Engineering respondents did not mirror the general student body with respect to demographics, but did mirror the general student body with most leadership outcomes. Without considering gender, engineering respondents scored lower on the citizenship outcome and higher on the hope pathways outcome. By comparing female engineering respondents with female respondents in the general student body and doing the analogous comparison for male students, the results showed that gender demographics explained the overall difference between engineering students and the general student body. Female engineers were more likely to have higher scores on hope pathways, complex cognitive skills, and social perspective taking than the general female population. Male engineers were observed to have no difference with the general male population.

When compared with respondents that did not have leadership training of any kind, respondents who had at least some leadership training scored higher with commitment, citizenship, hope agency, and complex cognitive skills. A similar analysis of respondents in the Leadership Certificate program showed that those students scored higher with citizenship. Respondents participating in the outdoor leadership program scored higher in citizenship, resiliency, social perspective taking and hope agency. A similar analysis of respondents in senior-level culminating experiences showed that those students scored higher with commitment, hope pathways, complex cognitive skills, and resilience.

Respondents to the custom questions revealed:

- The most common reason for participating in involvement opportunities was social interaction, while the most common reason for not participating was lack of available time.
- Leadership training is effective at exposing students to the values and competencies of the UW-Madison Leadership Framework.

Recommendations

The recommendations below are intended to serve as a guide for University of Wisconsin-Madison leadership educators and campus stakeholders, and are driven by the conclusions noted above. The recommendations have been grouped into categories to encourage specific action that would enhance the institution's leadership development efforts.

Leadership Development Program Content

These recommendations serve as a guide to leadership development program providers – both curricular and co-curricular. In this specific section, connections are also made, where appropriate, to the principles, values and competencies of the UW-Madison's Leadership Framework (Appendix C), which serves as a tool to ensure educational efforts are guided by leadership research and theory.

- Orient participants to leadership through connections to leadership definitions, theories or models – preferably using the principles, values, competencies, and outcomes of the UW-Madison Leadership Framework.
- Highlight distinctions between leadership and authority and indicate role and value of authority when possible. This aligns with the 1st Principle of the UW-Madison Leadership Framework.
- Integrate content and reflection into leadership development opportunities for participants, especially majority participants, which explore social identities and build capacity for connecting across difference. This aligns with the UW-Madison Leadership Framework's value of Inclusive Engagement and its competencies of Self-Awareness and Honoring Context and Culture.
- Engage in programming that generates personal and collective commitment to leadership for the purpose of enhancing the UW-Madison campus climate. This aligns with the UW-Madison Leadership Framework's value of Inclusive Engagement and its competency of Moving Ideas into Action.
- Integrate purpose driven leadership experiences into curricular and co-curricular programming, beyond focusing on individual development – engage in leadership for the purpose of change in beliefs, values and behaviors. This aligns with the 3rd Principle of the UW-Madison Leadership Framework.
- Launch students into post-graduate careers with a culminating capstone experience in their academic field of study, with leadership programming included in that capstone experience. This aligns with the UW-Madison Leadership Framework's value of Connection and Community and its competency of Moving Ideas into Action.

Leadership Development Program Outreach

The following recommendations highlight opportunities for recruiting, advertising, and marketing to help advance leadership development efforts.

- Advertise the social connections, community and fun aspects of leadership development opportunities as a way to broaden appeal.
- Target outreach to increase participation of male students in programming, including the Leadership Certificate program.
- Highlight program connections to leadership and encourage students to track involvement using the Wisconsin Involvement Network's (WIN) Leadership & Involvement Record.
 - Support university efforts, in partnership with the Registrar's office, to develop a co-curricular transcript that further validates the value of involvement.

UW-Madison's Participation with MSL

The recommendations contained in the items below outline opportunities for UW-Madison to systemically engage with this study on a consistent basis.

- Continue long-term participation in the 3-year cycle by deepening partnerships with campus stakeholders to secure funding and support data analysis. Explore connection with the Academic Planning and Institutional Research office to consider campus improvements related to leadership and engagement.
 - The next cycle includes registration for MSL 2018 by approximately June 30, 2017; identification of participating campus subgroups by approximately August 15, 2017; identification of custom questions by approximately October 1, 2017; and initiation of student survey work in Spring 2018.
 - Costs of participating in MSL 2018 are approximately \$4,000 with additional costs of data analysis in Calendar Year 2019. The magnitude of the additional costs depends on the depth of data analysis to be conducted. The cost of analyzing MSL 2015 outcomes beyond the analysis provided by MSL has been approximately \$5,000. Our MSL 2015 analysis did not include an examination of campus environment variables and their correlation to outcomes.
- Map UW-Madison's Leadership Framework (and potentially the Essential Learning Outcomes) to the MSL model – similar to what has been done with other models including Servant Leadership, Authentic Leadership, etc. prior to the 2018 survey cycle so that data can be viewed with these connections in mind.
 - Systematically evaluate all Leadership Framework principles, values, competencies, and outcomes to determine potential links to specific MSL questions.
- Evaluate differences between institutions for experience variables such as student participation in student organizations, faculty/staff mentorship programs, and peer-to-peer dialog. Because this data is available in MSL, we recommend that UW-Madison investigate this data to determine if these factors are related to differences in leadership outcomes.
- Determine custom questions that can be consistently incorporated into the MSL survey cycle that would provide baseline data for longitudinal analysis.

- Review the above recommendations after forthcoming MSL cycles to assess whether new strategies and program enhancements improve attainment of MSL outcomes. Include appropriate examples that demonstrate the value of participating in MSL.

Improvements to MSL Survey and Data

These recommendations are for the MSL survey team and their partners to enhance the survey experience and ensure collected data are as beneficial as possible to participating institutions, including UW-Madison.

- Pair custom questions with the rest of the data so that we can examine demographic effects on student thoughts about leadership.
 - See if there are any differences between the general student body and comparison groups within the student body (e.g., the School of Business and the College of Engineering).
- Create different primary identifiers for each cohort taking the survey (e.g., the general student body and the comparison groups within the student body) or create a solution that produces the same outcome. This applies to the MSL-generated questions and the university-specific custom questions.
- Provide participants with the ability to respond to more detailed questions related to leadership training and education, regardless of their response to if they have participated in leadership training and education. Some of the more detailed options may not be initially considered as “leadership” training or education (e.g., “Short Term Service Immersion”, “Outdoor Adventure Learning Program”).
- Map other Leadership Models more fully to the MSL model (e.g., other traits of Servant Leadership).

Additional Research Opportunities

The recommendations in this section identify additional research areas that would further extend our understanding of leadership development at UW-Madison.

- Explore possible reasons that limit male student participation in leadership programs with the hope of using this data to increase male participation rates.
- Further study small campus populations (students of color, LGBT, 1st Gen, low income, etc.) to strengthen statistical significance to better understand their leadership experiences.

Next Steps

A subset of UW-Madison’s MSL Planning Team plans to share these survey findings and recommendations with a cross section of campus and community stakeholders. This effort will increase the likelihood of this data being applied to enhance leadership education at UW-Madison. Potential stakeholders that would benefit from these presentations include, but are not limited to, Academic Planning & Institutional Research, WISCAPE, Pieper Family Foundation Servant Leadership Chairs, Vice Provost for Teaching & Learning, Registered Student Organization Advisors and campus leadership centers. Events at which presentations could be given include but are not limited to Teaching & Learning Symposium, Showcase, and Teaching Academy.

Acknowledgments

This study was conducted as a collaborative effort by University of Wisconsin – Madison's Center for Leadership & Involvement, the College of Engineering, the School of Business, the Wisconsin Union, McNair Scholars Program and the Division of Student Life. Representatives from these campus units initially convened as a planning team in the early Fall semester of 2014 and continued to shepherd this process through the completion of this report. Early in this process we were also joined by Karin Silet from Learning Communities for Institutional Change & Excellence and Alicia Hazen from the College of Engineering as we formed a set of institutionally focused custom questions. The Center for Leadership & Involvement, College of Engineering, School of Business and Wisconsin Union also served as co-funders.

Many campus partners contributed to the various stages of this study. The Education Research Office provided guidance during the Institutional Review Board process; the Registrar's Office generated data samples; the Vice Provost for Student Life and Dean of Students, Lori Berquam, supported our email correspondence plan; and the University Book Store and Wisconsin Union supplied incentives for survey participants. Throughout this process we received support from the Survey Sciences Group who administered the MSL on behalf of participating institutions.

This report includes a more detailed analysis of MSL data, conducted at UW-Madison with the support of the Center for Leadership & Involvement and the Pieper Family Foundation's Endowment for Servant Leadership in the College of Engineering.

We are thankful for the many contributions of those outlined above and the 1500+ UW-Madison students who participated in this study. We look forward to advancing our leadership education efforts across campus as a result of this project.

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Introduction and Purpose

Student leadership development is a primary mission of institutions of higher education, including the University of Wisconsin – Madison. Being an important part of UW-Madison’s mission, leadership development educational opportunities must be continually assessed and improved. However, leadership is hard to explain, and even harder to quantify. The Multi-Institutional Study of Leadership (MSL) provides a way in which to measure leadership outcomes, using the Social Change Model of Leadership Development as the basis for measurement. Although this model provided the basis, MSL provides mapping strategies that help extend the results to other leadership models (see the background section for more on mapping).

The MSL is a survey study designed to explore leadership development in college students. Introduced in 2006, MSL subsequently collected data in the years 2009, 2010, 2011, 2012, and 2015, and has settled on a tri-yearly collection schedule. The goal of the research program as a whole is to advance institutional efforts in leadership development as well as broaden the knowledge base regarding college student leadership.

UW-Madison participated in the 2009 and 2015 editions of the MSL. The MSL program provides data collection services and also provides data analysis comparing the general student population at UW-Madison with (1) the aggregate student population of participating institutions, (2) the aggregate student population of Carnegie peer institutions, (3) the aggregate student population of selected peer institutions, and (4) selected subsets of the UW-Madison student body. The data analysis provided by the MSL program focused on several general categories of the data, allowing the university to reach general conclusions but leaving a large body of data unanalyzed.

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1. Summarizing the findings of the 2015 MSL in general leadership categories
2. More completely examining the 2015 MSL data set to:
 - a. Evaluate specific items within the general leadership categories
 - b. Better characterize the influence of gender versus field of study
3. Summarizing the findings of UW-Madison-specific survey questions in the 2015 MSL
4. Providing conclusions and prioritized recommendations for continuous improvement of curricular and co-curricular leadership education at UW-Madison

Background

MSL and the Social Change Model of Leadership Development

The theoretical framework for the categories provided by the MSL (named the “seven Cs” in their reporting) is based in the Social Change Model of Leadership Development, which was developed specifically for college students. In the words of the MSL:

“The social change model of leadership development (Higher Education Research Institute [HERI], 1996) ... is consistent with contemporary theoretical perspectives that suggest leadership is a relational, transformative, process-oriented, learned, and change-directed phenomenon (Komives & Dugan, 2010; Rost, 1991). Similarly, the central principles associated with the social change model involve social responsibility and change for the common good. These are achieved through the development of eight core

values targeted at enhancing students' levels of self-awareness and abilities to work with others. The values include: consciousness of self, congruence, commitment, common purpose, collaboration, controversy with civility, and citizenship. These values function at the individual (i.e., consciousness of self, congruence commitment), group (i.e., common purpose, collaboration, and controversy with civility), and societal (i.e., citizenship) levels. The dynamic interaction across levels and between values contributes to social change for the common good, the eighth critical value associated with this model. For more information on the social change model consult: A Social Change Model of Leadership Development: Guidebook Version III (HERI, 1996) or Leadership for a Better World: Understanding the Social Change Model of Leadership Development (Komives, Wagner, & Associates, 2009)."

An illustration of the relationship between core values is provided in Figure 1.

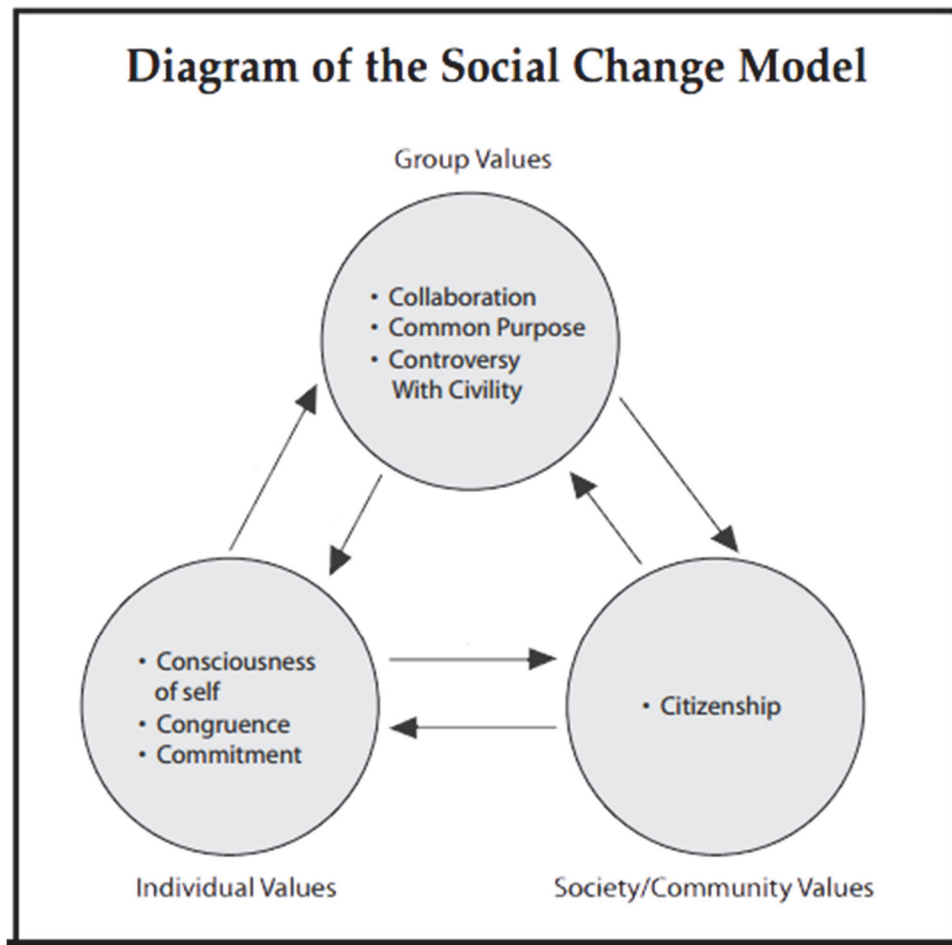


Figure 1. Illustration of the core values within the Social Change Model of Leadership Development (Wagner, 2006).

The MSL was designed specifically to measure leadership development among college students, and adopted from the Socially Responsible Leadership Scale (SRLS) developed by Tyree (1998). Tyree's original scale includes a characteristic *Change* which was not included as an aggregate measure within the MSL. The MSL also excluded the core value of "common purpose" in the 2015 survey. The MSL did, however, include an aggregate measure SRLS, which represents overall leadership as defined by the Socially Responsible Leadership Scale. Empirical testing validated this decision and demonstrated that the omnibus measure of SRLS was more accurate and statistically appropriate than the Change Scale (Multi-Institutional Study of Leadership, 2015). Furthermore, confirmatory factor analyses using structural equation modeling demonstrated that the Common Purpose Scale did not measure a construct unique from the Collaboration Scale (Multi-Institutional Study of Leadership, 2015).

The MSL also included a core value of "resiliency" in the Social Change Model for the 2015 survey. Expanding on previous MSL work on resiliency and leadership, given this background, the core leadership outcomes measured by MSL are defined as follows:

- Consciousness of Self: Awareness of the beliefs, values, attitudes, and emotions that motivate one to take action.
- Congruence: Thinking, feeling, and behaving with consistency, genuineness, authenticity, and honesty towards others; actions are consistent with most deeply held beliefs and convictions.
- Commitment: The psychic energy that motivates the individual to serve and that drives the collective effort; implies passion, intensity, and duration, and is directed toward both the group activity as well as its intended outcomes.
- Collaboration: To work with others in a common effort; constitutes the cornerstone value of the group leadership effort because it empowers self and others through trust.
- Controversy with Civility: Recognizes two fundamental realities of any creative group effort: that differences in viewpoint are inevitable, and that such differences must be aired openly, but with civility. Civility implies respect for others, a willingness to hear each other's views, and the exercise of restraint in criticizing the views and actions of others.
- Citizenship: The process whereby an individual and the collaborative group become responsibly connected to the community and the society through the leadership development activity. To be a good citizen is to work for positive change on the behalf of others and the community.
- Omnibus SRLS: Encompasses the "change" in the social change model by looking at an aggregate of the previous 6 C's.
- Resiliency: Ability to handle change, stress, and overcome obstacles.

MSL and Other Models of Leadership

Using both direct and indirect measures, the Social Change Model can be mapped to other models of leadership such as Authentic Leadership, Relational Leadership, Emotionally Intelligent Leadership, Servant Leadership, Leadership Practices Inventory, and Transformational Leadership (see Figure 2). This is important for several reasons. First, UW-Madison developed a theory and research based Leadership Framework (Appendix C) which includes leadership principles, values, competencies and outcomes. The content of UW-Madison's Leadership Framework was informed by the Social Change Model, in addition to many of the other models identified in Figure 2. Linking MSL-derived student perceptions of outcomes attainment with direct measures of Leadership Framework outcomes attainment will become important as the UW-Madison Leadership Framework continues to be integrated across campus. Second, various units on campus can derive value from MSL for unit-specific initiatives. One example of this is the Pieper Family Foundation's Endowment for Servant Leadership in the College of Engineering. This endowment

requires an annual report on leadership outcomes assessment and the MSL results can assist with this report. Another example is UW-Madison's Leadership Certificate program, administered by the Center for Leadership & Involvement.

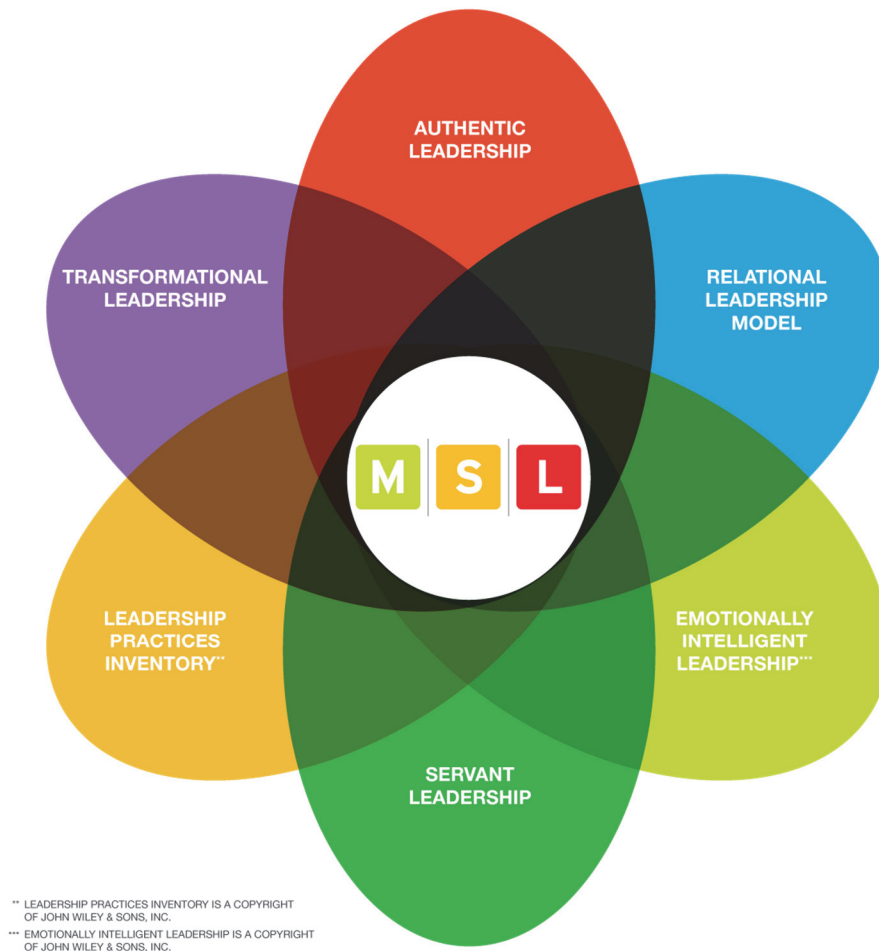


Figure 2. MSL's depiction of the relationship between the Social Change Model (center of the diagram) to other models of leadership. For more details on how these models map to each other, please see Appendix D or visit <http://leadershipstudy.net/design/>.

MSL and Other Outcome Measures

In their 2015 survey work, MSL included several alternative measures of leadership outcomes attainment. This work was designed to examine students' experiences during college and their influences on leadership-related outcomes. These alternative measures are as follows:

- **Leadership Efficacy:** Measures individuals' internal beliefs in the likelihood that they can be successful in the leadership process.
- **Complex Cognitive Skills:** includes critical thinking, self-directed learning, making complex connections.
- **Social Perspective-Taking:** measures a student's ability to see alternative social perspectives.

- Hope: the process of thinking about one's goals, along with the motivation to move toward those goals, and the ways to achieve those goals (Snyder 1991, 1995, 2002).
 - Hope Agency: the motivation to pursue goals.
 - Hope Pathways: the practical steps taken/planned to achieve goals.
- Spirituality – Search for Meaning: the process of meaning-making with self and community through the act of seeking congruence of one's personal values, living a balanced and integrated life, and willingness to engage with and accept others whose values and beliefs may be different from one's own.
- Collective Racial Esteem (CRE): examines an individual's domain-specific sense of self-concept related to membership in a broader racial group informed by four subcomponents representing (Crocker, Luhtanen, Blaine, & Broadnax, 1994):
 - Private CRE: personal assessment of the value of one's racial group.
 - Public CRE: personal beliefs regarding how others value one's racial group.
 - Identity Salience: the degree of centrality of one's racial group membership to their self-concept.
 - Membership: personal beliefs about how well one functions as a member of their racial group.
- Sense of Belonging: degree of feelings of affiliation with the campus community in a positive way.

Methods

Study Design

The MSL consisted of a survey with questions that generated a dataset containing more than 400 variables. These variables include:

- “input variables” such as gender, race, and class standing (i.e., demographics)
- “environment variables” such as leadership participation experience, leadership training experience, and field of study
- “outcomes variables” such as:
 - Core values from the Social Change Model (part of the primary study)
 - Other general measures such as hope agency and pathways, leadership efficacy, and complex cognitive skills (part of the primary study)
 - Measures of spirituality: search for meaning and purpose of life as well as measures of external self-concept, internal self-concept, and goal internalization (Sub-Study 1)
 - Measures of public and private collective racial esteem, and importance of race to identity (Sub-Study 2)

An initial evaluation of these variables was provided by MSL (see Appendices A and B).

UW-Madison added 10 custom questions to the MSL questions (see Appendix E). Unfortunately, the custom questions submitted by UW-Madison were coded and entered separately at MSL and therefore it was impossible to align this data with the 400 variables generated by the standard MSL questions.

This survey relied solely on self-reported data, which can bring questions of accuracy and reliability. It is important to keep in mind that answers may be biased. There is a body of research suggesting self-reported data can be reliable (Anaya, 1999; Astin, 1993; Bauer, 1992; Gonyea, 2005; Pace,

Barahona, & Kaplan, 1985; Pike, 1995), and the MSL data compilers employed the Crowne-Marlowe measure of social desirability as a means to remove items in which the responses appeared to be biased (Crowne & Marlowe, 1960; MSL, 2015).

Survey Questions that Defined the Key Variables

For the outcome measures of the Social Change Model, the questions were:

- Consciousness of Self (Scale: 1-5, Strongly Disagree – Strongly Agree):
 - I am able to articulate my priorities.
 - I am usually self-confident.
 - I know myself pretty well.
 - I could describe my personality.
 - I can describe how I am similar to other people.
 - I am comfortable expressing myself.
- Congruence (Scale: 1-5, Strongly Disagree – Strongly Agree):
 - My behaviors are congruent with my beliefs.
 - It is important to me to act on my beliefs.
 - My actions are consistent with my values.
 - Being seen as a person of integrity is important to me.
 - My behaviors reflect my beliefs.
- Commitment (Scale: 1-5, Strongly Disagree – Strongly Agree):
 - I am willing to devote the time and energy to things that are important to me.
 - I stick with others through difficult times.
 - I am focused on my responsibilities.
 - I can be counted on to do my part.
 - I follow through on my promises.
 - I hold myself accountable for responsibilities I agree to.
- Collaboration (Scale: 1-5, Strongly Disagree – Strongly Agree):
 - My contributions are recognized by others in the groups I belong to.
 - I am seen as someone who works well with others.
 - I can make a difference when I work with others on a task.
 - I actively listen to what others have to say.
 - I enjoy working with others toward common goals.
 - Others would describe me as a cooperative group member.
- Controversy with Civility (Scale: 1-5, Strongly Disagree – Strongly Agree):
 - I am open to others' ideas.
 - I value differences in others.
 - Hearing differences in opinions enriches my thinking.
 - I respect opinions other than my own.
 - I share my ideas with others.
- Citizenship (Scale: 1-5, Strongly Disagree – Strongly Agree):
 - I believe I have responsibilities to my community.
 - I work with others to make my communities better places.
 - I participate in activities that contribute to the common good.
 - I value opportunities that allow me to contribute to my community.
 - It is important to me that I play an active role in my communities.

- I believe my work has a greater purpose for the larger community.
- Omnibus SRLS (Scale: 1-5, Strongly Disagree – Strongly Agree):
 - This is the mean score of the above outcomes.
- Resiliency (Scale: 1-5, Not true at all – True nearly all the time):
 - I am able to adapt when changes occur.
 - I can deal with whatever comes my way.
 - I try to see the humorous side of things when I am faced with problems.
 - Having to cope with stress can make me stronger.
 - I tend to bounce back after injury, illness, or other hardships.
 - I believe I can achieve my goals, even if there are obstacles.
 - Under pressure, I stay focused and think clearly.
 - I am not easily discouraged by failure.
 - I think of myself as a strong person when dealing with life's challenges and difficulties.
 - I am able to handle unpleasant or painful feelings like sadness, fear, or anger.

General Leadership-Related Outcomes:

- Leadership Efficacy: How confident are you that you can be successful at (Scale: 1-4, Not at all Confident – Very Confident)
 - Leading others?
 - Organizing a group's tasks to accomplish a goal?
 - Taking initiative to improve on something?
 - Working with a team on a group project?
- Complex Cognitive Skills: In thinking about how you have changed during college, to what extent do you feel you have grown in the following areas (Scale: 1-4, Not Grown at All – Grown Very Much)
 - Ability to put ideas together and to see relationships between ideas.
 - Ability to learn on your own, pursue ideas, and find information you need.
 - Ability to critically analyze ideas and information.
 - Learning more about things that are new to you.
- Social Perspective-Taking (Scale: 1-5, Does not describe me well – Describes me very well)
 - I try to look at everybody's side of a disagreement before I make a decision.
 - I sometimes try to understand my friends better by imagining how things look from their perspective.
 - I believe that there are two sides to every question and try to look at them both.
 - When I'm upset at someone, I usually try to "put myself in their shoes" for a while.
 - Before criticizing somebody, I try to imagine how I would feel if I were in their place.
- Hope (Scale: 1-8, Definitely False – Definitely True)
 - Hope Agency:
 - I energetically pursue my goals.
 - My past experiences have prepared me well for my future.
 - I've been pretty successful in life.
 - I meet the goals that I set for myself.
 - Hope Pathways:
 - I can think of many ways to get out of a jam.
 - There are lots of ways around any problem.
 - I can think of many ways to get the things in life that are important to me.
 - Even when others get discouraged, I know I can find a way to solve a problem.

Sub-Study Leadership-Related Outcomes:

- Spirituality – Search for Meaning (Scale: 1-4, Never – Very Often)
 - How often do you search for meaning/purpose in life?
 - How often do you have discussions about the meaning of life with your friends?
 - How often do you surround yourself with friends who are searching for meaning/purpose in life?
 - How often do you reflect on finding answers to the mysteries of life?
 - How often do you think about developing a meaningful philosophy of life?
- Collective Racial Esteem (Scale: 1-7, Strongly Disagree – Strongly Agree)
 - Private Collective Racial Esteem
 - I often regret that I belong to my racial group. (reverse scored)
 - In general, I'm glad to be a member of my racial group.
 - Overall, I often feel that my racial group is not worthwhile. (reverse scored)
 - I feel good about the racial group I belong to.
 - Public Collective Racial Esteem
 - Overall, my racial group is considered good by others.
 - Most people consider my racial group, on average, to be more ineffective than other groups. (reverse scored)
 - In general, others respect my race.
 - In general, others think that my racial group is unworthy. (reverse scored)
 - Importance to Identity
 - Overall, my race has very little to do with how I feel about myself. (reverse scored)
 - The racial group I belong to is an important reflection of who I am.
 - My race is unimportant to my sense of what kind of person I am. (reverse scored)
 - In general, belonging to my racial group is an important part of my self-image.

Environmental Leadership-Related Outcomes:

- Campus Climate:
 - Sense of belonging (Scale: 1-5, Strongly Disagree – Strongly Agree)
 - I feel valued as a person at this school.
 - I feel accepted as a part of the campus community.
 - I feel I belong on this campus.
 - Non-discriminatory climate (Scale: 1-5, Strongly Disagree – Strongly Agree)
 - Non-Discriminatory Climate, Indirect:
 - I have encountered discrimination while attending this institution.
 - I feel there is a general atmosphere of prejudice among students.
 - I would describe the environment on campus as negative/hostile.
 - Non-Discriminatory Climate, Direct:
 - Faculty have discriminated against people like me.
 - Staff members have discriminated against people like me.
 - Other students have discriminated against people like me.

Study Participation

The basic survey was conducted at 80 university or college campuses across the United States. The entire study process from IRB approval to data analysis took, on average, 36 months overall. At UW-Madison, the MSL was distributed via email to a sample of 4,000 students. These students needed to be undergraduate, enrolled at UW-Madison as of 11/1/2014 and 18 years old as of 1/26/2015. The 4,000

names were determined using a programmed random selection process which gave each student an equal probability of selection. Additionally, 500 undergraduate students from the College of Engineering and 500 from the School of Business were also selected. The students eligible for selection in the College of Engineering or the School of Business must have met the overall qualifications and must have also been enrolled in the respective school. If a student in the College of Engineering or School of Business was selected as part of the initial cohort of 4,000 campus-wide students, that student was eliminated from participation in the College of Engineering or School of Business cohorts.

Survey Implementation

IRB approval was obtained for the time period from 12/29/2014 to 12/28/2015 and has since been extended to enable on-going analysis of the results. The participation process began with an invitation/pre-notification email sent from Lori Berquam, Vice Provost for Student Life and Dean of Students, on 02/16/2015. This explained the best ways to take the survey and that participation in the survey was optional. In order to incentivize participation and completion of the survey, students who finished the survey were entered in a raffle where they had a chance of winning gift cards valued at \$500, \$250 or \$100 and a separate raffle for UW-Madison book store gift cards, a terrace chair, or gift certificates for downtown Madison. This email also provided contact information if students had any questions or concerns.

On 02/21/2015, students were emailed with the incentives, an informed consent form, and a link to begin the survey. After this initial participation email, students were sent two reminder emails on 02/25/2015 and 03/01/2015 with the same instructions, and encouragements.

Data Analysis

The data generated by survey-takers at UW-Madison and other schools were compiled at MSL headquarters. The MSL made the raw data for UW-Madison available at no additional cost, but not the raw data from the national sample. The national data could be made available through negotiations, but due to limited resources, UW-Madison decided not to pursue this avenue of research. The calculations done by the MSL's national office used t-tests with significance defined as $p < 0.01$. The calculations done by UW-Madison were assessed at a significance level of $p < 0.05$. All calculations at MSL and UW-Madison were done with the statistical software package SPSS to avoid potential data corruption by changing formats. Statements of significance were determined by two sample t-tests with equal variance assumed. Demographic information was determined with descriptive frequencies.

MSL performed an initial analysis of the data, using two sample t-tests to compare the general UW-Madison cohort to the following cohorts:

- All participating institutions,
- Carnegie *very high research institution* peers that participated,
- Our *custom peer group* (Northwestern University, The Ohio State University – Main Campus, University of Illinois – Urbana-Champaign, University of Maryland – College Park),
- UW-Madison School of Business, and
- UW-Madison College of Engineering

UW-Madison performed a more detailed analysis of the data, using two sample t-tests to compare the general UW-Madison cohort to the following cohorts:

- UW-Madison School of Business, and
- UW-Madison College of Engineering

Key differences between the initial MSL analysis and the detailed UW-Madison analysis were (1) the evaluation of responses to individual questions and not just responses to aggregated questions, and (2) the evaluation of interactions between variables (e.g., gender interaction with field of study). This analysis supplemented the MSL analysis to detail the ways in which UW-Madison students manifest and think of leadership during undergraduate studies.

UW-Madison also performed summary statistical analyses of the custom questions, which explored the ways in which students at UW-Madison think about leadership scholarship, participation and involvement. Because these questions were only asked of UW-Madison students, no comparative tests were done with national or peer universities.

Analysis Terms

1. Significance: This term is designed to mean that the difference between two scores (or averages) is not due merely to chance. Within this study, a t-test resulting in a p value ≤ 0.05 were considered significant, meaning that there is a less than 5% chance that the difference between these numbers is due to chance/error. The MSL national comparisons were assessed to a p value of ≤ 0.01 or a 1% chance the difference is due to error.
2. Gender comparisons: These were done with a measure excluding gender non-conforming students because the number of participants who identified in this manner were too small.

Demographics of Respondents

Overall Response and Completion Rates

Overall, 1449 UW-Madison students, or 36.2% of invited students, responded to the survey that was sent to 4000 students campus-wide. Of those, 83.4% completed the survey (i.e., 1208 students completed the survey). These numbers put UW-Madison above the national averages of 30.1% and 80.2%, respectively, for response and completion rates. Carnegie peer institutions had response and completion rates of 26.4% and 70.4%, respectively.

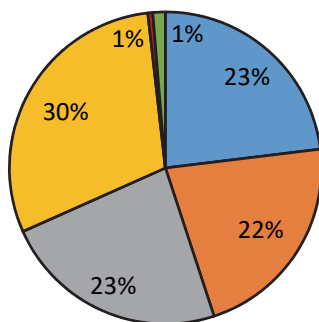
Of the 500 business students that were emailed separately from the UW-Madison student body, 263 responded and 216 completed the survey. This corresponds to response and completion rates of 52.6% and 82.1%, respectively. Of the 500 engineering students contacted separately, 437 responded and 370 completed the survey, corresponding to a response rate of 87.4% and a completion rate of 84.7%. The completion rates of these students are comparable to those of the general student body. However, the response rates are unusually high but follow-up work did not reveal an erroneous categorization of these students.

Class Level Diversity

Figure 3 shows the distribution of UW-Madison respondents amongst class levels, based on their response to the following question:

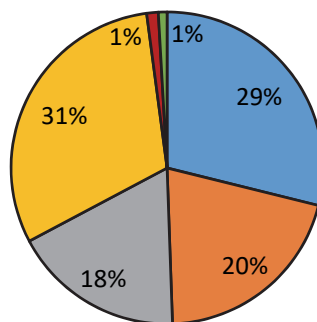
- What is your current class level? (choose one)
 1. Freshman/First Year
 2. Sophomore
 3. Junior
 4. Senior (4th Year and beyond)
 5. Graduate Student
 6. Unclassified

The results showed a relatively even distribution amongst the four different undergraduate levels, with the question leading students to respond on the basis of years in attendance. There is no way to directly compare this distribution with university enrollment records, which define class level on the basis of credits accumulated rather than year in school. On the credit basis, only 7.3% of undergraduate UW-Madison students were considered freshmen in Spring 2015, the semester when the survey was completed. For sophomores, juniors, and seniors, these percentages were 22.3%, 27.1%, and 43.3%, respectively. Thus, at face value, it appears that the survey data may be skewed towards freshmen respondents. However, Fall 2014 records showed 21.4% and 74.6% of undergraduate students having “first year” status and “continuing” status, respectively. This closely matches the respondent population, so our analysis assumed that the distribution of respondents amongst class level was representative of the UW-Madison undergraduate student body.



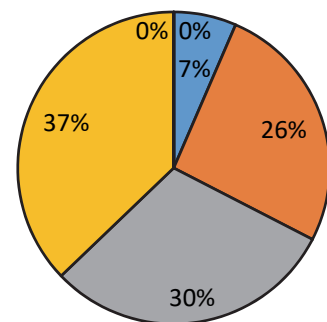
■ Freshman
■ Sophomore
■ Junior
■ Senior
■ Graduate Student
■ Unclassified

Figure 3A. Distribution of general student body respondents by class level.



■ Freshman
■ Sophomore
■ Junior
■ Senior
■ Graduate Student
■ Unclassified

Figure 3B. Distribution of engineering respondents by class level.



■ Freshman
■ Sophomore
■ Junior
■ Senior
■ Graduate Student
■ Unclassified

Figure 3C. Distribution of business respondents by class level.

The sample of the business school included more upperclassmen than the overall sample or the engineering. The distribution of class rank did not differ significantly between UW-Madison and the national, Carnegie, or custom peers.

96.3% of students who completed the survey were enrolled full time. This compares reasonably well with the UW-Madison undergraduate population, of which 92.8% were enrolled full time in Spring 2015. UW-Madison had a slightly higher percentage of full-time students than the national sample (94.5%), the same as our Carnegie peers (96.3%), and slightly lower than our custom peers (97.7%).

Diversity in Field of Study

Figure 4 shows the distribution of students who completed the survey at UW-Madison amongst fields of study, based on their response to the following question:

- Which of the following best describes your primary major? (Select the category that best represents your field of study)? (choose one)
 1. Agriculture/Natural Resources
 2. Architecture/Urban Planning
 3. Biological/Life Sciences (ex. biology, biochemistry, botany, zoology)
 4. Business (ex. accounting, marketing, management, entrepreneurship, finance, human resources, hospitality)
 5. Communication (speech, journalism, television/radio)
 6. Computer and Information Sciences
 7. Criminal Justice
 8. Ecology
 9. Education
 10. Engineering (ex. chemical, aerospace, civil, industrial, mechanical, biomedical)
 11. Environmental Science
 12. Ethnic & Cultural Studies
 13. Foreign Languages and Literature (ex. French, Spanish)
 14. Health-Related Professions (ex. nursing, physical therapy, health technology, pharmacy, kinesiology, health care administration)
 15. Humanities (ex. English, literature, philosophy, religion, history)
 16. Liberal/General Studies
 17. Library Science
 18. Mathematics/Statistics
 19. Military Science/Technology/Operations
 20. Multi/Interdisciplinary Studies
 21. Parks, Recreation, Leisure Studies, Sports Management
 22. Physical Sciences (ex. physics, chemistry, astronomy, earth science)
 23. Pre-Professional (ex. pre-dental, pre-medical, pre-veterinary)
 24. Public Administration (ex. City management, law enforcement)
 25. Social Sciences (ex. anthropology, economics, political science, psychology, sociology, social work)
 26. Visual and Performing Arts (ex. art, music, theater)
 27. Women/Gender Studies
 28. Undecided

Note that the question prompts do not directly compare with degree programs offered at UW-Madison.

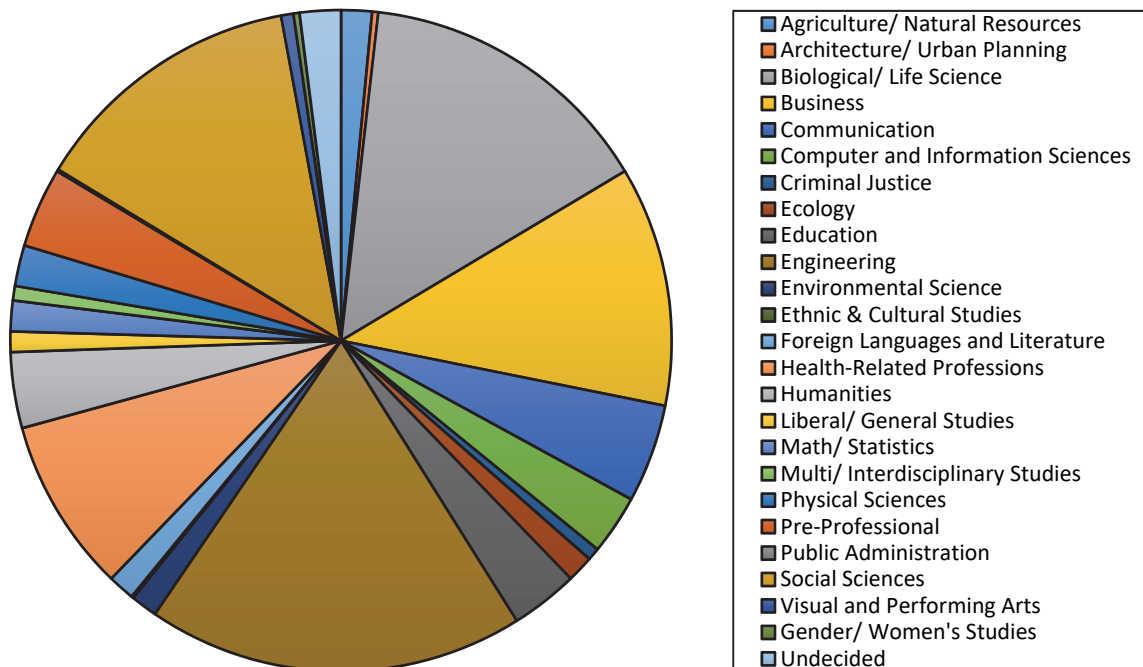


Figure 4. Distribution of UW-Madison respondents amongst fields of study according to self-reported “Primary Major”

The sample representing UW-Madison as a whole was fairly diverse in the distribution of majors. Biological/life sciences (14.6%), social sciences (13.4%), and health related professions (8.5%) were the most popular majors amongst respondents to the survey. These fields represent about 7%, 10%, and 5% of undergraduate students in the registrar’s database at UW-Madison, indicating that these fields may be somewhat overrepresented amongst the respondents.

In the university-wide survey, 18.4% of respondents chose engineering as their primary major, and 11.7% chose business. The UW-Madison registrar lists 16.7% of undergraduates having an engineering major, with 7.9% having a business major. As with the majors listed in the previous paragraph, it appears that engineering and business students are somewhat overrepresented in the survey.

As noted in the methods section, additional students in these fields of study were surveyed separately from the students in the university-wide survey. These additional students were selected from their major status in the registrar’s records. The overwhelming majority of respondents’ self-selected primary major reflected their registrar’s status (98.1% business, 93.8% engineering). It is possible the other majors chosen are students pursuing a double major. None of the other selected majors totaled more than 1% of respondents.

Racial Diversity

Figure 5 shows the racial group distribution of students who completed the survey, based on their response to the following question:

- Please indicate your broad racial group membership: (Mark all that apply)
 1. White/Caucasian
 2. Middle Eastern/Northern African

3. African American/Black
4. American Indian/Alaska Native
5. Asian American
6. Native Hawaiian/Pacific Islander
7. Latino/Hispanic
8. Multiracial
9. Race Not Listed

As noted in Figure 5, 82.7% of the UW-Madison respondents identified as Caucasian, which compares to a university-wide undergraduate enrollment of 82.8% in Spring 2015. Students identifying as African-American represented 1.3% of the respondents but represented 2.9% of enrolled students in Spring 2015. These numbers were 1.2% and 5.1%, respectively, for students identifying as Hispanic. For students identifying as Asian American, these percentages were 7.5% and 5.0%, respectively. The registrar did not publish data for a multiracial category, which was listed by 6.4% of respondents. In addition, those who did not list their race represented 2.9% of survey respondents and 0.4% of enrollment. The respondents from the School of Business and the College of Engineering were not significantly different than the overall UW-Madison respondents.

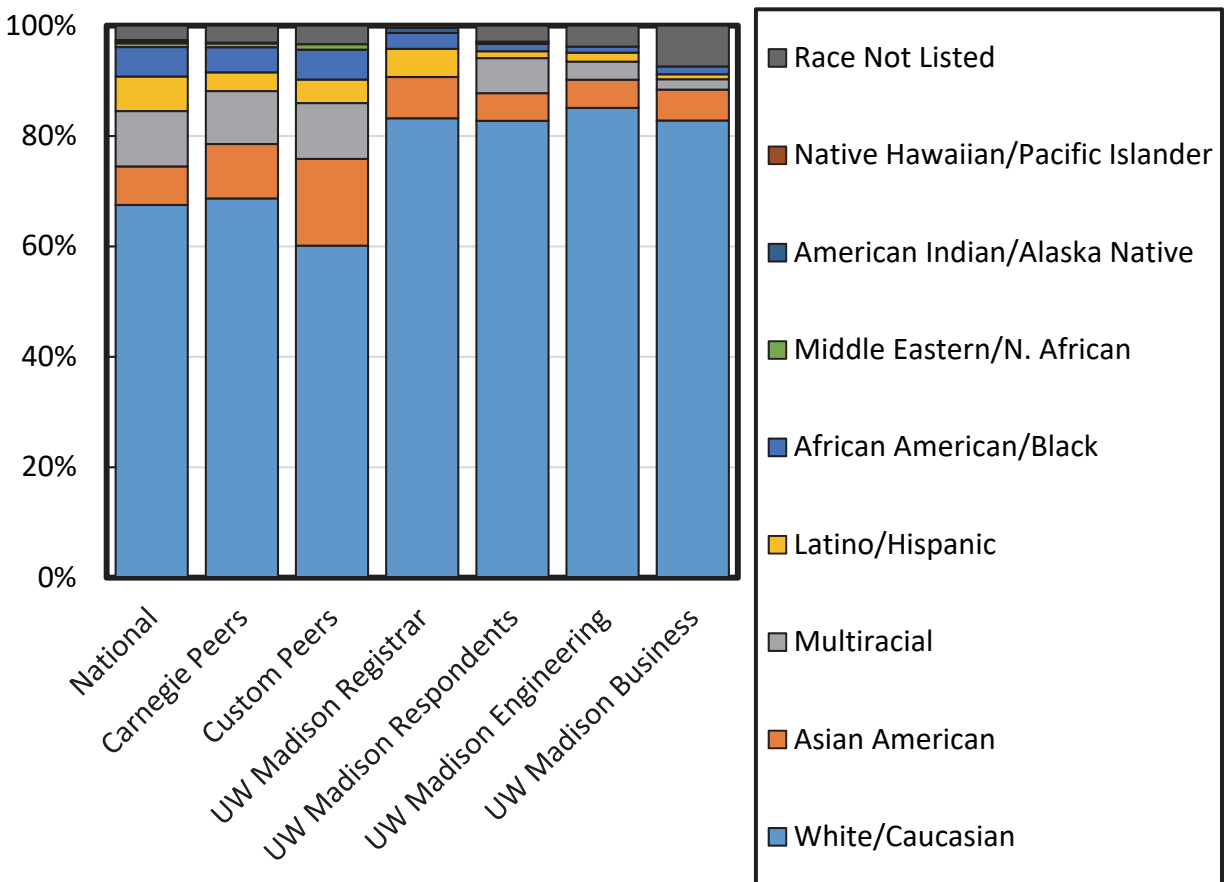


Figure 5. Distribution of respondents amongst broad racial groups. Included in the graph is the distribution for UW-Madison based on enrollment data (UW-Madison Registrar).

As shown by Figure 5, the demographic makeup of the MSL respondents for UW-Madison was less racially diverse than the national, Carnegie peer, and custom peer samples. The other samples had a significantly higher percentage of students identifying as African-American, Hispanic, and Multiracial.

Gender Diversity

Figure 6A shows the distribution of UW-Madison students who completed the survey, based on their response to the following question:

- What is your gender?
 1. Male
 2. Female
 3. Transgender/Gender Non-Conforming

Similar figures are shown for the School of Business (Figure 6B) and the College of Engineering (Figure 6C).

As noted in Figure 6A, 59% of the UW-Madison respondents identified as female, which compares to a university-wide undergraduate enrollment of 51% in Spring 2015. Nationally, 65% identified as female, more than UW-Madison, our Carnegie peers (59%) and our custom peers (54%). Respondents in the School of Business were 44% female (see Figure 6B), which is similar to an enrollment of 43% female. These numbers were 28% (see Figure 6C) and 22%, respectively, in the College of Engineering. This suggests that female students were generally overrepresented amongst survey respondents and male students were underrepresented.

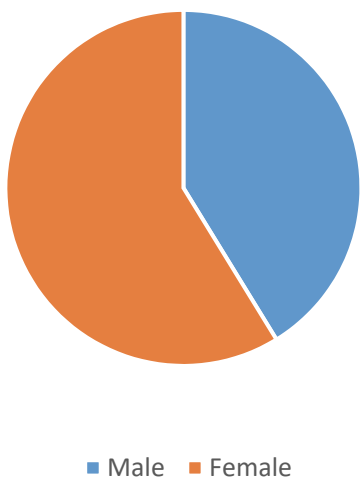


Figure 6A. Distribution of UW-Madison respondents by gender.



Figure 6B. Distribution of UW-Madison Business respondents by gender.

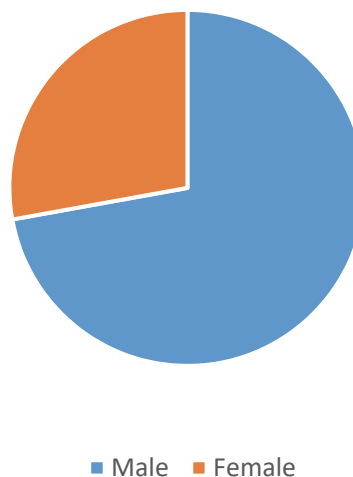


Figure 6C. Distribution of UW-Madison Engineering respondents by gender.

Results

Comparison of UW-Madison with other Institutions

Social Change Model of Leadership Development Outcomes

Table 1 shows how UW-Madison respondents compared with respondents from other universities. Cells with boldface text and are highlighted yellow are the measures by which UW-Madison scored significantly higher than the comparison group. There were no measures by which UW-Madison scored significantly below any comparison group.

UW-Madison respondents scored themselves higher on measures of Commitment than did respondents in all three comparison groups. This suggests that the UW-Madison respondents felt more strongly about willingness to devote time and energy to things important to them, sticking with others through difficult times, focusing on personal responsibilities, being counted on to do their part, following through on their promises, and holding themselves accountable for responsibilities they agreed to. Additionally, UW-Madison scored higher on measures of Collaboration and Omnibus SRLS than the custom peers and the Carnegie peers. For all of the remaining SCM outcomes, UW-Madison scored more highly than the custom peers, with the exception of resiliency. Interestingly, there was a much greater difference between UW-Madison respondents and their peers at the four participating Big Ten institutions, than there was between UW-Madison respondents and their peers at all participating institutions.

These results appear to correlate with employment and involvement in student organizations. For example, 40% of the UW-Madison students who completed the survey said they had an on-campus job. Only 28% of the national sample, 31% of our Carnegie peers, and 30% of our custom peers said the same. The results also indicate that UW-Madison students are more involved in college organizations than these groups. Nationally, 21% had never taken part in a college organization; with 15% of Carnegie peers and 13% of custom peers saying the same, compared to 8% at UW-Madison.

Table 1. Perceived attainment of Social Change Model of Leadership outcomes at UW-Madison relative to other institutions.

Outcome	UW-Madison	Custom Peers	Carnegie Peers	National
Consciousness of Self	4.05	3.97	4.01	4.05
Congruence	4.26	4.19	4.22	4.24
Commitment	4.44	4.34	4.38	4.40
Collaboration	4.22	4.13	4.16	4.18
Controversy with Civility	4.24	4.18	4.21	4.23
Citizenship	3.95	3.86	3.92	3.94
Omnibus SRLS	4.19	4.11	4.15	4.17
Resiliency	3.86	3.81	3.84	3.88

Note: Yellow shaded cells with boldface text show scores that are significantly lower than UW-Madison at a 99% level of confidence. All outcomes were scored on a scale of 1 to 5, with all but resiliency ranging from “strongly disagree” to “strongly agree.” Resiliency ranged from “not true at all” to “true nearly all the time.”

Other Leadership Outcomes

Table 2 shows how UW-Madison respondents compared with respondents from other universities. Cells with boldface text and are highlighted yellow are the measures by which UW-Madison scored significantly higher than the comparison group. There were no measures by which UW-Madison scored significantly below any comparison group.

As with the leadership outcomes in the previous section, there were more significant differences with the Custom Peer cohort than there were with the Carnegie Peer cohort or the national cohort. There was no significant difference between UW-Madison students and the national cohort on any of the measures presented in Table 2. When compared with the Custom Peer cohort, UW-Madison students scored significantly higher on all measures except for Social Perspective Taking. An example question in this category is “I try to look at everybody’s side of a disagreement before I make a decision.”

Table 2. Perceived attainment of other leadership outcomes
at UW-Madison relative to other institutions.

Outcome	UW-Madison	Custom Peers	Carnegie Peers	National
Leadership Efficacy	3.14	3.08	3.10	3.12
Complex Cognitive Skills	3.19	3.09	3.13	3.18
Social Perspective-Taking	3.83	3.82	3.75	3.88
Hope Agency	6.67	6.47	6.56	6.62
Hope Pathways	6.52	6.39	6.64	6.50

Note: Yellow shaded cells with boldface text show scores that are significantly lower than UW-Madison at a 99% level of confidence. Leadership efficacy is on a scale of 1 to 4, ranging from “not at all confident” to “very confident.” Complex cognitive skill is on a scale of 1 to 5, ranging from “not grown at all” to “grown very much.” Social perspective taking is on a scale of 1 to 5, ranging from “does not describe me well” to “describes me very well.” Hope agency and pathways are on a scale of 1 to 8, ranging from “definitely false” to “definitely true.”

Sub-Study Outcomes

Table 3 shows how UW-Madison respondents compared with respondents from other universities. Public collective racial esteem, those cells with boldface text and are highlighted yellow, is the measure by which UW-Madison respondents scored significantly higher than respondents in all three comparison groups. This outcome is based on responses to questions such as “overall, my racial group is considered good by others” and “in general, others respect my race.” This differs from private collective racial esteem, which is based on responses to questions like “in general, I’m glad to be a member of my racial group” and “I feel good about the racial group I belong to.”

Importance of race to identity, those cells highlighted in red, are the measures by which UW-Madison respondents scored significantly below respondents in all three comparison groups. This outcome is based on responses to questions like “the racial group I belong to is an important reflection of who I am” and “in general, belonging to my racial group is an important part of my self-image.” In addition to this outcome, UW-Madison respondents scored lower than respondents in the national cohort with search for meaning. This outcome is based on responses to questions like “how often you search for meaning/purpose in life” and “how often you think about developing a meaningful philosophy of life.”

Table 3. Perceived attainment of sub-study outcomes at UW-Madison relative to other institutions.

Outcome	UW-Madison	Custom Peers	Carnegie Peers	National
Spirituality: Search for Meaning	1.55	1.54	1.59	1.66
Private Collective Racial Esteem	5.57	5.50	5.47	5.52
Public Collective Racial Esteem	5.19	4.96	4.97	4.94
Importance of Race to Identity	3.29	3.65	3.50	3.59

Note: Yellow shaded cells with boldface text show scores that are significantly lower than UW-Madison at a 99% level of confidence. Red shaded cells show scores that are significantly higher than UW-Madison at a 99% level of confidence. Spirituality: Search for Meaning is on a scale of 1 to 4, ranging from “never” to “very often.” The remaining outcomes are on a scale of 1 to 7, ranging from “strongly disagree” to “strongly agree.”

Comparison within UW-Madison Respondents

Influence of Gender Identity on Perception of Outcomes Attainment

There are significant differences in leadership outcomes between people identifying as male and those identifying as female. As shown in Table 4, females scored higher than males in measures of Consciousness of Self, Congruence, Collaboration, Commitment, Controversy with Civility, and Citizenship. Males scored higher than females in measures of Resiliency (see Table 4) and Hope Pathways (see Table 5). These trends are also reflected in the national cohort.

People who identify as female were more likely to take part in leadership opportunities. Of the 465 people who answered that they had partaken in leadership training 193 identified as male, 253 identified as female, and 18 did not identify as either. This is 27.7% of males and 31.4% of females in the overall sample.

Table 4. Influence of gender identity on perceived attainment of Social Change Model of Leadership outcomes at UW-Madison.

Outcome	Male	Female
Consciousness of Self	4.02	4.07
Congruence	4.19	4.31
Commitment	4.38	4.48
Collaboration	4.19	4.23
Controversy with Civility	4.18	4.28
Citizenship	3.84	4.02
Omnibus SRLS	4.13	4.23
Resiliency	3.97	3.78

Note: Yellow shaded cells with boldface text show scores that are significantly higher than the comparison cohort at a 99% level of confidence. All outcomes were scored on a scale of 1 to 5, with all but resiliency ranging from “strongly disagree” to “strongly agree.” Resiliency ranged from “not true at all” to “true nearly all the time.”

Table 5. Influence of gender identity on perceived attainment of other leadership outcomes at UW-Madison.

Outcome	Male	Female
Leadership Efficacy	3.15	3.12
Complex Cognitive Skills	3.79	3.86
Social Perspective Taking	3.79	3.86
Hope Agency	6.62	6.71
Hope Pathways	6.67	6.42

Note: Yellow shaded cells with boldface text show scores that are significantly higher than the comparison cohort at a 99% level of confidence. Leadership efficacy is on a scale of 1 to 4, ranging from “not at all confident” to “very confident.” Complex cognitive skill is on a scale of 1 to 5, ranging from “not grown at all” to “grown very much.” Social perspective taking is on a scale of 1 to 5, ranging from “does not describe me well” to “describes me very well.” Hope agency and pathways are on a scale of 1 to 8, ranging from “definitely false” to “definitely true.”

Table 6. Influence of gender identity on respondents’ views of leadership

View of leadership	Male	Female	P Value
Leadership qualities can be learned and developed	0.77	0.81	< 0.001
Leadership is the responsibility of all members of an organization, not just the people in power	0.58	0.66	< 0.001
Leaders are born, not made	0.12	0.08	< 0.001
Leadership is a process instead of a position	0.55	0.63	< 0.001
None of the Above	0.03	0.01	< 0.001

Note: Values in the Male and Female columns represent the percentage of students that selected this statement as resonating with their view of leadership. A value of 1 would indicate that the statement resonated with all respondents and a value of 0 would indicate that the statement resonated with no respondents.

Based on responses to the custom questions, respondents who identified as female and those who identified as male also differed significantly on the ways in which they view leadership (see Table 6). Although the majority of males and females believed that leadership qualities can be learned and developed, this was significantly more apparent for females. Also, a minority of males and females believe that leaders are born and not made, but this belief was more apparent in males. Females were more apt to think that leadership is a process, can be learned, and is the responsibility of all involved. These differences are most likely reflected in the respondents’ significant gender differences in citizenship, commitment, and controversy with civility.

Influence of Race on Perception of Outcomes Attainment

One of the ways in which UW-Madison differed significantly from other institutions taking part in the MSL was “Importance of Race to Identity”; on which UW-Madison respondents scored lower than the national and both peer group averages. With 83% of UW-Madison respondents identifying as white, statistical comparisons between all the groups listed in the MSL (White/Caucasian, Middle Eastern/Northern African, African American/Black, American Indian/Alaska Native, Asian American, Native Hawaiian/Pacific Islander, Latino/Hispanic, Multiracial, Race Not Listed), show little to no statistically significant difference in leadership outcomes. Thus, to gain statistical power, we divided the racial groups even more broadly: white and non-white.

These broad racial groups ignore the complexity contained within the “non-white group”. It is possible that a positive perception amongst one non-white racial group could offset a negative perception amongst another. For example, at the national level, African-American respondents had a significantly higher score than White/Caucasian respondents for Consciousness of Self, while Asian-American respondents had a significantly lower score than White/Caucasian respondents. Also at the national level, African-American and Asian-American respondents both had a significantly higher score for Social Perspective Taking than White/Caucasian respondents.

Table 7 shows differences in leadership-related outcomes. Public collective racial esteem is a measure by which white UW-Madison respondents scored significantly higher than non-white UW-Madison respondents. This outcome is based on responses to questions such as “overall, my racial group is considered good by others” and “in general, others respect my race.” This differs from private collective racial esteem, which is based on responses to questions like “in general, I’m glad to be a member of my racial group” and “I feel good about the racial group I belong to.” For this latter category, non-white UW-Madison respondents scored higher than white UW-Madison respondents. White UW-Madison respondents scored significantly higher than non-white UW-Madison respondents for all other outcomes shown in Table 7.

Table 7. Perceived leadership-related outcomes between UW-Madison respondents identifying as white and those who did not.

Outcome	White	Non-White	P Value
Private Racial Esteem	5.59	5.70	0.021
Public Racial Esteem	5.34	4.37	0.011
Identity Salience	3.09	4.68	0.673
Belonging Climate	3.83	3.53	0.001
Non-Discriminatory Climate, Overall	4.04	3.36	0.001
Non-Discriminatory Climate, Indirect	3.83	3.09	0.035
Non-Discriminatory Climate, Direct	4.25	3.63	0.003

Note: Yellow shaded cells with boldface text show scores that are significantly higher than the comparison cohort at a 95% level of confidence. Questions about the climate were scored on a scale of 1 to 5, ranging from “strongly disagree” to “strongly agree.” Questions about racial esteem and identity were scored on a scale of 1 to 7, ranging from “strongly disagree” to “strongly agree”.

While there were several significantly different scores regarding the ways in which white and non-white students perceived the environment at UW-Madison, these differences seem to have no effect on the social change - model outcomes. Tables 8 and 9 show lack of significant difference in all leadership outcomes.

Table 8. Perceived attainment of Social Change Model of Leadership outcomes between UW-Madison respondents identifying as white and those who did not.

Outcome	White	Non-White	P Value
Consciousness of Self	4.06	3.97	0.732
Congruence	4.28	4.17	0.506
Commitment	4.45	4.32	0.172
Collaboration	4.23	4.12	0.152
Controversy with Civility	4.24	4.25	0.833
Citizenship	3.94	4.01	0.486
Omnibus SRLS	4.20	4.14	0.231
Resiliency	3.86	3.82	0.322

Note: There is no difference in any of the social change model leadership outcomes between the broad groups of white and non-white. All outcomes were scored on a scale of 1 to 5, with all but resiliency ranging from “strongly disagree” to “strongly agree.” Resiliency ranged from “not true at all” to “true nearly all the time.”

Table 9. Perceived attainment of other leadership outcomes between UW-Madison respondents identifying as white and those who did not.

Outcome	White	Non-White	P Value
Leadership Efficacy	3.15	3.00	0.322
Complex Cognitive Skills	3.18	3.22	0.469
Social Perspective-Taking	3.82	3.88	0.703
Hope Agency	6.70	6.43	0.198
Hope Pathways	6.54	6.37	0.087

Note: There are no differences between white and non-white students on the other leadership outcomes. Leadership efficacy is on a scale of 1 to 4, ranging from “not at all confident” to “very confident.” Complex cognitive skill is on a scale of 1 to 5, ranging from “not grown at all” to “grown very much.” Social perspective taking is on a scale of 1 to 5, ranging from “does not describe me well” to “describes me very well.” Hope agency and pathways are on a scale of 1 to 8, ranging from “definitely false” to “definitely true.”

Comparison of the UW-Madison School of Business with UW-Madison

Table 10 shows how UW-Madison School of Business respondents compared with respondents from the general student body at UW-Madison. This table only shows those outcomes in which there was a statistically significant difference between the two cohorts. Cells with boldface text and are highlighted yellow are the measures by which UW-Madison School of Business respondents scored significantly higher than the respondents in the general student body. There were no measures by which the School of Business respondents scored significantly below the respondents from the general student body.

Findings from the School of Business show that those respondents scored significantly higher on consciousness of self. This suggests that undergraduate business students are more prone to believing they (1) are able to articulate their priorities, (2) are self-confident, (3) know themselves pretty well, (4) could describe their personality, (5) could describe how they are similar to other people, and (6) are comfortable expressing themselves. Related to this, business school students were more likely to take part in leadership training, with 42.2% of business students saying they participated in some sort of

leadership training (compared with 24.2% in the general UW-Madison population). 25 of these respondents participated in the Leadership Certificate Program (9 males and 16 females). It should be noted that students who complete some leadership training self-report they have a better sense of themselves once they complete the training (see custom questions).

Business students also scored higher on leadership efficacy, suggesting they are confident they can be successful (1) leading others, (2) organizing a group's tasks to achieve a common goal, (3) taking initiative to improve something, and (4) working with a team on a group project.

Hope agency was another outcome with significantly higher scores amongst business students. This suggests they are more prone to believing they (1) energetically pursue their goals, (2) were prepared well for the future by past experiences, (3) have been pretty successful in life, and (4) meet the goals that they set for themselves.

Finally, business students also scored higher on private collective racial esteem, suggesting they are (1) glad to be a member of their racial group and (2) feel good about the racial group they belong to.

Table 10. Leadership outcomes having a significantly different level of perceived attainment at the School of Business relative to the general student body.

Outcome	School of Business	UW-Madison
Consciousness of Self	4.16	4.05
Leadership Efficacy	3.34	3.14
Hope Agency	6.89	6.67
Private Collective Racial Esteem	5.86	5.57

Note: Yellow shaded cells with boldface text show scores that are significantly higher than UW-Madison at a 95% level of confidence. Consciousness of self was scored on a scale of 1 to 5, ranging from "strongly disagree" to "strongly agree." Leadership efficacy was on a scale of 1 to 4, ranging from "not at all confident" to "very confident." Hope agency was on a scale of 1 to 8, ranging from "definitely false" to "definitely true." Private collective racial esteem was on a scale of 1 to 7, ranging from "strongly disagree" to "strongly agree."

Business school respondents reported participation in leadership opportunities at a much higher rate than the respondents from the general student body (see Table 11). Based on responses to UW-Madison custom questions, they were more likely to participate in activities for the social reasons of meeting others with similar interests, maintaining and building friendships, and to help the community. They were also more likely to express professional/educational reasons as the reasons they participate such as to gain influence, being interested in the subject matter, because they were selected for participation, and because they saw it as good for their professional development. They were less likely, however, to participate as a stress outlet.

For reasons they did not participate, business school respondents were less likely to cite not knowing about opportunities, not having enough time, needing to focus on school and not seeing themselves as a leader. They were more likely to say that the opportunities provided did not meet their specific leadership needs.

Table 11. Business School participation in leadership activities

Opportunity	Business Respondents	Percent of Total Business Respondents	Percent of Total UW-Madison Respondents
Leadership Training of Any Kind	111	42.2%	25.7%
Leadership Certificate	26	9.9%	6.1%
Leadership Capstone	6	2.3%	1.2%

Comparison of the UW-Madison College of Engineering with UW-Madison

Table 12 shows how UW-Madison College of Engineering respondents compared with respondents from the general student body at UW-Madison. This table only shows those outcomes in which there was a statistically significant difference between the two cohorts. Cells with boldface text and are highlighted yellow are the measures by which UW-Madison College of Engineering respondents scored significantly higher than the respondents in the general student body. Cells that are highlighted red are the measures by which UW-Madison College of Engineering respondents scored significantly lower than the respondents in the general student body.

As a whole, students in the college of engineering scored lower on citizenship outcomes than students elsewhere on campus. This suggests that engineering students are less prone to (1) believing they have responsibilities to their community, (2) working with others to making their communities better places, (3) participating in activities that contribute to the common good, (4) valuing opportunities to that allow contribution to the community, (5) feeling it is important to play an active role in the community, and (6) believing their work has a greater purpose for the larger community.

As noted earlier, it is important to note that female students tend to score significantly higher on citizenship than male students. Remembering that the College of Engineering respondents were 72% male, we looked at gender-specific differences between the College of Engineering and UW-Madison. The results are shown in Table 13 for females and Table 14 for males. Male engineers did not score significantly lower than male non-engineers, and female engineers did not score significantly lower than non-engineering females. Thus, the significantly lower score for citizenship can be explained by the gender disparity.

Table 12. Leadership outcomes having a significantly different level of perceived attainment at the College of Engineering relative to the general student body.

Outcome	College of Engineering	UW-Madison
Citizenship	3.84	3.95
Hope Pathways	6.69	6.52

Note: Yellow shaded cells with boldface text show scores that are significantly higher than UW-Madison at a 95% level of confidence. Red shaded cells show scores that are significantly lower than UW-Madison at a 95% level of confidence. Citizenship was scored on a scale of 1 to 5, ranging from “strongly disagree” to “strongly agree.” Hope pathways was on a scale of 1 to 8, ranging from “definitely false” to “definitely true.”

Table 13. Leadership outcomes having a significantly different level of perceived attainment amongst females in the College of Engineering relative to females in the general student body.

Outcome	College of Engineering Female	UW-Madison Female
Citizenship	4.00	4.02
Hope Pathways	6.78	6.41

Note: Yellow shaded cells with boldface text show scores that are significantly higher than UW-Madison at a 95% level of confidence. Citizenship was scored on a scale of 1 to 5, ranging from “strongly disagree” to “strongly agree.” Hope pathways was on a scale of 1 to 8, ranging from “definitely false” to “definitely true.”

Table 14. Leadership outcomes having a significantly different level of perceived attainment amongst males in the College of Engineering relative to males in the general student body.

Outcome	College of Engineering Male	UW-Madison Male
Citizenship	3.78	3.84
Hope Pathways	6.65	6.67

Note: Yellow shaded cells with boldface text show scores that are significantly higher than UW-Madison at a 95% level of confidence. Citizenship was scored on a scale of 1 to 5, ranging from “strongly disagree” to “strongly agree.” Hope pathways was on a scale of 1 to 8, ranging from “definitely false” to “definitely true.”

Table 12 also shows that College of Engineering respondents scored greater on the hope pathways scale than respondents in the general student body, which means they are more prone to believing (1) there are many ways to get out of a jam, (2) there are lots of ways around any problem, (3) there are many ways to get the things in life that are important to them, and (4) they can find a way to solve a problem even when many others around them are discouraged. Again, because the engineering population is skewed towards males, we looked to see if this difference can be explained by the gender disparity. In this instance, male engineering students scored about the same as males from non-engineering disciplines (see Table 14), but female engineers scored significantly higher than females from non-engineering disciplines (see Table 13).

It is possible that the engineering school inherently teaches hope pathways more than the rest of the university because of the nature of engineering work. Engineers are typically faced with a problem and are tasked with developing steps to overcome said problem. However, why does this mentality and learning style seem to make more of a difference for females in engineering? When analyzing individual questions there were two in particular where engineering female students differed significantly from the non-engineering UW-Madison students. Female engineers answered more positively to the statements “There are lots of ways around any problem” and “I can think of many ways to get the things in life that are important to me”. Interestingly, the male engineering students scored below UW-Madison students in the latter.

Engineering students were less likely to participate in leadership training (see Table 15). Only 19.7% of engineering respondents, said they had leadership training of any kind (compared to 24.2% of the general UW-Madison student body). Engineering respondents were less likely to participate in leadership opportunities and extracurricular programs in general. Based on responses to UW-Madison’s custom questions, they were more likely to participate in activities if they had taken part in a similar activity in high school. They were more likely to say that they did not have time and that they needed to focus on school as reasons for not participating. These concerns seemed to over-ride interest since they were less likely to say that they did not participate because they did not know what was available or that they were not interested in the programs.

Table 15. Engineering respondents' leadership participation

Opportunity	Engineering Respondents	Percent of Total Engineering Respondents	Percent of Total UW-Madison Respondents
Leadership Training of Any Kind	86	19.6%	25.7%
Leadership Certificate	20	4.6%	6.1%
Leadership Capstone	2	0.5%	1.2%

Of the students who had leadership training, 36% were female and 62% were male. In engineering, a higher percentage of females participated in leadership training than were present in the general engineering population (36% compared to 28%). A similar result was observed for participation in the Leadership Certificate Program. Thus, we cannot ignore the influence of gender identity when looking at engineers' participation. Since those identifying as female were more likely to participate in leadership opportunities, the College of Engineering's participation numbers could be lower simply due to gendered participation.

Effects of Leadership Training

UW-Madison students indicated participation in a variety of leadership training programs (see Table 16), with more than a quarter indicating that they had received some form of leadership training. A subset of these students indicated participation in a leadership certificate, presumably the formal Leadership Certificate Program that is administered by the Center for Leadership & Involvement (CfLI). 19 students indicated participation in a leadership capstone experience. We are unaware of any formal capstone experiences in leadership, although there are numerous senior capstone experiences offered on campus. Perhaps this small number of students were thinking of these experiences when responding to this question.

Table 16. Number of UW-Madison Respondents that Indicated Participation in Leadership Training Opportunities.

Opportunity	Raw Number of Respondents	Percent of Total Respondents
Leadership Training of Any Kind	465	25.7%
Leadership Certificate	95	6.1%
Leadership Capstone	19	1.2%

Note – there were 1208 UW-Madison respondents that completed the survey.

Tables 17 through 19 show that some significant differences were observed for students who identified as participating in leadership training. These tables only show those outcomes in which there was a statistically significant difference between the two compared cohorts. There were no measures by which the trained respondents scored significantly below the respondents without training.

Table 17. Leadership outcomes having a significantly different level of perceived attainment amongst students with training of any kind and students without training of any kind.

Outcome	Leadership Training/Education	No Leadership Training/Education
Commitment	4.48	4.43
Citizenship	4.19	3.84
Hope Agency	6.90	6.62
Complex Cognitive Skills	3.30	3.13

Note: Yellow shaded cells with boldface text show scores that are significantly higher than the comparison group at a 95% level of confidence.

Table 18. Leadership outcomes having a significantly different level of perceived attainment amongst respondents in a leadership certificate program.

Outcome	Leadership Certificate	No Leadership Certificate	P Value
Consciousness of Self	4.21	4.06	0.529
Congruence	4.30	4.26	0.829
Commitment	4.48	4.44	0.438
Collaboration	4.24	4.23	0.629
Controversy with Civility	4.26	4.23	0.107
Citizenship	4.28	3.92	0.050
Omnibus SRLS	4.30	4.19	0.858
Resiliency	4.06	3.87	0.977

Note: Yellow shaded cells with boldface text show scores that are significantly higher than the comparison group at a 95% level of confidence.

Those who participated in the Leadership Certificate had higher citizenship scores than those who did not (see Table 18). The same was true of those who participated in any kind of leadership training when compared with those who had not (see Table 17). This suggests that students receiving leadership training are more prone to (1) believing they have responsibilities to their community, (2) working with others to making their communities better places, (3) participating in activities that contribute to the common good, (4) valuing opportunities to that allow contribution to the community, (5) feeling it is important to play an active role in the community, and (6) believing their work has a greater purpose for the larger community.

While there were more females than males participating in the leadership program, this was not a solely gender based phenomenon. Measures of citizenship among students who identify as female was significantly higher (at a 95% level of confidence), with a score of 4.3 for those who had taken the leadership certificate and 4.0 in those who had not.

Respondents who participated in an outdoor leadership program scored significantly higher than those who did not in measures of citizenship and resiliency (see Table 19). They also scored higher on several other leadership-related outcomes (see Table 20).

Table 19. Leadership outcomes having a significantly different level of perceived attainment amongst respondents who participated in an outdoor leadership program

Outcome	Outdoor Program	No Outdoor Program	P Value
Consciousness of Self	4.30	4.05	0.090
Congruence	4.37	4.23	0.365
Commitment	4.48	4.44	0.506
Collaboration	4.37	4.22	0.833
Controversy with Civility	4.37	4.22	0.818
Citizenship	4.28	3.92	0.018
Omnibus SRLS	4.36	4.19	0.402
Resiliency	4.13	3.87	0.016

Note: Yellow shaded cells with boldface text show scores that are significantly higher than the comparison group at a 95% level of confidence.

Table 20. Leadership related outcomes having a significantly different level of perceived attainment amongst respondents who participated in an outdoor leadership program

Outcome	Outdoor Program	No Outdoor Program	P Value
Leadership Efficacy	3.54	3.14	0.085
Complex Cognitive Skills	3.29	3.17	0.375
Social Perspective-Taking	3.93	3.81	0.025
Hope Agency	7.00	6.69	0.004
Hope Pathways	6.66	6.55	0.469

Note: Yellow shaded cells with boldface text show scores that are significantly higher than the comparison group at a 95% level of confidence. Leadership efficacy is on a scale of 1 to 4, ranging from “not at all confident” to “very confident.” Complex cognitive skill is on a scale of 1 to 5, ranging from “not grown at all” to “grown very much.” Social perspective taking is on a scale of 1 to 5, ranging from “does not describe me well” to “describes me very well.” Hope agency and pathways are on a scale of 1 to 8, ranging from “definitely false” to “definitely true.”

Students who identified as either having taken part or are actively taking part in a culminating senior experience also scored significantly higher on several measures (see Table 21). All of these measured variables seem to indicate that respondents who take part in a high-level academic experience learn the importance of committing to a project, and seeing it through to the end. All are attractive traits to employers and prospective graduate schools.

Table 21. Leadership outcomes having a significantly different level of perceived attainment amongst students with a culminating senior experience. This question was separate from leadership training, there was a total of 291 respondents who answered in the affirmative.

Outcome	Culminating Senior Experience	No Culminating Senior Experience
Commitment	4.54	4.43
Hope Pathways	6.70	6.53
Complex Cognitive Skills	3.42	3.14
Resilience	3.99	3.85

Note: Yellow shaded cells with boldface text show scores that are significantly higher than the comparison group at a 95% level of confidence.

Custom Questions

The 10 questions UW-Madison added to accompany the MSL were aimed at examining the reasons why students participate in leadership opportunities or campus organizations. Analysis of these indicate the ways in which UW-Madison leadership educators might increase marketing and participation. This section focuses on 6 of the 10 questions. Tabulated results for all 10 questions may be found in Appendix E.

Student Perception on Leadership as Something to be Learned and Shared

Figure 7 shows student conceptual perceptions about leadership as innate versus learned, as a process versus a position, and as shared versus individualized. Respondents saw leadership as something that can be learned and developed, and that leaders should have purpose, meaning and values. While there are still a number of people who think leadership is not something which can be taught, this result suggests there is a potentially receptive audience to the offering of leadership training activities on campus.

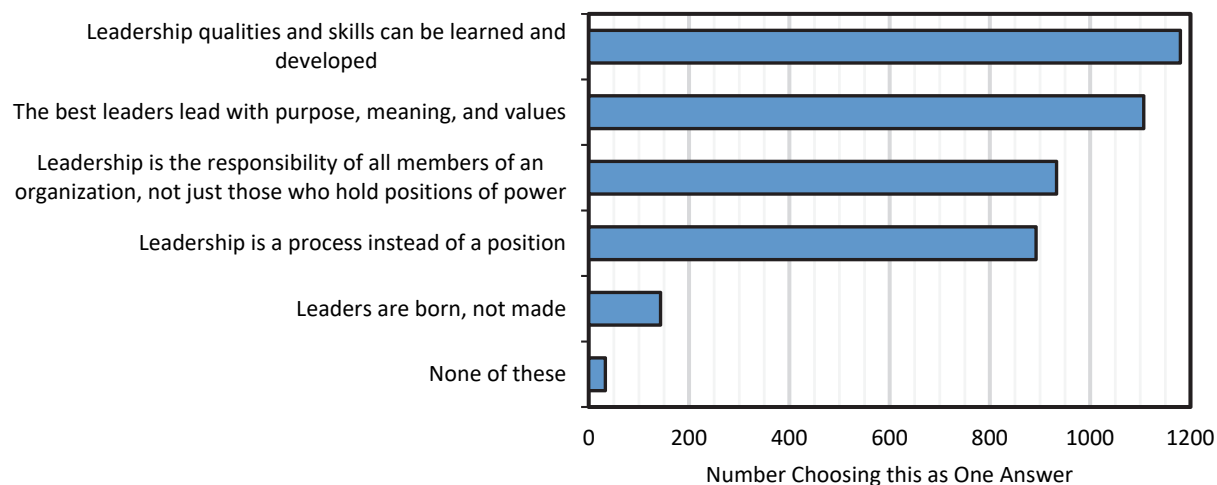


Figure 7. Student responses to the prompt “please select the statement(s) that resonate the most with how you view leadership.”

Student Perception on Definition of Leadership

Figure 8 shows student perceptions on alternative definitions of leadership. They also see leadership as a process involving many people, indicating that they believe the best way to learn leadership is to be presented with leadership opportunities.

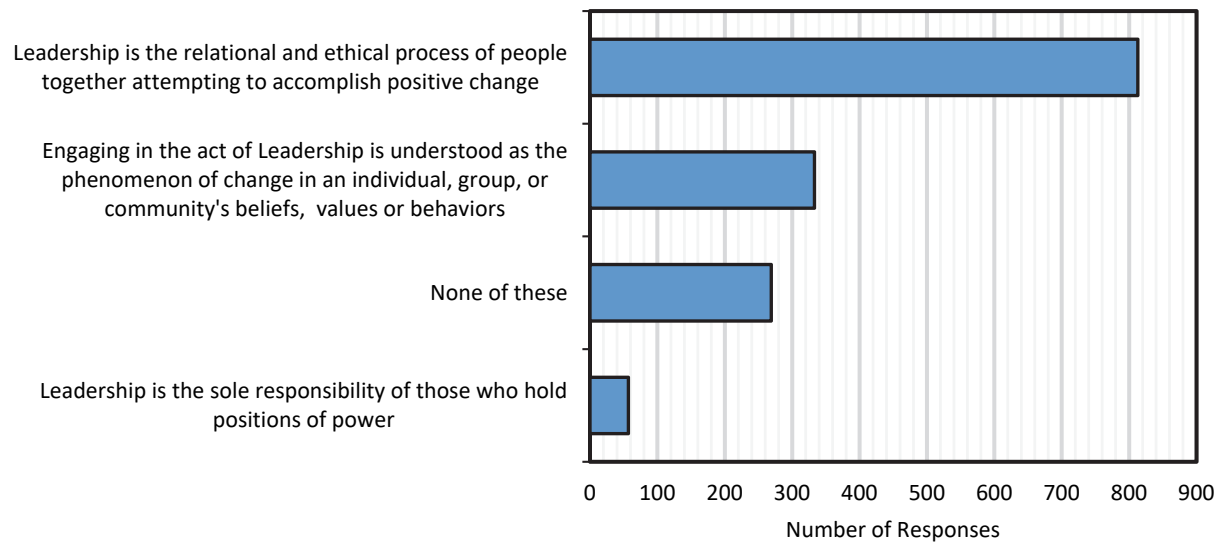


Figure 8. Student responses to the prompt “please select a definition from the list below that most closely aligns with your definition of leadership.”

Inhibitors to Student Participation in Leadership Development Opportunities

Figure 9 shows some of the reasons given by students when asked why they do not participate in leadership development activities. If students have not participated in leadership, they cite lack of time and a need to focus on school as the primary reasons. Because UW-Madison students value commitment highly (scoring significantly higher than the national sample and both MSL assigned peer groups), it is possible that this leadership quality prevents them from taking on other time-consuming activities they may see as interfering with their previous commitments to school, work, family and other activities. Campus leadership programs may benefit from advertising their services as part of an over-all academic commitment, or as something easily added to an already busy schedule.

For the responses most frequently cited as inhibitors to participation, there was little difference between males and females. For the least frequently cited inhibitors, there were significant differences between male and female respondents. Respondents identifying as male were more likely to say that they are not interested in becoming a leader and that the leadership programs offered are not of interest (see Table 22). Respondents identifying as female, on the other hand, are more likely to cite not having enough opportunities on campus and that they don’t identify as a leader as reasons they have not participated.

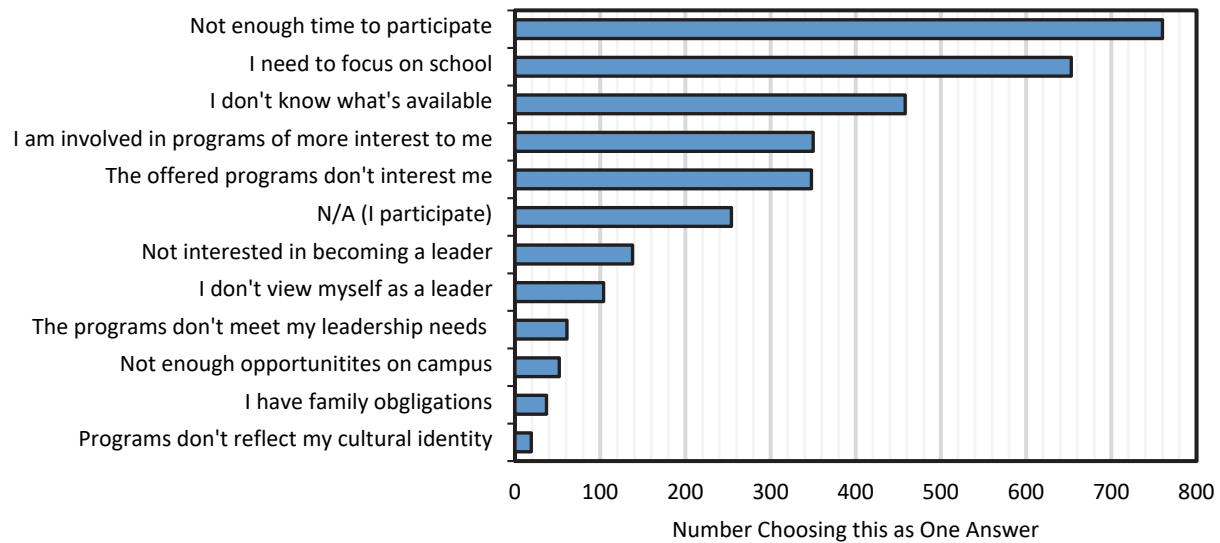


Figure 9. Student responses to the prompt “if you haven't participated in development opportunities on campus, why not?”

Table 22. Gender influences on reasons for not participating in leadership development opportunities

Reason for Not participating	Male	Female	P Value
Not enough time to participate	0.51	0.51	0.790
I need to focus on my school work	0.44	0.43	0.818
I don't know what's available	0.30	0.31	0.282
I am involved in programs of more interest to me	0.23	0.24	0.850
The offered programs don't interest me	0.29	0.19	< 0.001
Not Applicable – I participate	0.14	0.19	< 0.001
Not interested in becoming a leader	0.10	0.08	0.026
I don't view myself as a leader	0.05	0.08	< 0.001
The programs don't meet my leadership needs	0.06	0.02	< 0.001
Not enough opportunities	0.03	0.04	0.004
I have family obligations	0.02	0.02	0.946
Programs don't reflect my cultural identity	0.02	0.01	< 0.001

Note: Values in the Male and Female columns represent the percentage of students that selected this statement as reasons for not participating in leadership development opportunities. A value of 1 would indicate that the statement resonated with all respondents and a value of 0 would indicate that the statement resonated with no respondents. Yellow shaded cells with boldface text show scores that are significantly higher than the comparison group at a 95% level of confidence.

Motivators to Student Participation in Leadership Development Opportunities

In contrast to Figure 9, Figure 10 shows some of the reasons listed as motivating factors for participating in student leadership development. The most popular reasons in descending order to participate in leadership opportunities or student organizations is to meet other students with similar interests, interest in the subject, and to have fun. Alternatively, the least popular reasons were working for political/social change, selection for participation, and gaining recognition. Student organizations specializing in social/political change may wish to develop recruiting strategies that target the more popular reasons for joining an organization.

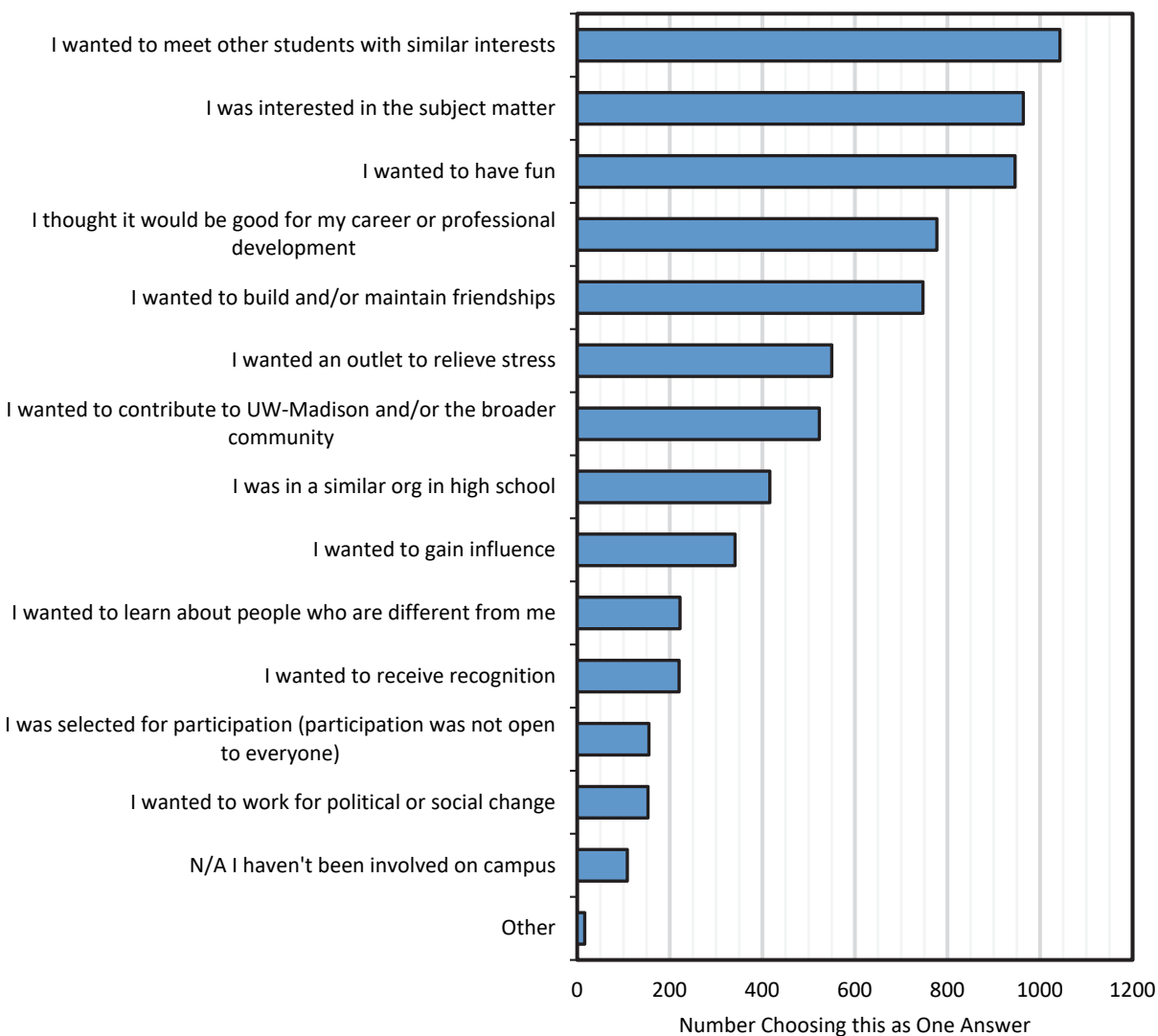


Figure 10. Student responses to the prompt “if you’ve been involved (student organizations, athletic team, employment, volunteering, etc.), what motivated you to participate?”

Respondents identifying as female in the survey were more likely to cite social reasons for participating, such as meeting other students with similar interests, working for social/political change, learning about people different from them, and contributing to the community (see Table 23). They were also more likely to think that participating would be good for their career or to relieve stress. Respondents identifying as male were more likely to want to have fun.

Table 23. Gender influence on motivation to be involved.

Reason for Participating	Male	Female	P Value
I wanted to meet other students with similar interests	0.66	0.72	< 0.001
I was interested in the subject matter	0.61	0.67	< 0.001
I wanted to have fun	0.65	0.61	< 0.001
I thought it would be good for my career or professional development	0.47	0.56	0.037
I wanted to build and/or maintain friendships	0.44	0.55	0.313
I wanted an outlet to relieve stress	0.34	0.39	0.001
I wanted to contribute to UW-Madison and/or the broader community	0.29	0.40	< 0.001
I was in a similar organization in high school	0.28	0.28	0.850
I wanted to gain Influence	0.22	0.23	0.581
I wanted to learn about people who are different from me	0.12	0.17	0.000
I wanted to receive recognition	0.15	0.14	0.162
I was selected for participation (participation was not open to everyone)	0.10	0.11	0.278
I wanted to work for political or social change	0.08	0.12	0.000
N/A I haven't been involved on campus	0.08	0.07	0.405

Note: Values in the Male and Female columns represent the percentage of students that selected this statement as motivation for being involved. A value of 1 would indicate that the statement resonated with all respondents and a value of 0 would indicate that the statement resonated with no respondents. Yellow shaded cells with boldface text show scores that are significantly higher than the comparison group at a 95% level of confidence.

Exposure to Leadership Values and Competencies from the UW-Madison Leadership Framework

Figure 11 shows student perceptions on whether they were exposed to values and competencies of the UW-Madison Leadership Framework, even if they had not participated in a development activity that specifically used the framework as a basis. Students feel they gained integrity, self-awareness and decision making from leadership development. It may be interesting to explore if these take-aways were the type of insights students were looking to develop when they signed up for leadership activities, or if these are the unexpected benefits of participation. The number of students who chose “none of these” is consistent with the number of students who answered that they had never participated in UW-Madison leadership development opportunities.

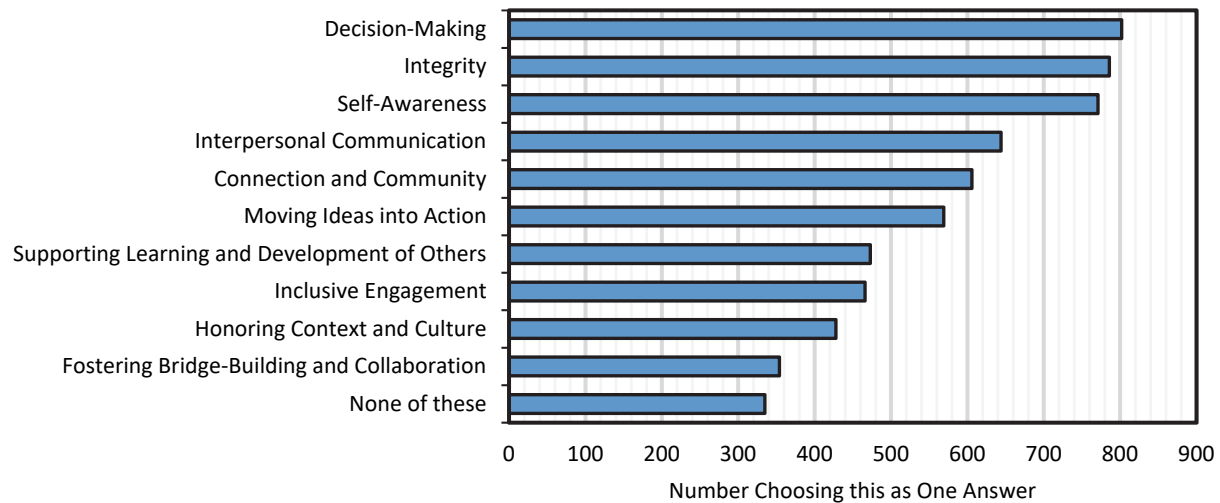


Figure 11. Student responses to the prompt “which of the following values and competencies from UW-Madison’s Leadership Framework have you been exposed to through a leadership development opportunity (class, workshop, program, etc.)?”

Volunteering experiences

Table 24 and Figure 12 illustrate how UW-Madison students felt they were shaped by volunteer work. The most common outcomes were increased self-awareness and awareness of community issues. Respondents who identified as female were statistically more likely to choose any of these answers than males except for “political and social action skills”, for which gender differences were not statistically significant. However, females are more likely to have taken part in volunteer experiences.

Table 24. Gender influence on enhanced outcomes of volunteer experiences.

Enhanced Characteristic	Male	Female	P Value
Self-Awareness	0.45	0.64	< 0.001
Awareness of community issues	0.44	0.65	< 0.001
Understanding of diversity	0.37	0.53	< 0.001
Interest in serving others in my own community	0.37	0.51	< 0.001
Leadership skills and my understanding of what it takes to be a leader	0.40	0.48	< 0.001
Interest in serving others in communities other than my own	0.27	0.42	< 0.001
Understanding of civic responsibility	0.27	0.35	< 0.001
N/A I don’t volunteer	0.28	0.16	< 0.001
Political and social action skills	0.21	0.23	0.450

Note: Values in the Male and Female columns represent the percentage of students that selected this statement as an enhanced outcome from volunteering in the community. A value of 1 would indicate that the statement resonated with all respondents and a value of 0 would indicate that the statement resonated with no respondents.

Yellow shaded cells with boldface text show scores that are significantly higher than the comparison group at a 95% level of confidence.

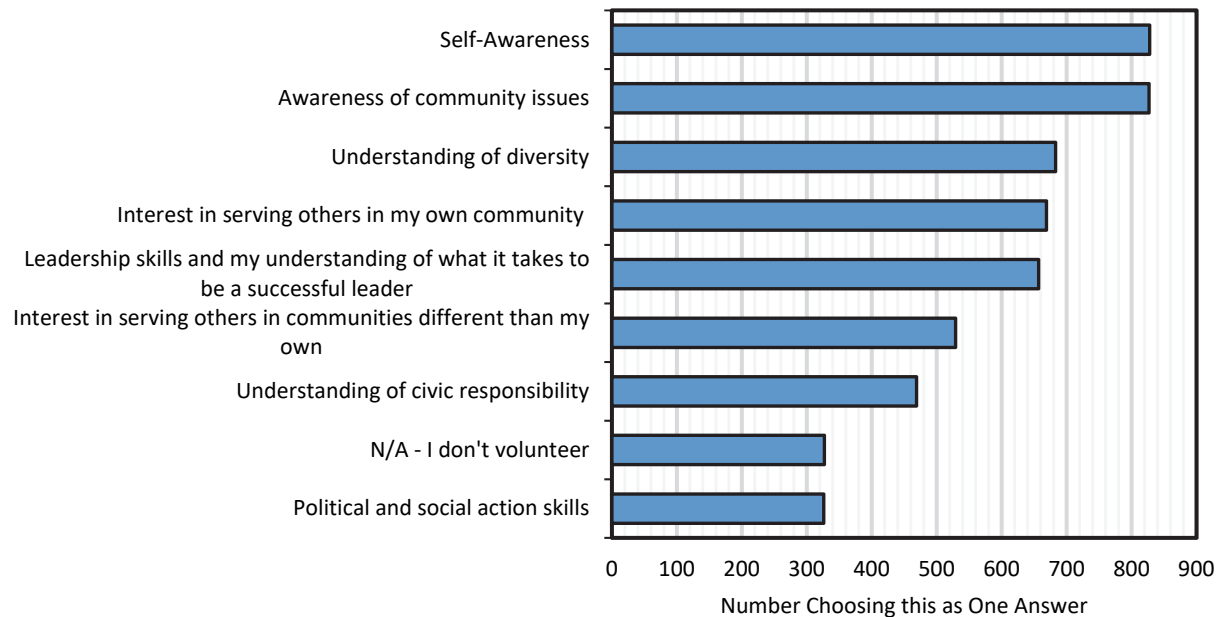


Figure 12. Student responses to the prompt “I believe that my volunteer experiences in the community (service learning, community service, work-study programs, and/or volunteering) have enhanced the following:”

Conclusions

When compared with other institutions, UW-Madison as a whole is fairly well-stocked with respondents who perceive themselves as having the attributes represented by the social change leadership model. The difference was more pronounced for our custom peer institutions than it was for other institutions in the Carnegie class and in general. Gender comparisons at UW-Madison mirrored the comparisons at other participating institutions, with female respondents scoring higher than male respondents on most of the social change model attributes. Exceptions were with resiliency and hope pathways.

In reviewing the data internally, within the institution, there are many factors which impact leadership outcomes as measured by the MSL. One of these is gender, with females scoring higher on almost all of the social change leadership outcomes and males scoring higher on resiliency and hope pathways. Race, when quantified as white students compared to non-white students, does not seem to affect the leadership outcomes despite being an important factor in the way in which respondents perceive and experience the campus community and climate. We were unable to make subgroup conclusions on race, sexual orientation, and first-generation student status due to an insufficient number of participating students in these subgroups. Economic status and gender identity were not included as variables by MSL.

UW-Madison School of Business respondents generally mirror the general student body in both demographics and most leadership outcomes. The key differences were with consciousness of self, leadership efficacy, hope agency, and private collective racial esteem. Business students had higher scores on these outcomes.

UW-Madison College of Engineering respondents did not mirror the general student body with respect to demographics, but did mirror the general student body with most leadership outcomes.

Without considering gender, engineering respondents scored lower on the citizenship outcome and higher on the hope pathways outcome. By comparing female engineering respondents with female respondents in the general student body and doing the analogous comparison for male students, the results showed that gender demographics explained the overall difference between engineering students and the general student body. Female engineers were more likely to have higher scores on hope pathways, complex cognitive skills, and social perspective taking than the general female population. Male engineers were observed to have no difference with the general male population.

When compared with respondents that did not have leadership training of any kind, respondents who had at least some leadership training scored higher with commitment, citizenship, hope agency, and complex cognitive skills. A similar analysis of respondents in the leadership certificate program showed that those students scored higher with citizenship. Respondents participating in the outdoor leadership program scored higher in citizenship, resiliency, social perspective taking and hope agency. A similar analysis of respondents in senior-level culminating experiences showed that those students scored higher with commitment, hope pathways, complex cognitive skills, and resilience.

Respondents to the custom questions revealed:

- The most common reason for participating in involvement opportunities was social interaction, while the most common reason for not participating was lack of available time.
- Leadership training is effective at exposing students to the values and competencies of the UW-Madison Leadership Framework.

Recommendations

The recommendations below are intended to serve as a guide for University of Wisconsin-Madison leadership educators and campus stakeholders, and are driven by the conclusions noted above. The recommendations have been grouped into categories to encourage specific action that would enhance the institution's leadership development efforts.

Leadership Development Program Content

These recommendations serve as a guide to leadership development program providers – both curricular and co-curricular. In this specific section, connections are also made, where appropriate, to the principles, values and competencies of the UW-Madison's Leadership Framework (Appendix C), which serves as a tool to ensure educational efforts are guided by leadership research and theory.

- Orient participants to leadership through connections to leadership definitions, theories or models – preferably using the principles, values, competencies, and outcomes of the UW-Madison Leadership Framework.
- Highlight distinctions between leadership and authority and indicate role and value of authority when possible. This aligns with the 1st Principle of the UW-Madison Leadership Framework.
- Integrate content and reflection into leadership development opportunities for participants, especially majority participants, which explore social identities and build capacity for connecting across difference. This aligns with the UW-Madison Leadership Framework's value of Inclusive Engagement and its competencies of Self-Awareness and Honoring Context and Culture.
- Engage in programming that generates personal and collective commitment to leadership for the purpose of enhancing the UW-Madison campus climate. This aligns with the UW-Madison

Leadership Framework's value of Inclusive Engagement and its competency of Moving Ideas into Action.

- Integrate purpose driven leadership experiences into curricular and co-curricular programming, beyond focusing on individual development – engage in leadership for the purpose of change in beliefs, values and behaviors. This aligns with the 3rd Principle of the UW-Madison Leadership Framework.
- Launch students into post-graduate careers with a culminating capstone experience in their academic field of study, with leadership programming included in that capstone experience. This aligns with the UW-Madison Leadership Framework's value of Connection and Community and its competency of Moving Ideas into Action.

Leadership Development Program Outreach

The following recommendations highlight opportunities for recruiting, advertising, and marketing to help advance leadership development efforts.

- Advertise the social connections, community and fun aspects of leadership development opportunities as a way to broaden appeal.
- Target outreach to increase participation of male students in programming, including the Leadership Certificate program.
- Highlight program connections to leadership and encourage students to track involvement using the Wisconsin Involvement Network's (WIN) Leadership & Involvement Record.
 - Support university efforts, in partnership with the Registrar's office, to develop a co-curricular transcript that further validates the value of involvement.

UW-Madison's Participation with MSL

The recommendations contained in the items below outline opportunities for UW-Madison to systemically engage with this study on a consistent basis.

- Continue long-term participation in the 3-year cycle by deepening partnerships with campus stakeholders to secure funding and support data analysis. Explore connection with the Academic Planning and Institutional Research office to consider campus improvements related to leadership and engagement.
 - The next cycle includes registration for MSL 2018 by approximately June 30, 2017; identification of participating campus subgroups by approximately August 15, 2017; identification of custom questions by approximately October 1, 2017; and initiation of student survey work in Spring 2018.
 - Costs of participating in MSL 2018 are approximately \$4,000 with additional costs of data analysis in Calendar Year 2019. The magnitude of the additional costs depends on the depth of data analysis to be conducted. The cost of analyzing MSL 2015 outcomes beyond the analysis provided by MSL has been approximately \$5,000. Our MSL 2015 analysis did not include an examination of campus environment variables and their correlation to outcomes.
- Map UW-Madison's Leadership Framework (and potentially the Essential Learning Outcomes) to the MSL model – similar to what has been done with other models including Servant Leadership,

Authentic Leadership, etc. prior to the 2018 survey cycle so that data can be viewed with these connections in mind.

- Systematically evaluate all leadership framework principles, values, competencies, and outcomes to determine potential links to specific MSL questions.
- Evaluate differences between institutions for experience variables such as student participation in student organizations, faculty/staff mentorship programs, and peer-to-peer dialog. Because this data is available in MSL, we recommend that UW-Madison investigate this data to determine if these factors are related to differences in leadership outcomes.
- Determine custom questions that can be consistently incorporated into the MSL survey cycle that would provide baseline data for longitudinal analysis.
- Review the above recommendations after forthcoming MSL cycles to assess whether new strategies and program enhancements improve attainment of MSL outcomes. Include appropriate examples that demonstrate the value of participating in MSL.

Improvements to MSL Survey and Data

These recommendations are for the MSL survey team and their partners to enhance the survey experience and ensure collected data are as beneficial as possible to participating institutions, including UW-Madison.

- Pair custom questions with the rest of the data so that we can examine demographic effects on student thoughts about leadership.
 - See if there are any differences between the general student body and comparison groups within the student body (e.g., the School of Business and the College of Engineering).
- Create different primary identifiers for each cohort taking the survey (e.g., the general student body and the comparison groups within the student body) or create a solution that produces the same outcome. This applies to the MSL-generated questions and the university-specific custom questions.
- Provide participants with the ability to respond to more detailed questions related to leadership training and education, regardless of their response to if they have participated in leadership training and education. Some of the more detailed options may not be initially considered as “leadership” training or education (ex. “Short Term Service Immersion”, “Outdoor Adventure Learning Program”).
- Map other Leadership Models more fully to the MSL model (e.g., other traits of Servant Leadership).

Additional Research Opportunities

The recommendations in this section identify additional research areas that would further extend our understanding of leadership development at UW-Madison.

- Explore possible reasons that limit male student participation in leadership programs with the hope of using this data to increase male participation rates.
- Further study small campus populations (students of color, LGBT, 1st Gen, low income, etc.) to strengthen statistical significance to better understand their leadership experiences.

Next Steps

A subset of UW-Madison's MSL Planning Team plans to share these survey findings and recommendations with a cross section of campus and community stakeholders. This effort will increase the likelihood of this data being applied to enhance leadership education at UW-Madison. Potential stakeholders that would benefit from these presentations include, but are not limited to, Academic Planning & Institutional Research, WISCAPE, Pieper Family Foundation Servant Leadership Chairs, Vice Provost for Teaching & Learning, Registered Student Organization Advisors and campus leadership centers. Events at which presentations could be given include but are not limited to Teaching & Learning Symposium, Showcase, and Teaching Academy.

Resources

1. Tyree, T. (1998) Designing an Instrument to Measure Socially Responsible Leadership Using the Social Change Model of Leadership Development. *Dissertation Abstracts International*, 59(6), 1945. (http://wabash.edu/news/displaystory.cfm?news_ID=2647)
2. Wagner, W. (2006) Social Change Model of Leadership: a brief overview. *Concepts & Collections*, 15(1), 8-10.
3. Anaya, G. (1999) College impact on student learning: comparing the use of self-reported gains, standardized test scores, and college grades. *Research in Higher Education*, 40, 499-526.
4. Astin, A. W. (1993) *What matters in college: Four critical years revisited*. San Francisco: Jossey-Bass.
5. Bauer, K. (1992) Self-reported gains in academic and social skills. *Journal of College Student Development*, 33, 492-498.
6. Crowne, D. P., & Marlowe, D. (1960) A new scale of social desirability independent of psychopathology. *Journal of Consulting Psychology*, 24(4) 349-354.
7. Gonyea, R. M. (2005) Self-reported data in institutional research: review and recommendations. In P. D. Umbach (Ed.) *Survey research: Emerging issues. New Directions for Institutional Research*, No. 127, pp. 73-89. San Francisco: Jossey-Bass.
8. Pace, C. R., Barahona, D., & Kaplan, D. (1985) The credibility of student self-reports. Los Angeles: Center for the Study of Evaluation.
9. Pike, G. R. (1995) The relationship between self-reports of college experiences and achievement test scores. *Research in Higher Education*, 36, 1-21.



2015
Multi-Institutional Study of Leadership

Appendix A
General & Sub-Study Outcomes



**MULTI-INSTITUTIONAL STUDY OF
LEADERSHIP**

2015

School Report



**General and Sub-Study
Outcomes**

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General and Sub-Study Outcomes

This report provides key information on your students' reported achievement across the general and sub-study outcomes in the MSL. It also provides statistical tests to determine the extent to which your students score significantly differently than their peers in the comparison groups that you've selected. In addition to the general and sub-study outcomes, this report also includes the MSL Delta Measure tables, which provide a change over time analysis focused on outcome achievement for seniors at your school (for community colleges, this measure has been adapted to include all students in your sample).

Reading the Tables

Please consider the following when reviewing tables:

- The blue column in each table represents the results for your random sample respondents only.
- Different measures use different size scales. Please consult the header for each major variable to determine the scaling. For example, some measures may be built on a 4, 5, or 7-point scale, and thus a mean of 4 will be interpreted very differently from one scale to another.
- In tests of significance, a boxed 'S' indicates the result is statistically significant at the .01 level.
- For statistically significant results, effect sizes are calculated and reported as 'trivial,' 'small,' 'moderate,' or 'large.' We recommend that you examine closely any results with effect sizes of small or greater.
- Cells populated with a period indicate that an insufficient number of respondents, less than 15, answered that particular question for analyses to be conducted. The MSL requires 15 cases for a statistic to be reported to ensure respondent confidentiality as well as appropriate interpretations of the data are made. Basing a finding off of fewer than 15 cases may lead to erroneous conclusions.
- The data presented in these tables include all responses received from respondents in the survey for each item or measure. In some places, where individual items were missing (item missing data), composite measures were not calculated. To help identify cases in the data with high rates of missing data, we have calculated a variable called CORE_PCT (CORE variable percentage). This variable will consist of a proportion of CORE variables with responses over the total number of CORE variables. This measure will be included in the analytic data file and may be used to filter specific cases with various levels of completeness.

The General and Sub-Study Outcomes Tables

This table describes students' capacities across core outcomes and substudy outcomes in the MSL. Data represent your random sample, the MSL National Sample, and other benchmark/comparison sample groups pre-selected by your institution for inclusion in this report. Statistical tests of differences are provided comparing your general population data with data from each of your comparison groups using independent samples *t*-tests. Results in this section are useful for:

- benchmarking student capacity from your random sample with that of students in selected benchmark/ comparison sample groups, and
- determining potential outcome areas that should be targeted for further development.

Mean (M): Represents the average score for all cases on an outcome measure with higher number indicating greater capacity.

Standard Deviation (SD): Indicator of the variation of the distribution from the mean.

Sig: Provides the results of an independent samples t-test to determine whether the mean for this comparison group is significantly different than the mean in the blue column (general population sample); significance is determined at the .01 level

Effect: Indicates the effect size, or magnitude, of any significantly different results

General Outcome Measure Scores and Comparisons

University of MSL2015				MSL National Sample				Coalition: Catholic				Custom Pk: 999999				MSL2012 School Data: 999999				Comparative Sample 1			
	M	SD		M	SD	Sig	Effect	M	SD	Sig	Effect	M	SD	Sig	Effect	M	SD	Sig	Effect	M	SD	Sig	Effect
Social Change Model Leadership Outcomes																							
Scored on a 5-point scale ranging from Strongly Disagree (1) to Strongly Agree (5)																							
Consciousness of Self	4.05	0.61		4.05	0.61			4.07	0.61			4.08	0.63			4.12	0.57	S	-	4.10	0.61		
Congruence	4.27	0.56		4.24	0.57			4.26	0.56			4.27	0.56			4.28	0.54			4.33	0.51		
Commitment	4.42	0.49		4.40	0.51			4.42	0.51			4.41	0.52			4.42	0.49			4.48	0.45		
Collaboration	4.21	0.53		4.18	0.54			4.21	0.54			4.21	0.55			4.23	0.52			4.26	0.52		
Controversy with Civility	4.29	0.51		4.23	0.53	S	-	4.24	0.53	S	-	4.26	0.55			4.27	0.52			4.34	0.49		
Citizenship	4.00	0.67		3.94	0.68	S	-	4.00	0.66			4.01	0.69			4.04	0.65			4.06	0.64		
Resiliency	3.88	0.67		3.88	0.65			3.90	0.65			3.90	0.66			3.98	0.64	S	-	3.96	0.63	S	-
Omnibus SRLS	4.20	0.47		4.17	0.48	S	-	4.20	0.48			4.20	0.49			4.22	0.46			4.26	0.45		
Scored on a 4-point scale ranging from Not At All Confident (1) to Very Confident (4)																							
Leadership Efficacy	3.12	0.67		3.12	0.66			3.15	0.65			3.16	0.66			3.15	0.64			3.16	0.65		
Scored on a 4-point scale ranging from Not Grown At All (1) to Grown Very Much (4)																							
Complex Cognitive Skills	3.17	0.62		3.18	0.62			3.20	0.61			3.21	0.62			3.16	0.62			3.29	0.60	S	-
Scored on a 5-point scale from Does Not Describe Me Well (1) to Describes Me Very Well (5)																							
Social Perspective-Taking	3.96	0.72		3.88	0.74	S	-	3.89	0.73	S	-	3.92	0.74			3.94	0.72			4.05	0.68	S	-
Significance: S = p < .01 Effect Sizes: Trivial - Small ○ Moderate ◐ Large ●																							

Indicator of effect size: A dash indicates the effect is trivial, a white circle indicates a small effect, a half filled circle is a moderate effect, and a fully shaded circle is a large effect

Be sure to check the scaling for each measure before interpreting the mean scores

The presence of an 'S' indicates that the difference between this comparison group mean and the general population mean is statistically significant.

MSL2015 General Outcomes

University of Wisconsin-Madison			MSL National Sample				Comparative Sample 1				Comparative Sample 2				Carnegie Peers: Very High Research				Custom Peer: 240444			
	M	SD	M	SD	Sig	Effect	M	SD	Sig	Effect	M	SD	Sig	Effect	M	SD	Sig	Effect	M	SD	Sig	Effect
Social Change Model of Leadership Outcomes																						
<i>Scored on a 5-point scale ranging from Strongly Disagree (1) to Strongly Agree (5)</i>																						
Consciousness of Self	4.05	0.59	4.05	0.61			4.16	0.54	S	-	4.03	0.63			4.01	0.61			3.97	0.61	S	-
Congruence	4.26	0.52	4.24	0.57			4.25	0.48			4.23	0.53			4.22	0.56			4.19	0.57	S	-
Commitment	4.44	0.46	4.40	0.51	S	-	4.50	0.42			4.44	0.47			4.38	0.51	S	-	4.34	0.52	S	-
Collaboration	4.22	0.49	4.18	0.54			4.29	0.45			4.23	0.47			4.16	0.54	S	-	4.13	0.54	S	-
Controversy with Civility	4.24	0.49	4.23	0.53			4.22	0.46			4.19	0.48			4.21	0.53			4.18	0.53	S	-
Citizenship	3.95	0.68	3.94	0.68			3.98	0.63			3.84	0.66	S	-	3.92	0.69			3.86	0.69	S	-
Omnibus SRLS	4.19	0.44	4.17	0.48			4.23	0.40			4.16	0.43			4.15	0.48	S	-	4.11	0.47	S	-
Resiliency	3.86	0.62	3.88	0.65			3.95	0.58			3.92	0.61			3.84	0.65			3.81	0.64		
<i>Scored on a 4-point scale ranging from Not At All Confident (1) to Very Confident (4)</i>																						
Leadership Efficacy	3.14	0.63	3.12	0.66			3.34	0.58	S	○	3.15	0.61			3.10	0.65			3.08	0.65	S	-
<i>Scored on a 4-point scale ranging from Not Grown At All (1) to Grown Very Much (4)</i>																						
Complex Cognitive Skills	3.19	0.61	3.18	0.62			3.23	0.57			3.13	0.61			3.15	0.62			3.09	0.63	S	-
<i>Scored on a 5-point scale from Does Not Describe Me Well (1) to Describes Me Very Well (5)</i>																						
Social Perspective-Taking	3.83	0.71	3.88	0.74			3.74	0.72			3.75	0.75			3.85	0.74			3.82	0.73		
<i>Scored on an 8-point scale ranging from Definitely False (1) to Definitely True (8)</i>																						
Hope (Agency)	6.67	1.04	6.62	1.06			6.89	0.88	S	○	6.72	1.06			6.56	1.09	S	-	6.47	1.13	S	-
Hope (Pathways)	6.52	0.94	6.50	1.00			6.56	0.92			6.69	0.91	S	-	6.46	1.00			6.39	1.01	S	-
Significance: S = p < .01 Effect Sizes: Trivial - Small ○ Moderate ◐ Large ●																						

MSL2015 Sub-Study Outcomes

University of Wisconsin-Madison				MSL National Sample				Comparative Sample 1				Comparative Sample 2				Carnegie Peers: Very High Research				Custom Peer: 240444			
	M	SD		M	SD	Sig	Effect	M	SD	Sig	Effect	M	SD	Sig	Effect	M	SD	Sig	Effect	M	SD	Sig	Effect
Sub-Study Outcome Measure Scores and Comparisons																							
<i>Scored on a 4-point scale ranging from Never (1) to Very Often (4)</i>																							
Spirituality: Search for Meaning	1.55	0.83		1.66	0.83	S	-	1.49	0.80			1.40	0.83			1.59	0.83			1.54	0.82		
<i>Scored on a 7-point scale ranging from Strongly Disagree (1) to Strongly Agree (7)</i>																							
Private Collective Racial Esteem	5.57	1.03		5.52	1.10			5.86	0.93	S	○	5.50	1.08			5.47	1.10			5.50	1.09		
Public Collective Racial Esteem	5.19	1.15		4.94	1.22	S	○	5.50	1.19			5.08	1.14			4.97	1.22	S	-	4.96	1.24	S	-
Importance to Identity	3.29	1.36		3.59	1.41	S	○	3.51	1.42			3.07	1.30			3.50	1.45	S	-	3.65	1.45	S	○
Significance: S = p < .01 Effect Sizes: Trivial - Small ○ Moderate ◐ Large ●																							

The MSL Delta Measure: Change Over Time

This table describes changes in students' perceived capacities across core outcomes in the MSL and is limited to those students who have experienced the campus environment for the longest duration – respondents who identified as seniors and beyond (omitting graduate students). All MSL respondents are asked to retrospectively report on their capacities prior to college as well as present capacities. This table specifically analyzes only data provided by students who indicated they are in their senior year. Data represent seniors in your random sample, the MSL National Sample, and other benchmark/comparison sample groups pre-selected by your institution for inclusion in this report. Data in the blue columns represent seniors from your institution's random sample. Statistical tests in this table examine differences in the reported capacities of seniors prior to the start of college and currently. This is done using paired samples *t*-tests. Similar tests are provided for seniors in each of your comparison groups. The presence of an 'S' symbol indicates the differences are significant at the .01 level: the rate of change in students' capacities is above and beyond simple chance. Results in this section are useful for:

- determining the degree to which students change in their capacity across key outcomes while in college,
- identifying the extent to which outcomes of focus for your institution reflect developmental gains, and
- benchmarking against comparison groups to see where your students are either mirroring patterns of significant difference or demonstrating unique patterns.

Mean (M): Represents the average score for all cases on an outcome measure with higher number indicating greater capacity.

Standard Deviation (SD): Indicator of the variation of the distribution from the mean.

Sig: Provides the results of an independent samples t-test to determine whether the mean for this comparison group is significantly different than the mean in the blue column (general population sample); significance is determined at the .01 level

Effect: Indicates the effect size, or magnitude, of any significantly different results

MSL2015 Delta Measure: Change Over Time

University of MSL2015	MSL National Sample			Coalition: Catholic			Custom Peer: 999999			MSL2012 School Data: 999999			Comparative Sample 1			
M	SD	Sig	Effect	M	SD	Sig	Effect	M	SD	Sig	Effect	M	SD	Sig	Effect	
Social Change Model of Leadership Outcomes																
Scored on a 5-point scale ranging from Strongly Disagree (1) to Strongly Agree (5); please note separate scale for Resiliency																
Consciousness of Self																
Prior to College	3.41	1.05	S	●	3.45	1.00	S	●	3.48	0.99	S	●	3.44	1.02	S	●
Senior Year	4.15	0.61	S	●	4.13	0.58	S	●	4.17	0.57	S	●	4.18	0.58	S	●
Congruence																
Prior to College	3.84	0.98	S	●	3.92	0.86	S	●	3.94	0.86	S	●	3.92	0.87	S	●
Senior Year	4.33	0.56	S	●	4.29	0.55	S	●	4.32	0.54	S	●	4.30	0.55	S	●

Seniors' perceived capacity on outcome measure prior to college

Seniors' perceived capacity on outcome measure during spring semester senior year

Indicator of effect size: A dash indicates the effect is trivial, a white circle indicates a small effect, a half filled circle is a moderate effect, and a fully shaded circle is a large effect

Be sure to check the scaling for each measure before interpreting the mean scores

The presence of an 'S' indicates that the difference between this comparison group mean and the general population mean is statistically significant.

MSL2015 Delta Measure: Change Over Time

University of Wisconsin-Madison				MSL National Sample				Comparative Sample 1				Comparative Sample 2				Carnegie Peers: Very High Research				Custom Peer: 240444				
	M	SD	Sig	Effect	M	SD	Sig	Effect	M	SD	Sig	Effect	M	SD	Sig	Effect	M	SD	Sig	Effect	M	SD	Sig	Effect
Social Change Model of Leadership Outcomes																								
Scored on a 5-point scale ranging from Strongly Disagree (1) to Strongly Agree (5)																								
Consciousness of Self																								
Prior to College	3.37	0.96	S	●	3.45	1.00	S	●	3.52	0.96	S	●	3.59	0.96	S	●	3.42	0.99	S	●	3.40	0.99	S	●
Senior Year	4.13	0.59	S	●	4.13	0.58	S	●	4.16	0.54	S	●	4.03	0.63	S	●	4.09	0.60	S	●	4.06	0.59	S	●
Congruence																								
Prior to College	3.91	0.88	S	●	3.92	0.86	S	●	3.94	0.78	S	○	4.01	0.81	S	○	3.91	0.86	S	○	3.91	0.84	S	○
Senior Year	4.29	0.57	S	○	4.29	0.55	S	○	4.25	0.48	S	○	4.23	0.53	S	○	4.27	0.56	S	○	4.23	0.56	S	○
Commitment																								
Prior to College	4.20	0.82	S	○	4.13	0.83	S	○	4.32	0.70	S	○	4.31	0.70	S	○	4.16	0.81	S	○	4.15	0.80	S	○
Senior Year	4.45	0.51	S	○	4.43	0.50	S	○	4.50	0.42	S	○	4.44	0.47	S	○	4.41	0.51	S	○	4.37	0.52	S	○
Collaboration																								
Prior to College	3.90	0.84	S	●	3.84	0.87	S	●	4.03	0.72	S	○	3.94	0.77	S	○	3.83	0.86	S	●	3.78	0.86	S	●
Senior Year	4.29	0.53	S	●	4.24	0.53	S	●	4.29	0.45	S	○	4.23	0.47	S	○	4.21	0.54	S	●	4.20	0.53	S	●
Controversy with Civility																								
Prior to College	3.85	0.81	S	●	3.86	0.83	S	●	3.77	0.84	S	●	3.90	0.74	S	○	3.88	0.82	S	●	3.88	0.80	S	●
Senior Year	4.31	0.52	S	●	4.27	0.53	S	●	4.22	0.46	S	●	4.19	0.48	S	○	4.25	0.54	S	●	4.23	0.52	S	●
Citizenship																								
Prior to College	3.76	0.85	S	○	3.73	0.89	S	○	3.79	0.94			3.71	0.87			3.75	0.89	S	○	3.71	0.92	S	○
Senior Year	4.00	0.69	S	○	3.98	0.68	S	○	3.98	0.63			3.84	0.66			3.96	0.69	S	○	3.92	0.68	S	○
Omnibus SRLS																								
Prior to College	3.83	0.55	S	●	3.82	0.56	S	●	3.89	0.52	S	●	3.91	0.48	S	●	3.82	0.54	S	●	3.81	0.54	S	●
Senior Year	4.24	0.47	S	●	4.22	0.47	S	●	4.23	0.40	S	●	4.16	0.43	S	●	4.19	0.48	S	●	4.17	0.46	S	●
Resiliency																								
Prior to College	3.53	0.74	S	●	3.53	0.81	S	●	3.67	0.73	S	○	3.67	0.74	S	○	3.51	0.80	S	●	3.53	0.82	S	●
Senior Year	3.95	0.60	S	●	3.95	0.64	S	●	3.95	0.58	S	○	3.92	0.61	S	○	3.90	0.64	S	●	3.90	0.63	S	●
Significance: S = p < .01 Effect Sizes: Trivial - Small ○ Moderate ● Large ●																								

MSL2015 Delta Measure: Change Over Time

University of Wisconsin-Madison					MSL National Sample				Comparative Sample 1				Comparative Sample 2				Carnegie Peers: Very High Research				Custom Peer: 240444			
	M	SD	Sig	Effect	M	SD	Sig	Effect	M	SD	Sig	Effect	M	SD	Sig	Effect	M	SD	Sig	Effect	M	SD	Sig	Effect
Leadership Efficacy					Scored on a 4-point scale ranging from Not At All Confident (1) to Very Confident (4)																			
Prior to College	2.80	0.69	S	●	2.83	0.76	S	●	2.98	0.65	S	●	2.89	0.64	S	○	2.82	0.74	S	●	2.80	0.73	S	●
Senior Year	3.28	0.61			3.24	0.63			3.34	0.58			3.15	0.61			3.22	0.63			3.21	0.63		
Complex Cognitive Skills					Scored on a 4-point scale ranging from Not Grown At All (1) to Grown Very Much (4)																			
Prior to College	3.01	0.59	S	●	3.01	0.64	S	●	3.02	0.55	S	○	3.04	0.53			3.02	0.62	S	○	2.99	0.63	S	○
Senior Year	3.36	0.61			3.34	0.58			3.23	0.57			3.13	0.61	3.30	0.58	3.28	0.56						
Social Perspective-Taking					Scored on on a 5-point scale from Does Not Describe Me Well (1) to Describes Me Very Well (5)																			
Prior to College	3.45	0.90	S	●	3.52	0.91	S	●	3.33	0.88	S	●	3.51	0.87	S	○	3.50	0.90	S	○	3.45	0.89	S	●
Senior Year	3.92	0.69			3.94	0.72			3.74	0.72			3.75	0.75			3.89	0.73			3.87	0.73		
Hope Scale - Agency					Scored on an 8-point scale ranging from Definitely False (1) to Definitely True (8)																			
Prior to College	3.98	0.62	S	●	3.89	0.67	S	●	4.05	0.56	S	●	4.03	0.62	S	●	3.92	0.65	S	●	3.91	0.67	S	●
Senior Year	6.76	1.10			6.70	1.05			6.89	0.88			6.72	1.06			6.65	1.09			6.60	1.10		
Hope Scale - Pathways					Scored on an 8-point scale ranging from Definitely False (1) to Definitely True (8)																			
Prior to College	3.98	0.62	S	●	3.89	0.67	S	●	4.05	0.56	S	●	4.03	0.62	S	●	3.92	0.65	S	●	3.91	0.67	S	●
Senior Year	6.62	0.93			6.57	0.99			6.56	0.92			6.69	0.91			6.54	0.99			6.48	0.95		
Significance: S = p < .01					Effect Sizes: Trivial -					Small ○					Moderate ●					Large ●				



2015 Multi-Institutional Study of Leadership

Appendix B Inputs and Environments by Outcomes



**MULTI-INSTITUTIONAL STUDY OF
LEADERSHIP**

2015

School Report



**Campus: Inputs and
Environments by
Outcomes**

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Campus: Inputs and Environments by Outcomes

This report provide examinations of the relationships that exist between key demographic characteristics (e.g., race, gender) and outcome measures as well as student experiences during college (e.g., student organization involvement, mentoring relationships, participation in leadership training programs) and outcome measures. These results point to critical differences in outcome achievement among student sub-populations as well as the experiences during college that seem to have the greatest influences on your students' outcomes.

Reading the Tables

Please consider the following when reviewing tables:

- Different measures use different size scales. Please consult the header for each major variable to determine the scaling. For example, some measures may be built on a 4, 5, or 7-point scale, and thus a mean of 4 will be interpreted very differently from one scale to another.
- Cells populated with a period indicate that an insufficient number of respondents, less than 15, answered that particular question for analyses to be conducted. The MSL requires 15 cases for a statistic to be reported to ensure respondent confidentiality as well as appropriate interpretations of the data are made. Basing a finding off of fewer than 15 cases may lead to erroneous conclusions.
- The data presented in these tables include all responses received from respondents in the survey for each item or measure. In some places, where individual items were missing (item missing data), composite measures were not calculated. To help identify cases in the data with high rates of missing data, we have calculated a variable called CORE_PCT (CORE variable percentage). This variable will consist of a proportion of CORE variables with responses over the total number of CORE variables. This measure will be included in the analytic data file and may be used to filter specific cases with various levels of completeness.

The Campus Inputs and Environments by Outcomes Tables

These tables describe significant relationships between input and environmental variables and core outcomes in the MSL. Data represent your institution's random sample and do not include benchmark sample data. Statistical tests in this table examine significant differences between categories of input and environmental variables across core MSL outcomes. If a variable is significant at the .01 level, the 'SIG' column will indicate the category number with which the significant difference exists. *This is different than the previous significance test results, as here we are looking closer at where the significant difference is within your institution across multiple groups.* To summarize, the presence of a number indicates that there is a significant difference, and the number itself represents the column that the result is different from. Results in this section are useful for:

- identifying student populations with differential rates of outcome achievement, and
- identifying collegiate experiences related to changes in scores across outcome measures.

Mean (M): Represents the average score for all cases on an outcome measure with higher number indicating greater capacity.

Standard Deviation (SD): Indicator of the variation of the distribution from the mean.

Sig: Provides the results of an independent samples t-test to determine whether the mean for this comparison group is significantly different than the mean in the blue column (general population sample); significance is determined at the .01 level

Be sure to check the scaling for each measure before interpreting the mean scores

Inputs by Outcome Measures - SCM Leadership Outcomes

University of MSL2015	Consciousness of Self			Congruence			Commitment			Collaboration			Controversy with Civility			Citizenship			Resiliency			Omnibus SRLS		
	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig
Student Characteristics																								
Scored on a 5-point scale ranging from Strongly Disagree (1) to Strongly Agree (5); please note separate scale for Resiliency																								
Age																								
(1) Traditional (Under 24)	4.03	0.61	2	4.27	0.56		4.42	0.49		4.21	0.53		4.29	0.5		4	0.66		3.85	0.66	2	4.2	0.47	
(2) Non-Traditional (24 or Older)	4.27	0.55	1	4.29	0.63		4.48	0.47		4.35	0.51		4.36	0.54		4.09	0.72		4.23	0.6	1	4.31	0.46	
Transfer Status																								
(1) Non-Transfer Student	4.02	0.61	2	4.27	0.56		4.41	0.49		4.2	0.53		4.29	0.5		4	0.67		3.84	0.67	2	4.19	0.47	
(2) Transfer Student	4.17	0.56	1	4.29	0.59		4.46	0.48		4.29	0.52		4.34	0.52		4.02	0.67		4.06	0.63	1	4.26	0.46	
Enrollment Status																								
(1) Full-Time	4.04	0.61		4.27	0.56		4.42	0.49		4.21	0.53		4.29	0.5		4	0.67		3.87	0.66	2	4.2	0.47	
(2) Part-Time	4.21	0.57		4.28	0.58		4.51	0.48		4.26	0.46		4.29	0.55		4.12	0.67		4.12	0.66	1	4.28	0.46	
Political Views																								
(1) Very Liberal	4.09	0.72		4.35	0.63		4.44	0.59		4.26	0.59		4.45	0.54	3,4,5	4.06	0.73		3.9	0.74		4.27	0.53	
(2) Liberal	4.05	0.58		4.29	0.52		4.43	0.45		4.25	0.49		4.37	0.44	3	4.04	0.65		3.88	0.65		4.24	0.43	
(3) Moderate	3.98	0.61	4	4.2	0.6		4.39	0.51		4.18	0.56		4.25	0.5	1,2	3.96	0.67		3.84	0.67		4.16	0.49	
(4) Conservative	4.15	0.55	3	4.32	0.53		4.47	0.45		4.21	0.51		4.15	0.56	1,2	3.97	0.65		3.94	0.61		4.21	0.44	
(5) Very Conservative	4.27	0.64		4.38	0.55		4.47	0.38		4.12	0.5		4.02	0.57	1,2	3.92	0.61		3.99	0.7		4.2	0.39	

Categories of responses listed under each variable are assigned a unique number to report significant differences.

If this column is blank there are no significant differences between mean scores on a category of a variable with other categories of the same variable. If numbers appear here, it indicates that the mean score on this category is significantly different than the ones associated with the numbers listed. In this example, students who report as Very Liberal score significantly higher on Controversy with Civility than their (3)Moderate, (4)Conservative, and (5)Very Conservative peers.

Inputs by Outcome Measures - SCM Leadership Outcomes

University of Wisconsin-Madison	Consciousness of Self			Congruence			Commitment			Collaboration			Controversy with Civility			Citizenship			Omnibus SRLS			Resiliency		
	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig
Student Characteristics																								
Scored on a 5-point scale ranging from Strongly Disagree (1) to Strongly Agree (5)																								
Gender																								
(1) Male	4.02	0.59		4.19	0.54	2	4.38	0.48	2	4.19	0.49		4.18	0.49	2	3.84	0.66	2	4.13	0.44	2	3.97	0.59	2
(2) Female	4.07	0.58		4.31	0.5	1	4.48	0.44	1	4.23	0.49		4.28	0.48	1	4.02	0.67	1	4.23	0.43	1	3.78	0.63	1
Race																								
(1) White/Caucasian	4.06	0.57		4.27	0.51		4.45	0.45	9	4.23	0.47	9	4.23	0.48		3.94	0.66		4.2	0.42	9	3.86	0.61	
(2) Middle Eastern/Northern African	.	.		.	.		.	.		.	.		.	.		.	.		.	.		.	.
(3) African American/Black	4.31	0.49		4.28	0.43		4.47	0.4		4.32	0.39		4.45	0.43		4.19	0.54		4.33	0.39		4.16	0.48	
(4) American Indian/Alaska Native	.	.		.	.		.	.		.	.		.	.		.	.		.	.		.	.
(5) Asian American	4.01	0.72		4.24	0.54		4.37	0.48		4.23	0.5	9	4.29	0.47		4.13	0.6		4.21	0.47		3.8	0.7	
(6) Native Hawaiian/Pacific Islander	.	.		.	.		.	.		.	.		.	.		.	.		.	.		.	.
(7) Latino/Hispanic	3.91	0.56		4.01	0.41		4.37	0.39		4.04	0.55		4.21	0.24		3.79	0.82		4.05	0.4		3.83	0.47	
(8) Multiracial	4.1	0.66		4.34	0.53		4.44	0.43		4.22	0.54	9	4.3	0.49		3.98	0.76		4.22	0.48	9	3.85	0.68	
(9) Race Not Listed	3.77	0.45		4	0.5		4.17	0.49	1	3.85	0.55	1,5,8	4.07	0.55		3.67	0.79		3.91	0.44	1,8	3.72	0.61	
Class Standing																								
(1) First-Year	3.96	0.57	4	4.2	0.53		4.41	0.45		4.17	0.5	4	4.17	0.49	4	3.89	0.67		4.13	0.43	4	3.75	0.6	4
(2) Sophomore	3.98	0.61		4.25	0.52		4.43	0.44		4.16	0.48	4	4.2	0.46		3.93	0.65		4.15	0.43		3.8	0.64	
(3) Junior	4.1	0.56		4.3	0.45		4.45	0.42		4.21	0.44		4.25	0.45		3.95	0.68		4.21	0.4		3.88	0.63	
(4) Senior+	4.13	0.59	1	4.29	0.57		4.45	0.51		4.29	0.53	1,2	4.31	0.52	1	4	0.69		4.24	0.47	1	3.95	0.6	1
Sexual Orientation																								
(1) Heterosexual	4.06	0.58		4.27	0.52		4.44	0.46		4.22	0.49		4.24	0.49		3.95	0.67		4.19	0.43		3.87	0.61	2
(2) Bisexual, Gay/Lesbian, Questioning	3.91	0.69		4.19	0.58		4.35	0.46		4.11	0.53		4.25	0.44		3.86	0.78		4.11	0.49		3.61	0.71	1

Significance: $p < .01$

Inputs by Outcome Measures - SCM Leadership Outcomes

University of Wisconsin-Madison	Consciousness of Self			Congruence			Commitment			Collaboration			Controversy with Civility			Citizenship			Omnibus SRLS			Resiliency		
	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig
Student Characteristics																								
Scored on a 5-point scale ranging from Strongly Disagree (1) to Strongly Agree (5)																								
Age																								
(1) Traditional (Under 24)	4.05	0.59		4.26	0.52		4.44	0.46		4.21	0.5		4.23	0.49		3.95	0.68		4.19	0.44		3.85	0.62	
(2) Non-Traditional (24 or Older)	4.05	0.52		4.29	0.54		4.38	0.53		4.29	0.4		4.34	0.48		4.01	0.53		4.22	0.42		3.95	0.64	
Transfer Status																								
(1) Non-Transfer Student	4.06	0.59		4.27	0.52		4.44	0.45		4.22	0.49		4.24	0.48		3.95	0.68		4.19	0.44		3.86	0.62	
(2) Transfer Student	4.02	0.55		4.21	0.54		4.4	0.51		4.19	0.51		4.21	0.57		3.98	0.66		4.17	0.44		3.87	0.62	
Enrollment Status																								
(1) Full-Time	4.05	0.59		4.26	0.52		4.44	0.46		4.22	0.49		4.24	0.49		3.95	0.68		4.19	0.44		3.85	0.62	
(2) Part-Time	4.08	0.58		4.21	0.57		4.34	0.55		4.16	0.49		4.17	0.51		3.9	0.65		4.14	0.48		3.92	0.65	
Political Views																								
(1) Very Liberal	4.09	0.64		4.35	0.48		4.39	0.47		4.25	0.52		4.36	0.43	4,5	4.17	0.72	3	4.26	0.46		3.77	0.59	
(2) Liberal	4.05	0.58		4.23	0.52		4.41	0.43		4.2	0.48		4.29	0.44	4	3.95	0.63		4.19	0.42		3.82	0.64	
(3) Moderate	4.03	0.58		4.24	0.51		4.45	0.46		4.21	0.48		4.24	0.5	4	3.9	0.7	1	4.17	0.43		3.88	0.61	
(4) Conservative	4.09	0.59		4.31	0.56		4.47	0.51		4.23	0.5		4.09	0.51	1,2,3	3.94	0.65		4.19	0.47		3.92	0.62	
(5) Very Conservative	4.12	0.49		4.52	0.56		4.55	0.45		4.08	0.68		3.94	0.68	1	3.93	0.66		4.19	0.43		3.93	0.72	
GPA Estimate																								
(1) 3.50 - 4.00	4.1	0.59	4	4.31	0.53	3	4.5	0.46	3,4	4.25	0.49	4	4.26	0.49	4	4.01	0.67	3,4	4.24	0.44	3,4	3.88	0.64	
(2) 3.00 - 3.49	4.07	0.55	4	4.26	0.49		4.43	0.44	4	4.22	0.5		4.24	0.49	4	3.96	0.66	4	4.19	0.42	4	3.9	0.57	3
(3) 2.50 - 2.99	3.94	0.64		4.16	0.55	1	4.34	0.47	1	4.15	0.44		4.2	0.48		3.8	0.69	1	4.09	0.45	1	3.72	0.68	2
(4) 2.00 - 2.49	3.63	0.68	1,2	4.07	0.45		4.15	0.52	1,2	3.95	0.5	1	3.94	0.39	1,2	3.54	0.61	1,2	3.87	0.44	1,2	3.59	0.68	
(5) 1.99 or less	.	.		.	.		.	.		.	.		.	.		.	.		.	.		.	.
(6) No college GPA	.	.		.	.		.	.		.	.		.	.		.	.		.	.		.	.
Educational Generation Status																								
(1) First Generation	4.05	0.59		4.26	0.52		4.44	0.46		4.22	0.49		4.24	0.49		3.95	0.67		4.19	0.43		3.85	0.62	
(2) Non-First Generation	4.09	0.57		4.27	0.5		4.42	0.48		4.21	0.51		4.25	0.5		3.98	0.75		4.2	0.46		3.92	0.61	

Significance: p < .01

Inputs by Outcome Measures - SCM Leadership Outcomes

University of Wisconsin-Madison	Consciousness of Self			Congruence			Commitment			Collaboration			Controversy with Civility			Citizenship			Omnibus SRLS			Resiliency		
	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig
Student Characteristics																								
Scored on a 5-point scale ranging from Strongly Disagree (1) to Strongly Agree (5)																								
Disability Status																								
(1) Reported Disability	3.78	0.77	0	4.12	0.7	0	4.28	0.62	0	4.03	0.64	0	4.15	0.66		3.86	0.76		4.03	0.58	0	3.64	0.76	0
(0) No Reported Disability	4.07	0.57	1	4.27	0.51	1	4.45	0.44	1	4.23	0.48	1	4.24	0.47		3.96	0.67		4.2	0.42	1	3.87	0.61	1
Significance: p < .01																								

Inputs by Outcome Measures

University of Wisconsin-Madison	Leadership Efficacy Scored on a 4-point scale ranging from Not At All Confident (1) to Very Confident (4)			Complex Cognitive Skills Scored on a 4-point scale ranging from Not Grown At All (1) to Grown Very Much At (4)			Social Perspective-Taking Scored part on on a 5-point scale from Does Not Describe Me Well (1) to Describes Me Very Well (5)			Hope Scale - Agency Scored on an 8-point scale ranging from Definitely False (1) to Definitely True (8)			Hope Scale - Pathways Scored on an 8-point scale ranging from Definitely False (1) to Definitely True (8)		
	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig
Student Characteristics															
Gender															
(1) Male	3.15	0.61		3.15	0.61		3.79	0.72		6.62	1.09		6.67	0.87	2
(2) Female	3.12	0.65		3.21	0.6		3.86	0.69		6.71	1		6.42	0.98	1
Race															
(1) White/Caucasian	3.16	0.62	9	3.18	0.6		3.82	0.71		6.71	1.01	7	6.55	0.91	
(2) Middle Eastern/Northern African	.	.		.	.		.	.		.	.		.	.
(3) African American/Black	3.36	0.61		3.31	0.51		4.15	0.48		6.95	0.76	7	6.89	0.7	
(4) American Indian/Alaska Native	.	.		.	.		.	.		.	.		.	.
(5) Asian American	3.01	0.67		3.34	0.67		3.94	0.71		6.59	1.06		6.38	1.09	
(6) Native Hawaiian/Pacific Islander	.	.		.	.		.	.		.	.		.	.
(7) Latino/Hispanic	3.12	0.57		3.18	0.59		3.87	0.7		5.7	1.31	1,3	6.28	0.91	
(8) Multiracial	3.05	0.75		3.23	0.65		3.91	0.66		6.57	1.16		6.46	1.12	
(9) Race Not Listed	2.76	0.62	1	3.08	0.63		3.68	0.68		6.19	0.9		6.35	0.8	
Class Standing															
(1) First-Year	2.99	0.62	3,4	2.93	0.58	2,3,4	3.73	0.75	4	6.59	1		6.47	0.89	
(2) Sophomore	3.04	0.68	4	3.15	0.58	1,4	3.77	0.71		6.62	1.06		6.43	1.03	
(3) Junior	3.17	0.59	1	3.25	0.58	1	3.87	0.67		6.65	0.98		6.5	0.92	
(4) Senior+	3.28	0.61	1,2	3.36	0.61	1,2	3.92	0.69	1	6.76	1.1		6.62	0.93	
Sexual Orientation															
(1) Heterosexual	3.15	0.63	2	3.19	0.61		3.83	0.71		6.7	1.01	2	6.54	0.94	
(2) Bisexual, Gay/Lesbian, Questioning	2.91	0.68	1	3.21	0.59		3.86	0.73		6.16	1.34	1	6.31	0.98	
Age															
(1) Traditional (Under 24)	3.13	0.63		3.19	0.61		3.82	0.7	2	6.67	1.04		6.51	0.95	
(2) Non-Traditional (24 or Older)	3.11	0.63		3.28	0.53		4.12	0.69	1	6.71	0.95		6.83	0.9	

Significance: p < .01

Inputs by Outcome Measures

University of Wisconsin-Madison	Leadership Efficacy Scored on a 4-point scale ranging from Not At All Confident (1) to Very Confident (4)			Complex Cognitive Skills Scored on a 4-point scale ranging from Not Grown At All (1) to Grown Very Much (4)			Social Perspective-Taking Scored part on on a 5-point scale from Does Not Describe Me Well (1) to Describes Me Very Well (5)			Hope Scale - Agency Scored on an 8-point scale ranging from Definitely False (1) to Definitely True (8)			Hope Scale - Pathways Scored on an 8-point scale ranging from Definitely False (1) to Definitely True (8)		
	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig
Student Characteristics															
Transfer Status															
(1) Non-Transfer Student	3.13	0.63		3.18	0.6		3.82	0.7		6.68	1.05		6.51	0.95	
(2) Transfer Student	3.16	0.63		3.22	0.65		3.92	0.77		6.62	1		6.61	0.92	
Enrollment Status															
(1) Full-Time	3.14	0.63		3.19	0.61		3.83	0.71		6.67	1.03		6.52	0.95	
(2) Part-Time	3.07	0.64		3.14	0.57		3.96	0.71		6.66	1.28		6.67	0.87	
Political Views															
(1) Very Liberal	3.16	0.67		3.31	0.62		3.9	0.62	4	6.6	1.08		6.63	0.81	
(2) Liberal	3.12	0.64		3.21	0.59		3.88	0.66	4	6.66	1.05		6.51	0.9	
(3) Moderate	3.12	0.63		3.19	0.62		3.88	0.73	4	6.63	1.05		6.5	0.98	
(4) Conservative	3.19	0.62		3.11	0.6		3.63	0.74	1,2,3	6.78	1		6.51	1.01	
(5) Very Conservative	3.19	0.65		2.97	0.67		3.68	0.91		7.01	0.63		6.94	0.85	
GPA Estimate															
(1) 3.50 - 4.00	3.17	0.61	4	3.24	0.6	3,4	3.83	0.7		6.89	0.92	2,3,4	6.54	0.93	
(2) 3.00 - 3.49	3.15	0.64	4	3.21	0.57	3,4	3.88	0.71		6.66	1	1,3,4	6.55	0.9	
(3) 2.50 - 2.99	3.05	0.65		3.03	0.64	1,2	3.73	0.67		6.22	1.21	1,2	6.42	1.08	
(4) 2.00 - 2.49	2.71	0.83	1,2	2.71	0.77	1,2	3.51	0.78		5.79	1.2	1,2	6.23	1.15	
(5) 1.99 or less	.	.		.	.		.	.		.	.		.	.
(6) No college GPA	.	.		.	.		.	.		.	.		.	.
Educational Generation Status															
(1) First Generation	3.14	0.63		3.19	0.61		3.81	0.71	2	6.68	1.02		6.53	0.93	
(2) Non-First Generation	3.15	0.63		3.24	0.64		4.07	0.65	1	6.64	1.22		6.53	1.03	
Disability Status															
(1) Reported Disability	3.03	0.67		3.12	0.69		3.8	0.8		6.21	1.56	0	6.26	1.14	0
(0) No Reported Disability	3.14	0.63		3.19	0.6		3.83	0.7		6.71	0.98	1	6.54	0.93	1

Significance: p < .01

Environments by Outcome Measures - SCM Leadership Outcomes

University of Wisconsin-Madison	Consciousness of Self			Congruence			Commitment			Collaboration			Controversy with Civility			Citizenship			Omnibus SRLS			Resiliency		
	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig
Student Characteristics																								
Scored on a 5-point scale ranging from Strongly Disagree (1) to Strongly Agree (5)																								
Off-Campus Job																								
(1) Yes	4.11	0.59		4.3	0.51		4.45	0.44		4.26	0.46		4.27	0.51		4.03	0.67		4.23	0.43		3.92	0.61	
(0) No	4.03	0.59		4.25	0.53		4.43	0.47		4.2	0.5		4.23	0.48		3.92	0.68		4.18	0.44		3.84	0.62	
On-Campus Job																								
(1) Yes	4.07	0.55		4.28	0.49		4.46	0.43		4.25	0.45		4.28	0.43	0	4.01	0.66	0	4.22	0.41		3.88	0.61	
(0) No	4.04	0.61		4.25	0.55		4.42	0.48		4.19	0.52		4.21	0.52	1	3.91	0.68	1	4.17	0.46		3.84	0.63	
Community Service																								
(1) Yes	4.12	0.56	0	4.34	0.51	0	4.49	0.44	0	4.29	0.47	0	4.28	0.47	0	4.18	0.57	0	4.28	0.41	0	3.9	0.58	
(0) No	3.99	0.6	1	4.2	0.53	1	4.39	0.47	1	4.15	0.5	1	4.2	0.5	1	3.75	0.69	1	4.11	0.44	1	3.82	0.65	
Residential Setting																								
(1) Off-Campus	4.09	0.58	2	4.3	0.51	2	4.45	0.46		4.25	0.48	2	4.28	0.47	2	3.98	0.66		4.22	0.43	2	3.9	0.59	2
(2) On-Campus	3.99	0.6	1	4.21	0.54	1	4.43	0.46		4.16	0.51	1	4.17	0.52	1	3.9	0.69		4.14	0.45	1	3.79	0.66	1
Involvement in College Organizations																								
(0) Never	3.8	0.75	3,4	4.09	0.62	4	4.23	0.6	3,4	3.99	0.58	3,4	4.09	0.63	4	3.51	0.74	2,3,4	3.94	0.54	2,3,4	3.82	0.73	
(1) Once	3.93	0.54	4	4.18	0.54	4	4.32	0.47	4	4.1	0.48	4	4.16	0.49	4	3.63	0.65	3,4	4.05	0.42	3,4	3.73	0.6	4
(2) Sometimes	3.97	0.59	4	4.16	0.53	4	4.38	0.48	4	4.15	0.5	4	4.18	0.46	4	3.83	0.66	0,3,4	4.11	0.44	0,4	3.74	0.62	4
(3) Many times	4.05	0.54	0,4	4.27	0.45	4	4.44	0.41	0,4	4.19	0.41	0,4	4.22	0.42	4	4.03	0.58	0,1,2,4	4.2	0.37	0,1,4	3.86	0.56	
(4) Much of the time	4.24	0.54	0,1,2,3	4.43	0.49	0,1,2,3	4.58	0.39	0,1,2,3	4.38	0.48	0,1,2,3	4.37	0.49	0,1,2,3	4.23	0.61	0,1,2,3	4.37	0.4	0,1,2,3	4.01	0.61	1,2
Leadership Positions in College Organizations																								
(0) Never	3.95	0.59	3,4	4.21	0.52	4	4.4	0.47	4	4.15	0.48	3,4	4.18	0.49	4	3.79	0.67	2,3,4	4.11	0.43	3,4	3.78	0.64	4
(1) Once	4.05	0.54	4	4.21	0.56	4	4.44	0.46		4.2	0.5	4	4.23	0.47	4	3.95	0.68	4	4.18	0.43	4	3.82	0.58	
(2) Sometimes	4.07	0.62	4	4.24	0.56	4	4.39	0.52	4	4.16	0.55	4	4.19	0.52	4	4.01	0.61	0,4	4.17	0.46	4	3.92	0.59	
(3) Many times	4.18	0.47	0	4.32	0.46		4.47	0.4		4.33	0.42	0	4.33	0.45		4.16	0.58	0	4.3	0.37	0	3.98	0.51	
(4) Much of the time	4.31	0.55	0,1,2	4.49	0.46	0,1,2	4.6	0.36	0,2	4.42	0.46	0,1,2	4.43	0.46	0,1,2	4.36	0.59	0,1,2	4.43	0.39	0,1,2	4.02	0.63	0

Significance: $p < .01$

Environments by Outcome Measures - SCM Leadership Outcomes

University of Wisconsin-Madison	Consciousness of Self			Congruence			Commitment			Collaboration			Controversy with Civility			Citizenship			Omnibus SRLS			Resiliency		
	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig
Involvement in Off-Campus Organizations																								
(0) Never	3.99	0.61	4	4.22	0.53	4	4.41	0.46	4	4.17	0.49	4	4.2	0.49	4	3.81	0.69	1,2,3,4	4.13	0.44	3,4	3.81	0.63	4
(1) Once	4.11	0.51		4.28	0.52	4	4.46	0.49		4.29	0.43		4.27	0.45		4.13	0.6	0	4.26	0.42	4	3.88	0.59	
(2) Sometimes	4.11	0.55		4.29	0.49	4	4.44	0.47		4.27	0.48		4.27	0.49		4.14	0.57	0,4	4.25	0.42	4	3.89	0.62	
(3) Many times	4.2	0.46		4.33	0.51		4.44	0.45		4.24	0.54		4.27	0.5		4.3	0.48	0	4.3	0.4	0	3.94	0.56	
(4) Much of the time	4.32	0.48	0	4.55	0.44	0,1,2	4.63	0.37	0	4.47	0.42	0	4.46	0.45	0	4.43	0.5	0,2	4.47	0.35	0,1,2	4.12	0.56	0
Leadership Positions in Off-Campus Organizations																								
(0) Never	4.02	0.59	4	4.24	0.52	4	4.43	0.45	4	4.2	0.48	4	4.22	0.48	4	3.88	0.68	2,3,4	4.16	0.43	4	3.83	0.61	4
(1) Once	4.13	0.52		4.34	0.48		4.43	0.57		4.23	0.53	4	4.26	0.48		4.11	0.59		4.25	0.45	4	3.97	0.61	
(2) Sometimes	4.09	0.62	4	4.27	0.54	4	4.39	0.47	4	4.25	0.49	4	4.24	0.5	4	4.2	0.57	0	4.24	0.43	4	3.82	0.69	4
(3) Many times	4.26	0.49		4.26	0.6	4	4.38	0.53	4	4.2	0.63	4	4.25	0.56		4.24	0.52	0	4.27	0.48	4	4.01	0.58	
(4) Much of the time	4.49	0.46	0,2	4.65	0.43	0,2,3	4.73	0.32	0,2,3	4.6	0.4	0,1,2,3	4.56	0.4	0,2	4.59	0.44	0	4.6	0.32	0,1,2,3	4.29	0.53	0,2

Significance: p < .01

Environments by Outcome Measures - SCM Leadership Outcomes

University of Wisconsin-Madison	Consciousness of Self			Congruence			Commitment			Collaboration			Controversy with Civility			Citizenship			Omnibus SRLS			Resiliency		
	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig
Participation in Student Groups																								
Academic/Departmental/Professional																								
(1) Yes	4.08	0.58		4.29	0.52		4.48	0.44	0	4.25	0.46		4.25	0.47		4.02	0.64	0	4.23	0.42	0	3.88	0.61	
(0) No	4.02	0.59		4.23	0.52		4.39	0.48	1	4.18	0.52		4.22	0.51		3.88	0.71	1	4.15	0.45	1	3.83	0.63	
Advocacy																								
(1) Yes	4.09	0.52		4.43	0.46	0	4.43	0.44		4.31	0.42		4.35	0.45		4.3	0.62	0	4.31	0.39	0	3.85	0.57	
(0) No	4.05	0.59		4.25	0.53	1	4.44	0.46		4.21	0.5		4.23	0.49		3.92	0.67	1	4.18	0.44	1	3.86	0.63	
Art/Theater/Music																								
(1) Yes	4.07	0.54		4.26	0.49		4.38	0.43		4.21	0.46		4.26	0.41		4	0.59		4.19	0.39		3.76	0.64	
(0) No	4.05	0.59		4.26	0.53		4.45	0.46		4.22	0.5		4.23	0.5		3.94	0.69		4.19	0.45		3.87	0.62	
Campus-Wide Programming																								
(1) Yes	4.16	0.57		4.29	0.53		4.43	0.48		4.29	0.47		4.29	0.46		4.17	0.63	0	4.27	0.44		3.92	0.55	
(0) No	4.04	0.59		4.26	0.52		4.44	0.46		4.21	0.49		4.23	0.49		3.93	0.68	1	4.18	0.44		3.85	0.63	
Honor Societies																								
(1) Yes	4.16	0.58		4.32	0.51		4.5	0.42		4.3	0.45		4.34	0.45	0	4.12	0.68	0	4.29	0.42	0	3.94	0.63	
(0) No	4.04	0.59		4.26	0.52		4.43	0.47		4.2	0.5		4.22	0.49	1	3.93	0.67	1	4.18	0.44	1	3.85	0.62	
Identity-Based/Multicultural Organizations																								
(1) Yes	4.2	0.54	0	4.37	0.47	0	4.47	0.44		4.28	0.47		4.39	0.46	0	4.22	0.65	0	4.32	0.43	0	3.87	0.59	
(0) No	4.03	0.59	1	4.25	0.53	1	4.43	0.46		4.21	0.5		4.22	0.49	1	3.91	0.67	1	4.17	0.44	1	3.86	0.62	
International Interest																								
(1) Yes	4.13	0.6		4.32	0.51		4.46	0.44		4.29	0.44		4.33	0.45	0	4.13	0.63	0	4.27	0.41	0	3.88	0.61	
(0) No	4.04	0.58		4.26	0.52		4.44	0.46		4.2	0.5		4.22	0.49	1	3.92	0.68	1	4.18	0.44	1	3.85	0.62	
Media																								
(1) Yes	4.11	0.56		4.38	0.5		4.46	0.45		4.31	0.46		4.33	0.46		4.07	0.63		4.27	0.41		3.95	0.63	
(0) No	4.05	0.59		4.25	0.52		4.44	0.46		4.21	0.49		4.23	0.49		3.94	0.68		4.18	0.44		3.85	0.62	
Military																								
(1) Yes	4.02	0.58		4.17	0.62		4.39	0.61		4.14	0.58		4.19	0.61		3.99	0.49		4.15	0.5		3.96	0.74	
(0) No	4.05	0.59		4.27	0.52		4.44	0.46		4.22	0.49		4.24	0.49		3.95	0.68		4.19	0.44		3.85	0.62	

Significance: $p < .01$

Environments by Outcome Measures - SCM Leadership Outcomes

University of Wisconsin-Madison	Consciousness of Self			Congruence			Commitment			Collaboration			Controversy with Civility			Citizenship			Omnibus SRLS			Resiliency		
	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig
Participation in Student Groups (Continued)																								
Multicultural Social Fraternities and Sororities																								
(1) Yes	4.13	0.67		4.27	0.61		4.36	0.64		4.23	0.5		4.22	0.46		4.18	0.55		4.23	0.5		4.04	0.69	
(0) No	4.05	0.59		4.26	0.52		4.44	0.46		4.21	0.49		4.24	0.49		3.94	0.68		4.19	0.44		3.85	0.62	
New Student Transitions																								
(1) Yes	4.13	0.53		4.28	0.52		4.46	0.38		4.29	0.41		4.34	0.41		4.18	0.59	0	4.28	0.37		3.89	0.63	
(0) No	4.05	0.59		4.26	0.52		4.44	0.47		4.21	0.5		4.23	0.49		3.93	0.68	1	4.18	0.44		3.85	0.62	
Peer Helper																								
(1) Yes	4.15	0.55	0	4.35	0.48		4.5	0.41		4.3	0.48	0	4.31	0.47		4.15	0.59	0	4.29	0.4	0	3.97	0.53	0
(0) No	4.03	0.59	1	4.25	0.53		4.43	0.47		4.2	0.49	1	4.22	0.49		3.91	0.68	1	4.17	0.44	1	3.83	0.63	1
Political																								
(1) Yes	4.14	0.56		4.36	0.52		4.45	0.47		4.24	0.57		4.23	0.55		4.11	0.68	0	4.26	0.45		3.9	0.58	
(0) No	4.04	0.59		4.25	0.52		4.44	0.46		4.21	0.48		4.24	0.48		3.93	0.67	1	4.18	0.44		3.85	0.63	
Recreational																								
(1) Yes	4.08	0.55		4.25	0.53		4.44	0.45		4.23	0.47		4.23	0.49		3.95	0.62		4.19	0.43		3.94	0.55	0
(0) No	4.04	0.6		4.27	0.52		4.44	0.46		4.21	0.5		4.24	0.49		3.95	0.7		4.19	0.44		3.82	0.65	1
Religious																								
(1) Yes	4.1	0.57		4.4	0.51	0	4.49	0.46		4.26	0.5		4.24	0.5		4.19	0.6	0	4.28	0.43	0	3.9	0.61	
(0) No	4.04	0.59		4.23	0.52	1	4.43	0.46		4.2	0.49		4.24	0.49		3.89	0.68	1	4.17	0.44	1	3.85	0.62	
Resident Assistants																								
(1) Yes	4	0.58		4.2	0.49		4.39	0.5		4.23	0.52		4.26	0.48		4.12	0.54		4.2	0.43		3.89	0.59	
(0) No	4.05	0.59		4.27	0.52		4.44	0.46		4.21	0.49		4.24	0.49		3.94	0.68		4.19	0.44		3.85	0.62	
Service																								
(1) Yes	4.11	0.56		4.34	0.49	0	4.54	0.4	0	4.33	0.45	0	4.3	0.48	0	4.21	0.6	0	4.31	0.4	0	3.91	0.6	
(0) No	4.03	0.6		4.23	0.53	1	4.4	0.48	1	4.17	0.5	1	4.21	0.49	1	3.85	0.68	1	4.15	0.45	1	3.84	0.63	
Social Fraternities or Sororities																								
(1) Yes	4.11	0.58		4.2	0.57		4.39	0.5		4.19	0.54		4.2	0.53		3.98	0.66		4.18	0.47		3.87	0.62	
(0) No	4.04	0.59		4.27	0.51		4.45	0.45		4.22	0.48		4.24	0.48		3.95	0.68		4.19	0.43		3.85	0.62	

Significance: $p < .01$

Environments by Outcome Measures - SCM Leadership Outcomes

University of Wisconsin-Madison	Consciousness of Self			Congruence			Commitment			Collaboration			Controversy with Civility			Citizenship			Omnibus SRLS			Resiliency		
	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig
Participation in Student Groups (Continued)																								
Social/Special Interest																								
(1) Yes	4.07	0.54		4.27	0.48		4.42	0.44		4.23	0.45		4.23	0.46		4.03	0.63		4.2	0.4		3.87	0.6	
(0) No	4.05	0.6		4.26	0.53		4.44	0.47		4.21	0.5		4.24	0.5		3.93	0.69		4.19	0.45		3.85	0.63	
Sports-Intercollegiate or Varsity																								
(1) Yes	4.18	0.54	0	4.34	0.54		4.51	0.43		4.31	0.45		4.27	0.42		3.94	0.62		4.26	0.39		3.97	0.55	
(0) No	4.04	0.59	1	4.25	0.52		4.43	0.46		4.2	0.5		4.23	0.5		3.95	0.68		4.18	0.44		3.84	0.63	
Student Governance																								
(1) Yes	4.2	0.5		4.44	0.46	0	4.49	0.41		4.34	0.45		4.37	0.47	0	4.34	0.51	0	4.36	0.38	0	3.99	0.61	
(0) No	4.04	0.59		4.25	0.53	1	4.43	0.46		4.21	0.49		4.23	0.49	1	3.92	0.68	1	4.18	0.44	1	3.85	0.62	
LGBTQ Groups																								
(0) Never	4.05	0.59		4.26	0.52		4.44	0.46		4.22	0.49		4.23	0.49		3.94	0.68	1	4.19	0.44		3.86	0.62	
(1) Sometimes	4.22	0.5		4.33	0.47		4.47	0.43		4.24	0.47		4.39	0.48		4.26	0.59	0	4.32	0.42		3.88	0.56	
(2) Often	.	.		.	.		.	.		.	.		.	.		.	.		.	.		.	.
(3) Very Often	.	.		.	.		.	.		.	.		.	.		.	.		.	.		.	.
Racial/Ethnic Groups																								
(0) Never	4.05	0.59		4.26	0.53		4.44	0.46		4.21	0.49		4.23	0.49	3	3.93	0.67	3	4.18	0.44	3	3.86	0.63	
(1) Sometimes	4.05	0.56		4.28	0.51		4.35	0.49		4.18	0.48		4.25	0.49		4.22	0.67		4.22	0.46		3.79	0.53	
(2) Often	4.15	0.38		4.38	0.34		4.49	0.37		4.26	0.36		4.35	0.37		4.25	0.54		4.31	0.3		3.63	0.45	
(3) Very Often	4.35	0.53		4.51	0.48		4.49	0.49		4.46	0.46		4.57	0.45	0	4.45	0.52	0	4.47	0.44	0	4.1	0.55	
Women's Groups																								
(0) Never	4.04	0.59	3	4.26	0.53	3	4.44	0.46		4.22	0.49	3	4.23	0.49	3	3.93	0.67	3	4.18	0.44	3	3.86	0.62	
(1) Sometimes	4.07	0.56		4.21	0.45	3	4.29	0.46	3	4.08	0.48	3	4.29	0.48		4.02	0.73	3	4.15	0.46	3	3.72	0.54	
(2) Often	4.12	0.59		4.42	0.44		4.53	0.41		4.25	0.52		4.33	0.45		4.35	0.62		4.33	0.44		3.99	0.64	
(3) Very Often	4.56	0.4	0	4.69	0.38	0,1	4.73	0.37	1	4.62	0.31	0,1	4.68	0.36	0	4.77	0.29	0,1	4.67	0.28	0,1	.	.	
Social Change Behaviors																								
(0) Never	3.89	0.64	1,2,3	4.12	0.55	1,2,3	4.35	0.49	2,3	4.05	0.51	1,2,3	4.08	0.51	1,2,3	3.48	0.69	1,2,3	3.99	0.45	1,2,3	3.76	0.69	2,3
(1) Once	4.06	0.56	0,3	4.26	0.49	0,2,3	4.44	0.44		4.23	0.45	0,2,3	4.23	0.44	0,2,3	3.99	0.55	0,2,3	4.2	0.39	0,2,3	3.84	0.6	3
(2) Sometimes	4.19	0.51	0,3	4.39	0.5	0,1	4.51	0.46	0	4.35	0.49	0,1,3	4.39	0.48	0,1	4.35	0.49	0,1,3	4.36	0.4	0,1,3	3.96	0.54	0
(3) Often	4.55	0.4	0,1,2	4.67	0.38	0,1	4.68	0.33	0	4.65	0.38	0,1,2	4.65	0.36	0,1	4.82	0.27	0,1,2	4.67	0.29	0,1,2	4.27	0.57	0,1

Significance: $p < .01$

Environments by Outcome Measures - SCM Leadership Outcomes

University of Wisconsin-Madison	Consciousness of Self			Congruence			Commitment			Collaboration			Controversy with Civility			Citizenship			Omnibus SRLS			Resiliency		
	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig
Socio-Cultural Conversations																								
(0) Never	3.75	0.69	2,3	4.04	0.66	2,3	4.3	0.63	3	3.91	0.65	1,2,3	3.83	0.6	1,2,3	3.48	0.73	1,2,3	3.88	0.56	1,2,3	3.66	0.72	2,3
(1) Once	3.91	0.57	2,3	4.15	0.51	2,3	4.37	0.45	3	4.1	0.48	0,2,3	4.08	0.44	0,2,3	3.77	0.62	0,2,3	4.06	0.41	0,2,3	3.74	0.64	2,3
(2) Sometimes	4.1	0.55	0,1,3	4.31	0.5	0,1,3	4.45	0.45	3	4.27	0.45	0,1,3	4.31	0.44	0,1,3	4.03	0.64	0,1,3	4.24	0.4	0,1,3	3.9	0.56	0,1,3
(3) Often	4.41	0.49	0,1,2	4.53	0.43	0,1,2	4.64	0.38	0,1,2	4.5	0.42	0,1,2	4.6	0.39	0,1,2	4.37	0.6	0,1,2	4.51	0.36	0,1,2	4.13	0.62	0,1,2
Campus Climate																								
Belonging Climate																								
(1) Strongly Disagree	3.53	0.87	4,5	4.07	0.91	5	4.23	0.83	5	3.64	0.84	3,4,5	3.85	0.89	4,5	3.43	1.16	4,5	3.78	0.79	4,5	3.4	0.98	4,5
(2) Disagree	3.71	0.63	4,5	4.09	0.53	5	4.35	0.44	5	4	0.49	4,5	4.03	0.47	4,5	3.6	0.77	4,5	3.96	0.4	4,5	3.38	0.74	4,5
(3) Neutral	3.79	0.64	4,5	4.07	0.55	4,5	4.29	0.5	4,5	4.02	0.49	1,4,5	4.07	0.48	4,5	3.69	0.67	4,5	3.98	0.43	4,5	3.61	0.63	4,5
(4) Agree	4.09	0.49	1,2,3,5	4.28	0.46	3,5	4.44	0.42	3,5	4.24	0.43	1,2,3,5	4.25	0.44	1,2,3,5	4	0.59	1,2,3,5	4.21	0.38	1,2,3,5	3.91	0.53	1,2,3,5
(5) Strongly Agree	4.44	0.48	1,2,3,4	4.55	0.47	1,2,3,4	4.68	0.38	1,2,3,4	4.54	0.42	1,2,3,4	4.52	0.45	1,2,3,4	4.3	0.64	1,2,3,4	4.5	0.38	1,2,3,4	4.21	0.56	1,2,3,4
Non-Discriminatory Climate																								
(1) Strongly Disagree	.	.		.	.		.	.		.	.		.	.		.	.		.	.		.	.
(2) Disagree	4.13	0.55		4.38	0.47		4.42	0.45		4.21	0.5		4.24	0.55		4.17	0.66	4,5	4.26	0.43		3.96	0.61	
(3) Neutral	4.02	0.58		4.24	0.51		4.37	0.47	5	4.19	0.49		4.2	0.48		4.01	0.67		4.17	0.44		3.8	0.69	
(4) Agree	4	0.58	5	4.22	0.5	5	4.4	0.44	5	4.17	0.48	5	4.22	0.46		3.91	0.64	2	4.15	0.41	5	3.82	0.58	
(5) Strongly Agree	4.15	0.6	4	4.33	0.56	4	4.56	0.47	3,4	4.31	0.5	4	4.28	0.51		3.91	0.74	2	4.25	0.46	4	3.91	0.64	

Significance: $p < .01$

Environments by Outcome Measures - SCM Leadership Outcomes

University of Wisconsin-Madison	Consciousness of Self			Congruence			Commitment			Collaboration			Controversy with Civility			Citizenship			Omnibus SRLS			Resiliency		
	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig
Mentor Relationships																								
Faculty/Instructor																								
(0) Never	3.96	0.63	3	4.21	0.55	3	4.39	0.49	3	4.14	0.51	3	4.14	0.51	2,3	3.78	0.72	2,3	4.1	0.46	2,3	3.79	0.66	3
(1) Once	4.07	0.51		4.24	0.48		4.46	0.41		4.2	0.46		4.25	0.44		3.92	0.63	3	4.19	0.38		3.79	0.57	
(2) Sometimes	4.07	0.55		4.28	0.49		4.44	0.43		4.24	0.44		4.27	0.46	0	4.02	0.6	0,3	4.22	0.4	0,3	3.89	0.58	
(3) Often	4.21	0.56	0	4.37	0.52	0	4.53	0.44	0	4.35	0.51	0	4.38	0.47	0	4.21	0.61	0,1,2	4.34	0.43	0,2	3.98	0.61	0
Student Affairs Professional Staff																								
(0) Never	3.99	0.62	3	4.22	0.55	3	4.38	0.49	3	4.15	0.53	3	4.17	0.52	3	3.84	0.71	3	4.12	0.46	3	3.82	0.65	
(1) Once	4.05	0.53	3	4.23	0.51	3	4.42	0.43	3	4.2	0.44	3	4.22	0.44	3	3.97	0.65	3	4.18	0.4	3	3.82	0.61	
(2) Sometimes	4.06	0.55	3	4.27	0.49	3	4.47	0.43	3	4.24	0.43	3	4.25	0.45	3	3.97	0.63	3	4.21	0.4	3	3.88	0.59	
(3) Often	4.31	0.55	0,1,2	4.44	0.47	0,1,2	4.61	0.4	0,1,2	4.45	0.45	0,1,2	4.48	0.45	0,1,2	4.33	0.52	0,1,2	4.43	0.39	0,1,2	3.99	0.59	
Employer																								
(0) Never	3.97	0.62	2,3	4.21	0.55	3	4.41	0.48	3	4.15	0.51	3	4.17	0.51	3	3.85	0.7	2,3	4.12	0.46	3	3.78	0.63	3
(1) Once	3.97	0.48	3	4.22	0.47	3	4.36	0.39	3	4.17	0.42	3	4.2	0.44	3	3.9	0.6	3	4.13	0.37	3	3.81	0.62	3
(2) Sometimes	4.1	0.54	0,3	4.28	0.5	3	4.43	0.46	3	4.22	0.46	3	4.26	0.45	3	4.02	0.63	0,3	4.22	0.42	3	3.89	0.57	3
(3) Often	4.32	0.48	0,1,2	4.44	0.44	0,1,2	4.61	0.38	0,1,2	4.49	0.4	0,1,2	4.48	0.41	0,1,2	4.24	0.57	0,1,2	4.43	0.35	0,1,2	4.12	0.59	0,1,2
Community Member																								
(0) Never	4	0.59	2,3	4.22	0.53	2,3	4.41	0.47	3	4.18	0.5	3	4.21	0.5	3	3.85	0.67	1,2,3	4.14	0.44	2,3	3.82	0.63	
(1) Once	4.15	0.5		4.28	0.48		4.5	0.38		4.3	0.43		4.31	0.45		4.13	0.54	0	4.28	0.35		3.94	0.56	
(2) Sometimes	4.18	0.54	0	4.39	0.47	0	4.47	0.42		4.28	0.45		4.3	0.46		4.21	0.59	0	4.3	0.41	0	3.97	0.56	
(3) Often	4.31	0.6	0	4.51	0.48	0	4.6	0.47	0	4.45	0.45	0	4.39	0.44	0	4.44	0.57	0	4.45	0.42	0	4	0.62	
Parent/Guardian																								
(0) Never	3.91	0.62	3	4.17	0.57	3	4.32	0.5	3	4.09	0.53	3	4.15	0.54	3	3.73	0.75	3	4.06	0.47	3	3.8	0.66	
(1) Once	4.02	0.54		4.01	0.64		4.29	0.48		4.05	0.38		4.19	0.34		3.98	0.66		4.09	0.44		3.81	0.64	
(2) Sometimes	4	0.56	3	4.19	0.47	3	4.35	0.44	3	4.16	0.45	3	4.21	0.45		3.88	0.58	3	4.13	0.4	3	3.82	0.6	
(3) Often	4.14	0.57	0,2	4.34	0.5	0,2	4.53	0.43	0,2	4.3	0.48	0,2	4.29	0.47	0	4.08	0.64	0,2	4.28	0.42	0,2	3.9	0.61	

Significance: p < .01

Environments by Outcome Measures - SCM Leadership Outcomes

University of Wisconsin-Madison	Consciousness of Self			Congruence			Commitment			Collaboration			Controversy with Civility			Citizenship			Omnibus SRLS			Resiliency		
	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig
Mentor Relationships (Continued)																								
Other Student																								
(0) Never	3.97	0.63	3	4.2	0.57	3	4.37	0.5	3	4.13	0.53	3	4.17	0.53	3	3.76	0.72	2,3	4.09	0.47	3	3.83	0.64	
(1) Once	3.98	0.52		4.14	0.53	3	4.27	0.5	3	4.11	0.48	3	4.19	0.51		3.85	0.72	3	4.08	0.45	3	3.81	0.54	
(2) Sometimes	4.06	0.53		4.24	0.48	3	4.43	0.42	3	4.21	0.44	3	4.21	0.47	3	4	0.59	0	4.19	0.4	3	3.86	0.6	
(3) Often	4.16	0.57	0	4.38	0.48	0,1,2	4.55	0.41	0,1,2	4.34	0.46	0,1,2	4.36	0.43	0,2	4.14	0.63	0,1	4.32	0.4	0,1,2	3.89	0.63	
Formal Leadership Training Experience																								
Leadership Conference																								
(0) Never	4.02	0.59	2,3	4.25	0.53		4.43	0.47		4.19	0.5		4.22	0.49		3.89	0.68	1,2,3	4.16	0.44	2,3	3.83	0.62	
(1) Once	4.15	0.52		4.3	0.47		4.45	0.43		4.28	0.44		4.32	0.45		4.16	0.57	0	4.27	0.37		3.92	0.57	
(2) Sometimes	4.26	0.55	0	4.36	0.52		4.51	0.4		4.36	0.5		4.36	0.52		4.36	0.53	0	4.37	0.43	0	4.01	0.64	
(3) Often	4.54	0.37	0	4.55	0.36		4.68	0.36		4.48	0.4		4.52	0.36		4.59	0.45	0	4.56	0.32	0	4.13	0.49	
Leadership Retreat																								
(0) Never	4.03	0.59	3	4.25	0.52	3	4.43	0.46		4.2	0.49		4.23	0.49	3	3.9	0.68	1,2,3	4.17	0.44	3	3.84	0.63	
(1) Once	4.1	0.57	3	4.28	0.55	3	4.4	0.49		4.23	0.54		4.24	0.49		4.13	0.58	0,3	4.23	0.45	3	3.94	0.55	
(2) Sometimes	4.18	0.49		4.34	0.52		4.49	0.38		4.33	0.48		4.28	0.48		4.29	0.54	0	4.32	0.4		3.81	0.6	
(3) Often	4.54	0.37	0,1	4.67	0.29	0,1	4.73	0.28		4.51	0.4		4.57	0.35	0	4.69	0.3	0,1	4.62	0.23	0,1	4.16	0.57	
Leadership Lecture/Workshop Series																								
(0) Never	4.03	0.6	3	4.25	0.52		4.43	0.46	3	4.2	0.49	3	4.22	0.48	3	3.89	0.68	2,3	4.16	0.44	2,3	3.83	0.62	
(1) Once	4.06	0.52	3	4.27	0.5		4.44	0.48		4.23	0.48	3	4.23	0.5	3	4.1	0.55	3	4.22	0.41	3	3.88	0.65	
(2) Sometimes	4.2	0.53		4.35	0.52		4.46	0.45		4.31	0.54		4.33	0.52		4.3	0.55	0	4.32	0.43	0	3.99	0.59	
(3) Often	4.53	0.38	0,1	4.49	0.48		4.72	0.31	0	4.57	0.41	0,1	4.61	0.33	0,1	4.55	0.52	0,1	4.58	0.3	0,1	4.15	0.55	
Positional Leader Training																								
(0) Never	4.03	0.6		4.25	0.53		4.43	0.47		4.2	0.49		4.22	0.49	3	3.91	0.68	2,3	4.17	0.44	3	3.84	0.62	
(1) Once	4.14	0.49		4.35	0.53		4.44	0.45		4.2	0.57		4.23	0.46		4.2	0.63		4.26	0.43		3.93	0.62	
(2) Sometimes	4.2	0.52		4.34	0.44		4.46	0.39		4.34	0.45		4.34	0.45		4.27	0.53	0	4.32	0.38		4.02	0.56	
(3) Often	4.35	0.41		4.35	0.44		4.55	0.37		4.45	0.37		4.56	0.37	0	4.44	0.58	0	4.45	0.31	0	4.08	0.58	

Significance: $p < .01$

Environments by Outcome Measures - SCM Leadership Outcomes

University of Wisconsin-Madison	Consciousness of Self			Congruence			Commitment			Collaboration			Controversy with Civility			Citizenship			Omnibus SRLS			Resiliency		
	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig
Formal Leadership Training Experience (Continued)																								
Leadership Course																								
(0) Never	4.03	0.59		4.25	0.52		4.43	0.46		4.2	0.49		4.23	0.49		3.91	0.68	1,2,3	4.17	0.44		3.84	0.62	
(1) Once	4.16	0.5		4.3	0.5		4.48	0.39		4.27	0.43		4.27	0.42		4.18	0.54	0	4.28	0.37		4.04	0.54	
(2) Sometimes	4.29	0.55		4.37	0.63		4.49	0.52		4.33	0.7		4.33	0.64		4.41	0.5	0	4.37	0.52		4.01	0.63	
(3) Often	4.41	0.34		4.52	0.46		4.52	0.52		4.46	0.52		4.49	0.5		4.47	0.51	0	4.48	0.41		3.98	0.67	
Short-Term Service Immersion																								
(0) Never	4.04	0.59		4.25	0.52		4.43	0.46		4.2	0.49		4.23	0.49		3.92	0.67	1,2	4.18	0.44		3.84	0.62	
(1) Once	4.13	0.59		4.33	0.53		4.49	0.44		4.33	0.47		4.33	0.5		4.2	0.62	0	4.3	0.44		3.95	0.53	
(2) Sometimes	4.29	0.48		4.42	0.47		4.54	0.45		4.41	0.4		4.42	0.46		4.48	0.47	0	4.43	0.39		4.1	0.61	
(3) Often	.	.		.	.		.	.		.	.		.	.		.	.		.	.		.	.
Emerging or New Leaders Program																								
(0) Never	4.04	0.59		4.26	0.52		4.44	0.46		4.21	0.49		4.24	0.48		3.93	0.68		4.18	0.44		3.84	0.62	1
(1) Once	4.25	0.49		4.3	0.45		4.46	0.36		4.31	0.38		4.32	0.42		4.2	0.52		4.31	0.34		4.16	0.42	0
(2) Sometimes	.	.		.	.		.	.		.	.		.	.		.	.		.	.		.	.
(3) Often	.	.		.	.		.	.		.	.		.	.		.	.		.	.		.	.
Living-Learning Leadership Program																								
(0) Never	4.05	0.59		4.26	0.52		4.44	0.46		4.21	0.49		4.23	0.49		3.94	0.68	1	4.19	0.44	1	3.85	0.62	1
(1) Once	4.29	0.48		4.58	0.41		4.62	0.36		4.49	0.34		4.45	0.43		4.37	0.5	0	4.46	0.3	0	4.28	0.46	0
(2) Sometimes	.	.		.	.		.	.		.	.		.	.		.	.		.	.		.	.
(3) Often	.	.		.	.		.	.		.	.		.	.		.	.		.	.		.	.
Peer Leadership Educator Team																								
(0) Never	4.04	0.59	1	4.26	0.53		4.43	0.46		4.21	0.49		4.23	0.49		3.93	0.68	1	4.18	0.44	1	3.85	0.62	
(1) Once	4.32	0.4	0	4.4	0.39		4.53	0.37		4.34	0.42		4.39	0.41		4.3	0.48	0	4.38	0.33	0	3.99	0.56	
(2) Sometimes	4.37	0.5		4.29	0.39		4.52	0.41		4.52	0.47		4.48	0.54		4.4	0.56		4.43	0.39		4.23	0.6	
(3) Often	.	.		.	.		.	.		.	.		.	.		.	.		.	.		.	.

Significance: p < .01

Environments by Outcome Measures - SCM Leadership Outcomes

University of Wisconsin-Madison	Consciousness of Self			Congruence			Commitment			Collaboration			Controversy with Civility			Citizenship			Omnibus SRLS			Resiliency		
	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig
Formal Leadership Training Experience (Continued)																								
Outdoor Adventure Leadership Program																								
(0) Never	4.04	0.59		4.26	0.52		4.44	0.46		4.21	0.49		4.23	0.49		3.94	0.68		4.18	0.44		3.85	0.62	
(1) Once	4.37	0.45		4.38	0.45		4.56	0.34		4.42	0.42		4.45	0.44		4.3	0.47		4.41	0.36		4.21	0.46	
(2) Sometimes	4.17	0.37		4.28	0.5		4.33	0.41		4.32	0.45		4.33	0.48		4.24	0.51		4.28	0.36		4.04	0.48	
(3) Often	.	.		.	.		.	.		.	.		.	.		.	.		.	.		.	.
Women's Leadership Program																								
(0) Never	4.05	0.59		4.26	0.52		4.44	0.46		4.21	0.49		4.23	0.49		3.94	0.68		4.19	0.44		3.85	0.62	
(1) Once	4.22	0.42		4.16	0.33		4.34	0.32		4.17	0.38		4.29	0.42		4.09	0.51		4.21	0.29		.	.	
(2) Sometimes	.	.		.	.		.	.		.	.		.	.		.	.		.	.		.	.
(3) Often	.	.		.	.		.	.		.	.		.	.		.	.		.	.		.	.
Multicultural Leadership Program																								
(0) Never	4.04	0.59	1	4.26	0.52		4.44	0.46		4.21	0.49		4.23	0.49	1	3.94	0.67		4.18	0.44		3.85	0.62	
(1) Once	4.47	0.43	0	4.34	0.56		4.45	0.44		4.44	0.38		4.56	0.41	0	4.27	0.6		4.42	0.37		3.99	0.44	
(2) Sometimes	.	.		.	.		.	.		.	.		.	.		.	.		.	.		.	.
(3) Often	.	.		.	.		.	.		.	.		.	.		.	.		.	.		.	.
Formal Leadership Training Program																								
Leadership Certificate Program																								
(1) Yes	4.2	0.5		4.27	0.55		4.47	0.46		4.23	0.59		4.25	0.55		4.29	0.54	0	4.29	0.44		4.06	0.52	0
(0) No	4.04	0.59		4.26	0.52		4.44	0.46		4.21	0.49		4.24	0.48		3.93	0.68	1	4.18	0.44		3.84	0.62	1
Leadership Capstone Experience																								
(1) Yes	.	.		.	.		.	.		.	.		.	.		.	.		.	.		.	.
(0) No	4.05	0.59		4.26	0.52		4.44	0.46		4.22	0.49		4.24	0.49		3.95	0.68		4.19	0.44		3.86	0.62	
Leadership Minor																								
(1) Yes	4.25	0.57		4.41	0.36		4.51	0.4		4.31	0.45		4.32	0.42		4.45	0.48	0	4.38	0.37		4.09	0.49	
(0) No	4.05	0.59		4.26	0.52		4.44	0.46		4.21	0.49		4.24	0.49		3.94	0.67	1	4.19	0.44		3.85	0.62	
Leadership Major																								
(1) Yes	.	.		.	.		.	.		.	.		.	.		.	.		.	.		.	.
(0) No	4.05	0.59		4.26	0.52		4.44	0.46		4.21	0.49		4.24	0.49		3.94	0.67		4.19	0.44		3.86	0.62	

Significance: p < .01

Environments by Outcome Measures - SCM Leadership Outcomes

University of Wisconsin-Madison	Consciousness of Self			Congruence			Commitment			Collaboration			Controversy with Civility			Citizenship			Omnibus SRLS			Resiliency		
	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig
Academic College Experiences																								
Study Abroad																								
(1) Yes	4.13	0.57		4.29	0.54		4.44	0.47		4.22	0.51		4.32	0.46	0	4.05	0.64		4.24	0.43		3.89	0.63	
(0) No	4.04	0.59		4.26	0.52		4.44	0.46		4.21	0.49		4.22	0.49	1	3.93	0.68		4.18	0.44		3.85	0.62	
Experienced Internship																								
(1) Yes	4.16	0.54	0	4.33	0.49	0	4.5	0.42	0	4.31	0.46	0	4.32	0.47	0	4.08	0.65	0	4.28	0.41	0	3.97	0.58	0
(0) No	3.97	0.61	1	4.22	0.54	1	4.39	0.48	1	4.14	0.51	1	4.17	0.49	1	3.85	0.67	1	4.12	0.45	1	3.77	0.63	1
Learning Community Participant																								
(1) Yes	4.11	0.56		4.31	0.49		4.46	0.45		4.27	0.48		4.31	0.44	0	4.12	0.63	0	4.26	0.42	0	3.87	0.64	
(0) No	4.04	0.59		4.25	0.53		4.43	0.46		4.2	0.5		4.22	0.5	1	3.9	0.68	1	4.17	0.44	1	3.85	0.62	
Living-Learning Program																								
(1) Yes	4.13	0.58		4.36	0.49		4.46	0.39		4.23	0.53		4.31	0.47		4.07	0.7		4.26	0.44		3.75	0.7	
(0) No	4.05	0.59		4.26	0.52		4.44	0.46		4.21	0.49		4.23	0.49		3.94	0.67		4.19	0.44		3.86	0.61	
Research with a Faculty Member																								
(1) Yes	4.14	0.58	0	4.29	0.5		4.46	0.45		4.26	0.44		4.3	0.43		4.1	0.59	0	4.26	0.41	0	3.92	0.58	
(0) No	4.03	0.59	1	4.25	0.53		4.43	0.46		4.2	0.51		4.22	0.5		3.91	0.69	1	4.17	0.45	1	3.84	0.63	
First-Year or Freshman Seminar Course																								
(1) Yes	4.08	0.53		4.27	0.49		4.45	0.45		4.23	0.46		4.25	0.45		4.03	0.62	0	4.22	0.41		3.84	0.59	
(0) No	4.04	0.61		4.26	0.54		4.43	0.47		4.21	0.51		4.23	0.5		3.91	0.7	1	4.18	0.45		3.86	0.63	
Senior Capstone Participant																								
(1) Yes	4.16	0.55	0	4.32	0.55		4.52	0.42	0	4.32	0.49	0	4.32	0.48	0	4.04	0.66		4.28	0.41	0	3.98	0.53	0
(0) No	4.03	0.59	1	4.25	0.52		4.42	0.47	1	4.19	0.49	1	4.22	0.49	1	3.93	0.68		4.17	0.44	1	3.83	0.63	1

Significance: p < .01

Environments by Outcome Measures - SCM Leadership Outcomes

University of Wisconsin-Madison	Consciousness of Self			Congruence			Commitment			Collaboration			Controversy with Civility			Citizenship			Omnibus SRLS			Resiliency		
	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig
Academic Major																								
Agriculture/Natural Resources																								
(1) Yes	3.96	0.49		4.28	0.58		4.44	0.35		4.24	0.38		4.22	0.5		4.03	0.69		4.19	0.43		3.92	0.42	
(0) No	4.05	0.59		4.26	0.52		4.44	0.46		4.21	0.49		4.24	0.49		3.95	0.68		4.19	0.44		3.86	0.62	
Architecture/Urban Planning																								
(1) Yes	.	.		.	.		.	.		.	.		.	.		.	.		.	.		.	.
(0) No	4.05	0.59		4.26	0.52		4.44	0.46		4.21	0.49		4.24	0.49		3.95	0.68		4.19	0.44		3.86	0.62	
Biological/Life Sciences																								
(1) Yes	4.03	0.63		4.26	0.58		4.41	0.53		4.18	0.53		4.24	0.49		4.01	0.68		4.18	0.5		3.85	0.72	
(0) No	4.06	0.58		4.26	0.51		4.44	0.45		4.22	0.49		4.24	0.49		3.94	0.67		4.19	0.43		3.86	0.6	
Business																								
(1) Yes	4.08	0.56		4.28	0.51		4.47	0.44		4.26	0.46		4.17	0.49		3.93	0.63		4.2	0.41		3.91	0.61	
(0) No	4.05	0.59		4.26	0.52		4.43	0.46		4.21	0.5		4.25	0.49		3.95	0.68		4.19	0.44		3.85	0.62	
Communication																								
(1) Yes	4.11	0.48		4.2	0.51		4.36	0.48		4.16	0.41		4.15	0.41		3.91	0.58		4.15	0.39		3.85	0.58	
(0) No	4.05	0.59		4.27	0.52		4.44	0.46		4.22	0.5		4.24	0.49		3.95	0.68		4.19	0.44		3.86	0.62	
Computer and Information Sciences																								
(1) Yes	3.95	0.46		4.14	0.42		4.23	0.41	0	4.03	0.46		4.17	0.37		3.52	0.5	0	4	0.31	0	3.78	0.64	
(0) No	4.06	0.59		4.27	0.53		4.44	0.46	1	4.22	0.49		4.24	0.49		3.96	0.68	1	4.2	0.44	1	3.86	0.62	
Education																								
(1) Yes	.	.		.	.		.	.		.	.		.	.		.	.		.	.		.	.
(0) No	4.05	0.59		4.26	0.52		4.44	0.46		4.21	0.49		4.24	0.49		3.95	0.68		4.19	0.44		3.85	0.62	

Significance: $p < .01$

Environments by Outcome Measures - SCM Leadership Outcomes

University of Wisconsin-Madison	Consciousness of Self			Congruence			Commitment			Collaboration			Controversy with Civility			Citizenship			Omnibus SRLS			Resiliency		
	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig
Academic Major (Continued)																								
Criminal Justice																								
(1) Yes	3.94	0.53		4.29	0.55		4.49	0.45		4.26	0.55		4.36	0.49		4.02	0.76		4.22	0.45		3.86	0.64	
(0) No	4.05	0.59		4.26	0.52		4.44	0.46		4.21	0.49		4.24	0.49		3.95	0.67		4.19	0.44		3.86	0.62	
Engineering																								
(1) Yes	4.04	0.71		4.24	0.51		4.44	0.47		4.25	0.66		4.25	0.63		4.05	0.92		4.21	0.57		3.89	0.6	
(0) No	4.05	0.58		4.26	0.52		4.44	0.46		4.21	0.49		4.24	0.48		3.95	0.67		4.19	0.43		3.86	0.62	
Ecology																								
(1) Yes	3.99	0.65		4.21	0.52		4.44	0.48		4.22	0.49		4.19	0.48		3.85	0.64		4.15	0.44		3.92	0.62	
(0) No	4.07	0.57		4.27	0.52		4.44	0.46		4.21	0.49		4.25	0.49		3.97	0.68		4.2	0.44		3.84	0.62	
Ethnic & Cultural Studies																								
(1) Yes	3.98	0.61		4.09	0.41		4.34	0.4		4.3	0.45		4.35	0.43		4.08	0.44		4.19	0.36		3.51	0.58	
(0) No	4.05	0.59		4.27	0.52		4.44	0.46		4.21	0.49		4.24	0.49		3.95	0.68		4.19	0.44		3.86	0.62	
Foreign Languages and Literature																								
(1) Yes	.	.		.	.		.	.		.	.		.	.		.	.		.	.		.	.
(0) No	4.05	0.59		4.26	0.52		4.44	0.46		4.21	0.49		4.24	0.49		3.95	0.68		4.19	0.44		3.86	0.62	
Environmental Science																								
(1) Yes	4.14	0.62		4.38	0.51		4.47	0.36		4.22	0.49		4.36	0.55		3.61	0.95		4.19	0.39		3.85	0.43	
(0) No	4.05	0.59		4.26	0.52		4.44	0.46		4.22	0.49		4.24	0.49		3.95	0.67		4.19	0.44		3.86	0.62	
Health-Related Professions																								
(1) Yes	4.14	0.46		4.34	0.45		4.56	0.4	0	4.31	0.43		4.32	0.46		4.1	0.58		4.3	0.38		3.85	0.52	
(0) No	4.04	0.6		4.26	0.53		4.43	0.46	1	4.21	0.5		4.23	0.49		3.94	0.68		4.18	0.44		3.86	0.63	

Significance: $p < .01$

Environments by Outcome Measures - SCM Leadership Outcomes

University of Wisconsin-Madison	Consciousness of Self			Congruence			Commitment			Collaboration			Controversy with Civility			Citizenship			Omnibus SRLS			Resiliency		
	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig
Academic Major (Continued)																								
Humanities																								
(1) Yes	4.15	0.57		4.32	0.6		4.38	0.51		4.24	0.65		4.33	0.56		4.07	0.58		4.24	0.47		3.93	0.49	
(0) No	4.05	0.59		4.26	0.52		4.44	0.46		4.21	0.49		4.23	0.49		3.95	0.68		4.19	0.44		3.85	0.62	
Liberal/General Studies																								
(1) Yes	.	.		.	.		.	.		.	.		.	.		.	.		.	.		.	.
(0) No	4.05	0.59		4.26	0.52		4.44	0.46		4.21	0.49		4.24	0.49		3.95	0.68		4.19	0.44		3.85	0.62	
Mathematics/Statistics																								
(1) Yes	.	.		.	.		.	.		.	.		.	.		.	.		.	.		.	.
(0) No	4.05	0.59		4.26	0.52		4.44	0.46		4.22	0.49		4.24	0.49		3.95	0.68		4.19	0.44		3.86	0.62	
Multi/Interdisciplinary Studies																								
(1) Yes	3.94	0.58		4.11	0.59		4.31	0.46		4.02	0.54		4.14	0.49		3.92	0.75		4.07	0.5		3.86	0.57	
(0) No	4.05	0.59		4.27	0.52		4.44	0.46		4.22	0.49		4.24	0.49		3.95	0.67		4.19	0.44		3.86	0.62	
Parks, Recreation, Leisure Studies, Sports Management																								
(1) Yes	.	.		.	.		.	.		.	.		.	.		.	.		.	.		.	.
(0) No	4.05	0.59		4.26	0.52		4.44	0.46		4.22	0.49		4.24	0.49		3.95	0.68		4.19	0.44		3.86	0.62	
Library Sciences																								
(1) Yes	.	.		.	.		.	.		.	.		.	.		.	.		.	.		.	.
(0) No	4.05	0.59		4.26	0.52		4.44	0.46		4.21	0.49		4.24	0.49		3.95	0.67		4.19	0.44		3.86	0.62	
Physical Sciences																								
(1) Yes	.	.		.	.		.	.		.	.		.	.		.	.		.	.		.	.
(0) No	4.05	0.59		4.26	0.52		4.44	0.46		4.22	0.49		4.24	0.49		3.95	0.68		4.19	0.44		3.86	0.62	

Significance: p < .01

Environments by Outcome Measures - SCM Leadership Outcomes

University of Wisconsin-Madison	Consciousness of Self			Congruence			Commitment			Collaboration			Controversy with Civility			Citizenship			Omnibus SRLS			Resiliency		
	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig
<i>Academic Major (Continued)</i>																								
Pre-Professional																								
(1) Yes	4.03	0.53		4.18	0.63		4.25	0.5		4.11	0.53		4.22	0.57		3.85	0.79		4.1	0.52		3.73	0.77	
(0) No	4.05	0.59		4.27	0.52		4.44	0.46		4.22	0.49		4.24	0.49		3.95	0.67		4.19	0.44		3.86	0.62	
Military Science/Technology/Operations																								
(1) Yes	4.18	0.58		4.37	0.41		4.57	0.35		4.33	0.43		4.37	0.36		4.19	0.56		4.34	0.36		3.88	0.58	
(0) No	4.05	0.59		4.26	0.53		4.43	0.46		4.21	0.49		4.23	0.49		3.94	0.68		4.18	0.44		3.86	0.62	
Public Administration																								
(1) Yes	.	.		.	.		.	.		.	.		.	.		.	.		.	.		.	.
(0) No	4.05	0.59		4.26	0.52		4.44	0.46		4.21	0.49		4.24	0.49		3.95	0.68		4.19	0.44		3.86	0.62	
Social Sciences																								
(1) Yes	4.02	0.6		4.32	0.54		4.44	0.44		4.21	0.48		4.26	0.51		3.96	0.77		4.2	0.44		3.82	0.66	
(0) No	4.06	0.59		4.26	0.52		4.44	0.46		4.22	0.49		4.23	0.49		3.95	0.66		4.19	0.44		3.86	0.61	
Visual and Performing Arts																								
(1) Yes	.	.		.	.		.	.		.	.		.	.		.	.		.	.		.	.
(0) No	4.05	0.59		4.26	0.52		4.44	0.46		4.22	0.49		4.24	0.49		3.95	0.67		4.19	0.44		3.86	0.62	
Undecided																								
(1) Yes	.	.		.	.		.	.		.	.		.	.		.	.		.	.		.	.
(0) No	4.05	0.59		4.26	0.52		4.44	0.46		4.22	0.49		4.24	0.49		3.95	0.67		4.19	0.44		3.86	0.62	
Women/Gender Studies																								
(1) Yes	3.65	0.5	0	3.94	0.43	0	4.33	0.38		4	0.46		4.01	0.4		3.71	0.6		3.94	0.34	0	3.37	0.59	0
(0) No	4.06	0.59	1	4.27	0.52	1	4.44	0.46		4.22	0.49		4.24	0.49		3.95	0.68		4.19	0.44	1	3.87	0.62	1

Significance: $p < .01$

Environments by Outcome Measures

University of Wisconsin-Madison	Leadership Efficacy Scored on a 4-point scale ranging from Not At All Confident (1) to Very Confident (4)			Complex Cognitive Skills Scored on a 4-point scale ranging from Not Grown At All (1) to Grown Very Much At (4)			Social Perspective-Taking Scored part on on a 5-point scale from Does Not Describe Me Well (1) to Describes Me Very Well (5)			Hope Scale - Agency Scored on an 8-point scale ranging from Definitely False (1) to Definitely True (8)			Hope Scale - Pathways Scored on an 8-point scale ranging from Definitely False (1) to Definitely True (8)		
	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig
Student Characteristics															
<i>Off-Campus Job</i>															
(1) Yes	3.2	0.57		3.24	0.61		3.91	0.66		6.73	0.99		6.64	0.87	
(0) No	3.11	0.65		3.17	0.61		3.81	0.72		6.65	1.06		6.49	0.96	
<i>On-Campus Job</i>															
(1) Yes	3.21	0.62	0	3.28	0.59	0	3.84	0.68		6.7	1.03		6.5	0.94	
(0) No	3.09	0.64	1	3.13	0.62	1	3.83	0.72		6.65	1.05		6.54	0.94	
<i>Community Service</i>															
(1) Yes	3.25	0.59	0	3.25	0.59	0	3.86	0.69		6.82	0.9	0	6.58	0.9	
(0) No	3.04	0.66	1	3.13	0.62	1	3.81	0.72		6.54	1.13	1	6.48	0.98	
<i>Residential Setting</i>															
(1) Off-Campus	3.19	0.62	2	3.27	0.59	2	3.88	0.67	2	6.7	1		6.54	0.94	
(2) On-Campus	3.05	0.65	1	3.07	0.62	1	3.76	0.76	1	6.63	1.1		6.49	0.95	
<i>Involvement in College Organizations</i>															
(0) Never	2.91	0.68	3,4	3.01	0.75	4	3.81	0.82		6.17	1.33	3,4	6.43	1.15	4
(1) Once	2.89	0.66	3,4	3.04	0.59	4	3.68	0.71		6.31	1.14	3,4	6.3	1.02	4
(2) Sometimes	2.99	0.61	3,4	3.1	0.63	4	3.8	0.68		6.48	1.1	3,4	6.4	0.91	4
(3) Many times	3.18	0.57	0,1,2,4	3.19	0.54	4	3.82	0.64		6.74	0.88	0,1,2,4	6.47	0.94	4
(4) Much of the time	3.38	0.59	0,1,2,3	3.37	0.57	0,1,2,3	3.92	0.74		7.05	0.82	0,1,2,3	6.79	0.83	0,1,2,3
<i>Leadership Positions in College Organizations</i>															
(0) Never	2.97	0.63	2,3,4	3.06	0.62	1,2,3,4	3.78	0.72	4	6.49	1.07	3,4	6.41	0.98	3,4
(1) Once	3.11	0.64	4	3.25	0.56	0	3.82	0.66		6.64	1.09	4	6.45	0.89	
(2) Sometimes	3.24	0.59	0,4	3.25	0.57	0,4	3.8	0.71		6.75	1.03		6.56	0.93	
(3) Many times	3.36	0.49	0	3.33	0.54	0	3.96	0.6		6.99	0.71	0	6.8	0.78	0
(4) Much of the time	3.49	0.54	0,1,2	3.47	0.54	0,2	3.98	0.73	0	7.04	0.94	0,1	6.75	0.89	0

Significance: p < .01

Environments by Outcome Measures

University of Wisconsin-Madison	Leadership Efficacy Scored on a 4-point scale ranging from Not At All Confident (1) to Very Confident (4)			Complex Cognitive Skills Scored on a 4-point scale ranging from Not Grown At All (1) to Grown Very Much (4)			Social Perspective-Taking Scored part on on a 5-point scale from Does Not Describe Me Well (1) to Describes Me Very Well (5)			Hope Scale - Agency Scored on an 8-point scale ranging from Definitely False (1) to Definitely True (8)			Hope Scale - Pathways Scored on an 8-point scale ranging from Definitely False (1) to Definitely True (8)		
	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig
Involvement in Off-Campus Organizations															
(0) Never	3.05	0.66	2,3,4	3.13	0.62	2	3.78	0.72		6.59	1.09	4	6.48	0.96	
(1) Once	3.21	0.58		3.29	0.57		3.89	0.62		6.7	0.93		6.47	0.89	
(2) Sometimes	3.29	0.59	0	3.34	0.52	0	3.9	0.68		6.79	1.05		6.55	0.95	
(3) Many times	3.29	0.53	0	3.24	0.53		3.95	0.69		6.87	0.75		6.68	0.81	
(4) Much of the time	3.43	0.46	0	3.33	0.7		4.02	0.73		7.01	0.82	0	6.78	0.95	
Leadership Positions in Off-Campus Organizations															
(0) Never	3.08	0.64	3,4	3.17	0.61	4	3.81	0.7	4	6.65	1.03	4	6.51	0.92	
(1) Once	3.27	0.51		3.18	0.51		3.96	0.71		6.66	1.08		6.36	1.19	
(2) Sometimes	3.29	0.62		3.24	0.62		3.84	0.63		6.51	1.33	4	6.4	1.06	4
(3) Many times	3.48	0.47	0	3.21	0.53		3.88	0.73		6.94	0.76		6.78	0.74	
(4) Much of the time	3.64	0.43	0	3.57	0.62	0	4.24	0.83	0	7.24	0.75	0,2	6.99	1.04	2

Significance: p < .01

Environments by Outcome Measures

University of Wisconsin-Madison	Leadership Efficacy Scored on a 4-point scale ranging from Not At All Confident (1) to Very Confident (4)			Complex Cognitive Skills Scored on a 4-point scale ranging from Not Grown At All (1) to Grown Very Much (4)			Social Perspective-Taking Scored part on on a 5-point scale from Does Not Describe Me Well (1) to Describes Me Very Well (5)			Hope Scale - Agency Scored on an 8-point scale ranging from Definitely False (1) to Definitely True (8)			Hope Scale - Pathways Scored on an 8-point scale ranging from Definitely False (1) to Definitely True (8)		
	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig
Participation in Student Groups															
Academic/Departmental/Professional															
(1) Yes	3.2	0.61	0	3.22	0.58		3.81	0.71		6.78	0.97	0	6.56	0.93	
(0) No	3.08	0.65	1	3.15	0.64		3.85	0.7		6.56	1.1	1	6.49	0.95	
Advocacy															
(1) Yes	3.24	0.62		3.3	0.57		3.89	0.63		6.72	0.98		6.47	0.93	
(0) No	3.13	0.64		3.18	0.61		3.83	0.71		6.67	1.05		6.53	0.94	
Art/Theater/Music															
(1) Yes	3.13	0.6		3.22	0.6		3.9	0.7		6.63	1.1		6.49	0.9	
(0) No	3.14	0.64		3.18	0.61		3.82	0.71		6.68	1.03		6.53	0.95	
Campus-Wide Programming															
(1) Yes	3.29	0.59	0	3.26	0.55		3.84	0.7		6.8	0.95		6.65	0.86	
(0) No	3.12	0.64	1	3.18	0.62		3.83	0.71		6.66	1.05		6.51	0.95	
Honor Societies															
(1) Yes	3.29	0.57	0	3.35	0.5	0	3.92	0.67		6.91	0.92	0	6.59	0.92	
(0) No	3.12	0.64	1	3.17	0.62	1	3.82	0.71		6.64	1.05	1	6.51	0.95	
Identity-Based/Multicultural Organizations															
(1) Yes	3.22	0.62		3.41	0.53	0	3.99	0.66	0	6.71	0.99		6.58	0.9	
(0) No	3.13	0.64		3.16	0.61	1	3.81	0.71	1	6.67	1.05		6.52	0.95	
International Interest															
(1) Yes	3.2	0.63		3.34	0.52	0	3.9	0.66		6.76	0.92		6.58	0.87	
(0) No	3.13	0.63		3.16	0.62	1	3.82	0.71		6.66	1.06		6.52	0.95	
Media															
(1) Yes	3.3	0.59	0	3.3	0.63		3.91	0.73		6.83	0.82		6.54	0.97	
(0) No	3.12	0.64	1	3.18	0.61		3.83	0.7		6.66	1.06		6.52	0.94	
Military															
(1) Yes	3.42	0.52		3.31	0.5		3.82	0.86		6.67	1.03		6.84	1.04	
(0) No	3.13	0.64		3.19	0.61		3.83	0.7		6.67	1.04		6.52	0.94	

Significance: $p < .01$

Environments by Outcome Measures

University of Wisconsin-Madison	Leadership Efficacy Scored on a 4-point scale ranging from Not At All Confident (1) to Very Confident (4)			Complex Cognitive Skills Scored on a 4-point scale ranging from Not Grown At All (1) to Grown Very Much (4)			Social Perspective-Taking Scored part on on a 5-point scale from Does Not Describe Me Well (1) to Describes Me Very Well (5)			Hope Scale - Agency Scored on an 8-point scale ranging from Definitely False (1) to Definitely True (8)			Hope Scale - Pathways Scored on an 8-point scale ranging from Definitely False (1) to Definitely True (8)		
	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig
Participation in Student Groups (Continued)															
Multicultural Social Fraternities and Sororities															
(1) Yes	3.2	0.59		3.31	0.61		3.91	0.78		6.39	1.4		6.33	1.06	
(0) No	3.13	0.64		3.18	0.61		3.83	0.7		6.68	1.03		6.53	0.94	
New Student Transitions															
(1) Yes	3.35	0.54	0	3.4	0.49	0	3.81	0.72		6.87	0.85		6.57	0.82	
(0) No	3.12	0.64	1	3.17	0.62	1	3.83	0.71		6.66	1.05		6.52	0.95	
Peer Helper															
(1) Yes	3.27	0.56	0	3.39	0.55	0	3.96	0.66	0	6.91	0.87	0	6.64	0.89	
(0) No	3.11	0.65	1	3.15	0.61	1	3.81	0.71	1	6.62	1.07	1	6.5	0.95	
Political															
(1) Yes	3.31	0.56	0	3.22	0.57		3.72	0.68		6.83	0.71		6.65	0.81	
(0) No	3.12	0.64	1	3.18	0.61		3.85	0.71		6.65	1.07		6.51	0.96	
Recreational															
(1) Yes	3.21	0.61	0	3.16	0.57		3.84	0.71		6.78	0.94		6.62	0.92	
(0) No	3.11	0.64	1	3.2	0.63		3.83	0.71		6.62	1.08		6.48	0.95	
Religious															
(1) Yes	3.25	0.58	0	3.22	0.63		3.88	0.74		6.86	0.89	0	6.62	0.92	
(0) No	3.11	0.64	1	3.18	0.61		3.82	0.7		6.62	1.07	1	6.5	0.95	
Resident Assistants															
(1) Yes	3.16	0.62		3.27	0.62		3.87	0.63		6.75	0.95		6.39	0.99	
(0) No	3.14	0.63		3.18	0.61		3.83	0.71		6.67	1.04		6.53	0.94	
Service															
(1) Yes	3.24	0.61	0	3.28	0.59	0	3.92	0.69	0	6.78	0.94		6.49	0.96	
(0) No	3.1	0.64	1	3.15	0.62	1	3.8	0.71	1	6.63	1.07		6.54	0.94	
Social Fraternities or Sororities															
(1) Yes	3.32	0.55	0	3.27	0.57		3.74	0.71		6.76	1.04		6.6	0.94	
(0) No	3.11	0.64	1	3.17	0.62		3.85	0.7		6.66	1.04		6.51	0.94	

Significance: p < .01

Environments by Outcome Measures

University of Wisconsin-Madison	Leadership Efficacy Scored on a 4-point scale ranging from Not At All Confident (1) to Very Confident (4)			Complex Cognitive Skills Scored on a 4-point scale ranging from Not Grown At All (1) to Grown Very Much (4)			Social Perspective-Taking Scored part on on a 5-point scale from Does Not Describe Me Well (1) to Describes Me Very Well (5)			Hope Scale - Agency Scored on an 8-point scale ranging from Definitely False (1) to Definitely True (8)			Hope Scale - Pathways Scored on an 8-point scale ranging from Definitely False (1) to Definitely True (8)		
	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig
Participation in Student Groups (Continued)															
Social/Special Interest															
(1) Yes	3.19	0.6		3.23	0.58		3.84	0.7		6.71	0.96		6.55	0.91	
(0) No	3.12	0.64		3.18	0.62		3.83	0.71		6.66	1.07		6.51	0.95	
Sports-Intecollegiate or Varsity															
(1) Yes	3.23	0.61		3.26	0.55		3.85	0.66		6.9	0.86	0	6.66	0.85	
(0) No	3.12	0.64		3.18	0.62		3.83	0.71		6.64	1.06	1	6.51	0.95	
Student Governance															
(1) Yes	3.37	0.55	0	3.34	0.54		3.97	0.67		6.95	0.8		6.66	0.95	
(0) No	3.12	0.64	1	3.18	0.61		3.82	0.71		6.65	1.05		6.51	0.94	
LGBTQ Groups															
(0) Never	3.14	0.64		3.18	0.61		3.82	0.71		6.67	1.04		6.52	0.94	
(1) Sometimes	3.19	0.58		3.42	0.49		4.09	0.61		6.79	0.91		6.61	0.84	
(2) Often	.	.		.	.		.	.		.	.		.	.
(3) Very Often	.	.		.	.		.	.		.	.		.	.
Racial/Ethnic Groups															
(0) Never	3.13	0.64		3.17	0.61	3	3.82	0.71		6.67	1.05		6.52	0.95	
(1) Sometimes	3.11	0.58		3.41	0.51		3.93	0.65		6.6	0.97		6.5	0.86	
(2) Often	3.13	0.61		3.34	0.57		3.98	0.63		6.79	0.66		6.72	0.57	
(3) Very Often	3.44	0.58		3.58	0.5	0	4.02	0.78		6.85	0.74		6.68	0.86	
Women's Groups															
(0) Never	3.13	0.63		3.17	0.61		3.82	0.71		6.67	1.04		6.52	0.94	
(1) Sometimes	3.15	0.63		3.33	0.57		3.92	0.52		6.48	1.06		6.35	0.96	
(2) Often	3.35	0.7		3.32	0.65		3.8	0.94		6.65	1.27		6.68	1.07	
(3) Very Often	.	.		.	.		.	.		.	.		.	.

Significance: $p < .01$

Environments by Outcome Measures

University of Wisconsin-Madison	Leadership Efficacy Scored on a 4-point scale ranging from Not At All Confident (1) to Very Confident (4)			Complex Cognitive Skills Scored on a 4-point scale ranging from Not Grown At All (1) to Grown Very Much (4)			Social Perspective-Taking Scored part on on a 5-point scale from Does Not Describe Me Well (1) to Describes Me Very Well (5)			Hope Scale - Agency Scored on an 8-point scale ranging from Definitely False (1) to Definitely True (8)			Hope Scale - Pathways Scored on an 8-point scale ranging from Definitely False (1) to Definitely True (8)		
	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig
Social Change Behaviors															
(0) Never	2.9	0.68	1,2,3	2.96	0.64	1,2,3	3.63	0.74	1,2,3	6.36	1.26	1,2,3	6.39	1.02	2,3
(1) Once	3.15	0.6	0,2,3	3.2	0.58	0,2,3	3.83	0.67	0,2	6.74	0.94	0	6.49	0.93	
(2) Sometimes	3.35	0.54	0,1	3.39	0.52	0,1	4.04	0.65	0,1	6.89	0.83	0	6.7	0.82	0
(3) Often	3.65	0.44	0,1	3.6	0.53	0,1	4.14	0.71	0	7.01	0.79	0	6.94	0.87	0
Socio-Cultural Conversations															
(0) Never	2.77	0.8	2,3	2.85	0.67	2,3	3.49	0.83	2,3	6.27	1.25	2,3	6.21	1.1	2,3
(1) Once	3	0.62	2,3	3.02	0.61	2,3	3.65	0.68	2,3	6.56	1.06	3	6.36	0.98	2,3
(2) Sometimes	3.19	0.59	0,1,3	3.27	0.56	0,1,3	3.9	0.67	0,1,3	6.7	1.01	0,3	6.58	0.88	0,1,3
(3) Often	3.48	0.54	0,1,2	3.49	0.55	0,1,2	4.24	0.59	0,1,2	7.04	0.87	0,1,2	6.91	0.84	0,1,2
Campus Climate															
Belonging Climate															
(1) Strongly Disagree	2.56	0.86	4,5	2.3	0.78	2,3,4,5	3.5	0.98	5	5.39	1.84	3,4,5	5.77	1.93	4,5
(2) Disagree	2.87	0.71	4,5	2.86	0.7	1,4,5	3.63	0.79	5	5.86	1.33	3,4,5	6.23	1.07	5
(3) Neutral	2.9	0.66	4,5	3	0.62	1,4,5	3.71	0.69	5	6.31	1.12	1,2,4,5	6.25	1.02	4,5
(4) Agree	3.17	0.57	1,2,3,5	3.23	0.55	1,2,3,5	3.83	0.66	5	6.78	0.86	1,2,3,5	6.57	0.82	1,3,5
(5) Strongly Agree	3.48	0.55	1,2,3,4	3.5	0.5	1,2,3,4	4.11	0.74	1,2,3,4	7.22	0.8	1,2,3,4	6.93	0.86	1,2,3,4
Non-Discriminatory Climate															
(1) Strongly Disagree	.	.		.	.		.	.		.	.		.	.
(2) Disagree	3.26	0.62		3.18	0.68		3.86	0.74		6.69	0.99		6.57	0.92	
(3) Neutral	3.14	0.66		3.15	0.61		3.78	0.72		6.53	1.16		6.46	1	
(4) Agree	3.08	0.65		3.16	0.6		3.81	0.68		6.63	1.01		6.47	0.92	
(5) Strongly Agree	3.18	0.59		3.25	0.6		3.87	0.73		6.83	1.02		6.64	0.94	

Significance: $p < .01$

Environments by Outcome Measures

University of Wisconsin-Madison	Leadership Efficacy Scored on a 4-point scale ranging from Not At All Confident (1) to Very Confident (4)			Complex Cognitive Skills Scored on a 4-point scale ranging from Not Grown At All (1) to Grown Very Much (4)			Social Perspective-Taking Scored part on on a 5-point scale from Does Not Describe Me Well (1) to Describes Me Very Well (5)			Hope Scale - Agency Scored on an 8-point scale ranging from Definitely False (1) to Definitely True (8)			Hope Scale - Pathways Scored on an 8-point scale ranging from Definitely False (1) to Definitely True (8)		
	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig
Mentor Relationships															
Faculty/Instructor															
(0) Never	3.03	0.65	2,3	3.04	0.64	2,3	3.77	0.7		6.43	1.17	2,3	6.4	1.01	3
(1) Once	3.16	0.62		3.16	0.59	3	3.86	0.67		6.64	1.03	3	6.42	0.92	
(2) Sometimes	3.17	0.6	0	3.25	0.57	0,3	3.84	0.71		6.77	0.87	0,3	6.57	0.88	
(3) Often	3.3	0.62	0	3.41	0.53	0,1,2	3.93	0.71		7.03	0.87	0,1,2	6.74	0.84	0
Student Affairs Professional Staff															
(0) Never	3.09	0.64	3	3.1	0.63	3	3.82	0.71	3	6.54	1.18	3	6.51	1.01	
(1) Once	3.1	0.63	3	3.17	0.57	3	3.7	0.73	3	6.68	0.9	3	6.5	0.82	
(2) Sometimes	3.11	0.6	3	3.21	0.58	3	3.82	0.69	3	6.7	0.91	3	6.47	0.9	
(3) Often	3.43	0.63	0,1,2	3.51	0.53	0,1,2	4.05	0.63	0,1,2	7.07	0.78	0,1,2	6.73	0.87	
Employer															
(0) Never	3.03	0.63	2,3	3.06	0.6	2,3	3.79	0.72	3	6.55	1.08	2,3	6.45	0.97	3
(1) Once	3.04	0.6	3	3.23	0.62	3	3.88	0.73		6.5	1.1	3	6.3	0.99	3
(2) Sometimes	3.2	0.62	0,3	3.29	0.57	0,3	3.82	0.65		6.78	0.95	0	6.53	0.9	3
(3) Often	3.51	0.5	0,1,2	3.49	0.57	0,1,2	4.01	0.7	0	7.06	0.85	0,1	6.93	0.74	0,1,2
Community Member															
(0) Never	3.09	0.64	3	3.14	0.62	2	3.81	0.71		6.58	1.09	2,3	6.48	0.96	
(1) Once	3.21	0.6		3.36	0.53		3.93	0.77		6.84	0.76		6.51	0.95	
(2) Sometimes	3.24	0.58		3.33	0.53	0	3.89	0.66		6.93	0.83	0	6.63	0.88	
(3) Often	3.42	0.57	0	3.33	0.59		3.94	0.69		7.02	0.97	0	6.8	0.76	
Parent/Guardian															
(0) Never	3	0.65	3	3.05	0.63	3	3.79	0.73		6.38	1.23	3	6.43	0.99	
(1) Once	2.94	0.7		3.02	0.62		3.9	0.72		6.34	0.95		6.5	0.8	
(2) Sometimes	3.04	0.62	3	3.11	0.62	3	3.81	0.69		6.6	1.01	3	6.49	0.86	
(3) Often	3.24	0.61	0,2	3.29	0.58	0,2	3.86	0.7		6.85	0.91	0,2	6.58	0.95	

Significance: p < .01

Environments by Outcome Measures

University of Wisconsin-Madison	Leadership Efficacy Scored on a 4-point scale ranging from Not At All Confident (1) to Very Confident (4)			Complex Cognitive Skills Scored on a 4-point scale ranging from Not Grown At All (1) to Grown Very Much At (4)			Social Perspective-Taking Scored part on on a 5-point scale from Does Not Describe Me Well (1) to Describes Me Very Well (5)			Hope Scale - Agency Scored on an 8-point scale ranging from Definitely False (1) to Definitely True (8)			Hope Scale - Pathways Scored on an 8-point scale ranging from Definitely False (1) to Definitely True (8)		
	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig
Mentor Relationships (Continued)															
Other Student															
(0) Never	3.05	0.66	3	3.08	0.64	2,3	3.83	0.71		6.5	1.14	2,3	6.45	1	3
(1) Once	3.18	0.6		3.21	0.64		3.76	0.68		6.44	1.24		6.32	0.89	
(2) Sometimes	3.13	0.58		3.22	0.57	0	3.81	0.7		6.77	0.87	0	6.5	0.89	
(3) Often	3.24	0.64	0	3.29	0.59	0	3.86	0.72		6.82	0.99	0	6.66	0.92	0
Formal Leadership Training Experience															
Leadership Conference															
(0) Never	3.09	0.63	1,2,3	3.16	0.62		3.82	0.71		6.63	1.06		6.5	0.95	
(1) Once	3.32	0.56	0	3.29	0.54		3.89	0.64		6.81	0.89		6.65	0.82	
(2) Sometimes	3.48	0.6	0	3.41	0.5		3.96	0.74		6.89	1.1		6.56	1.09	
(3) Often	3.53	0.51	0	3.16	0.8		3.77	0.67		7.08	0.71		6.99	0.75	
Leadership Retreat															
(0) Never	3.1	0.63	2,3	3.16	0.62		3.83	0.71		6.63	1.05		6.51	0.95	
(1) Once	3.31	0.56		3.35	0.47		3.83	0.71		6.85	0.94		6.58	0.95	
(2) Sometimes	3.41	0.6	0	3.37	0.47		3.84	0.63		6.93	1.07		6.66	0.79	
(3) Often	3.65	0.5	0	3.22	0.68		3.92	0.73		7.02	0.7		6.84	1.03	
Leadership Lecture/Workshop Series															
(0) Never	3.08	0.63	2,3	3.16	0.62		3.83	0.71		6.63	1.05		6.5	0.95	3
(1) Once	3.29	0.63	3	3.34	0.51		3.73	0.71		6.73	1.1		6.6	0.91	
(2) Sometimes	3.42	0.54	0	3.35	0.55		3.88	0.67		6.94	0.87		6.57	0.9	
(3) Often	3.71	0.44	0,1	3.33	0.7		4.03	0.77		7.14	0.64		7.04	0.68	0
Positional Leader Training															
(0) Never	3.1	0.63	2,3	3.17	0.62		3.84	0.71		6.64	1.05		6.51	0.94	
(1) Once	3.37	0.65		3.23	0.56		3.57	0.67		6.84	1.12		6.36	1.15	
(2) Sometimes	3.36	0.52	0	3.28	0.58		3.83	0.65		6.94	0.79		6.68	0.8	
(3) Often	3.65	0.44	0	3.53	0.45		4.02	0.82		7.01	0.78		6.99	0.69	

Significance: p < .01

Environments by Outcome Measures

University of Wisconsin-Madison	Leadership Efficacy Scored on a 4-point scale ranging from Not At All Confident (1) to Very Confident (4)			Complex Cognitive Skills Scored on a 4-point scale ranging from Not Grown At All (1) to Grown Very Much (4)			Social Perspective-Taking Scored part on on a 5-point scale from Does Not Describe Me Well (1) to Describes Me Very Well (5)			Hope Scale - Agency Scored on an 8-point scale ranging from Definitely False (1) to Definitely True (8)			Hope Scale - Pathways Scored on an 8-point scale ranging from Definitely False (1) to Definitely True (8)		
	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig
Formal Leadership Training Experience (Continued)															
Leadership Course															
(0) Never	3.1	0.63	2,3	3.17	0.62		3.83	0.71		6.64	1.05		6.51	0.95	
(1) Once	3.28	0.6		3.27	0.58		3.76	0.66		6.93	0.85		6.66	0.82	
(2) Sometimes	3.56	0.54	0	3.44	0.43		3.96	0.69		7.08	0.84		6.71	0.83	
(3) Often	3.66	0.52	0	3.2	0.59		3.82	0.85		6.87	1.17		6.66	1.03	
Short-Term Service Immersion															
(0) Never	3.12	0.64		3.17	0.61		3.82	0.71		6.65	1.05		6.52	0.94	
(1) Once	3.27	0.58		3.4	0.53		3.81	0.64		6.85	0.88		6.53	0.96	
(2) Sometimes	3.49	0.49		3.51	0.42		4.12	0.54		7	0.83		6.7	0.9	
(3) Often	.	.		.	.		.	.		.	.		.	.
Emerging or New Leaders Program															
(0) Never	3.12	0.64		3.19	0.61		3.83	0.71		6.66	1.05		6.51	0.95	
(1) Once	3.35	0.49		3.21	0.57		3.89	0.69		7.06	0.8		6.69	0.89	
(2) Sometimes	.	.		.	.		.	.		.	.		.	.
(3) Often	.	.		.	.		.	.		.	.		.	.
Living-Learning Leadership Program															
(0) Never	3.13	0.64		3.19	0.61		3.83	0.71		6.67	1.05		6.53	0.94	
(1) Once	3.43	0.53		3.47	0.51		3.81	0.65		7.01	0.48		6.5	0.82	
(2) Sometimes	.	.		.	.		.	.		.	.		.	.
(3) Often	.	.		.	.		.	.		.	.		.	.
Peer Leadership Educator Team															
(0) Never	3.12	0.63	2	3.18	0.61		3.83	0.7		6.65	1.05		6.52	0.94	
(1) Once	3.36	0.59		3.44	0.48		3.97	0.68		6.9	0.83		6.55	0.99	
(2) Sometimes	3.67	0.47	0	3.45	0.56		3.73	0.99		7.2	0.56		7.07	0.65	
(3) Often	.	.		.	.		.	.		.	.		.	.

Significance: p < .01

Environments by Outcome Measures

University of Wisconsin-Madison	Leadership Efficacy Scored on a 4-point scale ranging from Not At All Confident (1) to Very Confident (4)			Complex Cognitive Skills Scored on a 4-point scale ranging from Not Grown At All (1) to Grown Very Much (4)			Social Perspective-Taking Scored part on on a 5-point scale from Does Not Describe Me Well (1) to Describes Me Very Well (5)			Hope Scale - Agency Scored on an 8-point scale ranging from Definitely False (1) to Definitely True (8)			Hope Scale - Pathways Scored on an 8-point scale ranging from Definitely False (1) to Definitely True (8)		
	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig
Formal Leadership Training Experience (Continued)															
Outdoor Adventure Leadership Program															
(0) Never	3.12	0.63	1	3.18	0.62		3.83	0.71		6.66	1.05		6.52	0.94	
(1) Once	3.69	0.41	0	3.47	0.52		4.05	0.6		7.09	0.59		6.93	0.51	
(2) Sometimes	3.43	0.52		3.35	0.38		3.85	0.57		6.88	0.73		6.34	1.24	
(3) Often	.	.		.	.		.	.		.	.		.	.
Women's Leadership Program															
(0) Never	3.13	0.64		3.18	0.61		3.83	0.71		6.66	1.05		6.52	0.94	
(1) Once	3.28	0.54		3.3	0.41		.	.		6.88	0.53		6.58	0.69	
(2) Sometimes	.	.		.	.		.	.		.	.		.	.
(3) Often	.	.		.	.		.	.		.	.		.	.
Multicultural Leadership Program															
(0) Never	3.13	0.63		3.18	0.61		3.83	0.71		6.66	1.05		6.51	0.95	
(1) Once	3.47	0.61		3.47	0.32		3.94	0.75		7.06	0.54		6.92	0.65	
(2) Sometimes	.	.		.	.		.	.		.	.		.	.
(3) Often	.	.		.	.		.	.		.	.		.	.
Formal Leadership Training Program															
Leadership Certificate Program															
(1) Yes	3.49	0.53	0	3.32	0.51		3.9	0.64		6.99	0.82	0	6.75	0.87	
(0) No	3.12	0.63	1	3.18	0.62		3.83	0.71		6.65	1.05	1	6.51	0.95	
Leadership Capstone Experience															
(1) Yes	.	.		.	.		.	.		.	.		.	.
(0) No	3.13	0.63		3.19	0.61		3.83	0.71		6.67	1.04		6.52	0.94	
Leadership Minor															
(1) Yes	3.6	0.46	0	3.36	0.56		3.9	0.73		7.04	0.48		7.01	0.56	
(0) No	3.13	0.63	1	3.19	0.61		3.83	0.71		6.66	1.05		6.52	0.95	
Leadership Major															
(1) Yes	.	.		.	.		.	.		.	.		.	.
(0) No	3.13	0.63		3.19	0.61		3.83	0.71		6.67	1.04		6.52	0.95	

Significance: p < .01

Environments by Outcome Measures

University of Wisconsin-Madison	Leadership Efficacy Scored on a 4-point scale ranging from Not At All Confident (1) to Very Confident (4)			Complex Cognitive Skills Scored on a 4-point scale ranging from Not Grown At All (1) to Grown Very Much (4)			Social Perspective-Taking Scored part on on a 5-point scale from Does Not Describe Me Well (1) to Describes Me Very Well (5)			Hope Scale - Agency Scored on an 8-point scale ranging from Definitely False (1) to Definitely True (8)			Hope Scale - Pathways Scored on an 8-point scale ranging from Definitely False (1) to Definitely True (8)		
	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig
Academic College Experiences															
Study Abroad															
(1) Yes	3.26	0.58	0	3.32	0.54	0	3.83	0.65		6.87	0.95	0	6.57	0.88	
(0) No	3.11	0.64	1	3.16	0.62	1	3.83	0.72		6.63	1.05	1	6.51	0.95	
Experienced Internship															
(1) Yes	3.28	0.59	0	3.34	0.58	0	3.91	0.68	0	6.9	0.91	0	6.64	0.88	0
(0) No	3.03	0.65	1	3.08	0.61	1	3.78	0.72	1	6.5	1.1	1	6.43	0.98	1
Learning Community Participant															
(1) Yes	3.15	0.63		3.24	0.58		3.88	0.7		6.76	1.01		6.54	0.93	
(0) No	3.13	0.64		3.17	0.62		3.82	0.71		6.64	1.05		6.52	0.94	
Living-Learning Program															
(1) Yes	3.02	0.7		3.17	0.58		3.77	0.75		6.7	1.04		6.54	0.98	
(0) No	3.14	0.63		3.19	0.61		3.84	0.7		6.67	1.04		6.52	0.94	
Research with a Faculty Member															
(1) Yes	3.24	0.58	0	3.34	0.57	0	3.93	0.66		6.84	0.96	0	6.62	0.89	
(0) No	3.11	0.65	1	3.15	0.62	1	3.81	0.72		6.62	1.06	1	6.49	0.95	
First-Year or Freshman Seminar Course															
(1) Yes	3.13	0.63		3.19	0.56		3.8	0.69		6.74	0.93		6.56	0.88	
(0) No	3.14	0.64		3.19	0.63		3.85	0.71		6.64	1.09		6.5	0.97	
Senior Capstone Participant															
(1) Yes	3.36	0.55	0	3.44	0.51	0	3.92	0.67		6.89	0.96	0	6.69	0.86	0
(0) No	3.09	0.64	1	3.14	0.62	1	3.81	0.71		6.63	1.05	1	6.49	0.95	1

Significance: p < .01

Environments by Outcome Measures

University of Wisconsin-Madison	Leadership Efficacy Scored on a 4-point scale ranging from Not At All Confident (1) to Very Confident (4)			Complex Cognitive Skills Scored on a 4-point scale ranging from Not Grown At All (1) to Grown Very Much (4)			Social Perspective-Taking Scored part on on a 5-point scale from Does Not Describe Me Well (1) to Describes Me Very Well (5)			Hope Scale - Agency Scored on an 8-point scale ranging from Definitely False (1) to Definitely True (8)			Hope Scale - Pathways Scored on an 8-point scale ranging from Definitely False (1) to Definitely True (8)		
	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig
Academic Major															
Agriculture/Natural Resources															
(1) Yes	3.13	0.73		3.03	0.52		3.54	0.82		6.6	0.88		6.41	1	
(0) No	3.14	0.63		3.19	0.61		3.84	0.7		6.67	1.04		6.53	0.94	
Architecture/Urban Planning															
(1) Yes	.	.		.	.		.	.		.	.		.	.
(0) No	3.14	0.63		3.19	0.61		3.83	0.71		6.67	1.04		6.52	0.94	
Biological/Life Sciences															
(1) Yes	3.11	0.65		3.21	0.66		3.89	0.73		6.55	1.15		6.5	1	
(0) No	3.14	0.63		3.18	0.6		3.82	0.7		6.69	1.02		6.53	0.93	
Business															
(1) Yes	3.27	0.64	0	3.13	0.66		3.7	0.68		6.77	0.89		6.47	0.94	
(0) No	3.12	0.63	1	3.2	0.6		3.85	0.71		6.66	1.06		6.53	0.94	
Communication															
(1) Yes	3.25	0.56		3.24	0.55		3.82	0.62		6.82	0.87		6.57	0.82	
(0) No	3.13	0.64		3.19	0.61		3.83	0.71		6.66	1.05		6.52	0.95	
Computer and Information Sciences															
(1) Yes	3.01	0.62		3	0.66		3.92	0.66		6.23	1.21	0	6.64	0.79	
(0) No	3.14	0.63		3.19	0.61		3.83	0.71		6.68	1.03	1	6.52	0.95	
Education															
(1) Yes	.	.		.	.		.	.		.	.		.	.
(0) No	3.14	0.64		3.19	0.61		3.83	0.71		6.67	1.04		6.52	0.94	

Significance: p < .01

Environments by Outcome Measures

University of Wisconsin-Madison	Leadership Efficacy Scored on a 4-point scale ranging from Not At All Confident (1) to Very Confident (4)			Complex Cognitive Skills Scored on a 4-point scale ranging from Not Grown At All (1) to Grown Very Much (4)			Social Perspective-Taking Scored part on on a 5-point scale from Does Not Describe Me Well (1) to Describes Me Very Well (5)			Hope Scale - Agency Scored on an 8-point scale ranging from Definitely False (1) to Definitely True (8)			Hope Scale - Pathways Scored on an 8-point scale ranging from Definitely False (1) to Definitely True (8)		
	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig
Academic Major (Continued)															
Criminal Justice															
(1) Yes	2.98	0.77		3.02	0.81		3.95	0.6		6.86	0.98		6.52	0.86	
(0) No	3.14	0.63		3.19	0.61		3.83	0.71		6.67	1.04		6.52	0.94	
Engineering															
(1) Yes	3.16	0.64		3.17	0.6		3.81	0.73		6.74	1.19		6.47	1.03	
(0) No	3.14	0.63		3.19	0.61		3.83	0.71		6.67	1.04		6.53	0.94	
Ecology															
(1) Yes	3.13	0.61		3.16	0.6		3.77	0.79		6.7	1.14		6.68	0.96	0
(0) No	3.14	0.64		3.2	0.61		3.85	0.68		6.66	1.02		6.49	0.94	1
Ethnic & Cultural Studies															
(1) Yes	2.88	0.57		3.07	0.6		3.85	0.54		6.5	0.82		5.9	1.05	0
(0) No	3.14	0.63		3.19	0.61		3.83	0.71		6.67	1.04		6.53	0.94	1
Foreign Languages and Literature															
(1) Yes	.	.		.	.		.	.		.	.		.	.
(0) No	3.14	0.63		3.19	0.61		3.83	0.71		6.67	1.04		6.52	0.94	
Environmental Science															
(1) Yes	3.03	0.4		3.18	0.71		3.93	0.86		6.78	0.73		6.57	0.64	
(0) No	3.14	0.64		3.19	0.61		3.83	0.7		6.67	1.04		6.52	0.95	
Health-Related Professions															
(1) Yes	3.13	0.63		3.26	0.56		3.86	0.69		6.89	0.79		6.49	0.8	
(0) No	3.14	0.63		3.18	0.62		3.83	0.71		6.65	1.06		6.53	0.96	

Significance: $p < .01$

Environments by Outcome Measures

University of Wisconsin-Madison	Leadership Efficacy Scored on a 4-point scale ranging from Not At All Confident (1) to Very Confident (4)			Complex Cognitive Skills Scored on a 4-point scale ranging from Not Grown At All (1) to Grown Very Much (4)			Social Perspective-Taking Scored part on on a 5-point scale from Does Not Describe Me Well (1) to Describes Me Very Well (5)			Hope Scale - Agency Scored on an 8-point scale ranging from Definitely False (1) to Definitely True (8)			Hope Scale - Pathways Scored on an 8-point scale ranging from Definitely False (1) to Definitely True (8)		
	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig
Academic Major (Continued)															
Humanities															
(1) Yes	3.23	0.58		3.39	0.55		4.01	0.56		6.62	0.89		6.58	0.81	
(0) No	3.13	0.64		3.18	0.61		3.83	0.71		6.67	1.05		6.52	0.95	
Liberal/General Studies															
(1) Yes	.	.		.	.		.	.		.	.		.	.
(0) No	3.14	0.64		3.19	0.61		3.83	0.71		6.67	1.04		6.52	0.94	
Mathematics/Statistics															
(1) Yes	.	.		.	.		.	.		.	.		.	.
(0) No	3.14	0.63		3.19	0.61		3.83	0.71		6.67	1.04		6.52	0.94	
Multi/Interdisciplinary Studies															
(1) Yes	2.82	0.78		2.97	0.57		3.58	0.71		6.49	1.23		5.93	1.17	0
(0) No	3.14	0.63		3.19	0.61		3.84	0.71		6.67	1.04		6.53	0.94	1
Parks, Recreation, Leisure Studies, Sports Management															
(1) Yes	.	.		.	.		.	.		.	.		.	.
(0) No	3.14	0.63		3.19	0.61		3.83	0.71		6.67	1.04		6.52	0.94	
Library Sciences															
(1) Yes	.	.		.	.		.	.		.	.		.	.
(0) No	3.13	0.63		3.19	0.61		3.83	0.71		6.67	1.04		6.52	0.95	
Physical Sciences															
(1) Yes	.	.		.	.		.	.		.	.		.	.
(0) No	3.14	0.63		3.19	0.61		3.83	0.71		6.67	1.04		6.52	0.94	

Significance: $p < .01$

Environments by Outcome Measures

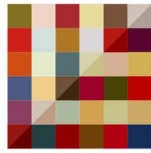
University of Wisconsin-Madison	Leadership Efficacy Scored on a 4-point scale ranging from Not At All Confident (1) to Very Confident (4)			Complex Cognitive Skills Scored on a 4-point scale ranging from Not Grown At All (1) to Grown Very Much At (4)			Social Perspective-Taking Scored part on on a 5-point scale from Does Not Describe Me Well (1) to Describes Me Very Well (5)			Hope Scale - Agency Scored on an 8-point scale ranging from Definitely False (1) to Definitely True (8)			Hope Scale - Pathways Scored on an 8-point scale ranging from Definitely False (1) to Definitely True (8)		
	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig	M	SD	Sig
Academic Major (Continued)															
Pre-Professional															
(1) Yes	3.06	0.63		3.24	0.62		3.87	0.76		6.67	1.42		6.81	0.83	
(0) No	3.14	0.63		3.19	0.61		3.83	0.71		6.67	1.03		6.52	0.94	
Military Science/Technology/Operations															
(1) Yes	3.25	0.63		3.29	0.54		4.02	0.65		6.89	0.91		6.64	0.84	
(0) No	3.13	0.63		3.18	0.61		3.83	0.71		6.66	1.05		6.52	0.95	
Public Administration															
(1) Yes	.	.		.	.		.	.		.	.		.	.
(0) No	3.14	0.63		3.19	0.61		3.83	0.71		6.67	1.04		6.52	0.94	
Social Sciences															
(1) Yes	3.12	0.63		3.26	0.55		3.89	0.64		6.59	0.97		6.41	1	
(0) No	3.14	0.64		3.18	0.62		3.82	0.72		6.68	1.05		6.54	0.93	
Visual and Performing Arts															
(1) Yes	.	.		.	.		.	.		.	.		.	.
(0) No	3.14	0.63		3.19	0.61		3.83	0.71		6.67	1.04		6.52	0.94	
Undecided															
(1) Yes	.	.		.	.		.	.		.	.		.	.
(0) No	3.14	0.63		3.19	0.61		3.83	0.71		6.68	1.04		6.53	0.94	
Women/Gender Studies															
(1) Yes	2.51	0.65	0	2.62	0.54	0	3.69	0.85		5.64	1.29	0	6	1.16	0
(0) No	3.15	0.63	1	3.2	0.61	1	3.84	0.7		6.69	1.03	1	6.53	0.94	1

Significance: p < .01



2015
Multi-Institutional Study of Leadership

Appendix C
UW-Madison Leadership Framework



COORDINATED LEADERSHIP

Leadership at UW-Madison

The University of Wisconsin-Madison has a rich history of developing engaged citizens in an ever changing global society. These citizens have gone on to demonstrate leadership in the private sector, non-profit organizations, and public service. We believe this is not coincidental but a natural outgrowth of our university's culture and mission.

Elements of leadership development are visible across campus in organizations, programs, and courses. The Coordinated Leadership Initiative was launched to connect leadership opportunities for the benefit of UW-Madison students, faculty, and staff. Coordinated Leadership honors the university's timeless tradition of sifting and winnowing, in pursuit of the best practices of leadership development. The purpose of Coordinated Leadership is to:

- Illuminate and connect leadership courses, programs, and opportunities.
- Facilitate a shared vision and common language for leadership.
- Identify and promote practices, approaches, and behavior that cultivate positive change.

The UW-Madison Leadership Framework

As an academic institution we have a responsibility to shepherd an understanding of leadership. Our university community is served best when it can reference a common framework for leadership with a uniquely Madison perspective. Research-based and developed in consultation with students, faculty, and staff from across campus, the framework is founded on the principles that leadership is an action-oriented endeavor not based on position or level of authority. It recognizes that context matters and each situation requires unique engagement. The framework articulates ways of engaging in the act of leadership - understood as the phenomenon of positive change in an individual, group, or community's beliefs, values, or behaviors. The Leadership Framework is built on three central assumptions:

- Leadership generates observable **outcomes**
- These outcomes are informed by three key **values** of UW-Madison
- These outcomes occur when an individual has developed certain leadership **competencies**

Values

The key values within the UW-Madison Leadership Framework represent a set of cultural beliefs or ideals that are consistent with our University's history and mission. They serve as a foundation for the framework and help to support the work of leadership development and leadership outcomes.

INTEGRITY - Transparency and truth are central touchstones for integrity. We aim for transparency of information and processes, because we believe openness and accessibility facilitate trust, particularly when there are diverse and divergent perspectives on an issue. We hold ourselves accountable to reach decisions through an ethical process and accept responsibility for acting in the interest of all stakeholders.

INCLUSIVE ENGAGEMENT - The heart of leadership is the art of inspiring active, informed engagement, and decision-making in the pursuit of the common good. Inclusive Engagement is the process by which we strive to seek and value the input of all, thereby realizing the benefit of the breadth of intelligence among us. At its core, Inclusive Engagement values the crucial knowledge, experiences, and contributions of us all.

CONNECTION AND COMMUNITY - Leadership requires working with communities rather than working on communities by identifying, aligning, and pursuing goals that are mutually beneficial for all people impacted. With humility, we seek to foster active partnerships rather than imposing solutions.

Competencies

The UW-Madison Leadership Framework competencies are skills, abilities, or knowledge sets that can be taught or developed. All competencies have indicators that allow them to be observed and measured.

SELF-AWARENESS - Consistently self-reflecting in order to reveal strengths, limitations, beliefs, values, and attitudes that generate engagement; Committing to personal development in order to provide greater understanding of multiple identities and experiences that affect the ability to facilitate change

INTERPERSONAL COMMUNICATION - Developing essential relationships through listening, considering, and responding to the needs of individuals and the situation; Having the ability to communicate in tactful, compassionate, and sensitive ways to enable these relationships to evolve

SUPPORTING LEARNING AND DEVELOPMENT OF OTHERS - Developing the capacity and engagement of individuals and groups through feedback and coaching

HONORING CONTEXT AND CULTURE - Seeking to understand the organization, culture, system, politics, and dynamics and their influence on actions needed to achieve the group's goals

DECISION-MAKING - Arriving at decisions that impact others and the organization in which the decisions are made; Employing critical and strategic thinking to enable creative solutions to be considered and pursued; Recognizing that with important systemic dimensions, analysis and ideas from multiple sources give way to implementation and evaluation

FOSTERING BRIDGE-BUILDING AND COLLABORATION - Through cooperative participation, encouraging everyone to take ownership of the work that is being done and the outcomes that are created; Creating an environment where differences are appreciated, knowing that conflict can serve to expose new solutions to complex problems

MOVING IDEAS INTO ACTION - Offering a compelling vision that inspires groups to engage in the ambiguous transformation process; Being aware that co-creation processes focused on common goals require steady, yet flexible, interventions

Leadership Principles

Leadership is an action-oriented endeavor, rather than based on position or level of authority.

Context matters - each situation requires unique engagement.

The act of leadership is understood as the phenomenon of positive change in an individual, group, or community's beliefs, values, or behaviors.

Outcomes

Leadership outcomes are detailed, specific, measurable/identifiable, and meaningful statements. They are the knowledge, skills, and abilities that might result when an individual upholds the values while endeavoring to demonstrate the competencies in their leadership practice.

The following matrix shows outcomes that can be generated when specific leadership competencies are executed while living each of the leadership values. The matrix focuses on individuals' behavioral practices and provides examples of observable and measurable outcomes. It includes examples of knowledge, skills and abilities that might result when an individual enacts leadership behavior.

K = Knowledge: Awareness, information, or understanding about facts, principles, and concepts

S = Skills: Acquired expertise to carry out particular tasks

A = Abilities: Personal characteristics, attitudes, values, or traits

		VALUES		
		Integrity	Inclusive Engagement	Connection and Community
COMPETENCIES	Self-Awareness	<p>K Understanding personal motivation to serve and how it relates to the collective effort</p> <p>K Understanding one's own culture and context and how it influences participation</p> <p>A Valuing fact-based information</p> <p>A Maintaining focus on truth over achievement</p> <p>A Thinking, feeling, and behaving with consistency, genuineness, authenticity, and honesty towards others</p> <p>A Ensuring transparency for the scrutiny of all the group's stakeholders</p> <p>A Committing to working hard and continuous learning</p>	<p>K Reflecting on personal beliefs, values, attitudes, and emotion that motivate one to take action</p> <p>K Understanding one's own strengths and limitations</p> <p>S Creating processes for open communication and dialogue</p> <p>S Creating on-going opportunities for feedback and reflection</p> <p>S Engaging others who complement group and individual limitations</p> <p>A Appreciating the knowledge, talents, and contributions of those in the community</p> <p>A Recognizing the value of broad community participation in creating change</p>	<p>K Evaluating and being attentive to the degree of participation among group members</p> <p>K Building awareness of one's influence on the dynamics and needs of the group</p> <p>K Ensuring each member is part of goal attainment</p> <p>A Demonstrating humility</p> <p>A Sharing ownership in the work and results of the group's efforts</p>
	Interpersonal Communication	<p>S Appropriately addressing anxiety and conflict</p> <p>A Encouraging open and honest communication</p> <p>A Modeling vulnerability by actively disclosing information that benefits the group</p>	<p>S Engaging various individual and group communication strategies to draw out participation of others</p> <p>S Listening to individual perspectives and ensuring they are reflected in group outcomes</p> <p>S Adapting one's approach in order to be responsive to the needs of others</p>	<p>S Cultivating a network of peers and colleagues in diverse communities</p> <p>S Mediating conflict to further the group's mission</p> <p>S Developing trust with others in the group</p> <p>A Openly acknowledging and appreciating the contributions of others</p>
	Supporting Learning and Development of Others	<p>S Providing and receiving feedback for the purposes of continued learning</p> <p>A Leading by example to help others be authentic contributors</p> <p>A Supporting others to take risks that allow new information and perspectives to emerge</p>	<p>S Assessing the goals, needs, and aspirations of others to support growth and development</p> <p>S Facilitating the learning of others by delegating work that extends current knowledge or experience</p> <p>S Partnering in peer-to-peer learning</p> <p>S Providing direction to resources that support others' growth</p>	<p>S Developing group facilitation knowledge in others</p> <p>A Engaging others in community work to expand their network of peers and colleagues</p> <p>A Trusting others to represent the group in community forums</p>
	Honoring Context and Culture	<p>K Understanding the culture and context in which the group exists</p> <p>K Acknowledging the impact of systemic racism, sexism, ableism, etc., on individuals and environments</p> <p>K Being aware of judging others' behavior and beliefs according to the standards of one's own culture</p> <p>A Recognizing the value and challenges of cultural differences</p>	<p>S Encouraging full participation of all members by identifying and removing barriers</p> <p>S Challenging what is culturally dominant or normative for the group or institution</p>	<p>K Demonstrating knowledge of history and cultural context of each constituency</p> <p>S Identifying goals that are meaningful to all</p> <p>S Promoting trust and good will across different cultures</p> <p>S Building and engaging with intersectional communities</p>

		VALUES		
		Integrity	Inclusive Engagement	Connection and Community
COMPETENCIES	Decision-Making	<p>K Acknowledging one's self-interest and ensuring it doesn't interfere with decision-making process</p> <p>S Engaging affected communities in decision-making that impacts them</p> <p>S Leading decision-making processes with transparent criteria and goals</p> <p>A Exhibiting personal accountability for decisions made</p> <p>A Demonstrating the flexibility to recognize when a decision needs to be revisited</p>	<p>K Recognizing "groupthink" and encouraging alternatives</p> <p>S Encouraging consensus-building through constructive dialogue</p> <p>S Creating processes where all perspectives are actively sought out and invited</p> <p>S Synthesizing divergent perspectives to help move towards a final decision</p> <p>A Helping the group stay focused on the common goal</p> <p>A Helping the group become comfortable with making a decision without full information or agreement</p>	<p>K Recognizing group dynamics and their effect on community</p> <p>S Promoting collaboration within groups and with external participants</p> <p>Modeling humility and trust for the rest of the group</p> <p>A Modeling humility and trust for the rest of the group</p>
	Fostering Bridge-Building and Collaboration	<p>K Openly acknowledging group dynamics</p> <p>S Fostering a culture of transparency</p> <p>S Fostering a sense of trust among team members</p> <p>S Identifying compatible interests when conflict is present</p> <p>A Valuing input from team members, even when it is different from others and one's own</p>	<p>K Recognizing the importance of sharing ownership in completing critical group tasks</p> <p>K Identifying how others want to be appreciated for their participation to support ongoing and future engagement</p> <p>K Identifying complementary skills and ensuring that teams are diverse</p> <p>S Ensuring that the dominant groups are not overpowering</p>	<p>S Creating a safe environment where participants can share differences of opinion</p> <p>S Building consensus with the group in identifying the group's goals</p> <p>S Fostering a sense of trust among community partners</p> <p>S Developing coalitions by aligning mutually beneficial goals</p> <p>A Appreciating the different learning styles of group members</p>
	Moving Ideas into Action	<p>K Recognizing the inherent risk in promoting change</p> <p>K Exploring how intended change will be sustained and supported</p> <p>S Appropriately managing risk</p> <p>S Challenging the status quo with facts and logical reasoning about its advantages and drawbacks</p> <p>S Demonstrating flexibility in responding to the ways others are impacted by change</p> <p>S Fostering a sense of trust among team members</p>	<p>S Collectively defining and communicating a compelling vision that enables others to pursue change</p> <p>S Creating a safe environment for people to be open in expressing and working through their fears of change</p> <p>S Promoting energy and optimism in order to move ideas into action</p>	<p>S Partnering with key stakeholders in the identification, development, and implementation of positive change</p> <p>S Maintaining an open atmosphere for questioning processes and impacts</p> <p>S Working with the community in determining where change is needed</p>





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Appendix D
Mapping of MSL Social Change Model
Outcomes to Constructs of Alternative
Leadership Models

Table D-1

Mapping of MSL Social Change Model Outcomes to Constructs of Alternative Leadership Models

Source: <http://leadershipstudy.net/design/>

Model	Constructs	Does MSL Measure?	Direct or Indirect	How?
Authentic Leadership	Self-Awareness	✓	Directly	<input checked="" type="checkbox"/> Consciousness of Self <input checked="" type="checkbox"/> Collective Racial Esteem <input checked="" type="checkbox"/> Motivation <input checked="" type="checkbox"/> Self-Directed Learning <input checked="" type="checkbox"/> Resiliency
	Internalized Moral Perspective	✓	Directly	<input checked="" type="checkbox"/> Congruence <input checked="" type="checkbox"/> Commitment <input checked="" type="checkbox"/> Resiliency <input checked="" type="checkbox"/> Cognitive Skills
	Balanced Processing	✓	Directly	<input checked="" type="checkbox"/> Cognitive Skills <input checked="" type="checkbox"/> Social Perspective Taking
	Relational Transparency	✓	Indirectly	<input checked="" type="checkbox"/> Consciousness of Self <input checked="" type="checkbox"/> Leadership Efficacy <input checked="" type="checkbox"/> Resiliency <input checked="" type="checkbox"/> Congruence
Relational Leadership Model	Purpose	✓	Directly	<input checked="" type="checkbox"/> Commitment <input checked="" type="checkbox"/> Common Purpose
	Process	✓	Directly	<input checked="" type="checkbox"/> Common Purpose <input checked="" type="checkbox"/> Collaboration <input checked="" type="checkbox"/> Controversy with Civility
	Inclusive	✓	Indirectly	<input checked="" type="checkbox"/> Collaboration <input checked="" type="checkbox"/> Social Perspective Taking
	Ethical	✓	Indirectly	<input checked="" type="checkbox"/> Consciousness of Self <input checked="" type="checkbox"/> Congruence <input checked="" type="checkbox"/> Citizenship
	Empowering	✓	Indirectly	<input checked="" type="checkbox"/> Collaboration

Table D-1 (continued)

Mapping of MSL Social Change Model Outcomes to Constructs of Alternative Leadership Models

Source: <http://leadershipstudy.net/design/>

Model	Constructs	Does MSL Measure?	Direct or Indirect	How?
Emotionally Intelligent Leadership**	Consciousness of Context	✓	indirectly	<input checked="" type="checkbox"/> Belonging / Climate <input checked="" type="checkbox"/> Cognitive Skills <input checked="" type="checkbox"/> Social Perspective Taking <input checked="" type="checkbox"/> Directed Learning
	Consciousness of Self	✓	Directly	<input checked="" type="checkbox"/> Consciousness of Self <input checked="" type="checkbox"/> Collective Racial Esteem <input checked="" type="checkbox"/> Motivation <input checked="" type="checkbox"/> Resiliency <input checked="" type="checkbox"/> Congruence
	Consciousness of Others	✓	Directly	<input checked="" type="checkbox"/> Common Purpose <input checked="" type="checkbox"/> Collaboration <input checked="" type="checkbox"/> Social Perspective Taking <input checked="" type="checkbox"/> Controversy with Civility
Servant Leadership	Conceptualizing	✓	Indirectly	<input checked="" type="checkbox"/> Common Purpose <input checked="" type="checkbox"/> Cognitive Skills
	Emotional Healing	✓	Indirectly	<input checked="" type="checkbox"/> Social Perspective Taking
	Putting Followers First	✗	✗	✗
	Helping Followers Grow & Succeed	✗	✗	✗
	Behaving Ethically	✓	Indirectly	<input checked="" type="checkbox"/> Consciousness of Self <input checked="" type="checkbox"/> Congruence <input checked="" type="checkbox"/> Citizenship
	Empowering	✓	Indirectly	<input checked="" type="checkbox"/> Collaboration
	Creating Value for the Community	✓	Directly	<input checked="" type="checkbox"/> Citizenship

Table D-1 (continued)

Mapping of MSL Social Change Model Outcomes to Constructs of Alternative Leadership Models

Source: <http://leadershipstudy.net/design/>

Model	Constructs	Does MSL Measure?	Direct or Indirect	How?
Leadership Practices Inventory**	Challenge the Process	✓	Indirectly	<input checked="" type="checkbox"/> Change <input checked="" type="checkbox"/> Cognitive Skills <input checked="" type="checkbox"/> Leadership Efficacy <input checked="" type="checkbox"/> Controversy with Civility
	Create a Shared Vision	✓	Directly	<input checked="" type="checkbox"/> Common Purpose <input checked="" type="checkbox"/> Collaboration
	Enable Other to Act	✓	Indirectly	<input checked="" type="checkbox"/> Collaboration
	Model the Way	✓	Indirectly	<input checked="" type="checkbox"/> Congruence <input checked="" type="checkbox"/> Commitment <input checked="" type="checkbox"/> Resiliency
	Encourage the Heart	✓	Indirectly	<input checked="" type="checkbox"/> Collaboration
Transformational Leadership	Idealized Influence / Charisma	✓	Indirectly	<input checked="" type="checkbox"/> Congruence <input checked="" type="checkbox"/> Commitment
	Inspirational Motivation	✓	Indirectly	<input checked="" type="checkbox"/> Common Purpose <input checked="" type="checkbox"/> Collaboration
	Intellectual Stimulation	✓	Indirectly	<input checked="" type="checkbox"/> Controversy with Civility <input checked="" type="checkbox"/> Common Purpose <input checked="" type="checkbox"/> Cognitive Skills
	Individualized Consideration	✓	Indirectly	<input checked="" type="checkbox"/> Social Perspective Taking <input checked="" type="checkbox"/> Collaboration



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Appendix E
Responses to UW-Madison's
Custom Questions

Table E-1
If you haven't participated in development opportunities on campus, why not?

Answer Code	Answer Long	Number of people who chose this as one of their answers	Percentage of answers including this option
1	Not interested in becoming a leader	138	9.20%
2	Not enough time to participate	760	50.67%
3	Not enough opportunities on campus	52	3.47%
4	I don't know what's available	458	30.53%
5	The offered programs don't interest me	348	23.20%
6	I am involved in programs of more interest to me	350	23.33%
7	I have family obligations	37	2.47%
8	I need to focus on school	653	43.53%
9	I don't view myself as a leader	104	6.93%
10	The programs don't meet my leadership needs	61	4.07%
11	Programs don't reflect my cultural identity	19	1.27%
12	N/A – I participate	254	16.93%

Table E-2
Which of the following have increased as a result of your experiences at UW-Madison?

Answer Code	Answer Long	Number of people who chose this as one of their answers	Percentage of answers including this option
1	Leadership Skills	817	54.47%
2	Cross-Cultural Communication Skills	708	47.20%
3	Awareness and understanding of societal injustices in your local community	795	53.00%
4	Awareness and understanding of societal injustices	805	53.67%
5	Interest in serving others from your	629	41.93%
6	Interest in serving others from communities different from your own	512	34.13%
7	Interest in engaging in political and social action (Advocacy, Boycott, Sign a Petition, etc)	417	27.80%
8	Participation in community service and civic engagement	488	32.53%
9	Understanding and appreciation of diverse perspectives and cultures	843	56.20%
10	Consciousness of poverty in the USA	670	44.67%
11	None of the above	111	7.40%

Table E-3

I believe that my volunteer experiences in the community (service learning, community service, work-study programs, and/or volunteering) have enhanced the following:

Answer Code	Answer Long	Number of people who chose this as one of their answers	Percentage of answers including this option
1	Leadership skills and my understanding of what it takes to be a successful leader	657	43.80%
2	Self-Awareness	828	55.20%
3	Awareness of community issues	827	55.13%
4	Understanding of diversity	683	45.53%
5	Interest in serving others in my own community	669	44.60%
6	Interest in serving others in communities different than my own	529	35.27%
7	Understanding of civic responsibility	469	31.27%
8	Political and social action skills	326	21.73%
9	N/A – I don't volunteer	327	21.80%

Table E-4

Which of the following have provided you with the knowledge and skills necessary to improve your community (local, regional, national, or global)?

Answer Code	Answer Long	Number of people who chose this as one of their answers	Percentage of answers including this option
1	Taking general education classes	700	46.67%
2	Taking classes for your major	913	60.87%
3	Taking classes for your certificate program	309	20.60%
4	Participating in student organizations	856	57.07%
5	Participating in intramurals/rec sports	221	14.73%
6	Volunteering through campus organized activities	348	23.20%
7	Volunteering not coordinated through campus organizations	308	20.53%
8	Having an on campus job	452	30.13%
9	Having an off campus job	342	22.80%
10	Studying abroad/international experiences	238	15.87%
11	Participating in research opportunities/independent study	198	13.20%
12	Participating in corporate internships/co-ops	172	11.47%
13	Participating in non-profit internships/independent study	82	5.47%
14	Living in a learning community	133	8.87%
15	None of the above	99	6.60%

Table E-5
What are the most important benefits that you get from your participation in involvement activities on campus?

Answer Code	Answer Long	Number of people who chose this as one of their answers	Percentage of answers including this option
1	New friends and social contacts	1184	78.93%
2	Clarifying my career interests	760	50.67%
3	Networking for my future career plans	774	51.60%
4	Improved self-confidence	807	53.80%
5	Creating positive change	714	47.60%
6	Learned and/or improved leadership skills	742	49.47%
7	Learned and/or improved skills to participate as a citizen in a democracy	275	18.33%
8	N/A – I don't participate in activities on campus	89	5.93%

Table E-6
If you've been involved (student organizations, athletic team, employment, volunteering, etc.), what motivated you to participate?

Answer Code	Answer Long	Number of people who chose this as one of their answers	Percentage of answers including this option
1	I wanted to meet other students with similar interests	1043	69.53%
2	I wanted to gain influence	341	22.73%
3	I wanted to receive recognition	220	14.67%
4	I was interested in the subject matter of the activity or org	964	64.27%
5	I was in a similar org in high school	416	27.73%
6	I thought it would be a good for my career or professional development	777	51.80%
7	I wanted to have fun	946	63.07%
8	I wanted an outlet to relieve stress	550	36.67%
9	I wanted to work for political or social change	153	10.20%
10	I wanted to learn about people who are different from me	222	14.80%
11	I wanted to build and/or maintain friendships	747	49.80%
12	I wanted to contribute to UW-Madison and/or the broader community	523	34.87%
13	I was selected for participation (participation was not open to everyone)	155	10.33%
14	N/A I haven't been involved on campus	108	7.20%
15	Other	16	1.07%

Table E-7
Of the statements below, please select the statement(s) that resonate the most with how you view leadership.

Answer Code	Answer Long	Number of people who chose this as one of their answers	Percentage of answers including this option
1	Leadership qualities and skills can be learned and developed	1180	78.67%
2	Leadership is the responsibility of all members of an organization, not just those who hold positions of power.	933	62.20%
3	Leaders are born, not made	143	9.53%
4	Leadership is a process instead of a position	892	59.47%
5	The best leaders lead with purpose, meaning, and values	1107	73.80%
6	None of these	33	2.20%

Table E-8
Please select a definition from the list below that most closely aligns with your definition of leadership.

Answer Code	Answer Long	Number of responses	Percentage
1	Leadership is the sole responsibility of those who hold positions of power	57	3.9%
2	Leadership is the relational and ethical process of people together attempting to accomplish positive change	813	55.2%
3	Engaging in the act of Leadership is understood as the phenomenon of change in an individual, group, or community's beliefs, values or behaviors	333	22.6%
4	None of these	269	18.3%

Table E-9

Which of the following values and competencies from UW-Madison's Leadership Framework have you been exposed to through a leadership development opportunity (class, workshop, program, etc.)?

Answer Code	Answer Long	Number of people who chose this as one of their answers	Percentage of answers including this option
1	Integrity	786	52.40%
2	Inclusive Engagement	466	31.07%
3	Connection and Community	606	40.40%
4	Self-Awareness	771	51.40%
5	Interpersonal Communication	644	42.93%
6	Supporting Learning and Development of Others	473	31.53%
7	Honoring Context and Culture	428	28.53%
8	Decision-Making	802	53.47%
9	Fostering Bridge-Building and Collaboration	354	23.60%
10	Moving Ideas into Action	569	37.93%
11	None of these	335	22.33%

Table E-10

Outside of directed coursework, how often do you reflect upon your leadership related practices, skills, attitudes and experiences?

Code	Number of Responses
1 = Very Often	176
2 = Often	375
3 = Sometimes	576
4 = Rarely	264
5 = Hardly Ever	92

Valid number of responses = 1483

Mean = 2.81

Median = 3

Mode = 3