

Suzanne & Richard Pieper Family Foundation  
Endowed Chair for Servant Leadership



**College of Engineering**  
UNIVERSITY OF WISCONSIN-MADISON

Annual Report  
October 2023

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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 [transitioned from associate department chair to department chair](#) for the Department of Civil and Environmental Engineering on July 1. The department is currently the home of 530 undergraduate students, 160 graduate students, 30 tenured and tenure-track faculty, and several dozen academic and research support staff. 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 in May 2015 and the Harvey Spangler Award for Innovative Teaching and Learning Practices in March 2020, both from the College of Engineering. He was also honored as the 2019 “Partner of the Year” by UW-Madison’s Center for Leadership and Involvement for his collaboration on the Multi-Institutional Study of Leadership.

Greg also works closely with a Servant Leadership team to support the implementation of programs furthering the Foundation’s mission. A key part of the team is now housed within the College of Engineering’s Center for Innovation in Engineering Education (CIEE), directed by Chris Dakes. Chris was a part of the Pieper Servant Leadership team from its inception until 2014 when he transitioned to the School of Business. We are excited to have him back in the College of Engineering. CIEE has recently hired Angela Kita as its associate director, a role that engages her with leadership education and the Pieper Servant Leadership team. CIEE has also hired Christa Wille as a Research Analyst, a role that assists the Pieper Servant Leadership team with analysis of assessment data and continuous improvement. Greg meets with Angela and Christa on a weekly basis to work on the initiatives described in this report. He also meets with Chris on a quarterly basis to ensure that CIEE and the Pieper Chair are working towards common goals.

The team also includes individuals at the campus level. 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). Mark continues to serve as the Director of UW-Madison’s Center for Leadership and Involvement (CfLI), overseeing the direction and vision of the center. Mark has been integral in helping to provide campus insight and connections to the Pieper Chair. Also assisting the team with MSL are James Yonker and Cory Hamilton. James is a leader of the Research and Data Management group in UW-Madison’s Division of Diversity, Equity, and Educational Achievement. Cory serves as the Associate Director for Leadership in CfLI.

We are pleased to provide the Pieper Family Foundation with this annual report summarizing our activities through August 2023 and our goals for Academic Year 2023-24. 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 2022-23 Progress***

As noted in previous reports, we continue to track data in the senior exit survey that is administered by Skyfactor Inc. 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 Skyfactor 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 Multi-Institutional Study of Leadership. This survey also focuses on leadership knowledge using the Social Change Model of Leadership development, which has been tentatively mapped to servant leadership. This survey was administered in 2015, 2018, and 2021 with Greg Harrington and Mark Kueppers as co-principal investigators for the entire UW-Madison study. Our MSL work is described in more detail in our section on Criterion 5.

### ***Academic Year 2023-24 Goals***

We will continue with our campus-wide leadership role in MSL for the coming year. Please see more in our discussion of Criteria 3 and 5.

## **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 2022-23 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 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:

<b>Servant Leadership Characteristics</b>	<b>UW-Madison Leadership Framework</b>
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 UW-Madison 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 at the college level and to work at the campus level to ensure that these principles are being considered within other units. Specific examples are further presented in our section on Criterion 6.

***Academic Year 2023-24 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 2022-23 Progress*

### *Senior Exit Survey*

When receiving the Servant Leader Chair Endowment in 2008-09, we used results from our senior exit survey to establish baseline performance for Criterion 1. In all 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 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 Skyfactor Inc 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.

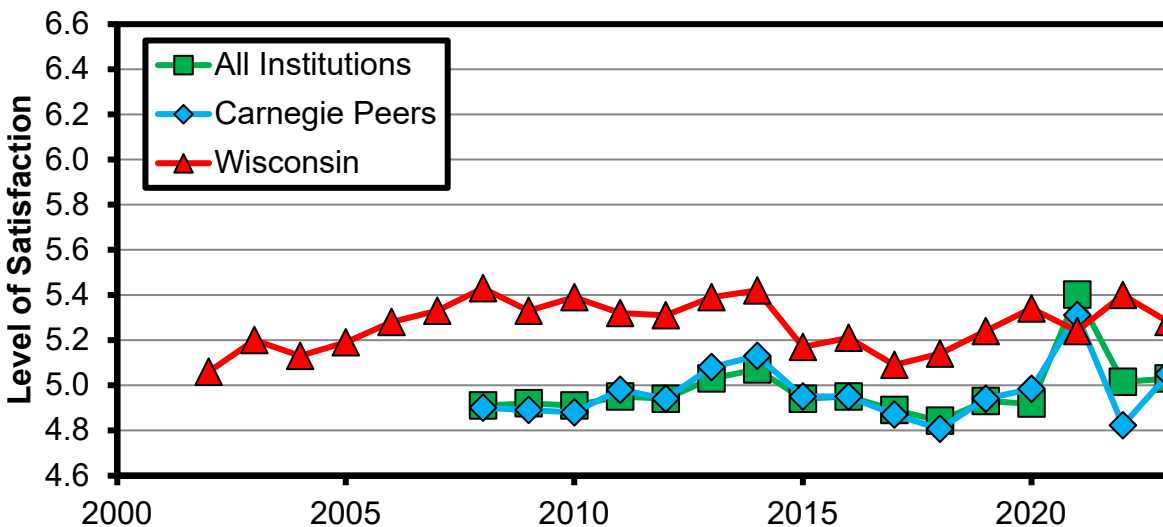
We selected the following nine questions to analyze for this report:

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 2015-2023 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 2014-2023 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 2014-2023 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 2014-2023 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 2014-2023 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.

Statistical analyses showed that UW-Madison COE students had a significantly better perception of leadership opportunities at UW-Madison than did peer students of their own institutions (peer institution perceptions spiked in Year 2021 but this appears to be an anomaly). For the most recent six years, there was a statistically significant improvement in UW-Madison COE student perceptions of leadership opportunities. A change in survey question for the 2014-15 academic year likely contributed to the observed decline for all three cohorts in that year (see Item 3 above).



**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.

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

- Our students had significantly better perceptions of the following items than students at participating Carnegie peer institutions and at all 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.
  - Satisfaction with fellow students' level of camaraderie.
  - Satisfaction with how engineering education enhanced ability to function on multidisciplinary teams.
  - Satisfaction with how engineering education enhanced ability to understand professional responsibilities.
  - Satisfaction with how engineering education enhanced ability to recognize need to engage in lifelong learning.
- Satisfaction with leadership opportunities had a statistically significant upward trend but none of the other measures had an observable upward or downward trend over the most recent 6 years.

Perceptions of Wisconsin students have been resilient through the COVID-19 pandemic years. Some noticeable changes were observed at peer institutions, but they have not yet resulted in any statistically significant trends.

#### *Multi-Institutional Study of Leadership*

As noted in Criterion 1, UW-Madison students participated in the MSL survey in 2015, 2018, and 2021. Because this continues to be a new initiative for our team, we describe this activity in more detail in our section on Criterion 5.

#### *Academic Year 2023-24 Goals*

As noted in our section on Criterion 5, we will continue to participate in the MSL with the UW Center for Leadership and Involvement and the UW Division of Diversity, Equity, and Educational Achievement to further dissect the data and better understand how our engineering students compare to the general student body. Once our MSL 2021 efforts are complete, this will transition from an initiative to a routine assessment measure.



## **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 2022-23 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 Skyfactor 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 2022-23 scores were in the range of 7.4 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 7.0 to 8.8 in Year 2022-23. 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 2023-24 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 2022-23 Progress***

In 2022-23, 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) the progress made by our new Center for Innovation in Engineering Education, 2) campus and College of Engineering participation in the Multi-Institutional Study of Leadership, and 3) our continued participation in the Big Ten Leadership Educators Network.

#### *College of Engineering’s Center for Innovation in Engineering Education*

##### *Leadership Education Program*

As noted in last year’s report, the College of Engineering’s Director of Student Organizations and Leadership Development, Paige LaPoint, moved to the College of Agricultural and Life Sciences to pursue a career growth opportunity. Since Paige’s departure, the College of Engineering shifted her curricular leadership development work to the new Center for Innovation in Engineering Education. Paige’s Emerging Leaders in Engineering and student organization work were retained in the Student Services office for the College of Engineering. During the past year, Paige was instrumental in ensuring program continuity, advising interim and newly hired individuals on best practices and expectations.

Chris Dakes, the director of the new Center for Innovation in Engineering Education, hired Angela Kita in Fall 2022 to serve as the center’s associate director. The associate director role is intended to provide oversight of two programs – the curricular leadership programming facilitated by the Pieper Chair and the Grand Challenges Scholars program initiated by the National Academy of Engineering. The latter program requires engineering students to develop five competencies and we are using InterEgr 303: Applied Leadership Competencies in Engineering as an integral part of one of those competencies.

Before Angela was hired, Dane Mattila was appointed as interim instructor for the Fall 2022 edition of InterEgr 303. Much like the previous editions of the course, the 21 students were asked to critically evaluate servant leadership and several other leadership models with reading and reflection assignments. Students also had the opportunity to apply their new knowledge to several community-based projects with UW-Madison’s UniverCity Year program. The community-based projects were:

- Disaster Proofing Critical Facilities of Outagamie County
- Recommendations for Koshkonong Creek Clean-Up and Maintenance, Dane County
- Toolkit for Combatting NIMBY’ism in Outagamie County with Regard to Affordable Housing

- Affordable Zoning Code Recommendations for New London and Seymour, Outagamie County

Angela served as the InterEgr 303 instructor in Spring 2023, with 22 students. The course continues to ask students to conduct critical evaluations of different leadership models such as servant leadership. The community-based projects for this edition of the course were as follows:

- Develop System to Collect Community and Stakeholder Input and Data, Polk County
- Stormwater Management Resiliency, Outagamie County
- Assessing the Highway Access Control Ordinance for Outagamie County
- Workforce Development, Attraction & Retention Initiatives for Columbia County

In addition to leading InterEgr 303, Angela established the college's new Grand Challenges Scholars program. In 2008, the National Academy of Engineering (NAE) identified 14 grand challenges for improving life, which broadly fall into the themes of sustainability, security, health and joy of living. These challenges require far-reaching solutions that will rely not only on engineering principles, but will also span political, social, ethical, and economical domains. Students in the program are expected to be passionate about using knowledge for the greater good of society and to engage deeply with one of the Grand Challenges themes noted above. The Applied Leadership Competencies course is an integral component of this new program. More information can be found at <https://ciece.wisc.edu/gcsp/about/>. Students began enrolling at the beginning of the 2023-24 academic year and we will report on the initial success of this program in next year's report.

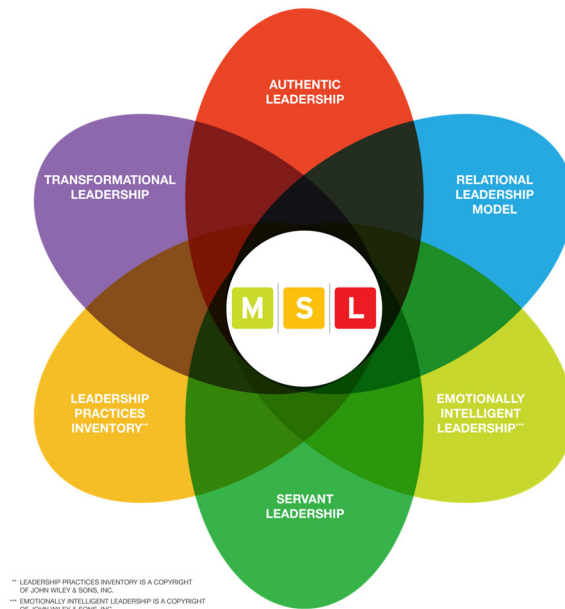
#### *Engineering for All and Effective Team Dynamics Initiatives*

Chris Castro, Associate Dean for Inclusion, Equity and Diversity, created a new College of Engineering initiative titled "Engineering for All." In parallel with this, Associate Professor Kate Fu (Mechanical Engineering), created a new College of Engineering initiative titled the "Effective Team Dynamics Initiative." The purpose of both efforts is to advance cross-disciplinary professional skills for all undergraduate students in the college and not just those motivated to participate in the Engineering Leaders or Grand Challenges programs. The cross-disciplinary skills include leadership, communications, ethical practices, and teamwork practiced with an equity mindset. The Engineering for All initiative gathered data from required first-year and capstone engineering courses across the college during Academic Year 2022-23. A community of practice, based on the instructors of first year and capstone courses, was created in Summer 2023. This group will be using the data gathered thus far to implement new instructional practices for the cross-disciplinary skill sets noted above. Recommendations are expected by the end of Academic Year 2023-24, with implementation in the three subsequent academic years. A long-term objective of these initiatives is to reach all of the 4500+ undergraduate students in the College of Engineering. Because both efforts are partly supported by the leadership education team of Angela Kita and Christa Wille, these efforts are partially supported by the Pieper Family Foundation Endowment for Servant Leadership.

## *Multi-Institutional Study of Leadership (MSL)*

### *Previously Reported Information*

This section will begin with information reported in last year's report, to help understand the context of new efforts undertaken during Academic Year 2022-23. As we have previously reported, 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, and results can be evaluated with other leadership models in mind (including Servant Leadership, see Figure 2). More than 80 institutions of higher education have participated in this study.



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

During the 2020-21 academic year, we successfully administered a survey of undergraduate students and graduate students in the School of Pharmacy. Over 30,000 undergraduate students were invited to participate and complete responses were received from 4,976 of them. This was a significant expansion of our effort from the 2018 survey, in which we invited 13,500 students to participate. This is almost 2.5 times as many students as we have invited to participate in previous editions. This will help us better analyze the least privileged, most marginalized student populations on our campus, so that we can ensure effective delivery of leadership education on a campus-wide basis. Greg Harrington serves as co-principal investigator for the study, along with Mark Kueppers. Mark is the director for UW-Madison's Center for Leadership and Involvement.

Data analysis was completed in the 2021-22 academic year, leading to the following completed reports:

- Coalition report with key findings and recommendations for campus  
<https://uwmadison.app.box.com/s/7s6blgqjyawmyxogwmlfyb19yhleg47j>
- Technical report with detailed statistics  
<https://uwmadison.app.box.com/s/voowbd1fjvm7214cb3h6d6ytwiu83vyh>
- Additional reports provided by MSLs research team  
<https://uwmadison.app.box.com/s/4jaro3y4shd1xa7oqpp81kt04rikp5qz>

Additional information is posted at <https://leadership.wisc.edu/research/>, the Leadership @ UW website. Members of the Pieper Foundation and the Pieper Foundation Board are invited to browse the site.

When considering statistical significance tests, University of Wisconsin students score higher on leadership outcomes attainment than students at similar institutions (Big Ten, Carnegie and Barron's classification peers). These differences are relatively small when evaluating differences on an effect size basis.

Our analysis also yielded the following key findings:

1. UW–Madison students scored as high on leadership outcomes as students at other institutions.
2. Leadership outcome scores for UW–Madison students have been mostly stable over time.
3. Consistent differences in leadership outcome scores were not observed by school/college.
4. Leadership outcome scores were not consistently associated with student demographics except for international status and GPA.
5. Some college environments - such as community service, organizations, student groups, mentoring, and leadership training - were strongly associated with higher leadership outcome scores.
6. Participation in those environments strongly associated with higher leadership outcome scores (Key Finding 5) was not consistently associated with selected student demographics.
7. High Impact Learning Experiences and Work for Pay were not strongly associated with leadership outcome scores.

As the key findings from this iteration of the MSL crystalized, the MSL Coalition considered goals and recommendations that aligned with the data and best practices in leadership development. The recommendations below were developed, reviewed, and revised with the intent to advance leadership education and research at UW-Madison.

1. Identify peer-based and time-based aspirational institutional benchmarks for student leadership outcomes.

2. Establish infrastructure that supports application of best practices for attainment of student leadership outcomes.
3. Expand engagement in on-going leadership research and assessment.
4. Develop and/or connect complementary curricular and co-curricular leadership programs.
5. Encourage curricular and co-curricular leadership programs to be grounded in theoretical and conceptual leadership models.
6. Incorporate experiences that are strongly associated with attainment of leadership outcomes into high impact learning experiences and work experiences.

One key purpose for our participation in the study is to serve as a vehicle for continuous improvement of leadership education programs at UW-Madison. As noted in the coalition report, one of the key findings was the lack of difference between undergraduate engineering students at UW-Madison and the rest of the undergraduate population. This allowed the task force to make recommendations for improvement that applied across the campus and these recommendations did not need to be tailored to specific colleges or schools on campus.

Some recommendations have already been adopted for the leadership course and the Emerging Leaders in Engineering program, particularly the opportunity for students to engage in community-based learning projects in collaboration with the UniverCity Alliance. Bringing leadership education into the Center for Innovation in Engineering Education is also consistent with the 4<sup>th</sup> and 5<sup>th</sup> recommendations noted above.

#### *Initiatives Undertaken for Academic Year 2022-23*

In the last year, the Center for Innovation in Engineering Education hired a new staff member, Christa Wille, to serve 50% of her time as a research analyst. The Center also hired a project assistant, Sajal Dixit, to work with Christa and the Pieper Servant Leadership Chair to perform statistical analyses of MSL data specifically from engineering students. Work completed in the last year focused on replicating campus results to ensure that coding practices were correctly completed. This work was successfully completed and both Christa and Sajal have embarked on analysis of engineering student data for the coming year. Points of emphasis for their work are described in our goals for 2023-24.

Based on our discussion at last year's annual meeting, we also launched an initiative to formally map the socially-responsible leadership outcomes of the MSL study to servant leadership outcomes. This effort was launched by Angela Kita, who worked with the Pieper Servant Leadership Chair to set up the mapping effort. As described in an earlier report, we have previously mapped socially-responsible leadership outcomes to the outcomes of the UW-Madison leadership framework, and this experience was used to develop the plan for the new mapping effort. To ensure our mapping was done with outcomes that were psychometrically tested, we used the seven servant leadership outcomes defined by the work of Liden and coworkers (2015)<sup>1</sup>. These seven outcomes are:

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<sup>1</sup> R.C. Liden, S.J. Wayne, J.D. Meuser, J. Hu, J. Wu, and C. Liao. 2015. Servant leadership: Validation of a short form of the SL-28. *The Leadership Quarterly*. 26 (2015) 254–269. <http://dx.doi.org/10.1016/j.leaqua.2014.12.002>.



- 1) *emotional healing*, which involves the degree to which the leader cares about followers' personal problems and well-being
- 2) *creating value for the community*, which captures the leader's involvement in helping the community surrounding the organization as well as encouraging followers to be active in the community
- 3) *conceptual skills*, reflecting the leader's competency in solving work problems and understanding the organization's goals
- 4) *empowering*, assessing the degree to which the leader entrusts followers with responsibility, autonomy, and decision-making influence
- 5) *helping subordinates grow and succeed*, capturing the extent to which the leader helps followers reach their full potential and succeed in their careers
- 6) *putting subordinates first*, assessing the degree to which the leader prioritizes meeting the needs of followers before tending to his or her own needs
- 7) *behaving ethically*, which includes being honest, trustworthy, and serving as a model of integrity

Angela invited a group of individuals from leadership education programs across the UW-Madison campus to participate in the mapping exercise, as well as individuals engaged in servant leadership programming from the Milwaukee School of Engineering and Ripon College.

At the campus level, our MSL efforts have seeded initial discussions for collaboration between CfLI and the campus Division for Diversity, Equity, and Educational Achievement (DDEEA). Current discussions focus on incentivizing more than 1000 students in DDEEA programs to participate in the university's Leadership Certificate program.

#### *Big Ten Leadership Educators Network*

We continue to engage with the Big Ten Leadership Educators Network, with Cory Hamilton remaining a member of the annual summit planning committee. Angela Kita also attended this year's summit, held at the University of Michigan.

#### *Academic Year 2023-24 Goals*

##### *College of Engineering Center for Education Innovation*

We look forward to Angela's continued development of the leadership course and its inclusion in the Global Challenges Scholars program. Next year, we will report on the implementation of the new initiatives to expand curricular leadership education to freshman and senior capstone experiences.

### *Multi-Institutional Study of Leadership*

Greg Harrington and Mark Kueppers continue to serve as the campus-level Principal Investigators for the 2021 MSL. With data analysis complete, attention has focused on gaining campus-wide participation in implementing recommendations and on ensuring participation of Big Ten peers in the years to come. We learned this year that the national MSL team has decided to delay the 2024 edition of MSL to 2025. This will allow more time to implement new campus-level initiatives such as the CfLI and DDEEA partnership described earlier. It will also allow time to determine how the different schools and colleges on campus can engage with this partnership. As noted in previous reports to the foundation, after completing participation in the 2025 edition of the MSL, we will likely have enough longitudinal data to replace the Skyfactor data used for Criteria 1, 3, and 4.

For the engineering assessment work with MSL, we will statistically analyze the results of the mapping exercise and report on the results in next year's report. If the results are successful, we will be able to report student attainment of the seven servant leadership outcomes proposed by Liden and coworkers at this time next year. We also intend to run statistical analyses that compare engineering students with non-engineering students. These analyses will be done for three cohorts: all students, female students, and male students. The purpose of this exercise is to account for the effects of gender distribution in the engineering student population, which is about 70% male at UW-Madison. Finally, we intend to analyze engineering students versus non-engineering students using data from the Big Ten coalition to see if UW-Madison results are comparable to results from a larger cohort of students. These statistical analyses can help establish a baseline level of outcomes attainment, which can then be compared with levels of outcomes attainment after implementation of the Engineering for All and the Effective Team Dynamics Initiatives.

### *Big Ten Leadership Educators Network*

The Big Ten Leadership Educators Network remains committed to meeting annually in an effort to advance the field of leadership education. Purdue University has been identified as the hosts for the next meeting in July/August 2024. We continue to work with our Big Ten peers to ensure a continued commitment to continuous improvement in leadership education across this globally recognized set of universities.

## **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 2022-23 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. **College of Engineering Student Leadership Center.** We continue to work with student organizations 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.”
2. **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. We have now performed projects for communities in Adams, Brown, Columbia, Dane, Door, Green, Marathon, Outagamie, Sheboygan, and Pepin Counties. We have also partnered with our Guatemala unit of Engineers Without Borders to work on school and water supply projects in our freshman engineering class.
3. **Collaboration with the UW-Madison Center for Leadership and Involvement.** We continue to engage the campus-level leadership development group with analysis of the campus-wide leadership framework and its continuous improvement. We are also engaged in long-term strategic planning that will elevate the academic stature of the Center. Long term goals are to develop a leadership certificate that has an academic credential status similar to a minor and to include a research component inclusive of both scholarly research and internal operations research.

### *Academic Year 2023-24 Goals*

We will continue to engage with the new Center for Innovation in Engineering Education to facilitate development of leadership education activities that are inclusive of the servant leadership model. In its early stages of development, the new center has focused on curricular programming and we will give some thoughtful consideration to co-curricular programming in the coming year. Co-curricular programming can be an effective complement to and should reinforce curricular programming. Greg will also continue to engage with Mark Kueppers and the campus' Center for Leadership and Involvement to develop strategic plans for the future.

## **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.*

### ***Academic Year 2022-23 Progress***

We appreciate the foundation's input on last year's candidate, Anthony Heddlesten. For this year, we looked at our rather limited alumni database to identify candidates who graduated after implementation of the Pieper Chair at UW-Madison and we felt that more time was needed for some of these candidates to develop into leaders befitting of this criterion. Thus, we defer consideration of a candidate for this criterion in this year's report.

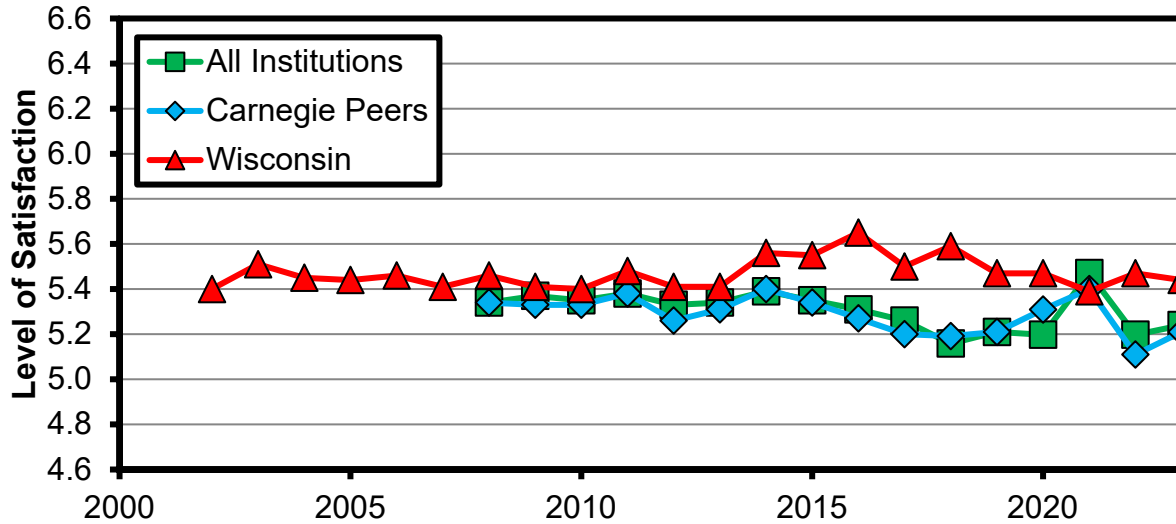
### ***Academic Year 2023-24 Goals***

We are also confident that the college's new leadership program will instill and reinforce the service-oriented values that our students commonly carry forward into their careers. 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.

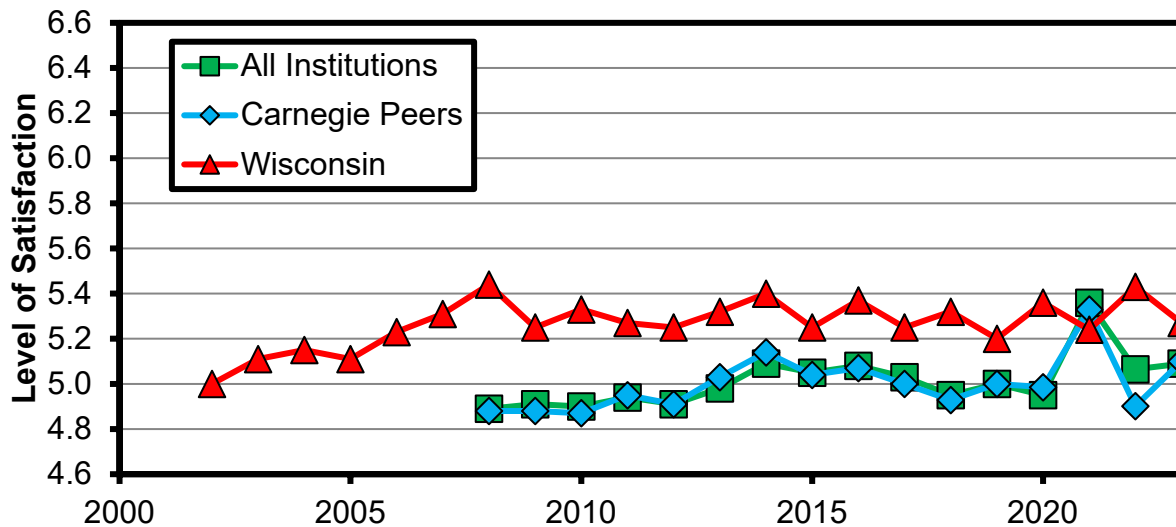
We question whether our alumni tracking efforts are extensive enough to identify candidates who meet this criterion. In the coming year, we will critically evaluate our approach and modify it if warranted.

As we have indicated in previous years, 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 educational activities and 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. We look forward to participating with and supporting our communities in making the world more just and humane.

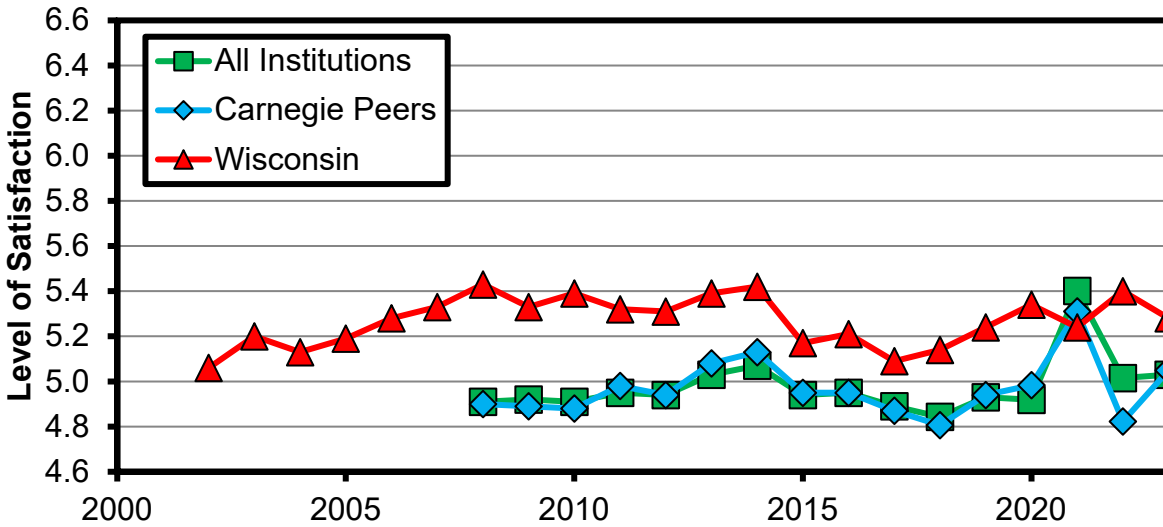
### Appendix A – Senior Exit Survey Data for Questions Relevant to Leadership Education



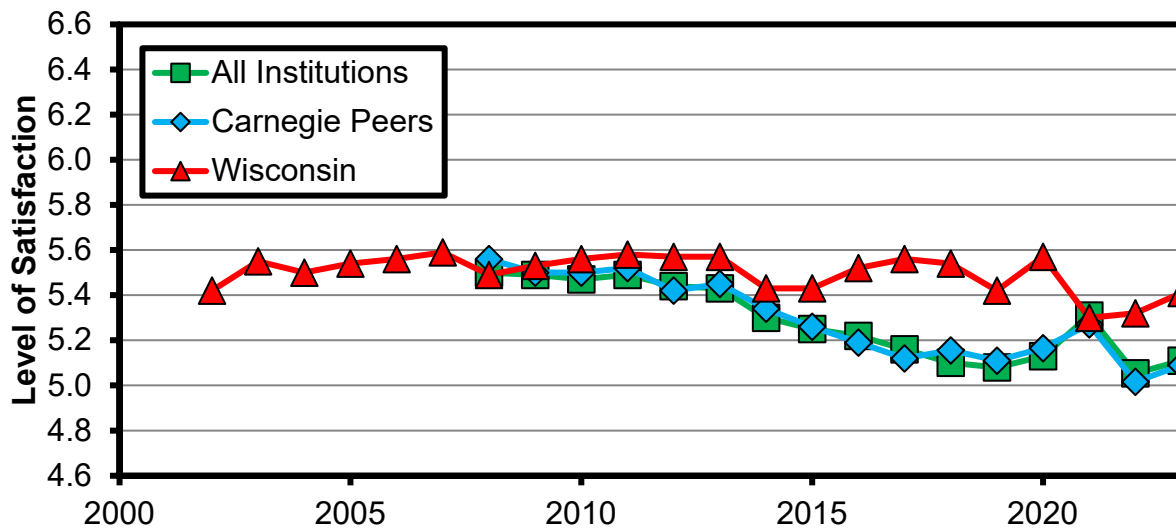
**Figure A1.** Mean level of satisfaction with value derived from team experiences. The x-axis is organized on an academic year basis, so that 2015 refers to the 2014-15 academic year. The Pieper Servant-Leader Chair at the UW-Madison College of Engineering began in the 2008-09 academic year. The scale 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 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.



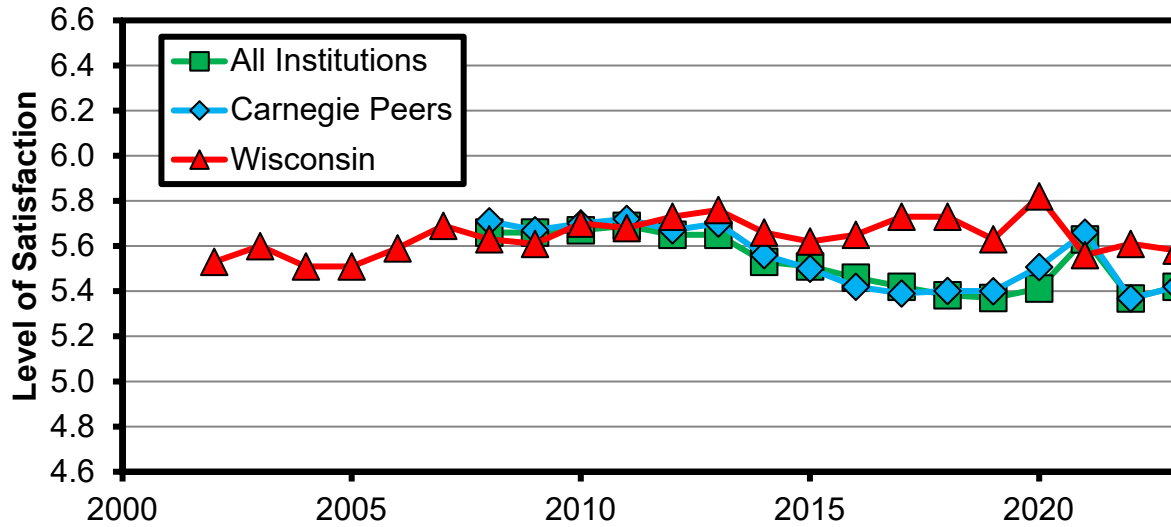
**Figure A2.** Mean level of satisfaction with value of engineering student organization activities. The x-axis is organized on an academic year basis, so that 2015 refers to the 2014-15 academic year. The Pieper Servant-Leader Chair at the UW-Madison College of Engineering began in the 2008-09 academic 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 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.



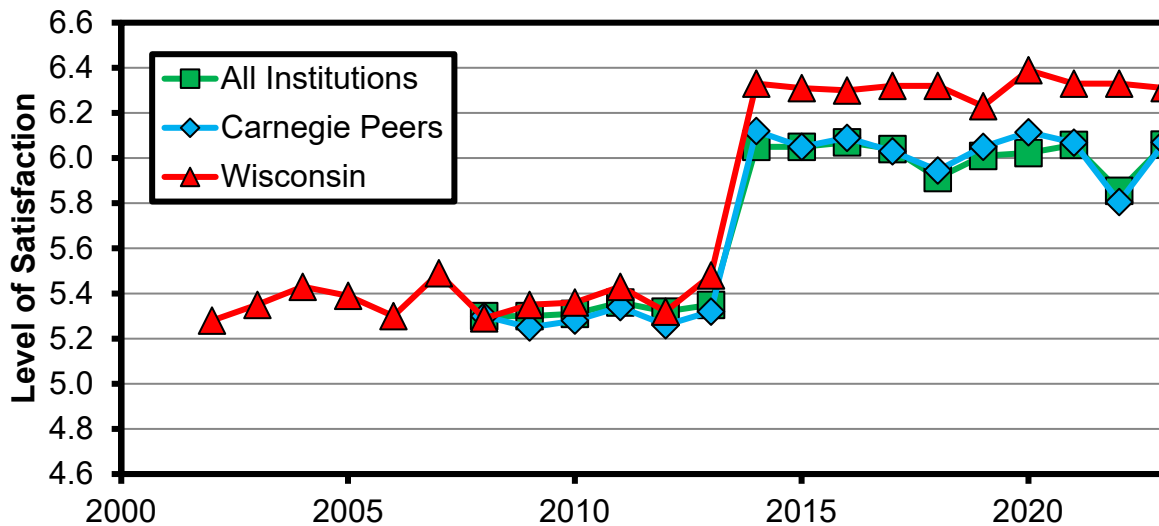
**Figure A3.** Mean level of satisfaction with leadership opportunities in engineering student organization activities. The x-axis is organized on an academic year basis, so that 2015 refers to the 2014-15 academic year. The Pieper Servant-Leader Chair at the UW-Madison College of Engineering began in 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 was statistically significant at a 95% confidence level. For the same period, there was a statistically significant improvement in student perception at Wisconsin.



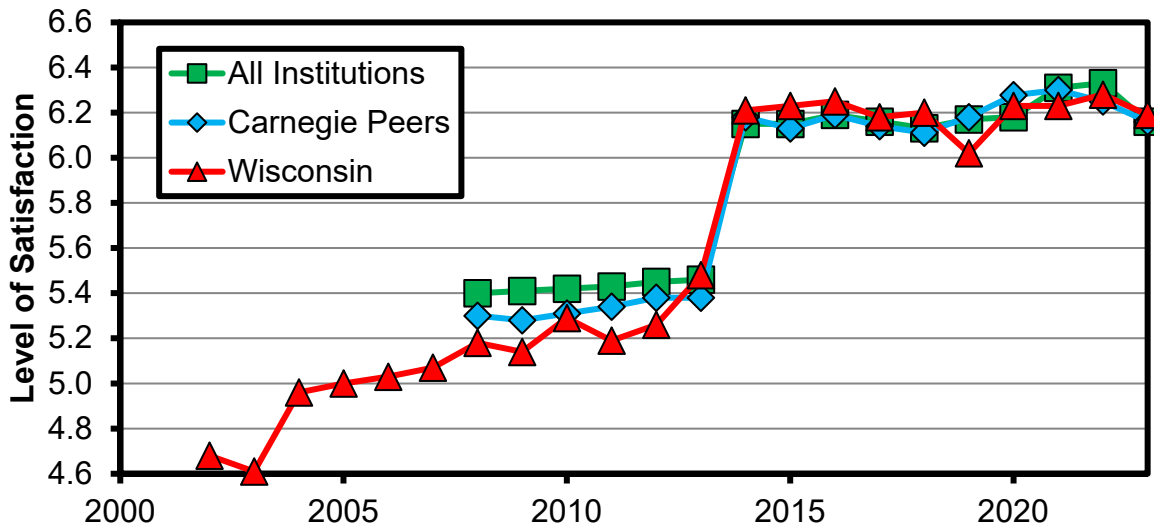
**Figure A4.** Mean level of satisfaction with fellow students' ability to work in teams. The x-axis is organized on an academic year basis, so that 2015 refers to the 2014-15 academic year. The Pieper Servant-Leader Chair at the UW-Madison College of Engineering began in the 2008-09 academic year. The 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.



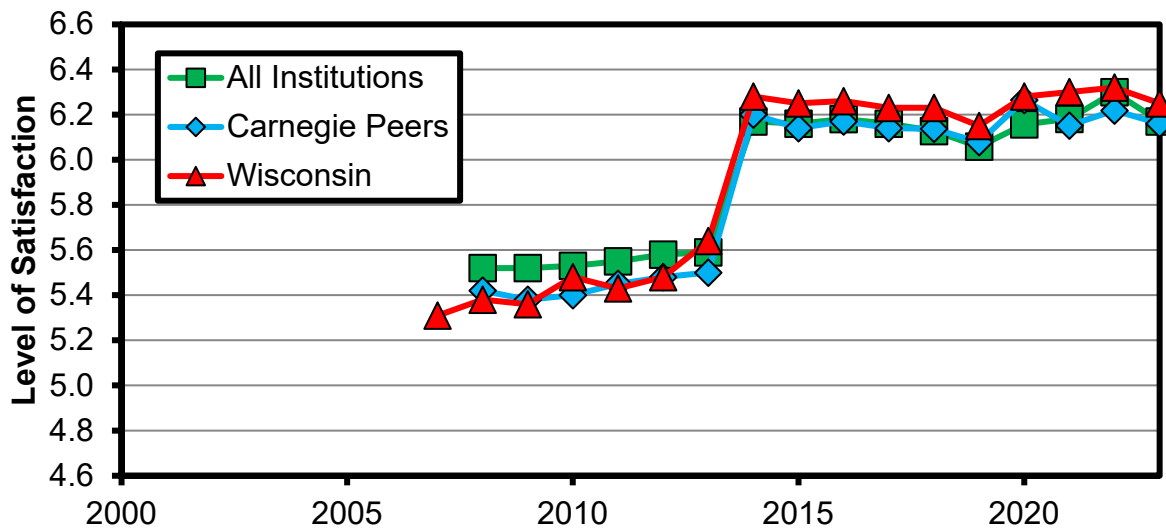
**Figure A5.** Mean level of satisfaction with fellow students' level of camaraderie. The x-axis is organized on an academic year basis, so that 2015 refers to the 2014-15 academic year. The Pieper Servant-Leader Chair at the UW-Madison College of Engineering began in the 2008-09 academic year. The scale 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 statistically significant at a 95% confidence level. For the same period, there was no statistically significant improvement or decline in student perception at Wisconsin.



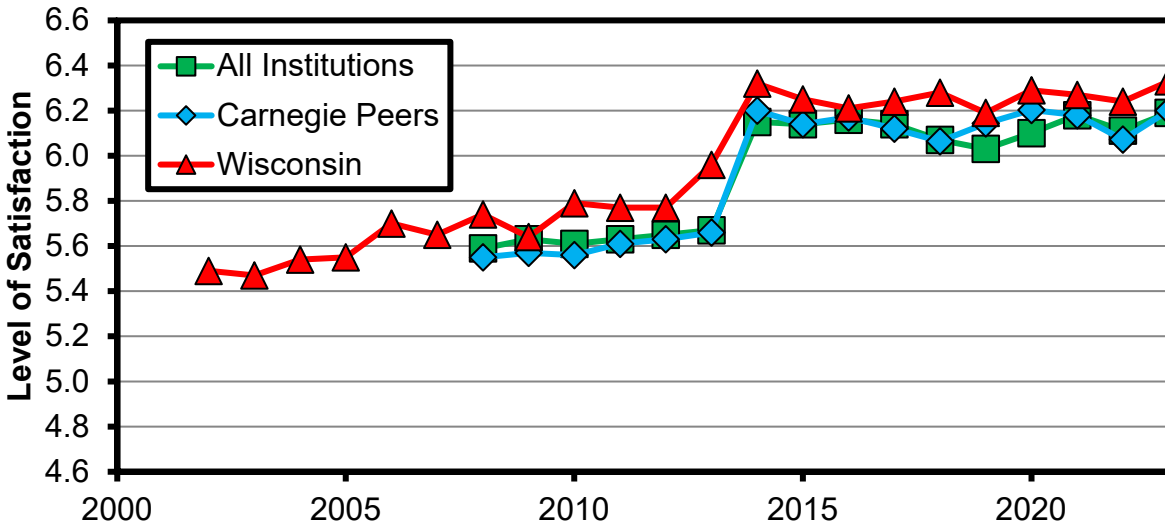
**Figure A6.** Mean level of satisfaction with how engineering education enhanced ability to function on multidisciplinary teams. The x-axis is organized on an academic year basis, so that 2015 refers to the 2014-15 academic year. The Pieper Servant-Leader Chair at the UW-Madison College of Engineering 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 no statistically significant improvement or decline in student perception at Wisconsin. The large improvement for all institutions in 2013-14 was likely due to a rephrasing of the question asked in the survey.



**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 no statistically significant improvement or decline in student perception at Wisconsin. The large improvement for all institutions in 2013-14 was likely due to a rephrasing of the question asked in the survey.



**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 statistically significant at a 95% confidence level. For the same period, there was no statistically significant improvement or decline in student perception at Wisconsin. The large improvement for all institutions in 2013-14 was likely due to a rephrasing of the question asked in the survey.



**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 no statistically significant improvement or decline in student perception at Wisconsin. The large improvement for all institutions in 2013-14 was likely due to a rephrasing of the question asked in the survey.