Suzanne & Richard Pieper Family Foundation
Endowed Chair for Servant Leadership

Annual Report
September 2024

CONTENTS

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 recently began his second year as department chair for the Department of Civil and Environmental Engineering. The department is currently the home of 530 undergraduate students, 150 graduate students, 30 tenured and tenure-track faculty, 10 instructional faculty, 50 academic and research support staff, and 30 volunteer professional engineers. 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. Angela Kita serves as CIEE's associate director, a role that engages her with leadership education and the Pieper Servant Leadership team. Christa Wille serves as CIEE's 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 routine 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. With this report, we announce that Mark Kueppers transitioned from his role as Director of UW-Madison's Center for Leadership and Involvement (CfLI) to Administrative Director and Business Manager for the Academic Affairs office of our School of Medicine and Public Health. Prior to this he collaborated with the team since 2014 and was instrumental in helping the chair with assessment efforts, particularly with the Multi-Institutional Study of Leadership (MSL). Cory Hamilton, the Assistant Director of Leadership Development at CfLI, has taken on larger responsibilities with the team after Mark's transition. Cory provides campus insight and connections to the Pieper Chair. Also continuing to assist the team with MSL is James Yonker, Director of the Office of Strategic Diversity Planning and Research in UW-Madison's Division of Diversity, Equity, and Educational Achievement (DDEEA). He has been a leader of the Research and Data Management group for DDEEA and a key contributor to our assessment efforts.

We are pleased to provide the Pieper Family Foundation with this annual report summarizing our activities through August 2024 and our goals for Academic Year 2024-25. 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 2023-24 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 2024-25 Goals

We will continue with our campus-wide leadership role in MSL for the coming year. The next offering of the MSL will take place in 2026, which means we will be doing the necessary setup work from May 2025 through December 2025. Thus, we will be reporting on some of this setup work in next year's report. 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 2023-24 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:

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 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 2024-25 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 2023-24 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 note that data from the survey are provided to us in October of each year. Last year, our report was submitted after receipt of this data. This year, our report is being submitted prior to receipt of this data. Thus, the contents of this section repeat the information from last year. We expect to have the new data prior to the annual review on November 13 and intend to present the latest data at that time.

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).

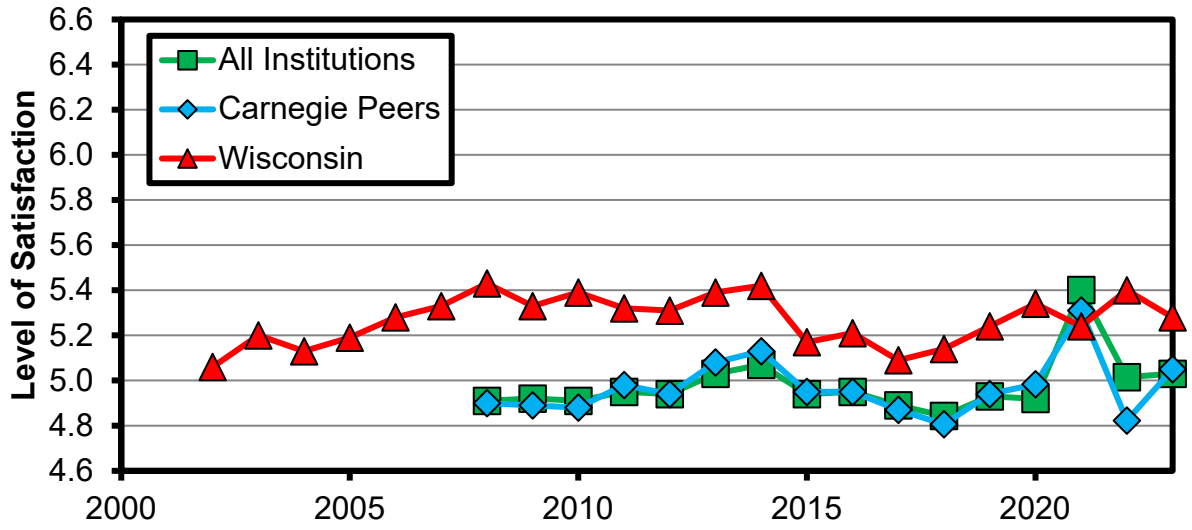

Figure 1. *Mean level of satisfaction with leadership opportunities in engineering program extracurricular activities. The x-axis is organized on an academic year basis, so that 2015 refers to the 2014-15 academic year. The Pieper Servant-Leader Chair at the UW-Madison College of Engineering began in 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 2024-25 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. We intend to transition from senior exit survey data to MSL data once we receive results from the 2026 edition of the MSL.

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 2023-24 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. 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. We conclude that a typical peer institution is in the 7.0 to 8.8 range rather than the 4 or 5 noted in the Foundation's criteria. Our results are routinely 0.5 points higher than those of the typical peer institutions, which we conclude is phenomenally higher given that all results are constrained by the upper end of the range.

Academic Year 2024-25 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 2023-24 Progress

In 2023-24, 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 described last year, our leadership education program is housed in the new Center for Innovation in Engineering Education, which is led by director Chris Dakes and associate director Angela Kita. 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.

Angela served as instructor of Inter Egr 303 for both Fall 2023 and Spring 2024, with 20 students in each semester. A syllabus for the course is provided in Appendix B. The official course description, noted at the top of the syllabus and in official campus records, is as follows:

Introduction to basic leadership theories and perspectives; application of said theories to real-life experiences (both engineering and otherwise) through reflections, course discussion, readings, and experiential education in their local communities. Social Change Model of Leadership Development and Servant Leadership theory, viewed through an Applied Critical Leadership Theory lens.

Much like the previous editions of the course, the 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 conducted in the last year were:

- **Attracting young people to Marinette** (City of Marinette): *How can the community bring in younger individuals/families?*
- **ByBlock Technology Feasibility Study** (City of Wausau): *What would be required for this technology to be economically viable?*
- **Eco-Site Analysis and Business Plan** (City of River Falls): *How can a compost site be made self-sustaining?*
- **Vehicle Fleet Analysis** (Eau Claire County): *What is the most cost-effective strategy for the county?*
- **Economic Development Survey** (City of Cottage Grove): *How can the city ensure community needs are a meaningful part of future developments?*
- **Recruit and Retain Employees** (City of Wausau): *What strategies and practices will create a more engaged workplace?*
- **Emergency Planning for Special Events** (City of Wausau): *How can the police department more effectively staff community events?*

- **Diversifying Boards Committees and Commissions** (City of River Falls): *What can the city do to encourage community members to join these groups?*

In addition to leading InterEgr 303, Angela established the college's new Grand Challenges Scholars (GCSP) 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 InterEgr 303 course is an integral component of this new program, which began with 10 students last year and continues with 8 new students this year. More information can be found at https://ciee.wisc.edu/gcsp/about/.

The interest and value in leadership education at our university continues to grow beyond InterEgr 303 and GCSP. Over the last year, Angela has been asked to bring leadership-focused activities into different courses and organizations. For example, team-based design courses such as a first-year cross-disciplinary course and a mid-level biomedical engineering course have requested that Angela educate students on different types of leadership styles, including servant leadership. Angela uses an assessment to identify students' individual strengths and guides them through activities and reflections to help them map their strengths to their preferred leadership styles. We have found that students very often believe that the only leader among them is the project manager of their design team. After engaging in discussion on various leadership styles, students begin to see how one of them can lead by developing their own style. In the Spring of 2023, Angela met with the student leaders of Mechanical Engineering student organization to discuss these topics and she has been requested to do something similar in two additional design-based courses in Fall 2024. These requests and our commitment to them demonstrate that our efforts to grow and build leadership awareness and education in the UW-Madison College of Engineering offerings have been worthwhile. These are the types of programs that will allow us to expand our reach to all engineering students at UW-Madison.

Engineering4All Community of Practice

The inaugural cohort of instructors participating in the Engineering4All Community of Practice (E4All CoP) consisted of 27 individuals drawn from first year introductory, engineering communication, and capstone courses, as these courses are the highest "touch points" for all engineering undergraduate students. The CoP engages faculty in learning how to take an equity-centered approach to course content around four key engineering skills that are ubiquitous and critical for all engineering disciplines; leadership, teamwork, communication, and ethics. Upon completion of the first year of the program, instructors reported examples of activities they worked on and implemented in their courses surrounding the professional skills focused on in the E4All CoP. For example, leadership examples that instructors implemented as a result of their participation in E4All included: leadership assessments incorporated in peer evaluations and discussions on different types of leadership skills and the important distinction between leadership and project management. While E4All covered four different professional skills, leadership was the skill that instructors reported the largest increase in their future growth and development of

additional aspects and activities they intend to implement in their courses (24% currently teaches leadership, 67% intend to teach it in the future).

Additional data gathered upon completion of the inaugural year indicated marked success. Participants were asked to rate how valuable they felt their participation in E4All was, on a scale of 1 to 10 (1 = no value, 10 = high value); participants on average reported relatively high value (8.1 1.9 standard deviation). In addition, upon completion of the program participants reported a strong sense of support and community to develop and facilitate instructional material related to professional skills (i.e. leadership, communication, ethics, and teamwork). On a scale of 1-10 (1=no support, 10=strong support) CoP participants reported on average a support level of 8.3 (2.3 standard deviation), up from 6.4 (1.9 standard deviation) at the start of the program.

We believe the best practices for the pedagogy of professional skills focused on in this community of practice will be disseminated further within our engineering programs by the people who made up this first year cohort. In addition, nearly all of the inaugural cohort (21 instructors) have indicated they want to continue to participate in this community for a second year. Simultaneously we have also launched a second cohort of instructors (13) participating in E4All for their first time. In addition, we have shared this method of support for the instruction of professional skills through various international levels, including trough a workshop at the American Society of Engineering Education, "*Engineering 4 All: Faculty Professional Development Around Diversity, Equity & Inclusion to Advance Undergraduate Professional Skills"* and through a publication in the J*ournal for Research and Practice in College Teaching, "Student Team Dynamics and Developmental Feedback: A common challenge from a year-long, multi-disciplinary engineering Community of Practice."* Even though the E4All CoP is in its infancy, it is clear that there is value and need in the community created and we look forward to continuing to improve and build upon current efforts and share our successes with the broader engineering education community.

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 2023-24. 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.

During the 2020-21 academic year, we successfully administered a survey of undergraduate students campus-wide 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 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. The other co-principal investigator has transitioned from Mark Kueppers to Cory Hamilton.

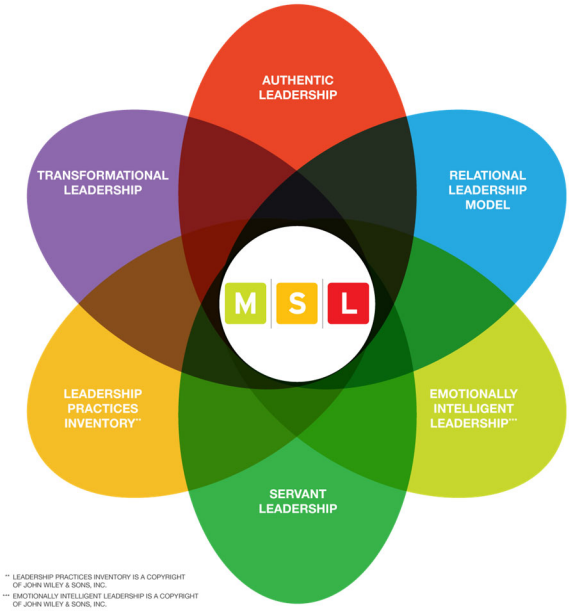

Figure 2 – Visual model of the Multi-Institutional Study of Leadership

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 (InterEgr 303) 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 4th and 5th recommendations noted above.

Initiatives Undertaken for Academic Year 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)[1]. These seven outcomes are:

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.

Christa applied statistical analysis to the data collected from Angela's efforts to develop models that map MSL outcomes to servant leadership outcomes. The purpose of Christa's study was to determine the extent to which survey items from the MSL appropriately measure the seven dimensions of servant leadership. Christa did this by implementing a factor analysis to determine which combination of MSL survey items most strongly represented each dimension of servant leadership. Please see Appendix C for the technical report.

During the first phase of the mapping, experts demonstrated consistency by achieving absolute majority in most questions (59/108, 55%). A decision tree algorithm was used to achieve consensus in the remaining questions. During the second phase of this project, a factor analysis was done to further refine the number of questions in each model representing a unique servant leadership dimension. Final models using 3-4 candidate survey items from the MSL were

[1] 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.

successfully mapped to each of the seven dimensions of servant leadership. Future work will implement the models built in this analysis and apply them to data collected in the next offering of the MSL survey (2026). Although further validation is still necessary, this analysis shows there is potential for the plethora of data acquired through the MSL to be analyzed through the models proposed in this study, models built to represent servant leadership centered in equity and justice.

Academic Year 2024-25 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. Now that Angela has a full year to develop her course, she is expecting growth to 40 students in Spring 2025 and 60 students per semester thereafter. Much of this growth will be stimulated by CIEE's work with E4All. Even though the E4All CoP is in its infancy, it is clear that there is value and need in the community created and we look forward to continuing to improve and build upon current efforts and share our successes with the broader engineering education community.

Multi-Institutional Study of Leadership

Greg Harrington and Cory Hamilton 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 2026. Greg and Cory are the expected Principal Investigators for the 2026 edition. As noted in previous reports to the foundation, after completing participation in the 2026 edition of the MSL, we will likely have enough longitudinal data to replace the Skyfactor data used for Criteria 1, 3, and 4.

We still have some lingering statistical analysis work to do in the coming year for mapping of MSL outcomes to servant leadership outcomes. More importantly, we have identified a goal to incorporate Liden's Servant Leadership scales into the custom questions portion of the 2026 MSL survey. This would allow us to directly survey our students with servant leadership scales rather than rely on mapping of MSL outcomes to servant leadership outcomes.

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 2023-24 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.

4. **Department Chair Training.** As noted earlier, Greg Harrington now serves as Chair for the Department of Civil and Environmental Engineering. He was invited by the provost's office to present a case-study for faculty starting as department chairs on the UW-Madison campus in AY 2024-25. He is also active in monthly campus-wide meetings of department chairs.

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. Cory helped to plan and attended this year's summit at Purdue University, where he continued our advocacy of assessment efforts for leadership education programs.

Academic Year 2024-25 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 Cory Hamilton and the campus' Center for Leadership and Involvement to develop strategic plans for the future.

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. 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 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 2023-24 Progress

Like last 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 2024-25 Goals

We remain 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 continue to 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

Please note that we receive this data annually in October. Last year's report was submitted after receipt of this data while this year's report is being submitted prior to receipt of this data. Thus, this appendix presents the same data as last year's report.

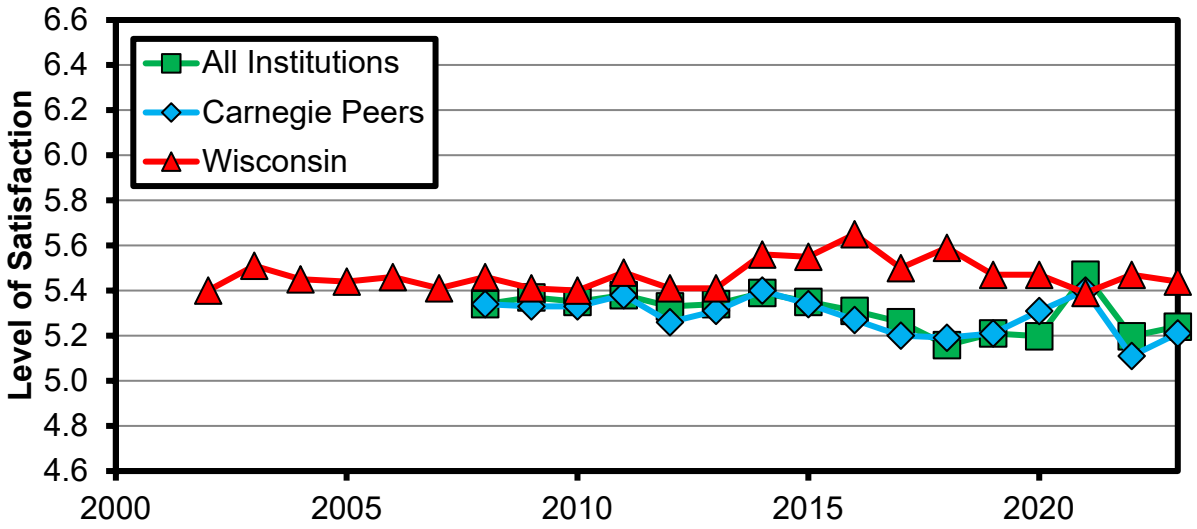

Figure A1. Mean level of satisfaction with value derived from team experiences. The x-axis is organized on an academic year basis, so that 2015 refers to the 2014-15 academic year. The Pieper Servant-Leader Chair at the UW-Madison College of Engineering began in the 2008-09 academic year. The scale on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

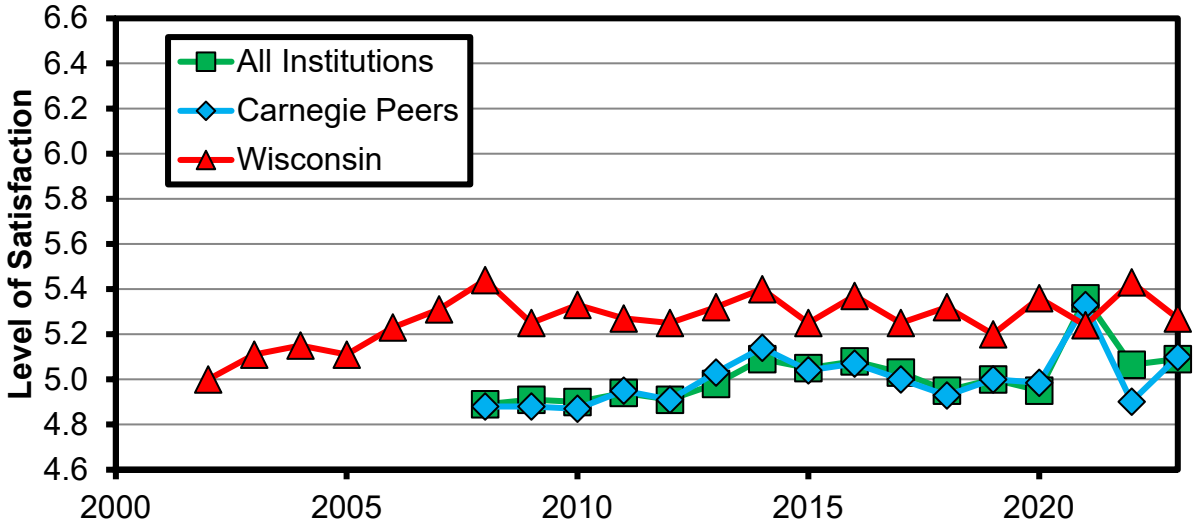

Figure A2. Mean level of satisfaction with value of engineering student organization activities. The x-axis is organized on an academic year basis, so that 2015 refers to the 2014-15 academic year. The Pieper Servant-Leader Chair at the UW-Madison College of Engineering began in the 2008-09 academic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

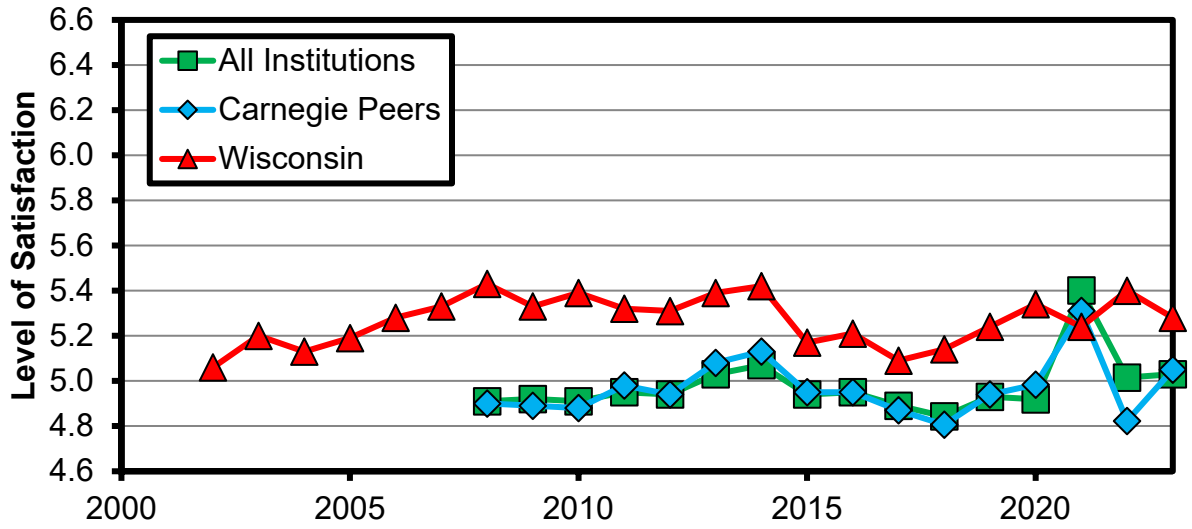

Figure A3. Mean level of satisfaction with leadership opportunities in engineering student organization activities. The x-axis is organized on an academic year basis, so that 2015 refers to the 2014-15 academic year. The Pieper Servant-Leader Chair at the UW-Madison College of Engineering began in the 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.

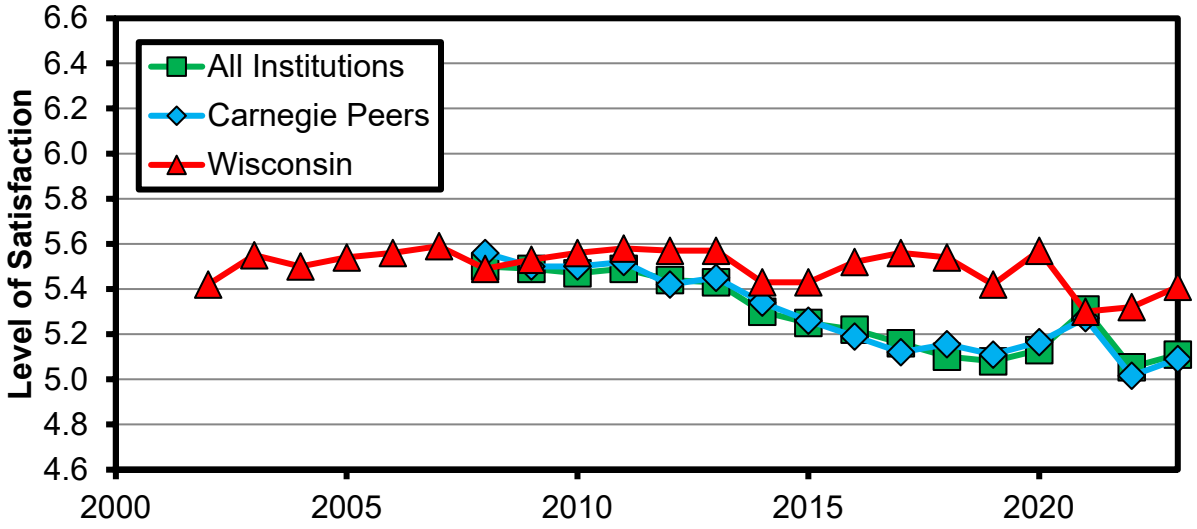

Figure A4. Mean level of satisfaction with fellow students' ability to work in teams. The x-axis is organized on an academic year basis, so that 2015 refers to the 2014-15 academic year. The Pieper Servant-Leader Chair at the UW-Madison College of Engineering began in the 2008-09 academic year. The scale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

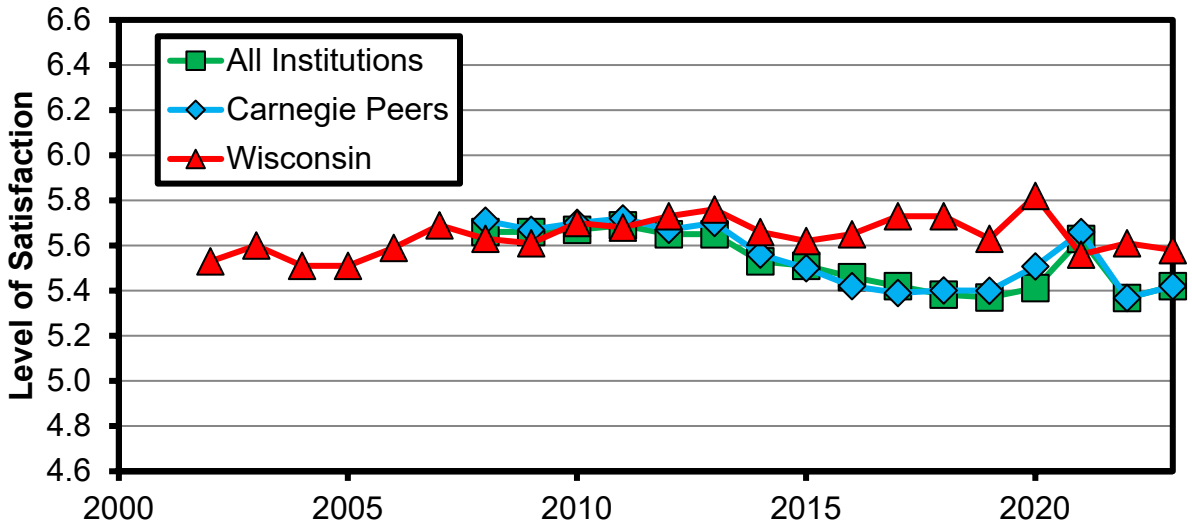

Figure A5. Mean level of satisfaction with fellow students' level of camaraderie. The x-axis is organized on an academic year basis, so that 2015 refers to the 2014-15 academic year. The Pieper Servant-Leader Chair at the UW-Madison College of Engineering began in the 2008-09 academic year. The scale 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.

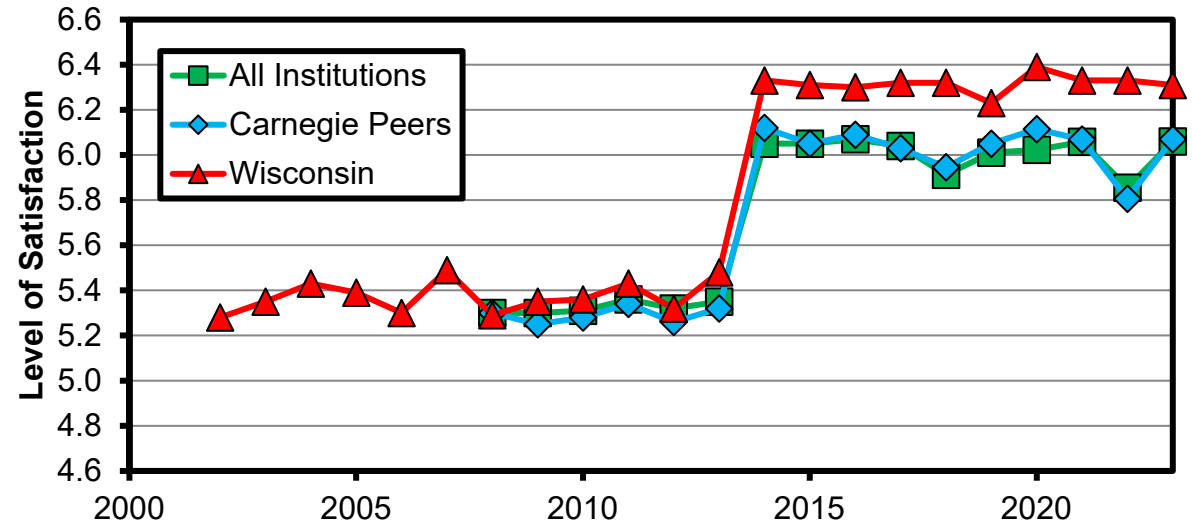

Figure A6. Mean level of satisfaction with how engineering education enhanced ability to function on multidisciplinary teams. The x-axis is organized on an academic year basis, so that 2015 refers to the 2014-15 academic year. The Pieper Servant-Leader Chair at the UW-Madison College of Engineering began 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.

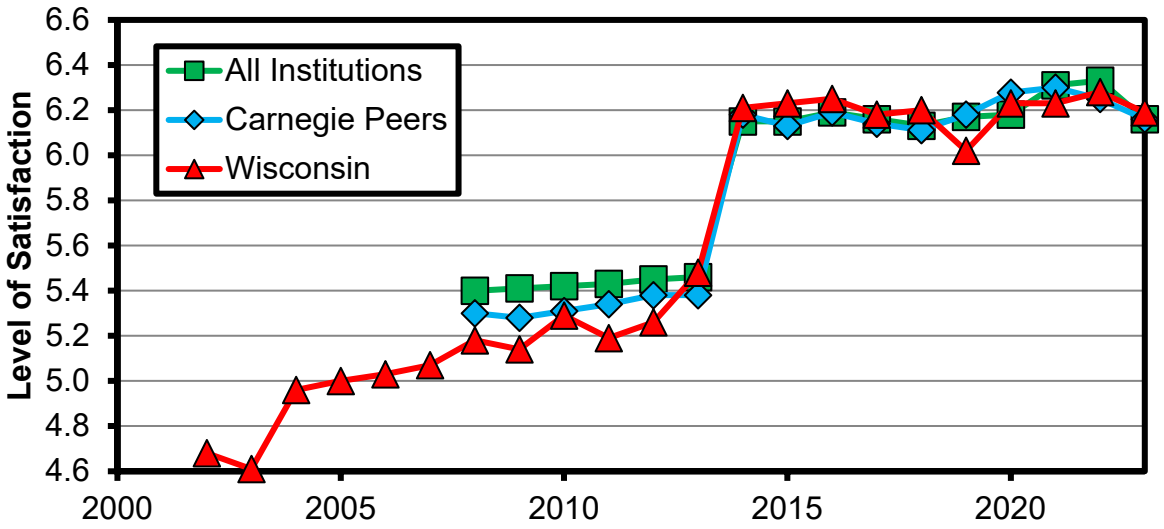

Figure A7. Mean level of satisfaction with how engineering education enhanced ability to understand ethical responsibilities. The x-axis is organized on an academic year basis, so that 2015 refers to the 2014-15 academic year. The Pieper Servant-Leader Chair at the UW-Madison College of Engineering began 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.

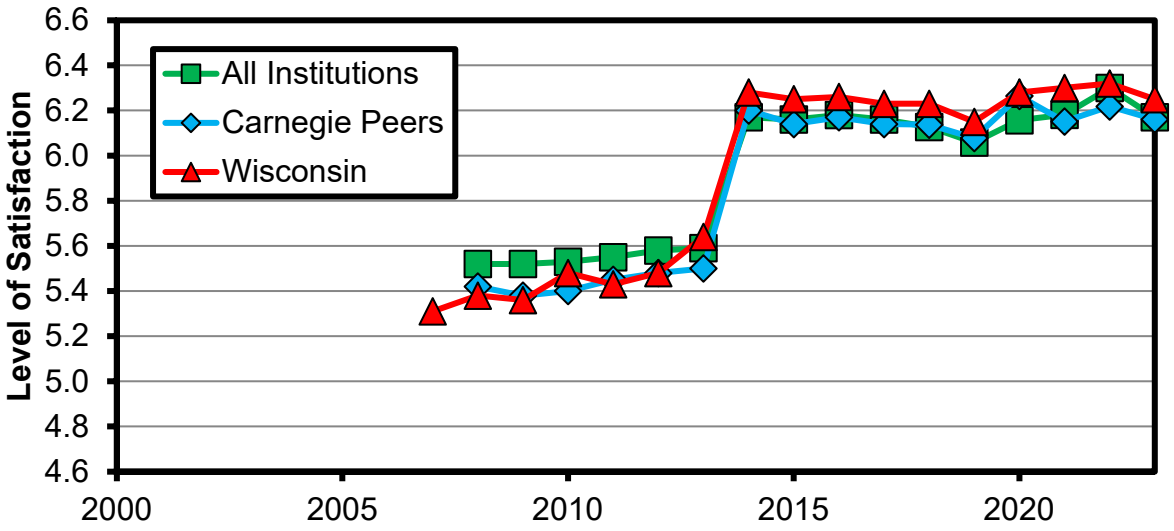

Figure A8. Mean level of satisfaction with how engineering education enhanced ability to understand professional responsibilities. The x-axis is organized on an academic year basis, so that 2015 refers to the 2014-15 academic year. The Pieper Servant-Leader Chair at the UW-Madison College of Engineering 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.

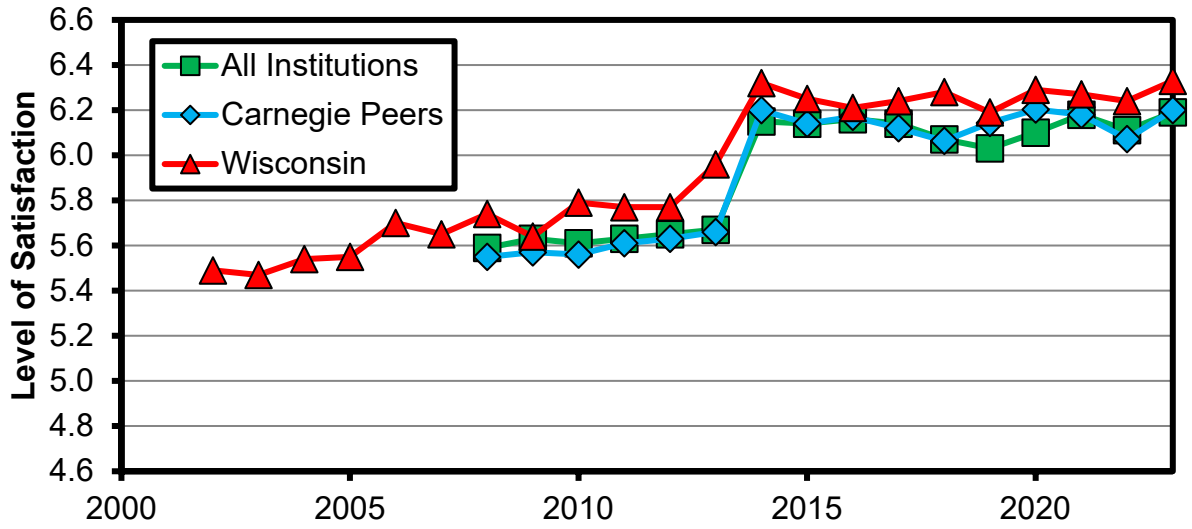

Figure A9. Mean level of satisfaction with how engineering education enhanced ability to recognize need to engage in lifelong learning. The x-axis is organized on an academic year basis, so that 2015 refers to the 2014-15 academic year. The Pieper Servant-Leader Chair at the UW-Madison College of Engineering 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.

Appendix B

Syllabus for InterEgr 303 Applied Leadership Competencies for Engineers

General Course Information

University of Wisconsin—Madison

Course Subject, Number and Title
INTEREGR 303 - Applied Leadership Competencies in Engineering

Credits
3 credits, 3 contact hours per week

Canvas Course URL
https://canvas.wisc.edu/courses/398839

Course Designations and Attributes
None

Requisites
None

Meeting Time and Location
Tuesdays and Thursdays 4:00-5:15p; 410B Wendt Commons (Spring 2024)

Instructional Modality
In-person

Specify How Credit Hours are Met by the Course
This class meets for two, 75-minute class periods each week over the semester and carries the expectation that students will work on course learning activities (volunteering, reading, reflecting, writing, etc.) for about 3 hours out of the classroom for every class period. There is a volunteer component to this course that will require you to work on a project in coordination with a local Wisconsin community with your peers both inside and outside of class.

Regular and Substantive Student-Instructor Interaction
Regular student-instructor interaction will occur weekly during scheduled class meetings. Substantive interaction will be achieved through direct instruction, providing feedback on student work, providing information about course content, facilitating discussion of course content, and providing guidance on a semester-long team project.

Instructor Title and Name
Angela Kita
Associate Director for Leadership Education

Instructor Availability/Office Hours
Mondays from 2:00pm-3:00pm or by appointment
217 Wendt Commons, 215 N Randall or via Zoom

Instructor Email/Preferred Contact
amkita@wisc.edu

Course Description
Introduction to basic leadership theories and perspectives; application of said theories to real-life experiences (both engineering and otherwise) through reflections, course discussion, readings, and experiential education in their local communities. Social Change Model of Leadership Development and Servant Leadership theory, viewed through an Applied Critical Leadership Theory lens.

Course Learning Outcomes
- Identify the leadership role that engineering professionals play in service to a breadth of social, political, environmental, economic, and global issues
- Apply and reflect on the "Seven C's" of the Social Change Model through engaging as servant leaders in a stewardship service project
- Apply teamwork and leadership skills necessary to embrace individual differences and help groups collaborate on shared aims and values
- Identify and describe one's own individual strengths, and be able to identify and honor the strengths in others
- Communicate comfortably and professionally with peers, practicing engineers, and adult professionals
- Reflect upon and understand one's own responsibility to strive for self-awareness, empathy, authenticity, vulnerability, and curiosity when working on leadership skill attainment
- Utilize a critical race perspective to address leadership challenges found in personal and professional experiences to achieve change in response to power, domination, access, and achievement imbalances.* (*Note: outcome language from Santamaria & Santamaria (2012), p. 7)

ABET Student Outcomes
3. an ability to ***communicate effectively*** with a range of audiences
4. an ability to ***recognize ethical and professional responsibilities*** in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. an ability to ***function effectively on a team*** whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
7. an ability to ***acquire and apply new knowledge*** as needed, using appropriate learning strategies.

Brief List of Topics to be Covered
- Stages of group development
- Personal and team strengths
- Leadership and management
- Emotionally intelligent leadership
- Servant Leadership
- Equitable leadership
- Authentic leadership
- Social Change Model of Leadership
- UW-Madison Leadership Framework
- Ethics in Engineering
- Mindful Leadership

Required Textbook, Software & Other Course Materials
None. All necessary materials will be provided by the instructor.

Grading
This course is heavily project and reflection-based; it emphasizes the importance of reading the material, participating and listening during class discussions, and synthesizing your thoughts into reflection pieces. Successful students will put in the effort to learn more about themselves and their fellow students. Final gades will be determined by the total percentage of points earned: A=92-100%, AB=88-91.9%, B=82-87.9%, BC=78-81.9%, C=70-77.9%, D=60-69.9%, F<60%. This course is not graded on a curve, so if everyone in the class earns >91% then everyone gets an A. Your grade for this course will be based on your work in the following categories:

Assessment	Points	Percentage
Reflection assignments	100	20
Feedback assignments	40	8
Competency essay assignments	60	12
Project updates	40	8
Preliminary presentation	25	5
Final presentation	100	20
Final report (deliverable) draft	25	5
Final report (deliverable)	80	16
Professionalism & participation	30	6
Total	500	100%

Reflection assignments (20%) You will complete several written assignments throughout the semester, reflecting on the topics we explore. Reflection papers will be assessed on effort and demonstrated understanding of the material.

Feedback assignments (8%) You will have several opportunities throughout the semester to share feedback, including self- and peer-assessments using Feedback Fruits (a tool integrated into Canvas).

Competency Essay (12%) This essay will allow you to discuss themes discussed throughout the semester, and reflect on your own connection to components of the Leadership Framework. The competency essay is also a part of the Leadership Certificate requirements, so this assignment serves as a draft that you'll receive feedback on.

Project updates (8%) Your team will have several opportunities to provide updates on your project.

Preliminary presentation (5%) About halfway through the semester, your project team will create an initial presentation. This will outline the project sponsor, key background and stakeholder information, the goals of the project, and your team's plan to achieve those goals. This will be a 10 minute presentation with 3-5 minutes for questions from the audience.

Final presentation (20%) Your team will present a project summary during the last week of a semester. This will be a continuation of the mid-semester presentation, with additional information about the overall project, potential next steps for the local community, and final statements. Project sponsors will be invited to attend this presentation.

Final report draft & deliverable (21%) Your team will submit your final deliverable, both for the course and to the project sponsor. Project deliverables will vary based on the needs of each community, but they will be assessed using a single scoring rubric.

Professionalism & participation (6%) An overall assessment will be made of each student's continued participation in class discussion throughout the course. Thoughtful participation can be defined in multiple ways—engaging in small or large group discussions, contributing to teamwork, or sharing your thoughts in course forms. Professionalism in communication and class attendance will also be used as a metric to determine this overall score. It is expected that you attend class and participate in class discussions; however, you do not need to participate in every class to receive full credit for participation. Please communicate any planned or unplanned absences with your instructor so we can determine an accommodation plan.

Homework & Other Assignments

- *Reading and short videos will be assigned weekly to provide context for each topic.*
- *You will complete reflections assignments that connect with the topic and your personal experience*
- *All assignments will be posted on Canvas with instructions and submission deadlines*
- *It is the expectation of your instructor that reflection papers are done on an individual basis, and group work is completed equally amongst the group.*
- *Late assignments will lose 5% per day late (up to 50%) unless prior approval from the instructor.*
- *Attendance for class is required and will be taken at the beginning of each class. If you must miss a class period, please confirm with the instructor before the class period via email.*

Exams, Quizzes, Papers & Other Major Graded Work

This course does not have a final exam. Instead, a large portion of your graded work will be a part of a volunteer project.

Team project through UniverCity Alliance

Assignments will be scaffolded over the semester to support your successful completion and will include: project memos, a mid-semester and final presentation, a draft of your project, and the final product for the community partner. This volunteer project asks for you to employ your "engineering brain" while simultaneously growing your team skills and exploring the role of serving a community. You will collaborate with a Wisconsin community (town, city, or county) to work on a project that utilizes your skills. You and your project team are expected to review the Scope of Service document that has been assigned to your group and complete the deliverables that have been outlined in the document, as well as those that have been discussed with your community partner(s). Towards the middle of the semester you and your team will submit a project check-in document to your instructor, as well as the local non-profit.

Campus Resources for Academic Success

- *University Health Services*
- *Undergraduate Academic Advising and Career Services*
- *Office of the Registrar*
- *Office of Student Financial Aid*
- *Dean of Students Office*
- *Engineering Career Services*
- *Undergraduate Learning Center*
- *Engineering Student Organizations*

Course Evaluations

Students will be provided with an opportunity to evaluate this course and your learning experience. Student participation is an integral component of this course, and your confidential feedback is important to me. I strongly encourage you to participate in the course evaluation.

Course & Campus Policies

Name & Pronoun Policy

You have the right to be referred to by the name that you are most comfortable with. If the name listed on my roster is not the name you would like to be called, you are welcome to let me know in class or through email at any time. Additionally, you have the right to be referred to with the pronouns you are most comfortable with. To have a safe and respectful class environment, you should refer to your classmates with the names and pronouns that your classmates are most comfortable with. If you have any concerns with the pronouns that I am using for you, please email me or visit me in office hours at any point during the semester.

Teaching & Learning Data Transparency Statement

The privacy and security of faculty, staff and students' personal information is a top priority for UW-Madison. The university carefully evaluates and vets all campus-supported digital tools used to support teaching and learning, to help support success through learning analytics, and to enable proctoring capabilities. View the university's full teaching and learning data transparency statement.

Privacy of Student Records & the Use of Audio Recorded Lectures Statement

View more information about FERPA.

Lecture materials and recordings for this course are protected intellectual property at UW-Madison. Students in this course may use the materials and recordings for their personal use related to participation in this class. Students may also take notes solely for their personal use. If a lecture is not already recorded, you are not authorized to record my lectures without my permission unless you are considered by the university to be a qualified student with a disability requiring accommodation. [Regent Policy Document 4-1] Students may not copy or have lecture materials and recordings outside of class, including posting on internet sites or selling to commercial entities. Students are also prohibited from providing or selling their personal notes to anyone else or being paid for taking notes by any person or commercial firm without the

instructor's express written permission. Unauthorized use of these copyrighted lecture materials and recordings constitutes copyright infringement and may be addressed under the university's policies, UWS Chapters 14 and 17, governing student academic and non-academic misconduct.

Rules, Rights & Responsibilities

See the Guide's to Rules, Rights and Responsibilities

Academic Integrity

By enrolling in this course, each student assumes the responsibilities of an active participant in UW-Madison's community of scholars in which everyone's academic work and behavior are held to the highest academic integrity standards. Academic misconduct compromises the integrity of the university. Cheating, fabrication, plagiarism, unauthorized collaboration, and helping others commit these acts are examples of academic misconduct, which can result in disciplinary action. This includes but is not limited to failure on the assignment/course, disciplinary probation, or suspension. Substantial or repeated cases of misconduct will be forwarded to the Office of Student Conduct & Community Standards for additional review. For more information, refer to https://conduct.students.wisc.edu/academic-integrity/.

Accommodations For Students With Disabilities

McBurney Disability Resource Center syllabus statement: "The University of Wisconsin-Madison supports the right of all enrolled students to a full and equal educational opportunity. The Americans with Disabilities Act (ADA), Wisconsin State Statute (36.12), and UW-Madison policy (Faculty Document 1071) require that students with disabilities be reasonably accommodated in instruction and campus life. Reasonable accommodations for students with disabilities is a shared faculty and student responsibility. Students are expected to inform faculty [me] of their need for instructional accommodations by the end of the third week of the semester, or as soon as possible after a disability has been incurred or recognized. Faculty [I], will work either directly with the student [you] or in coordination with the McBurney Center to identify and provide reasonable instructional accommodations. Disability information, including instructional accommodations as part of a student's educational record, is confidential and protected under FERPA."
http://mcburney.wisc.edu/facstaffother/faculty/syllabus.php

Diversity & Inclusion

Institutional statement on diversity: "Diversity is a source of strength, creativity, and innovation for UW-Madison. We value the contributions of each person and respect the profound ways their identity, culture, background, experience, status, abilities, and opinion enrich the university community. We commit ourselves to the pursuit of excellence in teaching, research, outreach, and diversity as inextricably linked goals. Disrespectful behavior or comments directed toward any group or individual will be addressed by the instructor.

The University of Wisconsin-Madison fulfills its public mission by creating a welcoming and inclusive community for people from every background – people who as students, faculty, and staff serve Wisconsin and the world."
https://diversity.wisc.edu/

Appendix C

Mapping of the Multi-Institutional Study of Leadership Assessment to the Multidimensional Servant Leadership Model

Christa Wille, Center for Innovation in Engineering Education
James Yonker, Division of Diversity, Equity and Educational Achievement
Greg Harrington, Civil and Environmental Engineering

Mapping of the Multi-Institutional Study of Leadership Assessment to the Multidimensional Servant Leadership Model

Christa Wille, Center for Innovation in Engineering Education
James Yonker, Division of Diversity, Equity and Educational Achievement
Greg Harrington, Civil and Environmental Engineering

Abstract

On-going assessment efforts in higher education provide an opportunity for coordinated, intentional interventions to improve leadership education for all students. The Multi-Institutional Study of Leadership (MSL) is a nationally normed survey that provides a psychometrically validated way to measure leadership outcomes attainment, using the Social Change Model of Leadership. While there is immense value in the implementation of a nationally distributed survey for the comparison across peer institutions, limitations of the MSL survey exist. There may be value in using an assessment measure based on a leadership model centered in equity and justice, such as the model of Servant Leadership. The purpose of this study was to determine the extent to which survey items from the MSL appropriately measure the seven dimensions of servant leadership. This project was divided into two phases, phase 1 utilized a team of experts and lay raters to sort the MSL survey items into the seven dimensions of servant leadership, while phase 2 further refined the mapping by implementing a factor analysis to determine which combination of MSL survey items most strongly represented each dimension of servant leadership.

During the first phase of the mapping, experts demonstrated consistency by achieving absolute majority in most questions (59/108, 55%). A decision tree algorithm was used to achieve consensus in the remaining questions. During the second phase of this project, a factor analysis was done to further refine the number of questions in each model representing a unique servant leadership dimension. Final models using 3-4 candidate survey items from the MSL were successfully mapped to each of the seven dimensions of servant leadership. Future work will implement the models built in this analysis and apply them to data collected in the next offering of the MSL survey (2026). Although further validation is still necessary, this analysis shows there is potential for the plethora of data acquired through the MSL to be analyzed through the models proposed in this study, models built to represent servant leadership centered in equity and justice.

Introduction

Because of the value of leadership education at our institution, regular and rigorous assessments are used to measure the attainment of student leadership outcomes. On-going assessment efforts provide an opportunity for coordinated, intentional interventions to improve leadership education for all students. The Multi-Institutional Study of Leadership (MSL) is a nationally normed survey that provides a psychometrically validated way to measure leadership outcomes attainment, using the Social Change Model of Leadership. The MSL examines the influences that higher education has in shaping socially responsible leadership capacity and other educational outcomes related to leadership and service. Because this is a nationally distributed survey, results from this survey allow for the understanding of our own growth and effectiveness, as well as comparison to others to other peer institutions.

While there is immense value in the implementation of a nationally distributed survey for the comparison across peer institutions, limitations of the MSL survey exist. Moving forward, there may be value in using an assessment measure based on a leadership model centered in equity and justice. One such model is Servant Leadership, a unique model of leadership compared to others for its prioritization of serving followers before attending to one's own needs, acting as a servant leader in all realms of life, and developing followers into servant leaders. This leadership model promotes integrity, focuses on helping others, and prioritizes bringing out the full potential of followers (Greenleaf, 1970). Servant leadership stresses the importance of leaders prioritizing the support and development of followers, accomplishing this by setting an example through demonstrating honesty, compassion, and hard work. While empirical research evaluating servant leadership is relatively young, it has demonstrated the incremental value of servant leadership as evidenced by the explanation of additional variance beyond other models of leadership such as transformational leadership and leader-member exchange in individual (Liden, Wayne, Zhao, & Henderson, 2008; Neubert, Kacmar, Carlson, Chonko, & Roberts, 2008; van Dierendonck, Stam, Boersma, de Windt, & Alkema, 2014), group (Ehrhart, 2004; Schaubroeck, Lam, & Peng, 2011), and organizational (Peterson, Galvin, & Lange, 2012) outcomes. The strength and consistency of the incremental variance demonstrated in these studies has served to legitimize servant leadership as a construct worthy of continued research attention.

Servant leadership has been presented as a multidimensional construction consisting of seven dimensions: 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; and 7) *behaving ethically*, which includes being honest, trustworthy, and serving as a model of integrity.

Mapping of the items on the MSL assessment would not only allow for continued comparison to historical data collected at our university, but it would also allow for the continued comparison across peer institutions, all while structured in a leadership model centered in equity and justice. Therefore, the purpose of this study was to determine the extent to which survey items from the MSL appropriately measure the seven dimensions of servant leadership. This project was divided into two phases, phase 1 utilized a team of experts and lay raters to sort the MSL survey items into the seven dimensions of servant leadership, while phase 2 further refined the mapping by implementing a factor analysis to determine which combination of MSL survey items most strongly represented each dimension of servant leadership.

Methods

PHASE 1- IDENTIFICATION OF SURVEY ITEMS WITH SERVANT LEADERSHIP DIMENSIONS

The first phase of mapping the MSL survey items to the seven dimensions of servant leadership relied on a pool of raters from a range of lived experiences and social identities to indicate whether or not each of the MSL survey items mapped to a unique dimension of servant leadership. To ensure a side variety of perspectives were considered, raters were recruited from faculty, staff, students, and institutional partners; comprised of those with professional experience and training in student leadership development, experts in the social and behavioral sciences, and lay reviewers.

Individual Rater Assessment

Raters received a spreadsheet file with the 108 candidate MSL survey items. The items were randomly ordered overall but the item order was the same for all raters. While the MSL questions are developed from a combination of core scales (**Table 1**), raters were asked to evaluate each individual question in the MSL and determine if it related to one of the seven dimensions of servant leadership. Raters also had the option to select *None of These* for those items that did not adequately represent any of the dimensions of servant leadership. Raters submitted their scored spreadsheets, which were combined for analysis.

Table 1. Composition of the 108 total Multi-Institutional Study of Leadership (MSL) candidate survey items. The majority of MSL survey questions were generated from the leadership scales listed in the table, with some additional unique and custom questions.

Core Scales in MSL	Number of Items
Socially Responsible Leadership Scale	34
Leadership Efficacy Scale	4
Motivation to Lead Scale	9
Dispositional Hope Scale	8
Resiliency Scale	6
Spirituality/Search for Meaning Scale	5
Social Perspective Taking Scale	5
Social Generativity Scale	4
Custom Questions	33
Total	**108**

Decision Rules and Algorithm

The next step in the mapping of the MSL candidate items to the dimensions of servant leadership was guided by the principle of consensus among raters while retaining as many candidate items for further scale analysis as possible. We developed a decision tree to review items, resolve ambiguity, and classify MSL candidate survey items into the dimensions of servant leadership for additional review. While the ideal scenario would achieve an absolute majority (>50% of all raters agreeing), a decision tree algorithm was built to systematically determine a consensus (**Figure 1**) for questions that did not reach an absolute majority.

PHASE 2- REFINEMENT OF SURVEY ITEMS TO REPRESENT SERVANT LEADERSHIP CATEGORIES

Once MSL survey items were mapped to each dimension of servant leadership, a confirmatory factor analysis (principal factor solution, regression scores; SAS, Cary, NC) was used to further refine the model used for each servant leadership dimension. Ideally, a smaller more refined set of questions, could be used to represent each servant leadership dimension. While more information could be gained by including all possible question mapped to each servant leadership dimension, including too many questions will lead to overfitting. For each servant leadership dimension, every possible combination of four questions was evaluated using a factor analysis. Bayesian Information Criterion (BIC) scores were used to evaluate each model, with a low BIC score indicating a better model. All models within 3 points of the model with the lowest BIC score were further evaluated. Next, Cronbach's alpha was used to determine the internal consistency of items within each model to gauge its reliability. The final model was selected as the one within 3 points of the lowest BIC score and with the highest Cronbach's alpha score. Cronbach's alpha thresholds used to interpret the level of reliability were: <0.6 poor; 0.6 to <0.7 moderate; 0.7 to <0.8 good; 0.8 to <0.9 very good; >0.9 excellent. The factor analysis and Cronbach's alpha scores were calculated using 6,276 student responses from our university collected during the 2018 and 2021 MSL surveys.

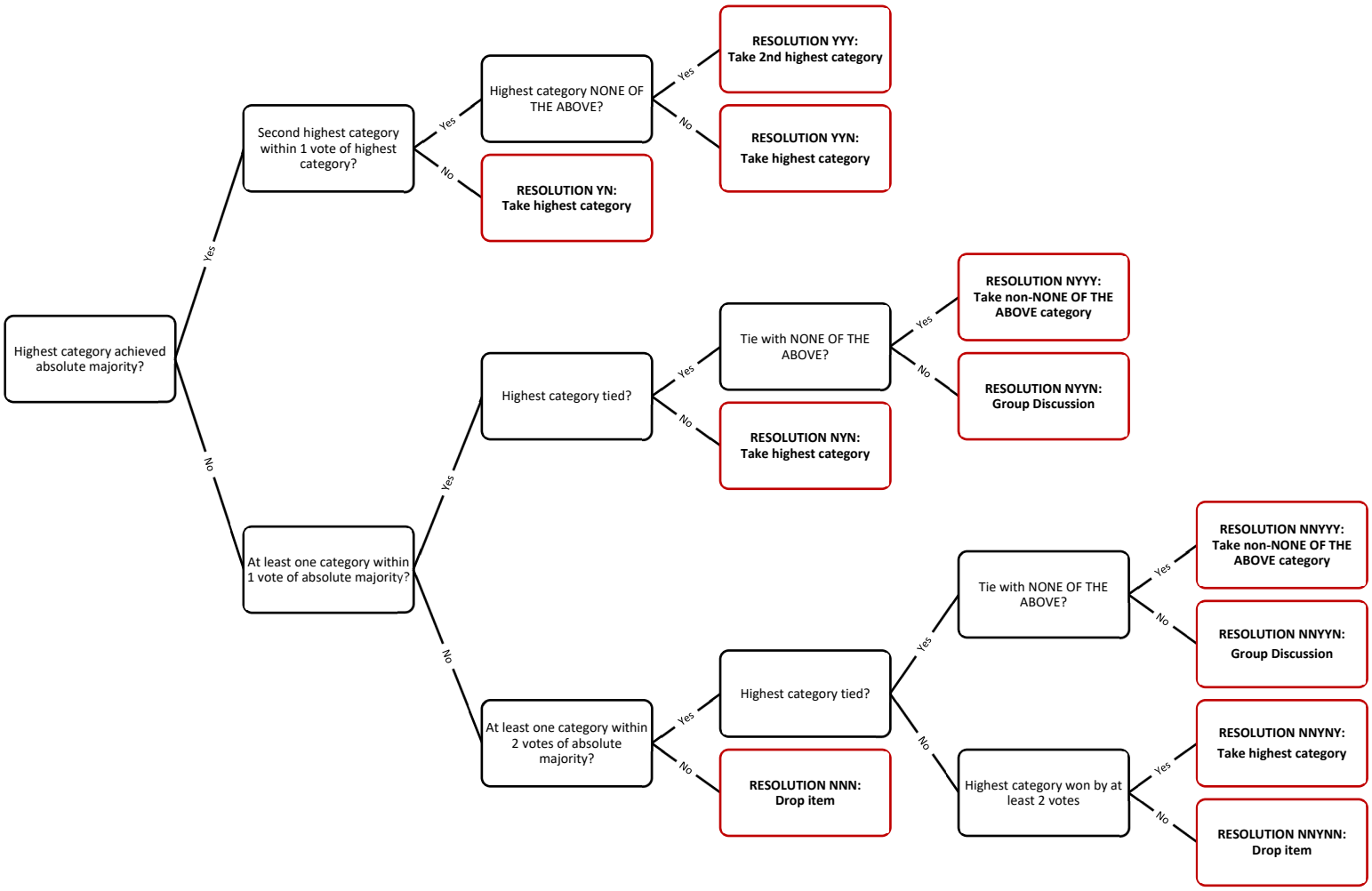

Figure 1. Decision tree algorithm used to determine consensus among compiled rater responses.

Results

PHASE 1- IDENTIFICATION OF SURVEY ITEMS WITH SERVANT LEADERSHIP CATEGORIES

Twelve raters completed the initial assessment of each of the MSL candidate items. Raters included faculty, staff, students, and institutional partners. Thus, a cohort that completed this phase of the analysis consisted of those with professional experience and

training in student leadership development, experts in the social and behavioral sciences, and lay reviewers; including raters from a range of lived experiences and social identities.

Table 2 shows the resolution of each item according to the decision tree algorithm (**Figure 1)**. Most items were resolved by obtaining a simple majority of ratings for a particular category that was not within one rating of a second category (YN; 55%, 59/108 items). Ratings, counts, and summaries for each of the 108 items are available upon request. **Table 3** represents the number of MSL questions that were successfully mapped to each of the seven dimensions of servant leadership. Anywhere from 3-12 questions were mapped to each dimension, with *behaving ethically* and *creating value for the community* both having the largest number of questions (12) mapped to those dimensions and *putting subordinates first* had the smallest number of questions (3) mapped to that dimension. Of note 'None of these' indicates that the consensus among raters was that those specific MSL survey questions did not map to any of the dimensions of servant leadership (35 questions). Further, if a consensus could not be reached due to large variability among how raters interpreted or mapped that specific question it was dropped ('Drop', 23 questions).

PHASE 2- REFINEMENT OF SURVEY ITEMS TO REPRESENT SERVANT LEADERSHIP CATEGORIES

After the application of the discission tree algorithm and a consensus was agreed upon for each candidate question from the MSL survey, a factor analysis was conducted using historical student data from 6,276 students. This step was necessary to refine the total number of questions used to represent each dimension of servant leadership. A separate model was created for every possible combination of four questions mapped to each servant leadership dimension. Of those, the best possible model was chosen (**Table 4**) to indicate which 3-4 questions would best represent each dimension of servant leadership. Because *putting subordinates first* only had 3 survey items mapped to, refinement of MSL survey items to represent that dimension was not required and thus statistical analyses for that category were not completed. **Table 5** lists the full text of each of the MSL questions mapped to each servant leadership dimension and indicates (*) which questions were included in the final model for each respective dimension. MSL questions that did not map or did not reach a consensus are included in the **Appendix**.

Table 2. Summary of Decision Tree Algorithm Resolutions. A resolution of YN indicated the absolute majority was achieved.

Resolution	Competencies
YYY	0
YYN	0
YN	59
NYYY	0
NYYN	0
NYN	15
NNYYY	3
NNYYN	2
NNYNY	8
NNYNN	19
NNN	2
Total	108

Table 3. Summary of the final number of MSL survey items that were mapped to each of the seven dimensions of servant leadership.

Servant Leadership Dimensions	Total Questions
Emotional healing	6
Creating value for the community	12
Conceptual skills	9
Empowering	6
Helping subordinates grow and succeed	5
Putting subordinates first	3
Behaving ethically	12
None of these	35
Drop	23
Total	108

Table 4. Statistical Results of the factor analysis and Cronbach's alpha for each servant leadership category.

Dimension	Items	RMSEA	BIC	Cronbach's Alpha
Emotional Healing	SRLS24, SPT4, RES10, Q3_5	<0.001	67.70	0.393
Behaving Ethically	SRLS52, Q3_10, Q3_11, Q3_13	<0.001	68.37	0.608
Conceptual Skills	HOP1, HOP5, OUT2B, RES7	<0.001	70.28	0.651
Creating Value	SRLS40, SRLS66, SRLS71, SGS2	0.008	70.70	0.815
Empowering	Q1_6, Q1_8, Q2_3, Q2_9	0.010	70.68	0.584
Helping Subordinates	Q2_1, Q2_5, Q2_6, Q2_7	0.029	77.40	0.668
Putting Subordinates First	MOT3, MOT9 SGS3	-	-	-

Note: Putting subordinates first only had 3 survey items mapped to it so refinement of survey items to represent that category was not required and thus statistical analyses for that dimension were not completed.

Table 5. Multi-Institutional Student Leadership (MSL) survey items mapped to each servant leadership dimension (* Indicates which of the questions were included in the final model for each servant leadership dimension)

Item	Stem	Text	Dimension	Final Model
Q3_10	I	I acknowledge self-interest and ensure it doesn't interfere with decision making process	BE	*
Q3_11	I	I exhibit personal accountability for decisions that are made	BE	*
Q3_13	I	I foster a culture of transparency	BE	*
SRLS52	B	Being seen as a person of integrity is important to me	BE	*
Q3_1	I	I maintain focus on truth over achievement	BE	
Q3_2	I	I think, feel, and behave with consistency, genuineness, authenticity, and honesty towards others	BE	
SRLS13	B	My behaviors are congruent with my beliefs	BE	
SRLS27	B	It is important to me to act on my beliefs	BE	
SRLS32	B	My actions are consistent with my values	BE	
SRLS53	B	I follow through on my promises	BE	
SRLS54	B	I hold myself accountable for responsibilities I agree to	BE	
SRLS63	B	My behaviors reflect my beliefs	BE	
HOP1	A	I can think of many ways to get out of a jam	CS	*
HOP5	A	Even when others get discouraged, I know I can find a way to solve a problem	CS	*
OUT2B	D	Organizing a group's tasks to accomplish a goal	CS	*
RES7	E	Under pressure, I stay focused and think clearly	CS	*
HOP3	A	There are lots of ways around any problem	CS	
Q1_1	I	I recognize the inherent risk in promoting change	CS	
Q1_3	I	I challenge the status quo with facts and logical reasoning about its advantages and disadvantages	CS	
Q3_12	I	I demonstrate the flexibility to recognize when a decision needs to be revisited	CS	
SRLS4	B	I am able to articulate my priorities	CS	
SGS2	F	I have a personal responsibility to improve the area in which I live	CV	*
SRLS40	B	I work with others to make my communities better places	CV	*
SRLS66	B	I value opportunities that allow me to contribute to my community	CV	*
SRLS71	B	I believe my work has a greater purpose for the larger community	CV	*
Q1_9	I	I work with the community in determining where change is needed	CV	
Q2_8	I	I engage others in community work to expand their network of peers and colleagues	CV	
Q3_3	I	I understand personal motivations to serve and how it relates to the collective effort	CV	
SGS1	F	I carry out activities in order to ensure a better world for future generations	CV	
SGS4	F	I think that I am responsible for ensuring a state of well-being for future generations	CV	
SRLS33	B	I believe I have responsibilities to my community	CV	
SRLS47	B	I participate in activities that contribute to the common good	CV	
SRLS69	B	It is important to me that I play an active role in my communities	CV	
Q1_6	I	I promote energy and optimism in order to move ideas into action	E	*
Q1_8	I	I maintain an open atmosphere for questioning processes and impacts	E	*
Q2_3	I	I support others to take risks that allow new information and perspectives to emerge	E	*
Q2_9	I	I trust others to represent the group in community forums	E	*
OUT2A	D	Leading others	E	
SRLS1	B	I am open to others' ideas	E	

Servant Leader Dimensions: CV = Creating Value for the Community; CS = Conceptual Skills; E = Empowering; BE = Behaving Ethically

Table 5 (continued). Multi-Institutional Student Leadership (MSL) survey items mapped to each servant leadership dimension (* Indicates which of the questions were included in the final model for each servant leadership dimension)

Q3_5	I	I appropriately address anxiety and conflict when working in groups	EH	*
RES10	E	I am able to handle unpleasant or painful feelings like sadness, fear, and anger	EH	*
SPT4	G	When I'm upset at someone, I usually try to 'put myself in their shoes' for a while	EH	*
SRLS24	B	I stick with others through difficult times	EH	*
Q3_8	I	When working in a group, I recognize the value and challenges of cultural differences within the group	EH	
SPT5	G	Before criticizing somebody, I try to imagine how I would feel if I were in their place	EH	
Q2_1	I	I provide and receive feedback for the purposes of continued learning	HS	*
Q2_5	I	I facilitate the learning of others by delegating work that extends current knowledge or experience	HS	*
Q2_6	I	I provide direction to resources that support others' growth	HS	*
Q2_7	I	I develop group facilitation knowledge in others	HS	*
Q2_4	I	I assess the goals, needs, and aspirations of others to support growth and development	HS	
MOT3	B	I am willing to persist in the face of adversity to meet my group's goals	PSF	*
MOT9	B	I put my group's progress toward a goal above my own success	PSF	*
SGS3	F	I give up part of my daily comforts to foster the development of next generations	PSF	*

Servant Leader Dimensions: EH = Emotional Healing; HS = Helping Subordinates Grow and Succeed; PSF = Putting Subordinates First

Question Stems for Table 5:

There were 9 distinct question stems and response categories for the 108 items. Question stems are coded A through I below and shown in the above table with the item text and the servant leadership dimension mapped to each question.

A) Read each item carefully and select the response option that best reflects you. (1=Definitely False to 8=Definitely True)
B) Please indicate your level of agreement with the following items. For the statements that refer to a group, think of the most effective, functional group of which you have recently been a part. This might be a formal organization or an informal study group. For consistency, use the same group in all of your responses. (1=Strongly Disagree to 5=Strongly Agree)
C) In thinking about how you have changed <u>during college</u>, to what extent do you feel you have grown in the following areas? (1=Not Grown At All to 4=Grown Very Much)
D) How confident are you that you can be successful at the following? (1=Not At All Confident to 4=Very Confident)
E) Indicate how much you agree with the following statements as they apply to you over the last *month*. If a particular situation has not occurred recently, answer according to how you think you would have felt. (1=Not At All True to 5=True Nearly All The Time)
F) Please indicate your level of agreement with the following items. (1=Strongly Disagree to 7=Strongly Agree)
G) The following statements inquire about your thoughts and feelings in a variety of situations. For each item, be as honest as possible in indicating how well it describes you. (1=Does Not Describe Me Well to 5=Describes Me Very Well)
H) How often do you… (0=Never to 3=Very Often)
I) Please indicate which of the following statements describe you. (0=No, 1=Yes)

Discussion

A collection of survey items from the MSL survey were successfully mapped to the seven servant leadership dimensions. This was achieved through two phases, phase 1 utilized a team of experts and lay raters to sort the MSL survey items into the seven dimensions of servant leadership, while phase 2 further refined the mapping by implementing a factor analysis to determine which combination of MSL survey items most strongly represented each dimension of servant leadership.

During the first phase of the mapping, experts demonstrated consistency by achieving absolute majority in most questions (59/108, 55%). A decision tree algorithm was used to achieve consensus in the remaining questions. Upon the completion of the first phase of the mapping, 3-12 questions from the MSL survey were agreed to adequately represent each of the seven dimensions of servant leadership.

With the mapping of each candidate MSL survey item to the servant leadership dimensions complete, the next phase of this project relied on a factor analysis to further refine the number of questions in the final model of each servant leadership dimension. Refinement of questions was successfully done in each of the seven dimensions, with 3-4 MSL questions used to assess each dimension. Interpretation of the reliability of each model indicated that the model representing *creating value* had very good reliability, while the models representing *behaving ethically, conceptual skills,* and *helping subordinates* demonstrated moderate reliability. The final model representing *empowering* nearly demonstrated moderate reliability, while the model representing *emotional healing* indicated poor reliability.

Future work will implement the models built using historical MSL data in this analysis and apply them to data collected in the next offering of the MSL survey (2026). We also intend to further validate the models built in this analysis against other tools to measure servant leadership such as the 7-item measure of global servant leadership (SL-7; Linden 2015). By implementing the SL-7 questions as custom questions in the offering of the MSL in 2026 we will be able to achieve this validation process. These next steps will be important to further understand if the models we have created in this analysis are adequate, especially for those with poor reliability (*emotional healing)*. After the validation of the models discussed in this project, it will be possible to create a weighted average of a students' response to each of the questions in each respective model and calculate an index measure to represent their unique score within each of the seven dimensions of servant leadership. If this validation is successful, it will allow for the use of a national survey measure with a plethora of historical data and strong future potential to better understand how students perform according to a servant leadership model centered in equity and justice.

Conclusion

Final models using 3-4 candidate survey items from the MSL were successfully mapped to each of the seven dimensions of servant leadership. Future work will implement the models built in this analysis and apply them to data collected in the next offering of the MSL survey (2026). Although further validation is still necessary, this analysis shows there is potential for the plethora of data acquired through the MSL to be analyzed through the models proposed in this study, models built to represent servant leadership centered in equity and justice.

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Appendix

Table. Multi-Institutional Student Leadership (MSL) survey items that did not map to any servant leadership dimension. There were 9 distinct question stems and response categories for the 108 items. Question stems are coded A through I below and shown in the subsequent table (see next two pages) with the item text and the servant leadership dimension mapped to each question.

None = None of These; Drop = Drop question, No consensus.
* Indicates which of the questions were included in the final model for each servant leadership dimension.

Question Stems:

A) Read each item carefully and select the response option that best reflects you. (1=Definitely False to 8=Definitely True)
B) Please indicate your level of agreement with the following items. For the statements that refer to a group, think of the most effective, functional group of which you have recently been a part. This might be a formal organization or an informal study group. For consistency, use the same group in all of your responses. (1=Strongly Disagree to 5=Strongly Agree)
C) In thinking about how you have changed during college, to what extent do you feel you have grown in the following areas? (1=Not Grown At All to 4=Grown Very Much)
D) How confident are you that you can be successful at the following? (1=Not At All Confident to 4=Very Confident)
E) Indicate how much you agree with the following statements as they apply to you over the last *month*. If a particular situation has not occurred recently, answer according to how you think you would have felt. (1=Not At All True to 5=True Nearly All The Time)
F) Please indicate your level of agreement with the following items. (1=Strongly Disagree to 7=Strongly Agree)
G) The following statements inquire about your thoughts and feelings in a variety of situations. For each item, be as honest as possible in indicating how well it describes you. (1=Does Not Describe Me Well to 5=Describes Me Very Well)
H) How often do you… (0=Never to 3=Very Often)
I) Please indicate which of the following statements describe you. (0=No, 1=Yes)

Item	Stem	Text	Dimension
MOT2	B	I need to be part of a group that reflects my values	Drop
MOT4	B	Others recognize me as a good person because of my contributions to the group	Drop
MOT5	B	Providing quality leadership, whether recognized or not, is important to me	Drop
OUT2C	D	Taking initiative to improve something	Drop
Q1_2	I	I explore how intended change will be sustained and supported	Drop
Q1_4	I	I work with others to define and communicate a compelling vision that enables others to pursue change	Drop
Q1_5	I	I create a safe environment for people to be open in expressing and working through their fears of change	Drop
Q1_7	I	I partner with key stakeholders in the identification, development, and implementation of positive change	Drop
Q2_2	I	I lead by example to help others be authentic contributors	Drop
Q3_15	I	When working in a group, I value input from team members, even when it is different from others' input and my own input	Drop
Q3_4	I	I encourage open and honest communication when working in groups	Drop
Q3_6	I	I model vulnerability by actively disclosing information that benefit the groups I work in	Drop
Q3_9	I	When working in a group, I understand the culture and context in which the group exists	Drop
RES2	E	I can deal with whatever comes my way	Drop
SPT1	G	I try to look at everybody's side of a disagreement before I make a decision	Drop
SPT2	G	I sometimes try to understand my friends better by imagining how things look from their perspective	Drop
SRLS16	B	I respect opinions other than my own	Drop
SRLS29	B	I can make a difference when I work with others on a task	Drop
SRLS3	B	I value differences in others	Drop
SRLS30	B	I actively listen to what others have to say	Drop
SRLS42	B	I enjoy working with others toward common goals	Drop
SRLS5	B	Hearing differences in opinions enriches my thinking	Drop
SRLS51	B	I can be counted on to do my part	Drop

HOP2	A	I energetically pursue my goals	None
HOP4	A	I can think of many ways to get the things in life that are important to me	None
HOP6	A	My past experiences have prepared me well for my future	None
HOP7	A	I've been pretty successful in life	None
HOP8	A	I meet the goals that I set for myself	None
MOT1	B	I only join groups with good reputations	None
MOT6	B	When I agree with my group's goals, I work harder to make a difference	None
MOT7	B	It is important that others think I do high quality work	None
MOT8	B	I need to see that my actions make a difference in the group	None
OUT2D	D	Working with a team on a group project	None
Q3_14	I	I identify compatible interests when conflict is present	None
Q3_7	I	I am aware of judging others' behavior and beliefs according to the standards of one's own culture	None
RES4	E	Having to cope with stress can make me stronger	None
RES8	E	I am not easily discouraged by failure	None
RES9	E	I think of myself as a strong person when dealing with life's challenges and difficulties	None
SPT3	G	I believe that there are two sides to every question and try to look at them both	None
SRLS10	B	I am seen as someone who works well with others	None
SRLS22	B	I know myself pretty well	None
SRLS23	B	I am willing to devote the time and energy to things that are important to me	None
SRLS28	B	I am focused on my responsibilities	None
SRLS34	B	I could describe my personality	None
SRLS41	B	I can describe how I am similar to other people	None
SRLS48	B	Others would describe me as a cooperative group member	None
SRLS59	B	I am comfortable expressing myself	None
SRLS60	B	My contributions are recognized by others in the groups I belong to	None
SRLS62	B	I share my ideas with others	None
SRLS9	B	I am usually self-confident	None
SUB2A	H	Search for meaning/purpose in your life?	None
SUB2B	H	Have discussions about the meaning of life with your friends?	None
SUB2C	H	Surround yourself with friends who are searching for meaning/purpose in life?	None
SUB2D	H	Reflect on finding answers to the mysteries of life?	None
SUB2E	H	Think about developing a meaningful philosophy of life?	None