



Suzanne
and Richard
Pieper
Family
Foundation:
Annual
Report

2017-2018
Academic
Year

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A Year of Growth and Progress

It has been another year of extraordinary growth for Servant-Leadership at Milwaukee School of Engineering. New leadership at MSOE has continued to provide the necessary support to increase impact throughout campus. Well established programs and events have continued to flourish while the focus of the Chair has concentrated on continuing to strengthen the integration of servant-leadership into the fabric of the university. The success of this year has been an accumulation of several years of efforts from faculty, staff, and students across campus.

2017-2018 Goals as Reported Last Year

As detailed throughout last year's report, the following is a summary of the goals we had for the 2017-2018 academic year:

Goals as they related to **Outcomes 3 & 4** for the 2017-2018 academic year included the following:

1. Successfully administer and analyze the data from the 2018 Multi-Institutional Study of Leadership,
2. Work with the newly appointed Assistant VP of Institutional Effectiveness, Dr. Jill Meyer, to develop an assessment plan to more effectively measure the impact of Servant-Leadership at MSOE, and
3. Continue to collect and analyze existing assessment data from alumni surveys, senior exit surveys, NSSE, and SSI to measure the impact of Servant-Leadership at MSOE.

Goals as they related to **Outcome 5** for the 2017-2018 academic year included the following:

1. Secure funding to enable the Chair of Servant-Leadership at MSOE to transition to a full-time position for as long as needed,
2. Develop a strategic plan for Servant-Leadership at MSOE based on the University's strategic plan that is published in early 2018, and
3. Secure funding and institutional support to create a physical location for Servant-Leadership at MSOE that is visible to the public and easily accessible to all students, faculty, and staff.

Goals as they related to **Outcome 6** for the 2017-2018 academic year included the following:

1. Further analyze the faculty survey to develop a better understanding of how faculty interpret integration of servant-leadership into their courses,
2. Further analyze the faculty survey to develop a better understanding of how we can increase the quality (training) and quantity (resources) of academic servant-leadership integration, and
3. Modify the survey to provide us with additional measures next year.

Throughout this report, evidence of the achievement of the above goals is presented. Additionally, new goals for 2018-2019 are listed within each outcome section.

Outcomes 3 & 4: Outcomes Measures Compared to Demographic Norms

Longitudinal Data

The chart below represents longitudinal/baseline data that was updated with measures from the 2017-2018 academic year.

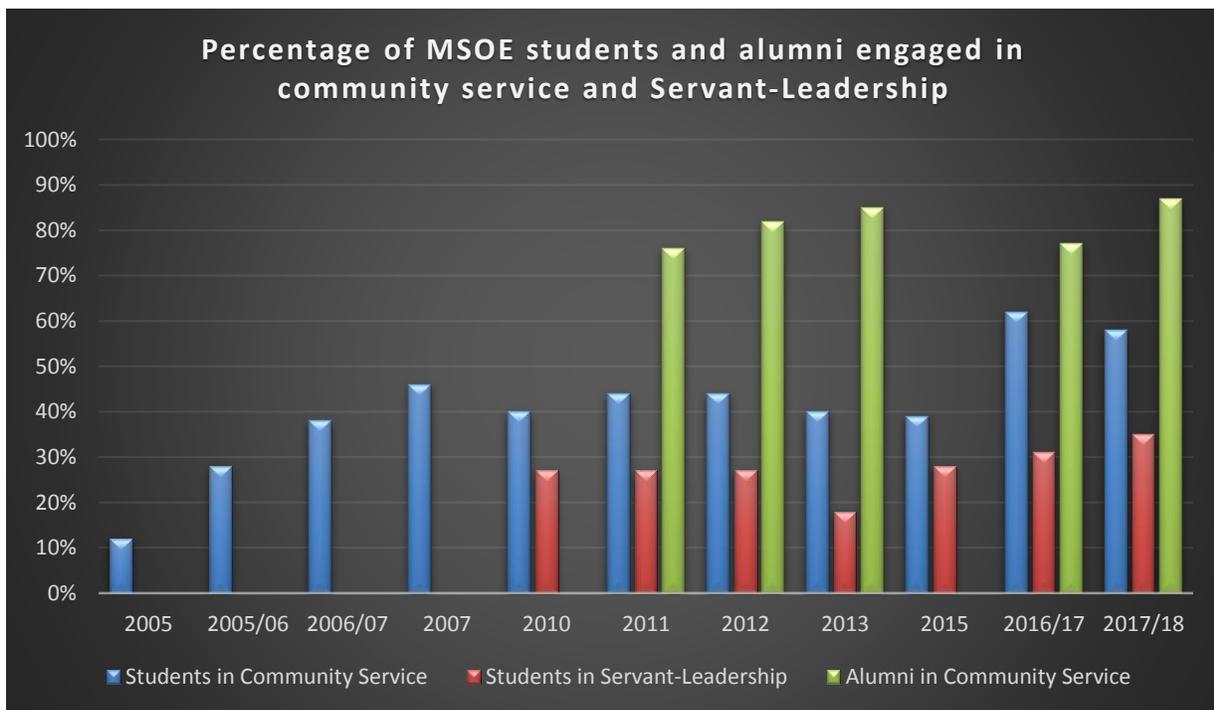


Figure 1: Student and Alumni Community Service and Servant-Leadership Engagement

The data from the 2017/2018 academic year indicates the highest level of alumni involvement in community service since 2005, up to 87% from 77% last year. This year's data also revealed the highest level of student involvement in Servant-Leadership at MSOE since 2005, up to 35%

from 31% last year. The data from the 2017/2018 academic year also indicates that student involvement in community service is 58% which is slightly lower than last academic year but well above the five-year average of 49%. Overall, these data indicate a strong tendency towards community service and servant-leadership integration at MSOE.

New Ventures in Measuring Outcomes

The Multi-Institutional Study of Leadership (MSL) survey was successfully administered during the Spring term with an exceptional response rate of 48%, well above the average response rate of 30% from all the institutions that participated. A debriefing call is scheduled with the MSL research team for mid-September which will provide a better understanding of the data and research reports that were provided. MSOE will complete a proper analysis of the data after this debriefing. The next scheduled implementation of this survey to MSOE students is planned for the 2019-2020 academic year.

Additionally, during the 2017-2018 academic year, in collaboration with the Assistant VP of Institutional Effectiveness, MSOE developed an Assessment Handbook (see Appendix B), which provides an overview of all assessment practices on campus. This includes details related to the MSL survey, which is the main assessment component for Servant-Leadership. This handbook will continue to be developed over the course of the next year, as the results from the MSL and other recently implemented surveys are analyzed. This will include a more detailed assessment plan for co-curricular student outcomes, including a well-defined plan for Servant-Leadership at MSOE. The goal of this plan is to implement a more comprehensive approach to assessment through a rotating schedule of three key institutional surveys: MSL, National Survey of Student Engagement (NSSE), and Student Satisfaction Inventory (SSI).

Response to 2017-2018 Goals for Outcomes 3 & 4

Goals as they related to Outcomes 3 & 4 for the 2017-2018 academic year are listed below with our responses to those goals:

1. Successfully administer and analyze the data from the 2018 Multi-Institutional Study of Leadership – *we successfully administered the 2018 MSL and have a plan in place to analyze the data in fall of 2018. Since MSL waits for all institutions to complete the survey before distribution of data and scheduling of debriefing calls, the analysis of this survey is not in alignment with the 2017-2018 goals. We will consider this timing constraint when determining future goals for Outcomes 3 & 4.*
2. Work with the newly appointed Assistant VP of Institutional Effectiveness, Dr. Jill Meyer, to develop an assessment plan to more effectively measure the impact of Servant-Leadership at MSOE – *MSOE successfully created a comprehensive assessment plan for the university which includes assessment of the servant-leadership program, further*

revision to this plan is scheduled for the upcoming academic year following the analysis of the 2018 MSL.

3. Continue to collect and analyze existing assessment data from alumni surveys, senior exit surveys, NSSE, and SSI to measure the impact of Servant-Leadership at MSOE – *we successfully collected and analyzed data from alumni and student surveys, once we complete the analysis of the 2018 MSL we will complete this goal in its entirety.*

2018-2019 Goals for Outcomes 3 & 4

Goals as they relate to Outcomes 3 & 4 for the 2018-2019 academic year include the following:

1. Successfully analyze the data from the 2018 Multi-Institutional Study of Leadership.
2. Work with the Assistant VP of Institutional Effectiveness to further revise the university assessment plan to more effectively measure the impact of Servant-Leadership at MSOE.
3. Continue to collect and analyze existing assessment data from alumni, faculty, and student surveys, NSSE, and SSI to measure the impact of Servant-Leadership at MSOE.

Outcome 5: A Breakthrough Venture that Promises a New Beginning in Acts of Goodness

New Venture: CREATE Institute at MSOE

In December of 2015, MSOE reported on the newly created Servant-Leadership Center for Business Solutions which reached out to Milwaukee area non-profit organizations to help solve their Information Technology (IT) challenges through the time and skills of our students. Last year we reported that the Center had continued to grow and we had a team comprised of the Chair for Servant-Leadership, three faculty Servant-Leader Faculty Fellows, and Dr. Eric Baumgartner, our Vice President of Academics, working to grow this center to support the institution across all areas of study at MSOE. At the end of the 2016-2017 academic year, this team presented the concept to the Academic Chairs and received unanimous support. Following that meeting, the Chair for Servant-Leadership met with each of the Academic Chairs individually to determine which courses would be a best-fit for the Center.

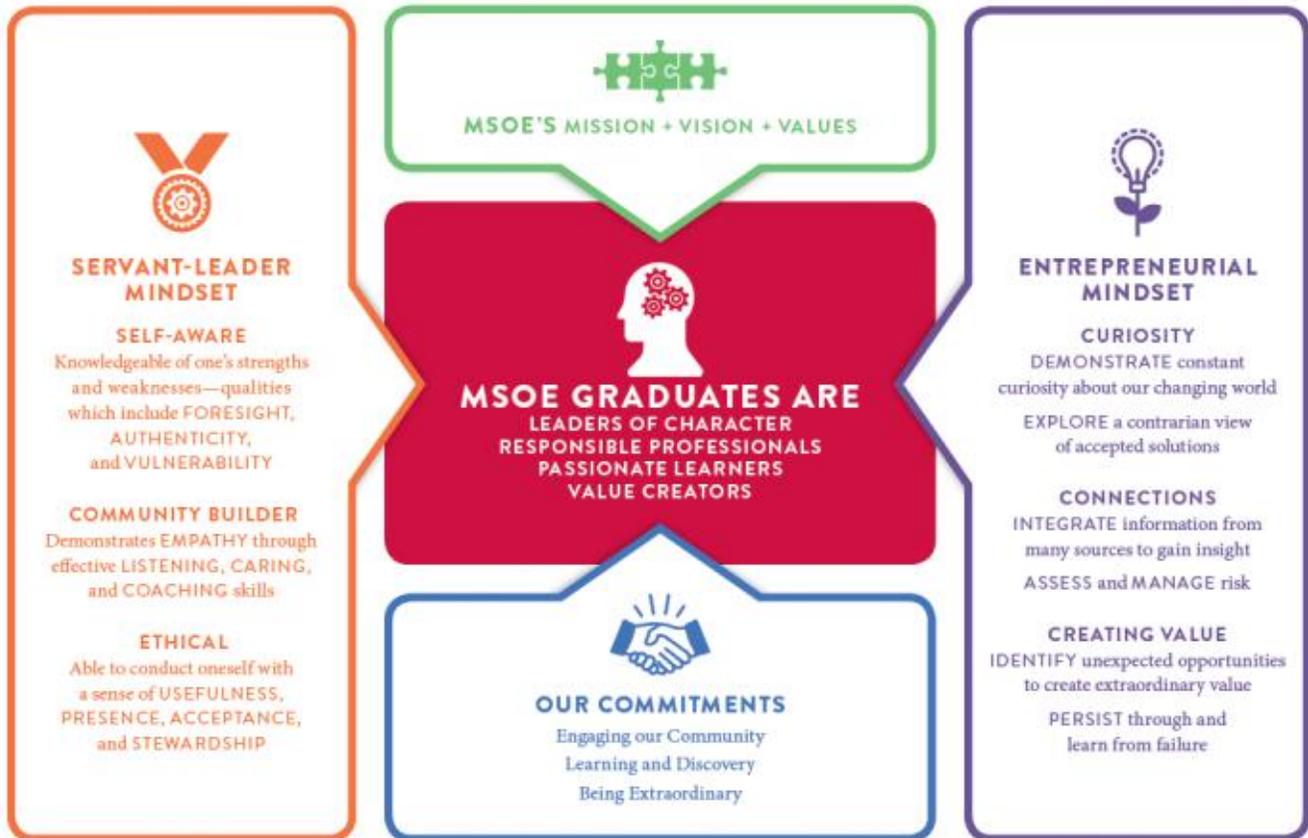
Last summer it was decided that the Chair of Servant-Leadership at MSOE would transition to a full-time position beginning in December of 2017. At that time, funds were available to support this full-time position until the end of the fiscal year, June 30th, 2018. During this seven-month period, the Chair had the opportunity to work with a team of faculty to develop an implementation plan to grow the Center across campus while working to secure funding to support a full-time Chair position for as long as needed. The goal of this long-term full-time

position was to provide the resources needed to support more project-based experiential learning across campus for the purposes of servant-leadership development.

We are excited to report that we have exceeded all expectations in this area. The first breakthrough in growing the Center was the inception of the MSOE Mindset. This tangible description of the characteristics of a MSOE graduate was created in tandem with the university's strategic plan and provided the foundation to strengthen the impact of Servant-Leadership at MSOE. The MSOE Mindset is an assimilation of the Servant-Leader Mindset, the Entrepreneurial Mindset, and MSOE's shared purpose. The MSOE Mindset identifies graduates as leaders of character; responsible professionals; passionate learners; and value creators.



MSOE MINDSET



During our university's strategic planning efforts, it became evident how much servant-leadership has become integrated into the fabric of the university. In other words, members of the strategic planning committee shared the desire to teach more students the servant-leadership philosophy and provide them with opportunities to practice the tenets of servant-leadership. Additionally, the strategy to leverage our industry relationships through project-based experiential learning was articulated as both an important aspect of the MSOE experience and an effective tool for mindset development. Finally, the strategic planning committee along with the Center for Solutions team acknowledged that project-based experiential learning was a pedagogical approach that we wanted to institutionalize. This realization along with the inception of the MSOE Mindset became the foundation to the CREATE (Community-focused Real-world Engagement in Academics Through Experiential-learning) Institute at MSOE.

To coordinate these efforts on campus, MSOE plans to form the CREATE Institute with two clear objectives. The first objective is to teach faculty how to work with industry professionals to create high-impact learning environments that cultivate the MSOE Mindset. The second objective of the CREATE Institute is to ensure that all MSOE graduates embody the MSOE Mindset. Our action plan to achieve these objectives includes focus in three main areas: faculty programming, student programming and community programming.

The estimated annual budget of approximately \$1.5M for the CREATE Institute will be supported financially through several sources including a four-year grant from the Kern Family Foundation, the Pieper Family Foundation Endowment, a grant from the Brady Foundation, the Uihlein-Spitzer Endowment, and institutional support from MSOE. The current Chair for Servant-Leadership has accepted an invitation to serve as Director to this new institute beginning in December of 2018.

During the next few months, the Chair for Servant-Leadership will lead a search committee to find a new Chair for Servant-Leadership at MSOE. That new Chair will then benefit from the shared resources of the CREATE Institute while providing the critical component of servant-leadership development to the project-based experiential-learning opportunities that are created by the new institute. While the Chair for Servant-Leadership will once again become a part-time position at MSOE, the added resources provided through the CREATE Institute will allow the impact of Servant-Leadership at MSOE to continue to strengthen across campus. We are thrilled to share this exciting news with the Pieper Family Foundation.

Update: Institutional Integration

Last year we reported a noticeable difference in the way that Servant-Leadership at MSOE was perceived on campus. This shift seemed to have reached a tipping point last year. We are

happy to report that this cultural shift has remained apparent. The following are some examples of how the momentum has continued:

- The Chair for Servant-Leadership was asked to present “Humanitarian/Service-Learning Opportunities at MSOE” during Professional Development Day at the start of the 2017-2018 academic year. This presentation was well attended (40+ faculty) and well received.
- Throughout the year, the marketing team worked diligently to share the work of Servant-Leadership at MSOE. The online MSOE News Room highlighted six stories during the academic year that focused on the efforts of Servant-Leadership at MSOE. In spring we event made the MSOE home page!



Figure 2: MSOE Website Homepage from May 31st, 2018

- We extended our reach into the Mechanical Engineering (ME) Department and started collaborating with several new faculty in this department. Since the ME Department is the largest academic department on campus, this expanded our reach to a significant number of new students.
- The Servant-Leader roundtables continue to be well attended by a diverse group of faculty, staff, and students. These events have become a wonderful catalyst to interdisciplinary collaboration and community building.
- We noticed the most significant shift when crafting this year’s annual report. Typically, we find content for the annual report in the quarterly Regents Reports. These quarterly

reports include information about each of the departments throughout campus. In the past, it was easy to collect material related to the development of servant leaders on campus because this information was separated into specific events/projects/courses. This year, we found evidence of servant-leadership development in a much larger percentage of the events/projects/courses that were shared in these quarterly reports. Examples included 1) faculty and staff living the tenets of servant-leadership as mentors to our students, 2) students demonstrating the servant leader philosophy in their course projects, and 3) students serving the community as servant leaders in their extra-curricular efforts. While these quarterly Regents Reports are not intended for public viewing, they are available for the Pieper Family Foundation Board to review if requested.

- The University's Strategic Plan was published last month and helps to exemplify the integration of the servant leader culture across campus. This plan is available for public viewing and is included in Appendix C of this report. The board will see examples throughout the plan that indicate our commitment to fostering the growth of servant leaders within the MSOE community.

We are excited to keep this momentum going as we prepare for the 2018-2019 academic year!

Response to 2017-2018 Goals for Outcome 5

Goals as they related to Outcome 5 for the 2017-2018 academic year are listed below with our responses to those goals:

1. Secure funding to enable the Chair of Servant-Leadership at MSOE to transition to a full-time position for as long as needed – *this was accomplished by the receipt of both a Brady Foundation Grant and Kern Family Foundation Grant. The formation of the CREATE Institute at MSOE will provide support in facilitating project-based experiential learning on campus which will allow the Chair to focus their efforts on fostering the development of servant leaders within this framework without managing the day-to-day coordination of this pedagogical approach. Therefore, the Chair for Servant-Leadership will be able to continue to expand the leadership development program while serving as Chair part-time.*
2. Develop a strategic plan for Servant-Leadership at MSOE based on the University's strategic plan – *this was accomplished through the development of the CREATE Institute.*
3. Secure funding and institutional support to create a physical location for Servant-Leadership at MSOE that is visible to the public and easily accessible to all students, faculty, and staff – *Leadership at MSOE has committed to securing funds to design and build-out a physical location for the CREATE Institute. The new Office of Servant-Leadership will be included in this space. Through this agreement, the Office of Servant-*

Leadership will have access to the institute's resources. While the location and design of this space is not finalized, the preliminary design for this space includes a conference room, an administrative area, several collaborative spaces, and a classroom.

2018-2019 Goals for Outcome 5

While we have made great strides towards integrating servant-leadership into the institutional fabric of Milwaukee School of Engineering, there will always be work to do in this area. Goals as they relate to Outcome 5 for the 2018-2019 academic year include the following:

1. Continue to participate in the implementation of the University's Strategic Plan to ensure that Servant-Leadership at MSOE continues to contribute to the culture of the university.
2. Work with the CREATE Institute at MSOE to leverage resources and enable Servant-Leadership at MSOE to grow.
3. Develop an organizational structure that empowers students to actively practice servant leadership as they themselves run Servant-Leadership at MSOE with the mentorship of the Chair for Servant-Leadership.

Outcome 6: An Excellent Year in Carrying Out the Elements of the Mission of the Chair

Areas of Focus

It has been another busy year for Servant-Leadership at MSOE. As always, we focused our efforts in three distinct areas:

- Collaboration with Classroom Instruction
- Serving the Greater Milwaukee Area
- International Initiatives

While there are some areas of overlap, we have categorized this year's activities into these areas. Additionally, we have tried to clarify the initiatives that have become sustainable due to the commitment of our students. These initiatives were initially dependent on both the financial assistance from the endowment and coaching from the Chair of Servant-Leadership. However, they have become self-sustaining. As mentioned previously, it is getting increasingly difficult to determine what activities were influenced by Servant-Leadership at MSOE directly and what activities are a result of the cultural shift that we are experiencing at MSOE. We believe that this is a wonderful challenge to have and is in-fact the goal of the Office of Servant-Leadership at MSOE. We want to coach students, faculty, and staff to become servant leaders who then continue these various initiatives without our help.

“The best test as a leader is: Do those served grow as persons; do they become healthier, wiser, freer, more autonomous, more likely themselves to become leaders?”

- Robert K. Greenleaf

While all the initiatives that we begin are initially dependent on the Office of Servant-Leadership at MSOE, within a year or two, most are self-sustaining and require very few resources from our office. Instead, we help to keep the MSOE community informed about the opportunities available to them and nurture the growth of new initiatives.

Collaboration with Classroom Instruction

This year Servant-Leadership at MSOE gathered classroom collaboration information by building on the survey that we used last year. We reached out to each of the faculty who responded last year to determine if they were still integrating servant-leadership into their classes in the same way. We provided each faculty who responded last year with their previous responses and asked them to report any changes. Additionally, we emailed all faculty and asked them to share new ways that they were integrating servant-leadership into their courses.

Based on the results from the above emails, we updated the list of courses currently integrating servant-leadership. This past year, faculty reported that they integrated servant-leadership into 63 courses. This list includes ten new courses (**). This list also omits eight courses that are no longer part of the curriculum or no longer integrating servant-leadership due to a change in faculty. While we tried to provide you with as much information as possible about the way servant-leadership is being integrated into these courses, we were dependent on the individual faculty members who teach the courses to obtain this information. As you can see, faculty had different thoughts on what it means to integrate servant-leadership aspects into their courses. In some cases, faculty are only teaching various tenets. While other faculty are providing students with robust experiential learning opportunities to develop a working knowledge of servant-leadership application. Based on the results of last year’s survey, we provided more opportunities for faculty to learn about servant-leadership in an effort to increase their comfort level with integrating this approach into their classrooms. Based on the addition of ten new courses, we consider our efforts in this area to be successful.

Courses Offered at MSOE that incorporate servant-leadership theory or application

AE/CV-1001, Freshman Seminar

- Required course for all Freshman Civil and Architectural Engineering and Construction Management students.
- Course included an introduction to servant-leadership by either the course coordinator or the faculty teaching the section.

AE-2121, Fundamentals of Thermodynamics

- Course objectives of AE 2121 align primarily with SL defined attributes of Conceptualization, Foresight, and Stewardship. In the AE 2121 course, students study basic principles of energy conversion--how energy is used to operate devices and systems--in the context of the 1st and 2nd Laws of Thermodynamics. Instructors take it beyond that and require their students to author a short paper summarizing an article of their choosing that deals with the geopolitical and/or environmental impacts of energy use, particularly fossil fuels, and the transition to renewables. Throughout the course, instructors stress the responsibility that engineers have socially to ensure that our society moves away from the use of fossil fuels to protect and preserve the environment. Students are required to CONCEPTUALIZE the "big picture" issues that result from energy use. They learn to use FORESIGHT in understanding the history of energy use (we talk about early refrigeration systems and the development of freons and their impacts), so that they can learn from this historical insight. And they learn about the importance of environmental STEWARDSHIP, and about how the welfare of the environment is linked to the welfare of communities and individuals. We like to think that the students who take thermodynamics from me learn not just about the mathematics and science surrounding the First and Second Laws, but that they learn what the societal significance of these scientific principles are.

AE-4121, Environmental Science in Building Construction

- Listening, Conceptualization, Foresight, and Stewardship are emphasized as part of the learning goals for AE 4121. During part of the course, we have class discussions based on the book by Dr. Pamela Matson, et. al., titled, Pursuing Sustainability: A Guide to the Science and Practice. This book contains some controversial topics because it gets into the politics of the environmental movement. In having these discussion, instructors stress to students the importance of listening respectfully to their classmates, even if they disagree. Conceptualization, foresight and stewardship were integrated into the course as students were asked to 1) conceptualize the ideas of how industrialization, construction, and energy use effects the environment and the people in undeveloped countries, (who bear the brunt of the negative impacts of global industrialization), and

to 2) apply foresight and creativity in devising solutions to some of the environmental impacts, thereby demonstrating stewardship.

AE-4311, Architectural Design

- Students completed designs and models for sites in the community as a way to give back and assist groups without resources. Projects that our students have worked on include the Basilica of St. Josaphat in the Lincoln Park Neighborhood, the Martin Luther King Drive neighborhood, and the United Migrant Opportunity Services (UMOS) south side Milwaukee headquarters.
- This is our CAECM students' first exposure to architectural design. Typically, these projects help both the students and their community clients conceptualize, show a commitment to growth of people, and build communities in a limited and accelerated period.

AE-4412, Engineering and Building Investment Economics

- Instructor incorporates community-based projects that nonprofits are working on. The class is real estate development focused so these projects are typically central city sites. The philosophy is to assist these groups that are looking for help and have students do research and develop a feasibility proposal.
- Course is offered as a servant-leadership opportunity to assist groups in need without really going over the tenets. Projects included: the Lincoln Park neighborhood, the King Drive neighborhood, and the Walkers Point neighborhood.
- The course objectives include having students learn and apply building investment economics principals to specific community development projects of their choice (building communities) (conceptualization), preparing students for the economics component of their FE exam (commitment to growth of people), and exposing students to real estate development history to better understand and predict future trends (foresight).

AE-4712, Architectural Engineering and Construction Management Senior Project I

- This course is the start of the four-course senior project sequence of classes that is a cumulating and application of all their past MSOE coursework. We typically seek 2-3 senior project real world clients and/or real-world developments each year for all senior project sections. We try to focus on projects that are in communities of need, clients of limited means, or projects that are transformational. The specific servant-leadership principals mainly include conceptualization, listening, commitment to growth of people and building communities.

AE-6460, Life Cycle Assessment of Building System

- Conceptualization, Foresight, and Stewardship are integrated into the course objectives.

- Instructor has developed a collection of researched PowerPoint lectures over the last several years that demonstrate the connection between Life Cycle Assessment and stewardship.

AE-5980, 21st Century Leadership in Construction**

- Leadership theory in this course is based on the servant-leadership model
- All lessons have a component of the leader as a servant to others

BA-3411, Leading Project Teams

- The majority of the 46 students enrolled in this course last year were engineering students from the civil, computer and architectural engineering programs
- Instructor introduced servant-leadership
- All students had free access to a print copy of *A Case for Servant Leadership* by Kent and other online materials on servant-leadership
- The instructor required all students in her sections of the course to lead a project that served the local community-students created the project scope with oversight by their instructor
- Students demonstrated a proficient understanding of leadership, project team terminology, and an array of issues important to team leaders to be effective in a business team environment
- Students learned to identify and anticipate challenges for effective project teams
- Students practiced team leadership, diagnosed situations, and learned how to respond/resolve appropriately
- Students practiced characteristics of servant-leadership in the project setting
- Examples of a recent projects include creating and delivering STEM-related classroom activities for Milwaukee Public Schools and Boy Scout STEM days, planning and executing an electronic waste swap and responsible disposal awareness event, and investigating viable processes for minimizing food waste on campus.
- At the end of the term, each student team had the opportunity to present their experience to project stakeholders, their peers, and MSOE faculty, staff, and administrators. As a final course deliverable, each student wrote a reflection essay on their own leadership development.
- Each year, Servant-Leadership at MSOE coordinates with this professor to identify potential needs in the surrounding local community as suggestions for student team projects.

BA-3444, Organizational Behavior

- Servant-leadership was introduced as a leadership concept. A film was shown and discussed.

BA-3447, Business Leadership

- Instructor presented several leadership theories including servant-leadership

BE-1005, Introduction to Biomedical Engineering

- Required course for all first-year biomedical engineering students.
- Instructors embrace servant-leadership theory and teach is through example to their students.

BE-3015, 4005, 4015 & 4025, Biomedical Engineering Design Series

- All biomedical engineering students are required to take this design series which begins in the spring term of their 3rd year.
- In spring, all 3rd year biomedical engineering students were introduced to servant-leadership theory and application to prepare them for senior design. Students participated in a self-reflection activity to get them thinking about what type of leader they want to be during senior design the following year.
- Instructors embrace servant-leadership theory and teach is through example to their students. Faculty reinforce this model as the student teams work through their projects.
- Whenever possible, faculty try to select projects that are service orientated and positively impact society. Here is a wonderful example of a team that grew as servant leaders during this design series:

<https://www.youtube.com/watch?v=nJBiOJAZUgl&feature=share>

CM-2200, Building Construction Methods

- Course is designed to give students a better understanding of the various construction methods (concrete, wood, masonry, and steel) through lecture periods, planning labs and construction labs.
- Students are expected to demonstrate their ability to work within a crew.
- Instructors present guidance to build team leadership.

CM-2300, Advanced Building Construction Methods

- Course is designed to give students a more in-depth understanding of more complex construction methods through lecture periods and construction labs.
- Students are expected to demonstrate their ability to work within a crew.
- Instructors present guidance to build team leadership.
- Labs were conducted at Habitat for Humanity homes to provide students with a real-life construction experience while serving the community.

CM-4311, Project Management I

- Students learn about various leadership theories as they relate to the construction industry.
- Students discuss how leadership plays a role in the construction industry as a whole.
- Students work in teams to practice their leadership skills.
- Instructors model servant-leadership for their students throughout the course.

CV 490/492, Civil Engineering Senior Design

- Our civil engineering students learn about servant-leadership throughout their academic career at MSOE. During the two quarters that they take senior project, they get an opportunity to apply the tenets of this leadership philosophy as they work in teams.
- In 2016-2017, students worked on the dam project in Tanzania as described in detail in the international project portion of this report.
- All Civil Senior projects are done by a multi-disciplinary team of students representing the specialties within the program; Structural Engineering, Construction Management, Water Resources, and Environmental Engineering.

GE-205, 305, & 405 – Professional Growth

- Required course for all students in the Civil and Architectural Engineering and Construction Management Department.
- Students within this department are required to complete a total of seven hours of community service related to their profession prior to graduation.
- While we recognize that students can participate in community service events without learning about or practicing servant-leadership, we encourage students to make this connection through modeling this leadership philosophy as a faculty. Additionally, most of the community service projects that students are involved in are organized and led by students who are practicing servant-leadership.

GS-1001, 1002, & 1003, Freshman Seminar I, II, & III

- Required series for all first-year student from all departments.
- Faculty often invite the Chair for Servant-Leadership to join one or more lecture periods throughout the year to discuss servant-leadership theory and application with first-year students. Faculty who feel comfortable presenting this topic on their own may still invite the chair to share more details about Servant-Leadership at MSOE. Each faculty member teaches this course slightly differently – the chair offers to support these faculty members in any way that they find most helpful.
- All students enrolled were required to engage in some form of a civic activity in the form of experiential learning that involved the larger community and society outside of MSOE. This activity varies based on the instructor teaching the course. One example

was for the technical writing component of the series – students researched hunger in Milwaukee to provide data to support the needs of Milwaukee Empty Bowls.

- Technical writing component of this series culminated in the students producing and presenting a formal written report that solves a problem in society. The topic used last year was food and problems with our food system.
 - Students in several sections of this course were given a scenario that introduced a problem that a person or family could face when it came to obtaining food. They had to go to a local grocery store and shop as if they were the people in the scenario with the same restrictions (budget, diet, and health) and figure out how they would obtain the food needed to survive.
 - Students were required to research a non-profit organization that deals with food in some way. Students used their website and other social media platforms to find information about the organization. They then produced a brochure meant to persuade people to get involved in the organization.
- Students in several sections of this course read the book "Evicted". This book discusses events and people who live in Milwaukee, it really seemed to hit home with the students. They spent a lot of the class time discussing inequality in housing, segregation, poverty, etc...

GS-1010H, 1020H, & 1030H, Honors Seminar I, II, & III

- The MSOE University Scholars Honors Program continued to grow its commitment to Servant-Leadership during the 2017-18 school year. Under the leadership of Dr. Michael Carriere from the Humanities, Social Science and Communication Department, the program grew to include 68 first-year students, the majority of whom lived in MSOE's first Living/Learning Community. In this community, housed in MSOE's Grohmann Tower, honors students were able to live with each other, use common spaces for Servant-Leadership project work, and hold both formal and informal honors-related programming throughout the year. These 68 honors students were invited to hone their leadership skills through service project work, professional presentations, and interaction with regional leaders in various fields. The USP encourages independent, collaborative, and cooperative learning.
- The University Scholars Honors Program continued to collaborate with Servant-Leadership at MSOE to provide honors students with additional exposure to servant-leadership projects, practice, and theory. The Chair for Servant-Leadership co-taught the first course of this three-course series and provided continued coaching to student groups on their service project work during the remaining two terms. Dr. Kelly Ottman, from the MSOE Raider School of Business, co-taught the second course of the three-

course series. Dr. Ottman was able to introduce the relationships between business, sustainability, and Servant-Leadership to the 68 students.

- The depth and complexity of the honors program is impressive. All students read a combination of the following books throughout the year, meant to highlight the concept of “The Power of Place”:
 - Matthew Desmond, *Evicted: Poverty and Profit in the American City*
 - Matt Hern, *What a City is For*
 - Patrick D. Jones, *The Selma of the North: Civil Rights Insurgency in Milwaukee*
 - Kent M. Keith, *The Case for Servant Leadership*
 - Peter Marcuse, *In Defense of Housing*
 - Michel Foucault, *Discipline and Punish*
 - Elizabeth Hinton, *From the War on Poverty to the War on Crime*
 - Colson Whitehead, *The Underground Railroad*
 - Eric Foner, *Gateway to Freedom: The Hidden History of the Underground Railroad*
 - Will Allen, with Charles Wilson, *The Good Food Revolution: Growing Healthy Food, People, and Communities*
 - Jennifer Cockrall-King, *Food and the City: Urban Agriculture and the New Food Revolution*
- As a compliment to the difficult topics that these students covered in their weekly class discussions, all students were required to participate in a group servant-leadership project. These projects were designed to provide students with an opportunity to actively participate in solving some of the problems that they were learning about as a class. These projects provided them with an outlet to act on this new knowledge that was challenging to digest as young men and women. The following is a selective list of the projects that the class worked on last year:
 - Working on the rehabilitation of Victory Over Violence Park, a park on the North Side of Milwaukee providing a space for a variety of programming.
 - Soccer field with Simba Soccer Club: working with the club on the rehabilitation of their home field.
 - We Got This: Work with community leader Andre Lee Ellis on the expansion of his community garden/youth employment project at 9th Street and Ring Street. The student plans for a new fruit orchard will be implemented in the fall of 2018.
 - GenSTEM: work with a variety of educational partners on the design and delivery of a hands-on, STEM curriculum for middle-school students in Milwaukee.

- Browning Elementary School: designing a solar food dehydrator and aquaponics system for Browning Elementary School, a school housed in the Silver Spring Neighborhood Center. Other students worked with SHARP Literacy on the development of a curriculum to go along with such tools.



Figure 3: Dehydrator at Browning Elementary School

- MacCanon Brown Homeless Sanctuary: working with Sister MacCanon Brown to develop a plan to renovate an abandoned warehouse in the 53206 zip code into a homeless sanctuary with a working kitchen, dining hall, clothing re-store, showers, clinics, aquaponics lab, makerspace, and community gathering space. Honors students focused on design a commercial-grade aquaponics system, an outdoor garden space, and a rooftop garden for the facility.
- Following the first term of this program, students were assigned a reflective essay to provide them with an opportunity to think about their growth as servant leaders. These papers assessed their understanding of the tenets of servant-leadership as well as their ability to apply these concepts to the service projects that they were involved in. It was clear from these essays that many students developed as leaders through this experience. Students also wrote academic essays, based on both course readings and their servant-leadership experiences, throughout the year.
- Based upon the success of these servant-leadership projects, Dr. Carriere decided to have all honors students participate in a design challenge during the spring 2018 academic

quarter. Two of the sections worked on the design of a new youth detention facility for the state of Wisconsin, while the third section worked on the design of a new community garden in Milwaukee. These projects, informed by both servant-leadership tenets and student involvement throughout the year in the broader servant-leadership projects, were a resounding success.

HU-432, Ethics**

- Students drafted essays defining their personal ethics paradigm and then a follow-up essay regarding their conduct, or, how they apply their personal ethics.
- Students delivered presentations on professional ethical conundrums specific to their areas of concentration.
- Students engaged in self-reflective exercises such as the “Good Essay” which required them to answer the following questions: are people good, are you good, and “what’s that all about?”
- Students presented to each other on work-place ethical conundrums: “Give a presentation that explains how to resolve a moral issue in a business, industry, or other relevant area of concern: 1) introduce a moral issue that takes place in a business or other relevant area of concern and then 2) explain how to best resolve it.” Many of the presentations covered information students experienced in internships (while protecting the anonymity of employers and coworkers). Students were offered the opportunity to do an optional final exam that articulated the relationship between one’s work, actions, thoughts, values (ethics), and serenity—as per Robert Pirsig’s discussion on quality.

IE-340, Project Management

- This is the course that was the recipient of the Brady Foundation Grant several years ago. Since then, many of the instructors who teach this course have continued to coordinate with Servant-Leadership at MSOE to provide their students with real-life projects that help the community to execute as they practice their project management skills.

IE-391, Industrial Engineering Junior Project**

- This design class is led by faculty who embody the servant leader mindset. Students are encouraged to practice the tenets of servant-leadership while serving the needs of their clients.
- While all projects incorporate applied servant-leadership in the way they are led, one of the projects last year also served the needs of a non-profit organization: The SIPer.

IE-440, Team Leadership/Facilitation

- Servant-leadership is one of the leadership theory discussed in this course.

IE-3470, Facilities Design**

- This design class is led by faculty who embody the servant leader mindset. Students are encouraged to practice the tenets of servant-leadership while serving the needs of their clients.
- While all projects incorporate applied servant-leadership in the way they are led, two of the projects last year also served the needs of a non-profit organization: Independence First.

IE-4901 & 4902, Industrial Engineering Senior Design**

- This design class is led by faculty who embody the servant leader mindset. Students are encouraged to practice the tenets of servant-leadership while serving the needs of their clients.
- While all projects incorporate applied servant-leadership in the way they are led, one of the projects last year also served the needs of a non-profit organization: World Bike Project.

MB-6000, Distributive Leadership for Educational Leadership Program

- One of the instructors who teaches this course uses the following approach:
 - Introduced servant-leadership as a leadership theory.
 - Provided an online module with web links and videos on servant-leadership.
 - Focused on international servant-leadership and presented a model to explore and resolve conflicting points of view.
 - Completed four graded case studies (based on real life global business situations) using an international servant-leadership model.
 - Multiple students noted servant-leadership as part of their leadership image and leadership model for action in their leadership mission and vision paper.
- The other instructor who teaches this course uses a slightly different approach:
 - Used a variety of models, tools, and videos in class all of which are very aligned to the servant-leadership style, however the instructor chooses to not explicitly name it. This is done purposeful as students are engaged in shaping their own leadership philosophy based on class readings, experiences, and assignments without explicitly naming particular leadership theories (as you might do if teaching Leadership 101). Specifically, they focused on three primary areas: A) Personal Leadership Values, Beliefs, Purpose, and Presence; B) Leadership Styles and Competencies related to Communication, Conflict, Coaching, etc. and 3) Shared Leadership around trust, team building, staff engagement, and models for developing leadership in others.

MB-6000, Distributive Leadership

- Introduced Servant-leadership as a leadership theory.

- Provided online module with web links and videos on servant-leadership
- Multiple students noted servant-leadership as part of their leadership image and leadership model for action in their leadership mission and vision paper.
- Multiple REAL (Reflective, Evaluative, Applied, Learning) papers were written on the topic of servant-leadership.

MB-6010, Leadership and the Global Achievement Gap

- Graduate students develop a deeper understanding of the roles of an administrator:
 - The administrator leads by advocating, nurturing, and sustaining a school culture and instructional program conducive to pupil learning and staff professional growth.
 - The administrator models collaborating with families and community members, responding to diverse community interests and needs, and mobilizing community resources.
 - The administrator acts with integrity, fairness, and in an ethical manner.
 - The administrator understands, responds to, and interacts with the larger political, social, economic, legal, and cultural context that affects schooling.
- Students work through an Ethical Dilemma Case Study.
- Study review and discuss various resources focusing on character development.

MB-6900, Project Management for Leading Change

- Servant-leadership is one of the leadership theories discussed in this course.

ME-300, Modeling and Numerical Analysis

- Group projects are a key component of the course and encourage development of servant leader behaviors essential to good engineering practice in modern teams.
- Specific principles present in the larger group assignments are:
 - Listening: Actively listening to other group members led to great discussions while working on group projects. Every group member found that they could learn something from someone in their group. Communication is critical to engineering.
 - Empathy: Group work brings empathy because it brings student outcomes together. The whole group will have more success when individual differences are understood and supported. Empathy leads to more effective groups, even when students do not initially see it that way.
 - Persuasion: Students were responsible for determining what should go into their reports; no specific "formula" or "recipe" was provided. This resulted in discussions and persuasion between group members on what content would most effectively convey their work.

- Foresight: Projects were linked to future projects, so students could save time in the long run by making smart decisions up front, even if it meant a little bit more work in that week, significant time savings could be achieved in future weeks.

ME/IE-490, 491, & 492, Mechanical and Industrial Engineering Senior Project

- During this year long series, students design a device or a machine to help individuals in need or social organizations.
- The first term is focused on determining need, second term on design development and third on project implementation.
- In addition to serving a client need, students strength their ability to work with and lead teams.

MG-600, Management Principles

- The study of the principles and practices of servant-leadership is one of the learning objectives of this course.

MG-660, Applied Organizational Behavior

- Introduced servant-leadership as a leadership theory.
- Provided online module with web links and videos on servant-leadership as an added module based on interest expressed by students.

MG-765, Leading Project Teams

- The study of the principles and practices of servant-leadership is one of the learning objectives of this course.

MG-800, Strategic Management

- The study of the principles and practices of servant-leadership is one of the learning objectives of this course.

MG-8042A, Doing Business in China: Domestic Coursework

- Servant-leadership is woven through the class.
- One class session of 11 is dedicated to Ethics and servant-leadership:
 - Guest Speaker – Al Klotsche (Past President of Brady Asia and current President of Mayline) addressed Servant leadership and ethics from a global perspective as a way to understand different perspectives.
 - Puzzle Teaching Group Assignment – Using the Kent book, each group of students reviewed a section of the book and discussed the meanings and applications. Then they taught others. Thus, the whole book was reviewed in student-lead discussion.
 - REAL papers for the week focused on the Reflection, Evaluation, and Applied Learning from the topic.

- Servant-Leadership project for international class was initiated. Team leaders were selected to lead components of the project. Fundraising occurred. All students were engaged.

MG-8042B, Doing Business in China: International Travel

- The servant-leadership project was student lead. Students this year were a part of all the pre-trip planning to include weekly international calls, fundraising, packing and logistics.
- In China, students lead all aspects of assembling the library, educating students and gift distribution.
- Pre-trip reflections, in trip reflections and post trip reflections occurred via group discussions, reflection papers and surveys.
- In overall reflections and summaries of the trip, the servant-leadership aspect stands out as life changing for many.
- A journal entry was completed for the servant-leadership project.
- Follow up independent studies were created by some students on the topic of servant-leadership.

NU-415CA (SS-415CA), Culture and Health in Central America**

- Students learn about servant-leadership through a lecture at the beginning of the term and then apply servant-leadership theory as they plan, facilitate, and reflect on an international service trip to Central America.

NU-2011, Health Concepts and Health Assessment

- While servant-leadership is not specifically presented in this course. The students apply the tenets of servant-leadership to the work they complete throughout the course.

NU-3300, Nursing Care of Acute Health Care Challenges

- Students learn to act on opportunities to apply aspects of caring by comforting and supporting clients and families in conjunction with reflection on one's approach to caring.
- Student practice using effective interpersonal communication skills and knowledge of health education principles to educate, support and partner with diverse clients and families to promote achieving higher levels of health.

SC-310, Nanoscience and Nanotechnology

- Students prepared a hands-on demonstration and presentation on nanotechnology to share with high school chemistry and biology students at St. Joan Antida High school. There were about an equal number of SJA students as MSOE students. The presentations were less than ten minutes and they were able to present to small groups

of SJA students. Time allowed for MSOE students to present to three small groups of SJA students.

- After the presentation, they wrote a reflective paper on their experience.
- Students were introduced servant-leadership philosophy by the leadership of the course instructor.

SS-457, Current Affairs

- Students are encouraged to develop foresight and conceptualization through their study of current affairs.
- Students dissect leadership theory through their study of current affairs and look for examples of various leadership styles in the articles that they read.

SS-461, Organizational Psychology

- Students are introduced to servant-leadership theory along with other styles of leadership.

SS-462, Developmental Psychology

- Students apply course material to “real world” examples.
- Students recognize the diversity of life experiences that shape individual development.
- Students enhance their capacity for empathy through developing a greater understanding of the differences among us.

SS-474, The Family

- Students provide evidence of a greater understanding of, appreciation of, and respect for human diversity.
- Students exhibit insight into the ways in which larger social, political, and economic forces as well as biological and psychological forces impact relationships within the family.
- Students show an increasing objectivity and openness toward the needs of society, including an improved grasp of the determinants of social behavior; and an enhanced capacity to make decisions consistent with his/her changing roles in society.
- Students enhance their capacity for empathy through developing a greater understanding of the differences among us.

SS-476, Death and Dying

- Students think about death & dying in a culturally competent manner.
- Students discuss topics of death & dying openly.
- Students distinguish ways in which death, dying, and bereavement differ across the lifespan.
- Students perceive everyday influences of death & dying.

- Students enhance their capacity for empathy through developing a greater understanding of the differences among us.

TC-498, Practicum**

- Student engaged in a practicum for the office of Servant-Leadership.
- The work revolved around the revision of the Empty Bowls website. Prototypes were created, and once one was selected, the website went through a complete redesign.



Figure 4: Image of Redesigned Website for Milwaukee Empty Bowls

TC-499, Independent Study**

- Worked with Technical Communications student in the final term of her program.
- Student created materials to help market the office of Servant-Leadership with emphasis on social media.
- Student also helped create marketing materials for a celebration event

UX-333, Knowledge and Content Management**

- Students conducted assessments of knowledge and content management systems for various for-profit and non-profit organizations, some of which included student organizations on campus.
- Students took on a consulting role.
- Offering recommendation as to how to enhance KM and CM was a true gift to the companies and student organizations that the students worked with.
- One student did an assessment of KM/CM for the office of Servant-Leadership.

Serving the Greater Milwaukee Area

Our goal is to provide as many opportunities as possible to help students learn about the community that surrounds our campus. There are many non-profits within walking distance of our campus that do wonderful things to support the least privileged in the Greater Milwaukee Area. It is easy for all of us to ignore the struggles of others who live just beyond our comfort zone – these events below are examples of how we support students who have a desire to serve this population. All these initiatives are led by students and many have been going on for so many years that we forget that they originated through sponsorship from the Office of Servant-Leadership. Our role is to help insure that they continue to be sustainable initiatives by mentoring student leaders to coach newer students to become future leaders.

The following are descriptions of the most notable local servant-leadership projects that students organized and led during the 2017-2018 academic year. While the university offered dozens of other opportunities for our students to engage in community service throughout the year, for purposes of this report, one-time volunteer opportunities are excluded from this list.

Blue Lotus Spring Clean Up – Every year, students from MSOE head out to Blue Lotus Farm and Retreat in Newburg, Wisconsin to help the facility get ready to welcome community members for the summer months. MSOE has been working with Blue Lotus since 2006 and uses this spring visit to help maintain their relationship with Blue Lotus and make sure that the deck they built is well maintained. This is an activity that our students look forward to all winter long!



Figure 5: Blue Lotus Spring Clean Up

Milwaukee Empty Bowls – Servant-Leadership at MSOE was the sponsored the 19th annual Milwaukee Empty Bowls event. The event uses art to heighten hunger awareness and raise funds that help provide food pantries and meal programs in Milwaukee. Last year there were over 300 volunteers, 35 restaurants, three bakeries and more than 2,000 attendees who raised a record \$66,000 for seven charities. Servant-Leadership coordinated MSOE’s involvement of over 80 student volunteers. Additionally, throughout the year, MSOE students supported Milwaukee Empty Bowls in their needs as a non-profit. For example, a student redesigned their website as part of a technical communications practicum. Our partnership with Milwaukee Empty Bowls has grown throughout the years and we are pleased to play a larger role in this amazing community event.



Figure 6: MSOE Students at the 2017 Milwaukee Empty Bowls Event

Outreach to St. Joan Antida High School – MSOE professors, Dr. Cynthia Barnicki of Mechanical Engineering and Dr. Anne-Marie Nickel of Physics and Chemistry presented to two classes of 25 students each at St. Joan Antida High School. The duo received a research grant in 2015 which became a catalyst to this partnership. Nickel and Barnicki have continued with the relationship through sponsorship of Servant-Leadership at MSOE. Now these professors volunteer their time to introduce minority high school students to the exciting world of chemistry through chocolate. “We talked about the chemical makeup of the molecules, why chocolate is special, tested the hardness of it, talked about nucleation – how you can ‘ruin’ chocolate by not cooling it correctly,” Barnicki said.



Figure 7: Dr. Barnicki working with St. Joan Antida High School Students

Tricklebee Café Garden Renovation – MSOE students worked with the owner of Tricklebee Café on North Avenue to continue the renovation of an outdoor garden adjacent to the café. Tricklebee is one of the areas ‘pay as much as you can’ restaurants that provides opportunities of community members to pay-it-forward and support those in the area that are unable to pay for food. Servant-Leader Faculty Fellow, Doug Nelson from the Civil and Architectural and Construction Management Department has led this effort. Students from Habitat for Humanity and the Professional Construction Society student organizations have contributed to his project. Last year they constructed a gravel path, stage, and bench for the community. Construction on this project will continue into the 2018-2019 academic year.



Figure 8: MSOE Students working at Tricklebee Café

MLK Day of Service at MSOE – To commemorate the servant-leadership of Dr. Martin Luther King Jr., Servant-Leadership at MSOE hosted the 4th Annual MLK Day of Service at MSOE. School supply packs were assembled using the donations collected during a month-long school supply drive hosted by the MSOE Bookstore. Students also created snack bags and tie blankets to donate to the Milwaukee Rescue Mission. Servant-Leadership at MSOE hosted this annual event to provide students an opportunity to honor Dr. Martin Luther King, Jr. while giving back to the community. This year, staff from the Wellness Center and Athletics Departments also volunteered their time to give back to the community during the event.



Figure 9: 4th Annual MLK Day of Service at MSOE

Annual School Supply Drive – A group of MSOE students meet with students at Tamarack Urban Waldorf High School to deliver the school supplies that were collected by the MSOE Bookstore and assembled during the MLK Day of Service at MSOE.

Habitat for Humanity – This year Servant-Leadership at MSOE sponsored five women to partake in the women’s build day. While on site, students were encouraged to learn how to handle various power tools. Students learned about construction basics and how the real-life application sometimes varies from what is taught in school. The students were given a hands-on experience with construction that was transformational.



Figure 10: Habitat for Humanity Women’s Build Day

Ronald McDonald House – Servant-Leadership has been a partner for Circle K for the 2017-18 school year at MSOE. They have given the organization an opportunity to volunteer more often enabling students to have greater community outreach within the Milwaukee area. Servant-Leadership has funded the adventures at Ronald McDonald House, where Circle K had three events with 17 volunteers total and a total of 85 hours of service. In addition, Servant-Leadership helped fund a Sandwich Making event where eight club members made over 100 sandwiches for the Guest House with a total of four services hours. Even more, a Cookie Baking event was hosted where five volunteers made cookies for older folks in the community for a total of ten hours of service.



Figure 11: MSOE Students Preparing a Meal at RMH

Winter Celebration on Campus – Servant-Leadership at MSOE provided school age children from the Our Next Generation (ONG) a fun day filled with winter themed crafts, games, and books. This community building event gave children from MPS an opportunity to get in the winter spirit while they worked one-on-one with MSOE students. Everyone created unique pipe cleaner snowflakes, read about different winter, had a friendly snowball fight (no real snow of course), and students learned how to create their own gingerbread houses from an Architecture Engineering student at MSOE. During lunch, everyone sat down to watch Frosty the Snowman. Together, both the MSOE students and school age children had an opportunity to share quality time learning about each other. This is an annual event that MSOE students organize to serve the community.



Figure 12: Winter Celebration on Campus

Playground Design Project – Over 20 students from the CAECM Department’s Professional Construction Society and Habitat for Humanity student organizations collaborated with Servant-Leadership at MSOE to participate in a student led playground design competition for Cross Trainers Academy, a K-12 school affiliated with the Milwaukee Rescue Mission. Five interdisciplinary teams completed a needs assessment for the school and provided the organization several design options for a playground. In fall of 2019, MSOE students will continue their involvement with the school which serves children from families who are experiencing homelessness.



Figure 13: Playground Design Winners

Bowl Making Event – MSOE works to support the efforts of Milwaukee Empty Bowls throughout the year. This partnership provides MSOE students with opportunities to apply the knowledge they acquire through their academic studies to serve the community and practice servant-leadership theory on various projects throughout the year. In spring of 2018 a student in the Technical Communication Program created a new website for the non-profit organization as part of her practicum experience. Another student in the Technical Communication Program at MSOE is creating an educational video as part of her practicum during the summer of 2018. Additionally, Servant-Leadership at MSOE sponsored a bowl making party for 15 students to help them take a break from studying before final exams. The bowls that they created were donated to the fundraiser that will be held at the Kern Center in October of 2018.



Figure 14: MSOE Students Making Bowls for Milwaukee Empty Bowls

International Initiatives

The Office of Servant-Leadership and the Office of Academics partnered to create the International Leadership Committee in January of 2014. This committee is now responsible for generating an annual call for proposals to delegate an award of \$20,000 (contributed evenly from each department) to international initiatives that allow our students to apply what they are learning in the classroom while practicing the tenets of servant-leadership to serve the global community.

Library Project, China – A class of 11 MSOE graduate students from the Doing Business with China program participated in a Servant-Leadership project of setting up an English language library in the Hunan Province of China. The team set up a reading library and provided books. The project was planned and executed by these students to provide children at this rural school an opportunity to learn English.

The students who participated in these two trips were asked to read the Kent book and write a reflection paper upon their return.



Figure 15: MSOE Student in China

Aguacate II Vehicular Bridge, Guatemala – Over the 2017-18 academic year, students from the MSOE chapter of Engineers without Borders USA (EWB-USA) designed and planned the construction of a 60-foot clear span reinforced concrete girder bridge for in Joyabaj, Guatemala. During the spring of 2018, twelve MSOE students and two faculty members partnered with eight Wisconsin professional engineers, six Guatemalan engineering students, and numerous members of three communities on the construction of the bridge.

The Aguacate II Vehicular Bridge in the municipality of Joyabaj, Guatemala crosses the Rio Temal which regularly floods during the wet season of December-April and is not able to be crossed on foot or by vehicle. The river separates the three villages of Aguacate, San Luis, and Limares from regional center of Joyabaj. The residents of these three villages wanted improved access to the healthcare, markets, and schools. This bridge and the accompanying new road cuts the transportation time in half for these three rural communities to the regional center of Joyabaj.



Figure 16: MSOE EWB Students with Community Members

Global Brigades, 2017-2018 – Over the break between Winter and Spring Quarters, a total of 73 MSOE students, faculty, staff, alumni, and parents participated in international service learning trips to Honduras and Nicaragua as part of Global Brigades-MSOE, which is a university chapter of the international service organization Global Brigades. These participants composed of total of four brigades: a Medical Brigade that provided basic medical services in La Candelaria, Honduras; a Public Health Brigade that built sanitary facilities in La Campos,

Honduras; a Business Brigade that developed a microfinancing project in El Ocote, Honduras; and a Water Brigade that helped build a freshwater system in Las Cureñas Nicaragua. This was the fifth year in a row that Global Brigades-MSOE sent brigades to Central America. It has grown by about 20% per year since the first Medical Brigade went to Panama in 2014. Global Brigades-MSOE continues to explore possibilities for growth, and it seeks to develop a deeper relationship with the main organization.

Below is a photo of our students on the Business Brigade meeting with the board members of the savings-and-loan cooperative in El Ocote. In Spanish, the savings-and-loan cooperative is called a *caja rural*. It was our first year of doing the Business Brigade, and our students did a wonderful job. They brought down \$1,500US for the savings-and-loan cooperative that is being used to develop a grain storage unit in El Ocote. Because they lack a grain storage unit in this region, farmers are often forced to sell grain at low prices. With the grain storage unit, they will be able to wait until the price for grain goes up and thus increase the average household income of these farmers. This project required our students to listen to the needs of the community and develop a strategy to create value to the people they were serving as part of this experiential learning project.



Figure 17: Global Brigades

Cocoa Bean Dryer, Dominican Republic – Through collaboration with Servant-Leadership at MSOE, four senior mechanical engineering students focused their senior project efforts on a service project in the Dominican Republic. The MSOE Cocoa Bean Dryer Senior Design team was tasked with the development of a cocoa bean drying system to be used in the Dominican Republic. The drying system was designed to operate independent of the surrounding weather conditions and to incorporate an automated cocoa bean agitation system. The design was intended for rural farmers whose lives depend predominately on the profits generated from the bi-annual harvest of cocoa beans. The implementation of a successful system will have a positive impact on local farmers by reducing the 15 percent of cocoa beans lost annually to mold. The senior design team consisted of four MSOE mechanical engineering students with one mechanical engineering faculty member serving as an advisor. The completion of the project helped to fulfill each students' MSOE curriculum requirement to participate in a senior design project prior to graduation.

During the 2017 MSOE Thanksgiving break, the design team travelled to the Dominican Republic to obtain design critical measurements, evaluate the current drying process, and develop servant-leadership skills. The knowledge gained during this trip helped in the development of an effective drying system designed for its operating environment. The trip was made possible by Servant-Leadership at MSOE who provided travel funding, support, and leadership development coaching.



Figure 18 - MSOE Team in Dominican Republic

Other Efforts

The ACRE Program – The Associates in Commercial Real Estate (ACRE) Program is an industry and academic supported initiative that prepares people of color for careers in the commercial real estate field. The goal of the ACRE is to expand minority representation in the real estate development, property management, and construction management. This program offers students the opportunity to expand their knowledge of these industries while creating a valuable network of fellow students, past ACRE graduates, and industry professionals. The ACRE program includes working with experienced professionals to provide a better understanding of the real estate industry as well as a hands-on approach to develop experience. Typical ACRE students have some college training and several years of business experience. The ACRE program was created by Professor Mark Eppli, and the Marquette University College of Business, in 2005. In 2015 a university partnership was created with Marquette University, the Milwaukee School of Engineering, and the University of Wisconsin-Milwaukee to expand the program. The project is administered by the non-profit community group Milwaukee-LISC. Many MSOE faculty and students volunteer their time and expertise to help make this program a success.

First Annual Diversity Retreat – The first annual diversity retreat was a weekend-long retreat in Upham Woods Outdoor Learning Center that focused on diversity, community, and leadership. The idea for this retreat was presented to Student Life by a student who previously attended a national diversity conference through the support of Servant-Leadership at MSOE. After receiving the support from Student Life, this student organized and facilitated this retreat where participants examined the meaning of social change and developed an action plan to bring back to their community. They learned how to synthesize this action plan into their lives to become an effective leader. They examined these issues through an experiential pedagogy, building upon their existing knowledge as well as learning gained through this experience. The goal of this retreat was for participants to develop a greater understanding of what it means to be a leader in a diverse ever-changing world.

Servant Leader Roundtables – This was the second year that MSOE organized and facilitated Servant Leader Roundtable events in the Milwaukee area. During the 2017-2018 academic year, we hosted five of these roundtable events which averaged 15 participants per event. All MSOE faculty, staff and students were invited to attend these events. Each of these roundtables was well attended and sparked verbose dialogue between a diverse group of participants. The last of these roundtables was facilitated by a senior industrial engineering student who completed an independent student on volunteerism and wanted to share her newly gained knowledge with the group. Servant-Leadership at MSOE wishes to continue to grow these gatherings and attract more participants from both on campus and in the downtown business and non-profit district. We are considering a more regular schedule and/or

dividing into two groups: one catering to downtown professionals and the other catering to our students.



Figure 19: Milwaukee Roundtable

In addition to the above efforts, MSOE faculty and staff who practice servant-leadership philosophy have spent the last year continuing to increase MSOE's involvement in the Servant-Leadership community at-large. Below is a list of events, conferences, and presentation that the Chair for Servant-Leadership, various Servant-Leader Faculty Fellows and other faculty and staff have participated in during the past academic year and summer. Our team has enjoyed meeting with many like-minded professionals and these opportunities have helped us to grow as a servant leaders.

- Professor Gene Wright and Chair DeAnna Leitzke served on the Milwaukee Servant Leader group as representatives of MSOE.
- Professor Gene Wright and Servant-Leader Faculty Fellow Doug Nelson attended and/or facilitated several servant leader roundtables throughout the Greater Milwaukee Area.
- Chair DeAnna Leitzke and Dr. David Howell served as members of the Three Holy Women Global Solidary Committee.
- Chair DeAnna Leitzke served as International Leadership Committee Chair at MSOE.
- In September 2017, Chair DeAnna Leitzke presented at a Residence Assistant Training Session – Introduction to Servant-Leadership.

- In September 2017, Servant-Leader Faculty Fellow Beth Slayman presented at New Faculty Training Session – Introduction to Servant-Leadership.
- On October 17, 2017, Servant-Leader Faculty Fellow Dr. Wikoff attended an “On the Table” dinner at Repairers of the Breach as part of the Greater Milwaukee Foundation’s On the Table Greater Milwaukee event. Repairers of the Breach is Milwaukee’s daytime homeless sanctuary. Earlier in the month, on October 8, Dr. Wikoff staffed a table at Milwaukee’s Empty Bowls event, which is a public fundraiser held in MSOE’s Kern Center and organized by MSOE’s office of Servant-Leadership and many MSOE student/staff volunteers. Dr. Wikoff attended as a representative of Repairers of the Breach a 2017 Empty Bowls recipient; she is chair of that organization’s Communications and Fund Development committee. Dr. Wikoff shares her experiences as a volunteer at Repairers of the Breach to enhance the educational experience for her students and help them develop their capacity for empathy and community building.
- Servant-Leadership at MSOE hosted seven faculty and staff (DeAnna Leitzke from Servant-Leadership at MSOE, Sara Alt and Gene Wright from the Raider School of Business, Doug Nelson from the Civil and Architectural Engineering and Construction Management Department, Dr. Diane Munzenmaier from the Center for BioMolecular Modeling, and Saj Thachenkary and Leigh Ann Hass from Marketing) to attend an interactive workshop titled, “Building the Engaged Enterprise” presented by Joe Patrnoch during the Servant Leader Cities Tour event on November 7th at Wisconsin Lutheran College. Joe Patrnoch, author of "Building the Engaged Enterprise" and former Chief Human Resources Officer at Cleveland Clinic lead an interactive presentation and workshop and offered a fresh and powerful perspective by connecting employee engagement with servant-leadership. The workshop outlined five core principles for successful organizational transformation to achieve world class levels of engagement. Topics included leveraging organizational dissatisfaction, overcoming resistance to change, the principles of servant-leadership, and personalizing the organizational mission.
- Chair DeAnna Leitzke represented MSOE at the Milwaukee Servant-Leader Group winter strategic planning session. Together this group of community and industry partners works to increase the awareness of the servant-leadership philosophy throughout the Greater Milwaukee Area. The goal of the session was to begin thinking strategically about the future of this group.
- Chair DeAnna Leitzke was invited to join SHARP Literacy’s Board of Directors. Through this role as a Director, DeAnna Leitzke will strive to support the mission of the organization as a representative of the MSOE community. SHARP Literacy is dedicated to providing the experience and opportunities urban students need to discover a lifelong love of reading and learning. To familiarize herself with the programs offered

through SHARP Literacy, DeAnna Leitzke joined fourth grade Forest Home Elementary students engaged in SHARP's Create Art with Code program in February. SHARP Literacy is a community partner of Servant-Leadership at MSOE and provides opportunities for MSOE students to use the knowledge they learn in the classroom to serve the community while practicing servant-leadership tenets.

- In January, Chair DeAnna Leitzke travelled with Dr. Eric Baumgartner, Dr. Dennis Bradley, Dr. Richard Kelnhofer, Dr. Wujie Zhang, Professor Gene Wright, and Servant-Leader Faculty Fellow Doug Nelson to the KEEN Conference in Dallas, Texas. As representatives of Servant-Leadership at MSOE, DeAnna Leitzke and Doug Nelson dedicated their visit to better understanding how the Entrepreneurial Mindset compliments the Servant-Leader Mindset.
- In February, Chair DeAnna Leitzke attended the MSOE Rapid Prototyping Consortium. As a representative of Servant-Leadership at MSOE, DeAnna Leitzke dedicated her time to discovering ways to collaborate with this group of corporate partners to benefit project-based service-learning leadership development initiatives on campus.
- Chair DeAnna Leitzke attended the Youth Frontiers' Ethical Leadership Luncheon with several members of the MSOE Leadership team on June 9, 2018 at the Pfister Hotel. Business, civic, and education leaders joined to raise critical funds for character development in Wisconsin. Richard Pieper, the Non-Executive Chairman of PPC Partners, Inc., and Founder of the Wisconsin Character Education Partnership received our inaugural Leader of Character Award.
- Chair DeAnna Leitzke attended the 2018 Global EPICS (Engineering Projects in Community Service) Symposium & Workshop at Purdue University. Educators from around the world joined to collaborate on how to provide engineering students with more opportunities to develop professional and leadership skills through project-based experiential learning.
- In April, Chair DeAnna Leitzke attended the Medical College of Wisconsin's Community Engagement Conference. As a representative of Servant-Leadership at MSOE, DeAnna Leitzke dedicated her visit to better understanding how Milwaukee School of Engineering can provide more community-based experiential learning opportunities to our students through collaboration with other institutions of higher education in the Greater Milwaukee Area. Sessions also included efforts to establish best-practices for these projects among the consortium of universities in attendance.

To help illustrate the impact that Servant-Leadership at MSOE is having on the way our faculty teach at MSOE, we have included a new category to the annual report this year. The following is a list of presentations and publications that include content from various Servant-Leadership sponsored projects and programs at MSOE.

- Dr. Kelly Ottman presented “Developing Engineering Leaders in a Global World” at the Colloquium on International Engineering Education in Flagstaff, AZ.
- Dr. Jung, Dr. Victoria Carlson-Oehlers of the Ruehlow School of Nursing; and Dr. Bernard Cohen of the MSOE Board of Regents presented a paper at the 2017 IEEE Global Humanitarian Technology Conference in San Jose, California on October 21, 2017. The title of the paper was “Implementation of a Global Humanitarian Outreach Experience by Partnering Engineering, Business, and High-Tech Nursing Education with a Non-Governmental Organization.” In this presentation, Drs. Jung, Oehlers, and Cohen examined the experience MSOE students have had doing international service learning trips to Central America with the American-based non-governmental organization (NGO) Global Brigades. Moreover, a longer version of the conference presentation has been accepted as a peer-reviewed article and published in the conference proceedings. Drs. Jung, Oehlers, and Cohen plan to continue investigating the pedagogical dimensions of international service learning to further develop and refine the overseas experiences MSOE students.
- Dr. Carriere presented “Beyond ReciproCITY,” Revitalizing City Spaces Through Art and Design, panel discussion, Milwaukee Film Festival, October 8, 2017. Dr. Carriere was an invited panelist for a discussion on the roles that art and design can play in reviving urban communities. This event was a part of the Milwaukee Film Festival. Dr. Carriere regularly shares his experiences supporting the servant-leadership development of MSOE honors students when he presents to community groups around the Milwaukee area.
- Chair DeAnna Leitzke represented MSOE as a panelist at a Collab Lab hosted by Learning Deep on *Effective Partnerships for Career Based Learning Experiences* at Ward 4 on November 16th. Together this group of community and industry partners collaborated with K12 educators from throughout Southeastern Wisconsin to discuss ways to create effective Career Based Learning Experiences (CBLEs) for students. The goal of the session was to build a clear understanding of structural problems around CBLEs that collaborative efforts could help resolve. Prof. Leitzke was able to offer a unique perspective based on her experiences with similar initiatives in higher education.
- In March of 2018, Dr. Anne-Marie Nickel and Ms. Gina Mazzone of the Physics & Chemistry Department along with Drs. Alicia Domack and Jennifer Farrell of Humanities, Social Sciences and Communication Department submitted a paper for the ASEE Annual Conference entitled, “Measuring the impact of an interdisciplinary experiential-learning activity on student-learning.”
- Chair DeAnna Leitzke attended the American Institute of Constructors (AIC) 2018 Constructor Conference & Collegiate Ethics Competition in Orlando, Florida where she

presented *Leadership Development Through Service Projects* to construction professionals and educators in attendance.

- Dr. Edward Chandler, Dr. Patrick Jung, and Dr. Victoria Carlson-Oehlers, and Regent Dr. Bernard Cohen, attended the Milwaukee Student Leadership Conference, sponsored by Global Brigades, Inc., on April 20-21, held at MSOE (April 20) and at Stone Creek Coffee Factory (April 21). At this conference, students and staff from several academic institutions in the Midwest met to engage in a weekend of leadership training with presentations and breakout sessions about recruitment, communication, growth, and team building for volunteer-service activities at academic institutions. The conference included a presentation by Dr. Shital Vora, Co-founder and CEO of Global Brigades, who presented recent updates from Global Brigades' program countries: Honduras, Panama, Nicaragua, and Ghana.
- On May 19th, the MSOE University Scholars Honors Program sponsored a Jane's Walk and book talk on Milwaukee's East Side. Dr. Jamin Rowan, associate professor of English at Brigham Young University, co-led the walk with Honors Program director Dr. Michael Carriere. Dr. Rowan then discussed his recent work, *The Sociable City: An American Intellectual Tradition*, at Boswell Books. Jane's Walks are a series of free, citizen-led neighborhood explorations and community-building events that embody urban activist Jane Jacob's legacy through observing, reflecting, questioning, and collectively re-imagining the places in which Milwaukeeans live, work and play.
- Chair DeAnna Leitzke presented to the Kiwanis Club of Milwaukee on April 11, 2018 at the War Memorial Center. During her presentation she shared how MSOE is committed to providing students with project-based service learning opportunities with the goal of fostering leadership development across campus.

Response to 2017-2018 Goals for Outcome 6

Goals as they related to Outcome 6 for the 2017-2018 academic year are listed below with our responses to those goals:

1. Further analyze the faculty survey to develop a better understanding of how faculty interpret integration of servant-leadership into their courses – *the Chair for Servant-Leadership at MSOE worked closely with the Servant-Leader Faculty Fellows to determine a plan to support faculty to increase the integration of servant-leadership into their courses. It was determined that faculty needed professional development to gain comfort in this pedagogical approach. The CREATE Institute at MSOE will provide faculty with the training they need to foster the growth of the MSOE Mindset within their courses.*

2. Further analyze the faculty survey to develop a better understanding of how we can increase the quality (training) and quantity (resources) of academic servant-leadership integration – *Similar to above, the CREATE Institute will facilitate the achievement of this goal.*
3. Modify the survey to provide us with additional measures next year – *this goal was suspended until analysis of the MSL data is complete.*

2018-2019 Goals for Outcome 6

It has been a wonderful year for fulfilling the mission of the Chair at MSOE. The only goal related to Outcome 6 for the 2018-2019 academic year is:

1. Develop an integrated approach to servant-leadership development and assessment in conjunction with the development of the CREATE Institute at MSOE.

Looking Ahead

As detailed throughout the report, the following is a summary of the goals we have for the 2018-2019 academic year:

Goals as they relate to **Outcomes 3 & 4** for the 2018-2019 academic year include the following:

1. Successfully analyze the data from the 2018 Multi-Institutional Study of Leadership.
2. Work with the Assistant VP of Institutional Effectiveness to further revise the university assessment plan to more effectively measure the impact of Servant-Leadership at MSOE.
3. Continue to collect and analyze existing assessment data from alumni, faculty, and student surveys, NSSE, and SSI to measure the impact of Servant-Leadership at MSOE.

Goals as they relate to **Outcome 5** for the 2018-2019 academic year include the following:

1. Continue to participate in the implementation of the University's Strategic Plan to ensure that Servant-Leadership at MSOE continues to contribute to the culture of the university.
2. Work with the CREATE Institute at MSOE to leverage resources and enable Servant-Leadership at MSOE to grow.
3. Develop an organizational structure that empowers students to actively practice servant-leadership as they themselves run Servant-Leadership at MSOE with the mentorship of the Chair for Servant-Leadership.

The only goal related to **Outcome 6** for the 2018-2019 academic year is:

1. Develop an integrated approach to servant-leadership development and assessment in conjunction with the development of the CREATE Institute at MSOE.

We look forward to yet another year of significant growth at Milwaukee School of Engineering!

Appendix A: Sample Student Reflection Paper

Written by an MSOE student on 1-15-18

Servant-Leadership Reflection – Mechanical Engineering Senior Project

The MSOE cocoa bean dryer senior design team travelled to the Dominican Republic (DR) in November of 2017 to gather information for our design. The purpose of our trip was to determine the context and details of the drying challenges facing rural cocoa bean farmers. I and three other students were tasked to challenge ourselves to become better servant leaders during our trip. Prior to preparing for the trip, I did not understand the principles of servant leadership or their application in the field of engineering. *The Case for Servant Leadership* by Kent M. Keith was provided by Prof. DeAnna Leitzke, of MSOE, as a resource for understanding servant leadership [1]. I will share my experience and important role servant leadership played in my trip to the DR.

Keith mentions that servant leaders should utilize listening to assess and meet the needs of others [1]. After reading Keith's statement, I realized that listening is a skill I struggle with and that in order to resolve an issue, it is crucial to first understand that issue. As such, I challenged myself to work on being a better listener while in the DR. Our trip included us travelling to a variety of processing centers and farms to talk to local workers. I used these trips as opportunities to "watch and listen before taking action" [1]. I spent time asking the workers what they liked or did not like about the current drying process, and if they had any suggestions for improving the process. It was not until after we visited all the processing centers and talked to all the workers that we showed our proposed solution to our local contact, Jaime. By doing this, we were able to present our proposed solutions while communicating that we would be modifying it based on the feedback we had already received. By seeing the process before we shared our design we "didn't begin with (our) knowledge or expertise" [1] which allowed Jaime to be more receptive to our solution. I felt that by demonstrating my commitment to hear the local concerns first, it allowed me to gain a better perspective than if I had started by presenting my solution. In addition, I have found that listening improves my relationship and ability to work well with my teammates.

Travelling with three of my peers provided the opportunity for me to work towards coaching rather than controlling others. I have a tendency to over-involve myself in others work when I see them struggling with a problem. My help is solicited as often as it is not solicited, and I do it with the intention to help. I now realize that by telling someone how they should do something, I am controlling and limiting them more than I am helping them. I made it a personal goal to coach my peers in an attempt to help them "see the purpose, be in alignment, and be willing to do what is requested" instead of telling them what they should or should not do [1]. There were,

and continue to be, many instances where I have chosen to coach rather than control my teammates. I do this by asking my teammates questions instead of making statements. I have noticed a new commitment from my teammates since changing my approach, which has resulted in an improved sense of comradery and shared responsibility. I have witness the benefits of these changes to our team dynamic as it better cultivate an environment for collaboration and individual intelligence to grow.

Empowering each member of our team is important because our project's success fully depends on the full "energy and intelligence" of each member to be "unleashed" [1]. I identified that it is my responsibility to tap into the potential of my teammates and others we may work with. I gained an increased appreciation for this when we were discussing the current process with the locals in the DR. I found it most effective to let the workers say what they thought or highlight the details that felt were most important because it revealed information that I would have never thought to investigate. I noted this as evidence "that those closest to the job are likely to have the best understanding of how to get the job done" and improve the job [1]. I have made it a personal commitment to search for opportunities to "unleash the energy and intelligence of others" whenever possible, as I feel it has played an instrumental role in the development of our project [1].

I found that our trip to the DR added tremendous value to the project and my personal development as a servant leader. Our travels serve as evidence that the application of servant leadership in an engineering project allows its potential to unbounded. I am grateful for the opportunity to travel and exercise my skills as a servant leader. I think servant leadership is applicable far beyond this project and I intended to use it in my future whenever possible.

Reference:

[1] Kent, M. Keith. "The Key Practices of Servant-Leaders." *The Case For Servant Leadership*. N/A. United States (2015): pp. 35-56

Appendix B: MSOE's Assessment Handbook

(embedded link, double click on image below)



Mission

MSOE is the university of choice for those seeking an inclusive community of experiential learners driven to solve the complex challenges of today and tomorrow.

Vision

MSOE will set the standard for preparing leaders to solve the diverse technical challenges of the 21st century.

Values

<i>Collaboration</i>	<i>We value working together across boundaries.</i>
<i>Excellence</i>	<i>We value the pursuit and achievement of excellence.</i>
<i>Inclusion</i>	<i>We value authentic engagement with diverse people, beliefs and ideas.</i>
<i>Innovation</i>	<i>We value creativity and new ideas for lifelong service, discovery and growth.</i>
<i>Integrity</i>	<i>We value doing the right thing in a reliable way.</i>
<i>Stewardship</i>	<i>We value the responsible use of our resources.</i>

Undergraduate General Education Philosophy

The integration of General Education Requirements into undergraduate programs at MSOE provides graduates with the cornerstone of knowledge, skills, and habits of mind necessary to be well-rounded individuals and lifelong learners. MSOE's general education fosters skills in mathematical and scientific reasoning, communication and information literacy, and provides a foundation in culture and cultural values, ethics and integrity, as well as professional and social responsibilities. As an institution, MSOE cultivates a climate that fosters independent thinking, personal growth, and professional development.

Appendix C: MSOE's Strategic Plan 2018-2023
(embedded link, double click on image below)



Presented August 29, 2018 to the MSOE Faculty and Staff