



MICHIGAN STATE UNIVERSITY PARTNERS

SPRING 2017



OPPORTUNITIES GROWING FOR YOUTH

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From left to right: Julie Howard, MSU Agrifood Youth Opportunity Lab director; Bunmi Akinyemiju, CEO, Venture Garden Group (MSU graduate, and partner in Ag Youth Lab); Gbemiga Adewale, provost, Oyo State College of Agriculture and Technology (partner in Ag Youth Lab); Ife Adebayo, special assistant to the Nigerian Vice President on Innovation and Entrepreneurship; Adepeju Adebajo, commissioner of Agriculture, Ogun State; Chimwe Effiong, assistant dean, ISP; Margaret Githua, MSU MasterCard Foundation scholar; and Alemayehu Konde Koirra, senior program manager, The MasterCard Foundation.

Partnering to **Expand Opportunities for Young Adults** in Africa

A five-year, \$13 million collaboration between Michigan State University and The MasterCard Foundation will help 15,000 young people access employment and entrepreneurship opportunities in the expanding horticulture, aquaculture, poultry, cassava, and oilseed sectors in Tanzania and Nigeria.

The partnership, the AgriFood Youth Opportunity Lab (Ag Youth Lab), will focus on young adults, ages 18 to 24, in major food shed regions surrounding Lagos, Nigeria, and Dar es Salaam, Tanzania. The Ag Youth Lab will assist economically disadvantaged, hard-to-reach, and out-of-school youth transition into employment and entrepreneurship opportunities.

“Working with The MasterCard Foundation and African partners to address one of the most critical problems facing the continent—youth unemployment—reflects how we pursue MSU’s global vision,” said MSU President Lou Anna K. Simon. “We see great potential to expand youth agrifood employment both on and off the farm.”

More than 60 percent of Africa’s young people are jobless or underemployed, and formal job creation efforts in Africa’s growing economies have been insufficient, according to African *Economic Outlook*. Tanzania and Nigeria together comprise 20 percent of Africa’s population and present an important opportunity for intervention in skills acquisition, job creation, and employment for youth.

The program will have a special focus on gender equity, aiming for equal representation of young men and women across its programs and addressing policy, training, mentoring, and other constraints that affect the ability of young women to start enterprises or obtain employment.

The Ag Youth Lab will respond directly to opportunities for youth-related programming identified in the *2016 Agrifood Youth Employment and Engagement Study*, a joint undertaking of MSU and The MasterCard Foundation. That report recommended:

- Actively engage the private sector in the design, development and implementation of youth employment programs;
- Improve training curricula to ensure its relevance to the modern agrifood sector;
- Apply information and communication technologies (ICT) and other advanced technologies to solve agrifood system problems; and
- Adapt youth programs to meet the expanding consumer demand for fresh fruits, vegetables, high-quality proteins, and semi-processed and ready-to eat meals.

“WORKING WITH THE MASTERCARD FOUNDATION AND AFRICAN PARTNERS TO ADDRESS ONE OF THE MOST CRITICAL PROBLEMS FACING THE CONTINENT—YOUTH UNEMPLOYMENT—REFLECTS HOW WE PURSUE MSU’S GLOBAL VISION,”

—LOU ANNA K. SIMON.

“This partnership with Michigan State University is an excellent example of using evidence to address youth unemployment,” said Reeta Roy, president and CEO of The MasterCard Foundation. “By engaging the private sector to develop business opportunities for young people, the project also addresses some of the challenges youth face in seeking work.”

MSU will lead implementation of the Ag Youth Lab in close collaboration with regional partners, including the International Institute of Tropical Agriculture; Venture Garden Group, a Nigerian company; Tanzania’s Sokoine University Graduate Entrepreneurs Cooperative (SUGECO); and Nigeria’s Oyo State College of Agriculture and Technology (OYSCATECH).

Using policy research, data, and analytics, the Ag Youth Lab will develop a cost-effective, scalable model for youth training and facilitation. “Our e-learning and monitoring and evaluation platforms will support the program by providing trainees and other stakeholders with the information needed to succeed,” said Bunmi Akinyemiju, CEO of Venture Garden Group, the lead partner responsible for data and information technology activities.

Local colleges and their graduates will train the trainers (community participants) to pass on skills to young adults using an experiential learning approach. “We will work together to

establish an atmosphere where youth will be able to create jobs and become agents of food sufficiency as well as ambassadors of character,” said J.G. Adewale, provost at OYSCATECH.

The project will give youth skills to build their own businesses and, in turn, create employment opportunities for other out-of-school youth. “Agriculture is much more than just farming,” said Anna Andrew Temu, founder of SUGECO. “Equipped with the right entrepreneurial and technical skills, and with guidance from experienced mentors, youth can imagine and bring to life their own innovative agribusinesses.”

Ultimately, the Ag Youth Lab seeks long-term impact by building the capacity of local organizations, working directly with the private sector to help youth transition to quality agrifood employment, addressing key policy constraints, and reducing the cost of expanding youth employment. “IITA will bring the lessons from its experience to help Ag Youth Lab tap the dynamism of Africa’s youth,” said N. Sanginga, director general of International Institute of Tropical Agriculture. “By creating better jobs for themselves, youth can transform Africa’s agrifood systems and build a brighter future for Africa.”

The Ag Youth Lab was officially launched on May 15, 2017 at a special event held in Lagos, Nigeria.





NIH Supports Efforts to Understand and **Eradicate Malaria in Malawi**



For more than two decades, MSU's Terrie Taylor has been relentless in fighting malaria. Now, with the support of a program underwritten by the National Institutes of Health, she has launched a major effort to find out why, despite ongoing malaria control efforts, so many children and adults still suffer and die from this widespread and deadly disease in the southern African nation of Malawi.

Terrie E. Taylor is a Michigan State University Distinguished Professor of internal medicine and an osteopathic physician. She will use the seven-year, \$8.5 million federal grant to study why previous methods for malaria prevention and eradication have been unsuccessful and how progress in these areas can be made. Malawi is located near the east coast of Africa and bordered by Tanzania, Zambia, and Mozambique.

Taylor said that her team is facing an urgent challenge, "This program has two major aims, preventing malaria infection in the first place, and understanding how some individuals can remain infected without ever becoming sick. That latter group represents 'reservoirs of infection' – people going about their daily lives not realizing they are infected, all the while transmitting the disease to others through mosquitoes."

Taylor's work is part of the International Centers of Excellence in Malaria Research (ICEMR), a program created in 2010 and funded by the National Institutes of Health's National Institute of Allergy and Infectious Diseases. This is the second ICEMR grant Taylor and her team have been awarded.

The team also will focus on mosquitoes that carry malaria. They will investigate which people are good sources of parasites for the mosquitoes and how changing mosquito behavior and insecticide resistance are affecting the use of mosquito netting.

While increased efforts targeting malaria elimination and eradication have had some effect on malaria infection and illness, death rates from malaria are still too high. The World Health Organization estimates that 212 million new cases of malaria and 429,000 malaria deaths, mostly in Africa, occurred in 2015.

Taylor's newest research effort is a companion to her team's ongoing efforts to prevent childhood deaths from cerebral malaria by developing the first malaria treatments. Taylor's battle against malaria, which she refers to as the "Voldemort of parasites," has been waged since 1986. She spends six months every year in Malawi conducting malaria research and treating children.

In addition to Taylor's team at MSU, partners in the ICEMR program include University of Malawi, University of Michigan, and University of Maryland.



C.S. Mott Professors Honored at University-Wide Faculty Investiture

On October 28, 2016, Debra Furr-Holden, Harold "Woody" Neighbors, and Jennifer Johnson, MSU's first three C.S. Mott Endowed Professors of Public Health, were honored at a university-wide investiture ceremony for endowed faculty.

The C.S. Mott Endowed Professors were among 41 honorees from departments across the university, who have been appointed to endowed positions in recent years.

Furr-Holden earned the distinct honor of delivering the faculty message. She spoke about her move to MSU from Johns Hopkins and how the promise of resources through the C.S. Mott Professorship influenced her decision. With private funding, she noted, researchers and educators across the university are able to ask important questions, take risks in their research, and solve big problems.

For Furr-Holden, Neighbors, and Johnson, that means studying and addressing health disparities in Flint, and using their findings to create a model for tackling major public health issues in cities around the country and the world.

Furr-Holden is focusing on how safe, affordable housing, public spaces for play and exercise, and access to quality jobs



affect the health of the community. Neighbors has created the Man Up Man Down program, which aims to improve the health of adult black men. Johnson is a clinical psychologist working to improve access to and funding for mental health and substance abuse treatment.

The C.S. Mott Endowed Professorships were created as part of a \$9 million endowment from the Charles Stewart Mott Foundation in 2014, making the College of Human Medicine's Flint campus the epicenter of the college's work in the field of public health.

MALARIA FACTS AND FIGURES

- Cerebral malaria kills a child every two minutes.
- Terrie Taylor's ground-breaking research into cerebral malaria was published in the *New England Journal of Medicine* in 2015. She identified that children who die from cerebral malaria do so from massively swollen brains that compress the brain stem and cause the child to stop breathing.
- Taylor is using a separate \$8.4M NIH grant to identify the first-ever treatments for children with cerebral malaria. The research will be conducted in Malawi's first pediatric surgery and intensive care unit built by Raising Malawi, an organization founded by pop legend Madonna.
- In 2015, malaria killed an estimated 303,000 children under 5 years of age globally, including 292,000 in the African region.



\$2M Grant Supports Success for Flint Students

Efforts to improve educational opportunities and outcomes among Flint kids have received an important boost, thanks to a \$2.1 million grant from the Charles Stewart Mott Foundation to Michigan State University (MSU). The funding provides continued support for a working partnership between the Flint Community Schools (FCS) and the Office of K-12 Outreach in MSU's College of Education.

Since the partnership's launch with Mott support in 2015, MSU has helped the district to identify and initiate important reforms in its personnel and operational policies, ramp up its collection and use of data to improve programs, and launch new approaches to meeting the needs of pre-K children and their families.

"Flint Community Schools is excited to be entering year two of our partnership with Michigan State University's Office of K-12 Outreach," FCS Superintendent Bilal Tawwab said last fall. "As I visit schools and engage with teachers and leaders, there is an observable shift in the conversation. More and more, our leaders and teachers are engaged in meaningful dialogue on what matters most – teaching and learning."

During the 2016-17 school year, the district and MSU focused on four major strategies:

- Developing student support systems, which will help nurture

and guide students throughout their educational careers (pre-K to graduation).

- Strengthening curriculum and teaching by enhancing instruction and helping teachers and school leaders work together effectively.
- Cultivating the district's leadership and organizational structure through leadership training on the effective use of data, and the creation of a strong school culture through coaching and professional development.
- Strengthening community relations by forging new bonds between the district and the broader community, including a focus on wrap-around services for Flint children.

"This is a real opportunity to make a difference in the lives of the students of Flint Community Schools," said Barbara Markle, assistant dean and director of the Office of K-12 Outreach. "MSU K-12 Outreach has a long history of applying cutting-edge educational research to the practical problems of Michigan schools. We have learned that the key to success is working directly with teachers, administrators, and students."

The College of Education also collaborates with other MSU departments and programs to mitigate the effects of the lead poisoning from the Flint water crisis.

Deep Roots in Flint

For more than a half-century, MSU's education scholars have worked closely with Flint students, educators, and community members to support and strengthen the city's school system.

Whether helping expand the city's revolutionary community education model 50 years ago, or working to boost student achievement through the new partnership with the district, MSU's roots in Flint education run deep.

"We see this as a very successful ongoing relationship," said Markle. "It's a collaborative effort with teachers, principals, and central office leaders to transform research into practice and improve student achievement across the district. This is really what outreach and the land-grant mission of MSU is about."

One example of MSU's many education projects in Flint was an effort in the 1950s and '60s to help spread the community education model to school districts nationwide. The concept of opening school facilities to the community for youth clubs and other purposes took early root in Flint through the efforts of philanthropist Charles Stewart Mott and local educator Frank Manley.

The late Ernest Melby, MSU education professor from 1956 to 1975, worked with Mott and Manley to develop and expand the model. Their goal was to develop an educational program for urban areas plagued with poor academic achievement and high rates of dropouts and unemployment.

MSU received several grants from the Mott Foundation to develop the model in Flint and elsewhere. Melby was a driving force in establishing community education on a broader level.

"There are now so many community schools in America, so much community education going on, that this kind of education has become the measuring stick for all education," Melby wrote in 1972.

WHETHER HELPING EXPAND THE CITY'S
REVOLUTIONARY COMMUNITY EDUCATION
MODEL 50 YEARS AGO, OR WORKING TO
BOOST STUDENT ACHIEVEMENT THROUGH
THE NEW MOTT FOUNDATION FUNDED PRO-
GRAM, MSU'S ROOTS IN FLINT EDUCATION
RUN DEEP.



Another project that impacted Flint was the Michigan Partnership for New Education, led by former Dean of Education Judith Lanier. Formed in 1989, the partnership brought together business leaders, state officials, and educators to improve student outcomes and teacher training in the state.

Markle came to MSU in 1991 from the Michigan Department of Education to work on the project. For several years she and MSU colleagues worked closely with teams of principals and teachers to enhance educators' professional development and, ultimately, student achievement.

Sonya Gunnings-Moton, assistant dean of education who coordinated some of the Professional Development Schools, as they were called, said the engagement with Flint became a catalyst for the college's urban education commitment. That commitment continues today through programs to recruit and prepare teachers to serve in urban schools, including Detroit and Chicago.

Currently, the College of Education's Office of K-12 Outreach has more than 25 specialists and faculty members in Flint schools and in the district's central office. MSU's roles range from improving classroom instruction and outcomes to helping the district meet its regulatory requirements with the state.



MSU will share lessons learned from student success initiatives such as the student engagement center at Brody Complex, pictured here.

Finding New Ways to **Keep Students on Track**

Six Foundations Support MSU Through the University Innovation Alliance

Getting the degree. It's a huge challenge for every college student and crucial to our nation's progress. Some students find it difficult to pass courses. Some switch majors without understanding the difficulties and implications. Some don't know where they stand academically. Some, sadly, just drop out.

To address this problem, six major foundations are helping Michigan State University and ten more of the finest universities in the country work together and share information on new ways to help many more students from all socioeconomic backgrounds succeed in their classes and graduate with college degrees in good time.

With more than \$9 million in support from the foundations, which is being matched dollar for dollar by each institution, the 11 universities have formed the University Innovation Alliance (UIA), a consortium seeking to enhance student engagement

and success. The alliance is quickly improving the ways MSU and the other UIA institutions help their students learn and share those improvements. These institutions, some of the largest and most prestigious and innovative research universities in the U.S., are working across state and conference lines to increase the rate at which students from all backgrounds graduate from college.

Luke Schultheis, assistant dean of Student Success Initiatives and director for the Neighborhood Student Success Collaborative, explained that the UIA provides a forum in which those leading student success efforts can openly brainstorm, challenge, and incubate approaches to support students. As institutions find success in their respective efforts, they share their outcomes as well as the means by which they developed the programs. This includes exposing all of the challenges they encountered, which spares the other

THE UNIVERSITY INNOVATION ALLIANCE

FOUNDATIONS PROVIDING SUPPORT:

- Ford Foundation
- Bill & Melinda Gates Foundation
- The Kresge Foundation
- Lumina Foundation
- Strada Education Network
- Markle Foundation

PARTICIPATING INSTITUTIONS:

- Arizona State University
- Georgia State University
- Iowa State University
- Michigan State University
- Oregon State University
- Purdue University
- Ohio State University
- The University of California, Riverside
- The University of Central Florida
- The University of Kansas
- The University of Texas-Austin

institutions from treading down the same path. Rather, they can emulate the program or service design by avoiding those pitfalls, enabling them to ramp up an effort more rapidly and efficiently.

Dr. Schultheis said, "We have initiated endeavors which have been replicated by other institutions, such as our process mapping, worked with other institutions on initiatives such as First in the World and are beginning new efforts as a collective, focused upon micro-grants. The process mapping exercise enabled MSU to examine the expanse of messages delivered to students, which needs to be condensed and calendared so that information is delivered in a more clear fashion, when it is most needed."

The First in the World efforts focus upon providing students with a degree map, or outline of the courses they need to take in order to complete their degree in a timely manner, enabling them to minimize expense and optimize their schedule. The micro-grant efforts are focused upon providing students near graduation with a small institutional aid award if finances are preventing the students from enrolling in a final class or two to complete their program of study.

UIA Executive Director Bridget Burns said, "MSU's deep commitment to students has played an important role in the success of the UIA. Too often, innovation and change appear impossible, expensive, or out of reach. But MSU showed how powerful the combination of leadership, teamwork, and enthusiasm for student success can be."

MSU contributes to the alliance as a partner in various innovation and scale projects, and hopes to share lessons learned from designing and implementing additional initiatives. Some current efforts include an online course for families of newly enrolled first generation students, and utilizing non-cognitive variables for assigning success coaches within the Neighborhoods. The Neighborhoods, launched in 2010 to enhance student engagement and success, are an integrated, multifunctional support system for all students, providing service to the largest on-campus housing program in the nation as well as off-campus underclassmen.

The online course is designed to help families enhance support for their student, as well as to inform them of the various support services and persons on campus. Each week, over the course of the fall semester, a presenter representing one of many important support units will outline the services they provide, explain when these services should be utilized, answer questions, and provide a point of contact for the families. The goal of this free course is to increase the student's ability to succeed and persist at the institution, through university and family support.

The non-cognitive variable assessment, created by Dr. William Sedlacek, provides insight into which enrolled students may not be likely to persist. In essence, it measures, among other things, "grit," or the likelihood of one to continue moving forward in the face of adversity. Students who indicate

through the assessment that they may benefit from additional support will be provided with a success coach. This peer coach will provide individualized support for students and remind them of critical activities which they need to be concerned about in order to remain enrolled and in good standing. The purpose of this effort is to increase retention and graduation rates.

And there is much more in the works. Dr. Schultheis said that MSU is working on a variety of fronts from data analytics, partnerships with faculty in student success endeavors, and enhanced advising just to name a few. A primary focus is to consult data analyses to target support efforts toward students who would benefit from them, to assess those efforts, and continually refine and expand the student success endeavors.

For Dr. Schultheis, the UIA's emphasis on sharing is crucial. "There are plenty of student success efforts being executed nationally. However, student success varies by institution and there are many nuances associated with deploying a successful program. It is very helpful to be able to speak candidly with colleagues about their programs. It saves us time and money in that we can learn from the experiences of our peers rather than relive them on our own. Likewise, we can share our successes so that students across the nation are able to benefit from the efforts we developed."



STUDENT SUCCESS COLLABORATORS

At MSU, the focus upon student success expands beyond one unit. Faculty, staff, and administrators support such efforts in a variety of ways. Examining data related to student achievement, progression to degree, and other activities are crucial in determining what services need to be developed. A team of data scientists and analysts provide background and rationale for support development. The Hub for Innovation in Learning and Technology is active in developing and supporting academic technology solutions, assessment, and infrastructure. Financial Aid actively partners in allocating micro-grants to students who may need to enroll in additional credits to continue a timely progression to degree or to graduate. Academic advisors interact directly with students, helping them navigate their curricular path and decrease their time to degree. The Neighborhoods provide sociocultural, health, and academic support for students. Many other units collaborate regularly to ensure that projects and activities align toward improving the student experience and graduation rates.

Mellon Foundation Supports Multi-university Language Learning at MSU

More than ever, American students need to learn new languages. Although English is the world's lingua franca, students who speak only English are at a disadvantage. Knowing another language deepens understanding and appreciation of our complex world. Learning less commonly taught languages (LCTLs) opens up new opportunities and gives students valuable perspectives from which to view cultures very different from their own.

To ensure high quality teaching in LCTLs and draw more students to study these languages, the Andrew W. Mellon Foundation has awarded Michigan State University a three-year \$1.2 million grant to lead a multi-university research project, the Big Ten LCTL Partnership.

Dr. David Prestel, professor of Russian and co-director of MSU's Center for Language Teaching Advancement (CeLTA) in the College of Arts and Letters, said the partnership builds upon the successful Big Ten Academic Alliance CourseShare program, whose distance-learning technologies offer a wide variety of courses in many fields. Over the next three years, with Mellon's support, the project will develop templates for teaching less common languages online.

Dr. Prestel explained, "The Mellon Foundation funded the Big Ten LCTL Partnership to assist member universities in pooling their resources in technology and personnel with the goal of creating more robust resources across institutions. We will develop pedagogical and research strategies, including the development of online courses, that will make it possible for more students across the Big Ten to have access to four years of high quality language instruction in the three languages selected for this stage of the project."

CeLTA will direct the initiative on behalf of the Big Ten Academic Alliance. MSU offers 29 LCTLs, including Vietnamese, Persian, Sanskrit, and Bengali. In the first two years of the grant, the focus will be on Swahili. A second language will be added in year 2 and a third in year 3. By working collaboratively with institutions in the alliance, MSU will be in a position to use its strengths in language teaching and learning to further the general mission of creating world-class language programs.

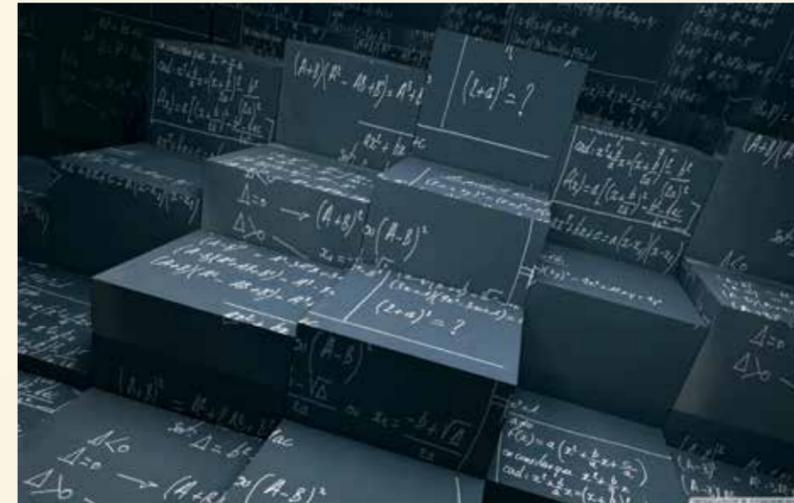
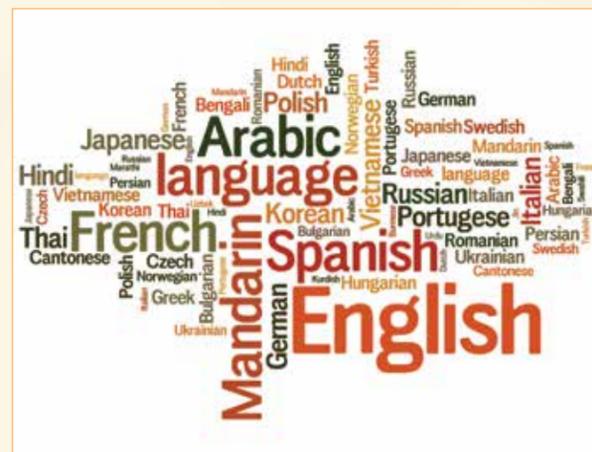
Dr. Susan Gass, University Distinguished Professor in the Department of Linguistics and Germanic, Slavic, Asian and African Languages and co-director of CeLTA, said CourseShare will make it possible for the Mellon grant to have a much wider reach, "This grant will allow the development

of online materials for languages that are among those less commonly taught and for which enrollments are often low following the first two years of study. This work is creating a strong community of language instructors throughout these universities and throughout the alliance. An additional goal is to create a manual that will guide future online course development for all members of the alliance, allowing for a lasting impact of the project."

The world is changing fast. Companies doing business around the world benefit by hiring globally-minded, multilingual graduates. At universities, most funding for research on language instruction and language learning has gone toward more commonly taught languages, according to Dr. Gass. Research and instruction for less commonly taught languages have encountered difficulties, such as lack of human and financial resources.

CourseShare has addressed some of those challenges, but the new LCTL Partnership will more effectively coordinate course offerings to reflect best practices in language teaching. Dr. Prestel emphasized the importance of technology, "Our intent is to have these three languages serve as templates, which can be used to assist course and materials development over a much broader range of languages. The overall goal of the partnership is to have more students in more institutions reach functional proficiency levels, by leveraging cutting-edge technology and advanced pedagogies to transform the manner in which LCTLs are taught."

The partnership will focus on both instruction research and research on language learning. By the end of the first year, the consortium hopes all members of the working group will be familiar with best practices in assessment and curriculum development.



Bosch Deepens its Commitment to STEM Students

The "M" in STEM. It stands, of course, for mathematics. It's often a high school student's highest academic hurdle—even many students drawn to the study of one of the sciences or a field in engineering. The Bosch Community Fund based in Farmington Hills, Michigan, has made a grant to join with MSU in helping high school students get over the "M" hurdle.

The \$70,000 grant to the new MSU High School STEM Success Program is one part of the foundation's many-sided effort to prepare kids for success in STEM (science, technology, engineering, math). The U.S.-based Bosch Community Fund was established by Robert Bosch LLC, and focuses primarily on the enrichment of STEM education and the advancement of environmental sustainability initiatives.

Kathleen Owsley, Bosch Community Fund executive director, said at the time of the grant's announcement, "STEM education is imperative to Michigan and the nation's future economic growth. Bosch seeks to support schools that promote STEM in ways that foster excitement among students for these fields."

Program Director Dr. Pavel Sikorskii, MSU Department of Mathematics, explained that the MSU High School STEM Success Program is a true partnership with public high schools in the Detroit Metropolitan area, "We are going to let the schools tell us who the best young students for the program are, those who are college bound, are motivated, are thinking about going into STEM, but are maybe struggling with math a little bit."

"The program is going to be stretched over a longer period of time, so naturally we will be able to go more in depth on mathematical concepts because there will be more time for students to digest things. The big idea is that we should be more proactively involved in working with students while they're still in secondary schools."

Dr. Sikorskii is co-director of MSU's Undergraduate Mathematics Program in the College of Natural Science. A teaching specialist, he was a 2015 MSU Distinguished Academic Specialist awardee.

Sikorskii and his team designed the High School STEM Success Program, which will last for two years, to improve

the mathematics readiness of college-bound high school students who intend to pursue a STEM degree. College-bound high school juniors and seniors in three Detroit area high schools will be eligible for the program, based on their status of being college bound, highly motivated, and intending to pursue a STEM degree, but needing to strengthen their math skills.

The students will access an online college math preparation module developed at MSU. Learning assistants will provide continuous support, and MSU faculty will make periodic visits to the three selected high schools. They will work with students to make sure they develop deep conceptual understanding of the topics as well as critical thinking and problem-solving skills required for success in college-level math courses.

Dr. Sikorskii said that the program is part of an overall mission for the university, "The earlier you catch students the more you can do to help them. MSU has wonderful bridge programs for high school graduates before they start college. But if you want to try to prepare students better you want to catch them as early as you can. So if you can go a year earlier and they can get started on the things they need to know, then we can help them be more and more successful in STEM in college."

Over many years, MSU has demonstrated a deep commitment to increasing the number of underserved or underprepared students who seek degrees in the STEM disciplines. Throughout the year, MSU faculty in many fields of study work with K-12 students. The American Association of Universities selected MSU as one of only eight STEM Initiative Sites across the country to share in a \$4.7 million grant. For 21 years, MSU's graduate programs in elementary and secondary education have been ranked #1 by *U.S. News and World Report*.



The CoRe Experience is committed to building the whole engineer, through academic programs, professional development, and personal connections.

CoRe Bridges the Gap Between Students and Industry

The MSU College of Engineering's CoRe Experience program is making a significant impact on student learning through engagement with peers and industry leaders.

The CoRe Experience provides first-year College of Engineering students engaging and meaningful academic experiences in a supportive community. CoRe seeks to provide students with the academic, professional, and personal supports necessary to make the successful transition from high school to the College of Engineering. The living-learning program's guiding

principle is that meaningful experiences early in students' undergraduate careers will support their persistence and success throughout their time at MSU, and even into their professional lives.

CoRe is located in MSU's South Neighborhood, with facilities and activities occurring across the four residence halls in the Neighborhood. A primary goal of CoRe is to build a strong link between students and industry. Through these strategic partnerships, CoRe is able to provide students with insight into the "real-world" after graduation.

Corporate "Theme Floor Partnerships" offer renovated gathering spaces for students to collaborate on projects and new ideas, study as a group or individually, and socialize with their peers. These spaces are ideal for first-year students whose introductory courses are team-based from the start. Theme Floor Partnerships also provide students with a valuable connection to industry leaders and career possibilities available to them both prior to and after graduation. Current CoRe theme partners include Bosch, GE, Consumers Energy, and Tenneco.

"The College of Engineering hopes that CoRe Theme Floor Partnerships will foster strong connections not only between students and MSU but also between students and companies that are actively recruiting MSU engineering students," said College of Engineering Dean Leo Kempel.

As part of CoRe's academic program, many students present their course projects at Design Day – the college-wide

day for final project presentations. Many of these projects are sponsored by CoRe Project Partners. In the fall of 2016, these presentations included collaborations with ArcelorMittal on parking lot optimization and safety, Delphi on a 48-volt mild hybrid architecture, and Tenneco on building an app to analyze vehicle emission data. CoRe's co-curricular activities also connect

students with The Center for Spartan Engineering (the career services office of the College of Engineering) to support professional activities including resumé building, preparation for career fairs, and discovering how to take advantage of experiential education opportunities.

To learn more about CoRe visit: www.egr.msu.edu/core/



NORTH AMERICAN INTERNATIONAL AUTO SHOW RECEPTION

To conclude a week of exhibiting and engaging with industry partners, the Eli Broad College of Business, College of Communication Arts and Sciences, and College of Engineering held a reception during the North American International Auto Show in Detroit. The event was hosted by MSU President Lou Anna K. Simon, Dean Sanjay Gupta, Dean Prabu David, and Dean Leo Kempel. MSU's week at the Auto Show showcased the unique role those three colleges play within the auto industry and their relationship with Detroit corporate partners. In attendance at the event were former CEO and current chief community officer of Barton Mallow Co., Ben Maibach III, (L) who served as the master of ceremonies for the reception, and Matt Elliot, senior vice president, Midwest region at Bank of America Merrill Lynch (R), pictured with President Simon.



The Alfred P. Sloan Foundation Supports **Study of Business Responses to Changing Retirement Policies**

Populations and workforces are aging across the globe. As they do, countries are changing retirement policies and the lives of workers. But how are businesses being affected? That's the question at the heart of an investigation being carried out through a \$487,000 grant from the Alfred P. Sloan Foundation of New York City.

With the foundation's support, MSU Professor of Employment Relations Dr. Peter Berg and a team of four scholars from universities in Wisconsin, Virginia, and New York City, are conducting a study—a first of its kind—into how businesses are responding to changes in pay-as-you-go pensions and other retirement policies that have spread around the industrial world in the past two decades.

The numbers tell how important this study could be to setting sound retirement policies. By 2030, the number of Americans aged 65 or older is expected to be at least 80% more than in 2009, climbing from 39.6 million to 72.1 million, according to the Administration on Aging. Many European countries have aged more than the U.S.

In response, a majority of the 34 democratic countries in the OECD (Organization for Economic Cooperation and Development) have increased their "pensionable age," the age at which

person can receive full social security benefits. For example, in 1983 the United States gradually changed the pensionable age for those born in 1938 or later from 65 to 67. Germany raised the age for most workers born after 1938 from 60 to 65.

Businesses and organizations of all kinds are seriously affected by these trends. Yet although scholars have investigated how individuals react to retirement reforms, little is known about how firms are responding. The project, supported by the Sloan Foundation and led by Dr. Berg, will study pension reform using administrative social security data and business surveys from Germany to learn about the possible effects of retirement age reforms in the U.S. and other countries.

Dr. Berg says that very little research on how businesses are reacting to changing retirement policies has been conducted before. "This is what makes this project so unique. So much of the data on retirement is at the level of the employee. We have been looking in the past at how people respond, such as whether they will keep working longer. This project is focused on how firms are responding. Do businesses put practices in place that change the way they manage their employees as a result of changes in retirement policy? That hasn't been studied with detailed firm data covering a significantly long period. We are starting with an investigation of Germany because of the availability and quality of the data, which extends from 1993 to 2010."

To study how changes in pensionable age influence the policies and actions of businesses and organizations, the project will conduct four separate analyses:

- 1) Measure the effects of increases in ages of pension eligibility across businesses and organizations.
- 2) Study the relationships between the estimated policy impact and the hiring, promotion, and compensation of younger workers.
- 3) Assess the different ways changes in policy change business practices for managing an aging workforce.
- 4) Investigate a possible linkage between changing policies on aging and business shut-downs.

The project is timely. Between 2009 and 2013, all 34 OECD countries changed pension policies by adjusting pension coverage, amounts, sustainability, work incentives, administration, or diversification. Twenty-eight OECD countries were planning increases in pensionable ages or were already in progress as of 2012.

What might the project uncover? With laws on mandatory retirement and measures prohibiting age discrimination, it could show employers that pension reforms cause older employees to want to work longer, which could significantly change the demographics of workforces. Reforms could even impose costs on businesses promoting them to find new ways to manage their aging workforces.

There are other concerns with changing retirement policies. Some policy-makers worry reforms may lead to postponements in hiring and promoting younger workers, though others argue this is unfounded according to some evidence. The project will contribute a microeconomic analysis of

outcomes among younger workers within establishments and may identify industries and skill groups where younger workers are being put at a disadvantage.

Dr. Berg's team hopes the project will also contribute to designing better pension policies. For example, gradual increases

in pensionable ages announced well in advance may be preferred over rapid increases, which has been the German practice so far. Or businesses might well cause more workers to retire sooner than forecasted if they use buyouts and other incentives to undo the effects of reforms.

Lear's 5:1 Match for Employee Giving to Business Facility

Michigan-based Lear Corporation and its employees are giving more than \$1.5 million to the Michigan State University Eli Broad College of Business to help construct the Business College Pavilion.

The announcement comes after Lear, through the Lear Corporation Charitable Foundation, pledged a five-to-one match for every dollar any Lear employee gave to the building project. To date, 101 employees have made a contribution.

The Lear Corporation Lobby, named in recognition of the gift, will welcome the thousands of visitors to the state-of-the-art business facility, set to break ground in the coming year.

"Lear Corporation's unwavering support for the Broad College of Business has made an indelible impact on our community and across the entire university," said Sanjay Gupta, Eli and Edythe L. Broad Dean of the college. "This is the most important endeavor the college has undertaken in the last 50 years and it is made possible by our invaluable partnerships. Lear's name is forever linked to the success of future generations of Spartans and the impact they will have on the world of business."

Broad College alumni Jason Cardew, vice president of finance for seating, and Ray Scott, Lear executive vice president and president

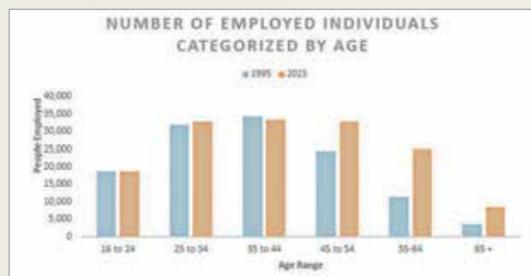
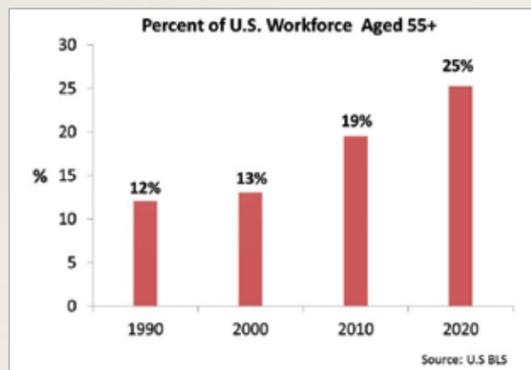
for seating, worked collaboratively with college leaders to build awareness for the pavilion and to maximize the impact Lear will have on business students and the university. Lear's history of giving to MSU is reflected in the current named career management space, located in the college's Eppley Center.

"Lear Corporation has a long history of partnering with Michigan State University. Many MSU graduates today have key roles at Lear, many more have benefitted from the Lear Career Management Center, and we are now proud to be investing in the future of the Eli Broad College of Business with a \$1.5 million contribution to the new world-class Business College Pavilion," said Mel Stephens, Lear vice president for investor relations and corporate communications.

The Business College Pavilion will feature flexible classrooms, team rooms, and open collaboration spaces; serve as the new center for career management; and reflect the innovation and creative mindset the college encourages throughout its curriculum.

"We are grateful for the partnership of Lear Corporation and their commitment to our students," said MSU President Lou Anna K. Simon. "As we build this new facility, together we are ensuring that future Spartans will have an active learning experience that prepares them to continue to be leaders and innovators in business."

To date, \$31.7 million has been raised toward a \$60 million fundraising goal for the pavilion project through MSU's *Empower Extraordinary* capital campaign.





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MSUFCU ENDOWMENT PROVIDES \$1.6 MILLION IN STUDENT FUNDING

On March 2, 2017, the MSU Federal Credit Union hosted its annual study abroad scholarship luncheon at the Wharton Center for Performing Arts. Since establishing a \$2.5 million endowment in 2003, the MSU Federal Credit Union Study Abroad Program has provided more than \$1.6 million in funding for students to study abroad. In the 2015-16 school year alone, 380 qualified students were able to pursue enriched learning experiences and envision their futures as citizens of the world thanks to scholarships awarded from the endowment. Each year, scholarship recipients attend a luncheon hosted by MSUFCU. Here (left to right) student Selena Huapilla-Perez, alumnus Mitchell Brown, and student Evonte Terrell share a moment with President Simon after speaking to the MSUFCU Board and other attendees about how their experiences abroad had an impact on their career plans.