PROJECT PROPOSAL

As a CUES Distinguished Fellow, I will grow the success of my Poverty in Tucson Field Workshop course (SOC397a), which is an engaged learning opportunity providing STEM-based learning for the social sciences in an applied setting, by developing a second course focused on designing solutions to social problems. In Tucson, poverty is a serious social problem, with more than a quarter of households in the city living below the poverty threshold and a third of all children growing up in impoverished households. As a land-grant university, we have a mission to serve the needs of the most vulnerable residents through our research, teaching, and outreach. The Poverty Workshop was designed to address these needs by providing an applied educational experience around the topics of poverty and inequality that provides STEM-based methodological training in survey research. While this class has been very successful in transforming traditional educational practices into engaged learning experiences, the time available in a single semester is limited and the 200-plus students who have taken the course frequently report wanting additional time to learn how we can create social change to alleviate poverty and its accompanying social problems.

Through the CUES program, I will develop and implement a second engaged learning course that will focus on using pedagogical innovations in human-centric design thinking to develop potential solutions to place-based inequality and poverty in Tucson. This course, tentatively titled “Tucson Community Cares” (TCC), will challenge students to work in small groups to develop these solutions through a creative and iterative process of assessing the problem, proposing possible solutions, and evaluating them. The course will be conducted in partnership with the Tucson Fire Department (TFD), which has been recently piloting a new community-based program to help alleviate a significant burden of non-emergency calls through the 9-1-1 system. TFD aims to develop community-level interventions that can address the root causes of vulnerable households’ reliance on 9-1-1 for the basic of social needs. Together, we have proposed utilizing our undergraduate students to collect information on these vulnerable neighborhoods and to design and evaluate community-level solutions to problems related to poverty and social exclusion.

These types of courses are essential for developing innovative educational practices that provide our undergraduates with the real-world experiences and engaged learning opportunities that they are clearly seeking. Presently, undergraduate education is heavily lecture-based, encouraging students to become passive learners (Fox and Hackerman, 2003). In this learning environment, many students rely heavily on memorization of facts to pass tests (Brainard, 2007) and may fail to achieve genuine understanding of the subject matter. Research shows that students retain only a fraction of the information presented in the typical lecture. Rather than focus on the broader concept and process, undergraduates educated through this model tend to overestimate the importance of memorizing facts, dates, and outcomes over truly understanding the process. Hence, the traditional lecture is often not an effective way to help students master the basic scientific concepts essential to advanced study and work in STEM fields (Wieman 2007).

Instead, finding alternative approaches that encourage active learning are seen as better tools for enhancing STEM learning. Effective approaches to enhancing STEM learning have been shown to not be discipline dependent and can enhance learning outcomes across academic disciplines (Kuh et al. 2008; Pascarella and Terenzini 2005). In particular, I am interested in pedagogical approaches that link broad societal trends to individual experiences, which have been demonstrated to produce higher research orientations amongst undergraduate students (Keen 1996; Ostrower 1998). One such approach is the integration of undergraduate research
experiences into traditional curricula (Bauer and Bennett 2003; Russel et al. 2007). This “learning by doing” approach has been successfully tested and implemented in multiple settings across disciplines, including the social sciences (see Deem and Lucas 2006; Takata and Leiting 1987). Furthermore, evaluative research has shown that immersing undergraduate students in an engaging and professional research project has a positive effect on students’ decision to pursue a career in the sciences (Russel et al. 2007). Yet the successful implementation of these research experiences is usually done with individual students, such as through internships or senior theses. These require faculty to invest personal time and potentially modify their own research programs to accommodate the inclusion of undergraduate students, thus limiting the scalability of the individual research experience model (Zydney et al. 2002).

My innovation in undergraduate education is to integrate authentic research experiences into larger courses of 50-60 students that focus on the development of STEM-based skills such as data collection, analysis, and evaluation in real-world settings. This approach is intended to capture the students’ ‘sociological imagination’ that links their personal experiences in the scientific process with broader historical and social issues – an aspect that is often lacking in STEM education (Mills 1959). My current innovations in STEM education NSF-funded project is generating new assessment techniques for observing professional and personal active-learning outcomes that will help the STEM field, which currently struggles to fully implement active-learning approaches (Prince 2004). The Tucson Community Cares course will create a new opportunity for innovation in undergraduate education that combines the principles of active learning in the STEM field with human-centric design, an increasingly popular and creative approach to problem solving that is utilized in the nation’s leading educational institutions such as Stanford’s d.School and Duke University’s Innovation and Entrepreneurship Initiative. Human-centric design thinking breaks the problem-solving process down into three steps: Inspiration, Ideation, and Implementation (Brown 2009).

**Inspiration** involves learning more about the design challenge. In the course, students will learn about the nature of poverty and social exclusion in Tucson. Rather than learn from texts and lectures, students will participate in data collection exercises to interview community stakeholders and gain insights into the nature of poverty and begin thinking about solutions.

**Ideation** involves the challenging work of transforming the insights the students will have gained into the nature of the problem into tangible ideas. In this portion of the course, students will be reading about community-based interventions that have been successful in the literature and applying design-thinking ideas and exercises. Here is where the true innovation in their educational experiences takes place – instead of reporting on what others have done, students will be challenged to generate their own concepts. This task is designed to prepare them for their professional career trajectories, challenging them to become producers of knowledge instead of consumers. Mimicking the professional world, students will work in small groups and consult with experts in the poverty reduction field to develop their ideas.

**Implementation** will challenge the students to develop a professional-quality presentation on their solutions to be shared with TFD for evaluation and feedback. With funding through the CUES program, we can take this a step beyond presentation and provide a small startup fund for students to actually implement and evaluate their solution. This may take the form of informational booklets, intervention activities, etc. and should be feasible in a 2-3 week period.
Students are most often drawn to their majors not by content of the knowledge they will learn through their courses, but rather by the prospective careers and professional tool-kits conferred by those programs. In the social sciences, many students are seeking the knowledge and tools that will let them go out into the world and solve its myriad social problems. Yet our majors today provide much less content in problem-solving than we do in problem-identification, which is a common undergraduate complaint. Building on the success of the Poverty Workshop, I now aim to build on this innovation by integrating human-centric design thinking into how we prepare students for their professional careers. One core difference in teaching through design thinking versus a content-based approach is that in design thinking, failure is a plausible option, where not every proposal will succeed in the real world—an experience we all face in the real world, but often shield our students from by grading the memorization of knowledge and not the process of creating new ideas. The design thinking emphasizes group-based learning, innovation, and evaluation that mirrors the experiences students will face in their professional careers. By combining this approach and its hands-on lessons and assessments with readings in community sociology, I believe I can develop an innovative educational experience that will benefit undergraduates and the community.

**Proposed Timeline:** The proposed project will be implemented over the course of two years and be organized around 3 specific goals: #1) to integrate new technology into the existing Poverty Workshop and assess whether it improves student learning outcomes, #2) complete the development of the TCC course, and #3) assess student learning outcomes from the TCC course and make improvements for future offerings. For Goal #1, I will purchase 25 tablets to use for collecting data in the field in Spring 2018 (see the timeline in the budget section below). During the Spring 2018 semester, I will use a benchmark of observing improved student learning outcomes associated with the integration of technology and based on these, develop procedures for their full integration into the Poverty Workshop and TCC courses. For Goal #2, I will work with a graduate assistant in Summer 2018 to identify best practices in the teaching of design thinking and adapt them to the TCC course. Our benchmark here is the completion of a course syllabus with specific activities assigned throughout. In Fall 2018, the benchmark will be offering the course for the first time. For Goal #3, I will develop student learning assessments based on my current NSF grant for the TCC course and conduct pre- and post-evaluations. Based on these results—the benchmark for this goal, I will work again in Summer 2019 to improve the TCC course and complete a second course-development guide to share with colleagues and publish in the scholarly literature on engaged education. A second round of student learning assessments will also be conducted in Fall 2019.

**Proposed Budget:** Two years of support are requested to 1) enhance the current Poverty Workshop course and 2) develop the second Social Change course. This support will provide summer salary and a graduate assistant to prepare the course for Spring 2019. In addition, funds are requested to purchase computer tablets to transition the existing Poverty Workshop and enable the Tucson Community Cares course to collect survey data digitally.
REFERENCES


Evidence of Current or Past Scholarship

The innovative educational aspects my Tucson Poverty Project have been recognized by the National Science Foundation (NSF), which awarded a $250,000 grant to support “Innovations in Social Science Learning: The Poverty in Tucson Field Workshop.” This award from NSF’s Division of Undergraduate Education addresses two of the agency’s core missions for improving undergraduate education: 1) improving the effectiveness of undergraduate STEM education and 2) supporting projects that have broad societal impacts. Through this grant, I am working to assess how engaged student learning, exemplified by our 100% Engagement Initiative, can be utilized to improve student learning outcomes including knowledge retention, motivation towards graduate education, and career preparedness. Based on the positive results, I am developing a manuscript for Teaching Sociology that will provide evidence-based examples for implementing project-based learning in the social sciences. A second manuscript focuses on transforming traditional methodological and statistical training to approaches that link undergraduate experiences throughout the full scientific method by personally meaningful data collection and analysis. This manuscript will be targeted at a more general teaching journal that reaches beyond the sociology community and will also be condensed into an editorial or commentary for publishing in an online teaching outlet such as the Chronicle of Higher Education or Inside Higher Ed. The Poverty Workshop centers on this interactive experience, providing an opportunity for engagement in a STEM field that puts real world data in the hands of undergraduates and challenges them to make sense of their own findings.

By improving the methodological approach to the training of social scientists, my assessment of two years of student learning outcomes from the current Poverty Workshop provides unique insights into the development of professional STEM skills and experiences into existing undergraduate curricula. In doing so, undergraduates can experience firsthand the challenges of data collection and management, which are often overlooked in many STEM educational programs and a potential cause of student frustration and withdrawal from scientifically rigorous programs. Based on my experiences in the Poverty Workshop, I believe we can challenge and empower undergraduates to develop the skills necessary to succeed outside the classroom. To help other instructors develop and integrate similar research experiences related to their fields, I am developing an evidence-based guidebook on how to implement this approach to engaged and applied learning that will be produced and shared broadly through my NSF grant. Additionally, I will share this guidebook with the UA community as part of a multi-day workshop hosted by the Office of Student Engagement at the UA to promote and grow our university-wide portfolio of engaged-learning courses and experiences.

In 2016, the College of Social & Behavioral Sciences’ (SBS) Magellan Circle awarded the Poverty in Tucson Field Workshop course with its annual Community Partner Award. This award honors collaborations between UA academics and regional community organizations that advance the goals of the university and SBS. As part of the community engagement mission of the Tucson Poverty Project, I also regularly engage with the Tucson nonprofit community on regional poverty and the data collection efforts and findings we have produced so far. In the last year, I have given presentations to Arizona Serves, the League of Women Voters, the Pima County Poverty Working Group, the United Way of Southern Arizona, Social Venture Partners, and the Community Foundation for Southern Arizona. In addition, I regularly consult with staff at the Tucson Daily Star on issues related to poverty and inequality locally. Several organizations, such as Habitat for Humanity Tucson, have reported modifying their service delivery based on our data. Through these partnerships, I have raised approximately $65,000 from nonprofit organizations in Tucson to support the last four years of operating the Poverty Workshop, creating an important precedent that these types of courses can be locally sustainable.
BRIAN MAYER
Associate Professor
Department of Sociology
University of Arizona
Tucson, AZ 85721
brianmayer@email.arizona.edu

EDUCATION

Brown University
Ph.D. in Sociology, 2006
Committee: Phil Brown (Chair), Rachel Morello-Frosch, Patrick Heller
Comprehensive Exam Areas: Environmental Sociology, Medical Sociology and Social Movement Theory

M.A. in Sociology, 2002

University of California at Santa Cruz
B.A. in Environmental Studies and Politics, 1999

RESEARCH AND TEACHING INTERESTS

Environmental Sociology, Risk and Hazards, Medical Sociology, Social Movements, Science and Technology Studies, Qualitative Methods, Public Health, Poverty

PROFESSIONAL EXPERIENCE

Adjunct Associate Professor
College of Global Public Health, NYU. 2017-present.

Associate Professor
School of Sociology, College of Social and Behavioral Sciences, University of Arizona, 2013-present.

Affiliate Associate Professor
Division of Community, Environment & Policy, Mel and Enid Zuckerman School of Public Health, University of Arizona, 2013-present.

Assistant Professor
School of Sociology, College of Social and Behavioral Sciences, University of Arizona, 2012-2013.
Assistant Professor
Department of Sociology, College of Liberal Arts and Sciences, University of Florida, 2006–2012.

Affiliate Assistant Professor

AWARDS AND HONORS


College of Liberal Arts and Sciences. Nomination for Faculty Teaching Award for 2006-2007.

Joukowsky Family Foundation Outstanding Dissertation Award in the Social Sciences, Graduate School, Brown University. 2006.

FELLOWSHIPS AND GRANTS


Title: “The State of Tucson’s Nonprofit Social Sector.”


Title: “Strengthening Gulf Coast Resilience by Engaging, Educating, and Empowering Vulnerable Populations.”

National Institutes of Environmental Health Sciences. Co-PI. 2015-2020. $5,000,000. Title: “Center for Indigenous Environmental Health Research (P50 Center).”

Title: “A Multi-City Comparison of Poverty Reduction Strategies.”

Office of the Senior Vice President for Student Affairs and Enrollment Management, Academic Initiatives and Student Success. 100% Engagement Collaborative Student Projects. University of Arizona. 2015. $14,355.


Title: “Modeling the Interplay of Individual and Community Resilience for Recovery from Hurricane Sandy.”


Title: “The Role of Social Resources in Resilience and Mental Health Recovery in Gulf Coast Communities After the Oil Spill.”


Title: “Health Impact of Deepwater Horizon Oil Spill on Eastern Gulf Coast Communities: A Community-Based Assessment of Vulnerability and Resiliency.”


Graham Center for Public Service Case Study Grant, Bob Graham Center for Public Service, University of Florida, PI, 2009: $4,000.

Preliminary Study Grant, College of Liberal Arts and Sciences, University of Florida, Co-PI, 2009: $15,000.

Title: “Bucket Brigades and Citizen Science: Empowering Communities with Information.”


Title: “Fostering Blue/Green Leadership in Massachusetts.”
National Science Foundation Research Grant. 2004-2006.
Title: “Blue and Green Shades of Health: The Social Construction of Health Risks in the Labor and Environmental Movements.”

BOOKS

REFEREED JOURNAL PUBLICATIONS


BOOK CHAPTERS


ARTICLES IN PREPARATION


“Social Capital and Receipt of Formal Recovery Support Following the Deepwater Horizon Oil Spill.” Kyle Puetz and Brian Mayer.


CONFERENCE PRESENTATIONS


NONREFEREED PUBLICATIONS


“Boston Public Schools Green Cleaners Project: Pilot Program Assessment” Report to Massachusetts Committee on Occupational Safety and Health and Boston Urban Asthma Coalition.


PROFESSIONAL MEMBERSHIPS

American Sociological Association:
   Environment and Technology Section
   Medical Sociology Section
   Collective Behavior and Social Movements Section

Society for the Social Studies of Science
Society for Applied Anthropology.
**PROFESSIONAL SERVICE**

Faculty Chair, School of Sociology. University of Arizona. 2017-2018.

Board Member, Mothers in Arizona Moving Ahead. Pima County Ending Poverty Now Initiative. 2017-present.

Faculty Chair, Office of Student Engagement. University of Arizona. 2015-present.

Secretary: Environment and Technology Section of the American Sociological Association, 2015-2016.

Preview Advisor, Academic Advising Center, University of Florida, Summer 2011.

Focus Group Leader, Social and Economic Impacts, University of Florida Oil Spill Response Task Force, 2010.

Faculty Advisor, University of Florida Society of Social Sciences 6th Annual Conference. 2010.

Chair: Teaching, Training, and Practice Committee; Environment and Technology Section of the American Sociological Association, 2009-2011.

Member: Water Institute, University of Florida. 2008-2012.

Member: Changing Environments and Emerging Infectious Diseases Program, University of Florida. 2008-2012.


Board Member, Toward Tomorrow. 2006-2008.

Labor Advisory Board Member, Alliance for a Healthy Tomorrow. 2004 – 2006.

Graduate Student Representative. Department of Sociology, Brown University. 2003.


Labor Advisory Board Member, Alliance for a Healthy Tomorrow. 2004 – 2006.

December 1, 2017

Distinguished Fellowship Review Committee
Center for University Education Scholarship (CUES)
University of Arizona

Dear Colleagues,

I am pleased to write in support of Dr. Bryan Mayer’s application for a CUES Distinguished Fellowship. A CUES award will enable Dr. Mayer to extend his NSF-funded Tucson Poverty Workshop, which provides STEM research experiences for undergraduates on engaging topics in a scalable course setting. A new linked workshop, provisionally entitled “Tucson Community Cares,” will train students to apply design thinking to develop solutions to problems identified through the poverty workshop. The goal is not only to develop a new course, but to rigorously evaluate the approach and disseminate the model within and beyond UA.

Dr. Mayer is a leader in undergraduate engagement in Sociology and at UA. The Poverty Workshop is a flagship course in our broader efforts to reorient undergraduate curriculum to create active learning experiences and provide transferable methodological training. Dr. Mayer is adept at triangulating teaching, research, and service – the data and analyses that students conduct in the course are in turn the basis for research reports on local poverty, which are disseminated to and used by stakeholders the Tucson community. Dr. Mayer is also conducting research on student learning through the workshop, with NSF support and in collaboration with Dr. Sally Stevens an expert on evaluation research in education settings. A CUES fellowship would provide resources and a platform to broaden the scope of the project and share his model for integrating engaged research experiences in social science courses.

To demonstrate the priority on which we place Dr. Mayer’s work, the School of Sociology is committed to funding a .50 FTE teaching assistant each semester that either workshop is taught throughout the term of the fellowship. Note that this is twice the level of TA support than we normally provide for courses with similar enrollments.

Dr. Mayer’s approach enhances the relevance of social sciences for the STEM learning enterprise, a case he made effectively in a recent successful proposal to NSF’s Division of Undergraduate Education. Although sociology (and related social sciences like anthropology, geography, and linguistics) are officially included as STEM disciplines by NSF, our reputation as ‘soft’ sciences often leads to the misconceptions about the scientific reasoning and methodological rigor we employ. Accordingly, the social sciences are under-included in STEM-enhancement programs and under-funded for developing engaged pedagogical approaches. This gap is problematic, as many social science majors advance into scientific careers, from market research to medical practice to laboratory sciences. Advancements in network analysis, ‘big data’ analysis, demography, and epidemiology place
social scientists' skills in higher demand, either alone or through interdisciplinary cooperation with other STEM scientists. Social sciences are also key to diversifying access to STEM, as enrollments of under-represented minorities are relatively high in social science majors, and thus provide an overlooked opportunity to enhance STEM education and prepare future STEM professionals.

Dr. Mayer’s core innovation in undergraduate education is to integrate authentic research experiences into larger courses of 50-60 students that focus on the development of STEM-based skills such as data collection, analysis, and evaluation in real-world settings. In the Poverty Workshop, students are fully engaged in the scientific inquiry process, as they collect data from households in Tucson, collaborate as analytical teams to identify patterns in their data, and present their findings to community stakeholders. This provides a scalable and less costly alternative to traditional models of research experiences for undergraduates (REUs) based on individualized mentoring and internships. Does it work? Preliminary results of evaluation research that Dr. Mayer and Dr. Stevens are conducting suggest it does. CUES support will provide a broader basis for evaluation of impacts.

The CUES proposal is especially exciting for Sociology because the follow-on course will push students beyond describing and explaining social problems, to systematic design of potential solutions to specific problems that may be amenable to treatment. This is relatively rare in sociology – we are more adept at diagnosing than treating social ills -- but broader impacts require solutions. The proposed collaboration with the Tucson Fire Department (with whom Dr. Mayer has a strong working relationship) provides an ideal setting for students to practice developing and presenting solutions. Bringing design thinking into a social science REU will model an innovative approach to social science research as well as teaching that will benefit the broader scholarly community at UA.

Formal scholarship on teaching and learning are a relatively new direction for Dr. Mayer—though a commitment to engaged and effective teaching are not. I am highly confident this emerging line of work will soon lead to peer-reviewed publications that will appeal to interdisciplinary audiences in higher education — CUES support will lead to more rapid and broader impact. His track record gives reason for such confidence. An expert on environmental health, social vulnerability, and community resilience, Dr. Mayer has long engaged both students and community partners in his research, which been funded by National Institutes of Health, National Academy of Sciences, Health and Human Services, and others. He collaborates widely and has published in leading journals across multiple fields. He is also adept at developing rapport and working respectfully with diverse populations (including due attention to ethics and risk management when researching and teaching in community settings). Finally, Dr. Mayer is a superb and service-oriented colleague who will contribute to a collaborative and supportive culture among the initial cohort of CUES fellows.

Sincerely,

Albert J. Bergesen
Professor and Director, School of Sociology
Phone: 520-621-3303
Email: albert@email.arizona.edu
21 November 2017

Center for University Education Scholarship (CUES)  
Martin Luther King Building, Room 320  
University of Arizona

To the Review Committee:

I write this letter in my strongest support for Dr. Brian Mayer’s application to this year’s CUES Distinguished Fellows program. Brian is a leader on campus in the area of engaged learning, having not only developed one of our campus’ most creative engaged learning courses – the Tucson Poverty Project – but also through his service to the Engaged Learning Committee (a committee he has chaired since that group’s founding). Brian’s current proposal, which will build upon the poverty project course and develop a new action-oriented course based on the principles of design thinking, is both innovative and progressive. For this reason, I absolutely believe Brian will not only make an excellent Fellow but he will also develop a new course, based on sound principles, that enriches the student learning experience through research-based teaching practices.

More broadly, through his current and proposed courses Brian is introducing students to a wide range of social scientific-based research methodologies. His new course design will enhance students’ quantitative reasoning skills by allowing them to actively engage with the core concepts of design thinking. His course will also allow students to apply those core course concepts to a context outside the institution; this has implications for those beyond the classroom. Perhaps most creatively, this course, by applying concepts that come from industry leaders such as IDEO, will allow students to apply their social scientific practices to a challenge that can then be presented to real community stakeholders through a design thinking framework. It is an exciting project that has real purchase, therefore, to not only engage our students but to put them in a learning environment that allows them to translate that learning to new areas of thinking.

It is clear that Brian is already a leading national scholar in sociology with a record of funded research and peer-reviewed publication. He is also a committed educator who is helping to drive the University of Arizona forward as a leader in engaged, active-learning. I strongly support his application and encourage you to provide Brian with this opportunity. Please do not hesitate to contact me if you have any questions about my letter (vdelcasino@email.arizona.edu).

Sincerely,

Vincent J. Del Casino Jr., Ph.D.
Vice President, Academic Initiatives and Student Success  
Professor, Geography and Development
November 30, 2017

Review Committee
Distinguished Fellowship Awards
Center for University Education Scholarship
University of Arizona

Re: Dr. Brian Mayer

Dear Review Committee,

It is my pleasure to provide this letter of recommendation in support of Dr. Brian Mayer’s application for a Center for University Education Scholarship (CUES) Distinguished Fellowship Award. Dr. Mayer is exceptionally committed to improving the quality of education for University of Arizona (UA) students and has a well-established record of leadership, innovation, and scholarship with cross-disciplinary challenges that go beyond the classroom - improving students’ educational experience and enhancing their learning outcomes.

Dr. Mayer’s commitment to teaching and student learning has been ongoing throughout his career. As noted in his curriculum vitae, Dr. Mayer served as Chair of the Teaching, Training, and Practice Committee; Environment and Technology Section of the American Sociological Association from 2009-2011. At the UA, he currently serves as the Faculty Chair for the UA-Office of Student Engagement (2015-present), and as the Faculty Chair for the School of Sociology (2017-present). Dr. Mayer’s long-term commitment to the wider community is also apparent as evidenced by his service work including being a Board Member of Towards Tomorrow (2006-2008), and serving as Board Member of Mothers in Arizona Moving Ahead (2017-present). Fortunately, Dr. Mayer has bridged his expertise in innovative teaching and engaged student learning with solving real world (and community) problems – specifically, poverty.

Dr. Mayer’s scholarship and innovation in the area of student learning along with his recognition of the need for the integration of natural and social sciences to be able to understand and address major issues facing society such as poverty, led him to submit and receive a prestigious grant from the National Science Foundation (NSF). This grant is an NSF Innovation in Undergraduate Education project, titled “The Innovations in Social Science Learning: The Poverty in Tucson Field Workshop”. Currently, this project is in its second year of funding. The goal of the Poverty in Tucson Field Workshops to design, teach, and assess the effectiveness of an engaging undergraduate research experience that enhances undergraduate education based on the theories and evidence of successful learning practices while simultaneously addressing local social problems by generating relevant data to inform the development of community interventions and policies.

As the Evaluator of Dr. Mayer’s Sociology 397a “Poverty in Tucson Field Workshop”, I am able to speak to preliminary outcomes as well as to what we may further ascertain about learning outcomes based on engaged, community-driven research in the classroom. Based on the first year of data, we know that
students enrolled in Dr. Mayer’s class performed better on a short test of Sociological Knowledge at post-
test, as well as compared to the control group. In addition, compared to the control group, students in the
Poverty in Tucson Field Workshop reported: 1) higher general self-efficacy; 2) greater gains in scientific
skills, including thinking and working like a scientist, personal gains related to research, and gains in
scientific skills; 3) higher civic engagement; and 4) more positively endorsed the view that the
government should increase its involvement in addressing poverty.

These and other outcomes from students enrolled in Dr. Mayer’s Poverty in Tucson Field Workshop will
be compared to outcomes from student enrolled in a “control class” following Spring semester, 2018. Not
only should we learn if/how student outcomes from the Poverty in Tucson Field Workshop differ from
those enrolled in a traditional course, we will also learn about how the class has differentially impacted
student learning outcomes for students from various backgrounds, educational majors, educational and
career aspirations, class level (e.g., sophomore vs seniors), and other trends that will advance excellence
in teaching and learning at the UA.

Given the outcome data that we already have, I am convinced of its usefulness and look forward to
working with Dr. Mayer on dissemination activities. We are completing a “course-development guide”
that will assist UA administrators and professors in developing, teaching, and assessing engaged learning
classes – classes that are fundamentally an applied experience - not simply an add-on to a traditional
course. This guide will detail strategies for identifying key community issues, working with community
agencies, arranging for trainings (e.g., human subjects; safety in the field), overseeing student field work,
and other issues specific to an engaged learning approach. This guide will also address generalizable
and scalability of the approach to other social and health issues, other types of engaged learning
experiences, and considerations for upscaling to classes larger than 50 students. Given the momentum
underway, Dr. Mayer’s receipt of a CUES Distinguished Fellowship Award would be timely and should
further propel this momentum - illuminating innovative and successful theory-driven and evidence-based
instructional strategies.

Dr. Mayer’s work is important to the UA as well as it is to the larger field of higher education and the
training of the next generation of our future leaders. Towards this end, Dr. Mayer will be presenting at the
UA’s “Symposium on Community Engaged Teaching & Education Scholarship” in spring of 2018, and
both Dr. Mayer and I will be submitting to relevant professional and scholarly education conferences
(e.g., American Educational Research Association). We also have plans to publish in Teaching Sociology
and other highly ranked and read academic journals.

Finally, I have read Dr. Mayer’s CUES proposal and found it innovative, exciting, and feasible. His
proposed course, “Tucson Community Cares” is theory-based, well-thought out and timely. The
development and delivery of this course will provide UA’s undergraduate students with the real-life
learning experiences that they are seeking. As a leader in innovative education approaches and
research, I am confident that the UA will greatly benefit from Dr. Mayer’s future contributions as a CUES
Distinguished Fellow.

As an educational psychologist by training and an engaged community researcher, I am particularly
appreciative of theory-driven approaches to education and community interventions – and I am excited
about Dr. Mayer’s application. I fully support his application and trust you will give it due consideration. If you have questions or need additional information, please contact me at ssstevens@email.arizona.edu or at 520-626-9558.

Sincerely,

Sally Stevens, Ph.D.
Distinguished Outreach Professor
Department of Gender and Women’s Studies
Research Professor
Southwest Institute for Research on Women
University of Arizona
December 4, 2017

Review Committee
Distinguished Fellowship Awards
Center for University Scholarship
University of Arizona

Re: Dr. Brian Mayer application for the Center for University Scholarship Distinguished Fellowship Award

Dear Review Committee:

I am pleased to recommend Dr. Brian Mayer for the Center for University Scholarship (CUES) Distinguished Fellowship Award. I co-instructed the Poverty in Tucson Field Workshop course in the spring of 2015 with Dr. Mayer and have witnessed first-hand Dr. Mayer’s commitment to providing innovative engaged learning opportunities for students and community-based participatory research. To date, the Poverty in Tucson Field Workshop course has enjoyed much success both in terms of improved student learning outcomes and community support. In the spring of 2017, nearly 75 percent of the students who completed the course evaluation indicated that Dr. Mayer was either more effective than usual or one of the most effective instructors that he/she has had with 50 percent of the students falling in the latter category. Additionally, nearly 85 percent of the students indicated that the course was either better than usual or one of the best with over 57 percent indicated that the course was one of the best. Community members have also continued to support the course both financially and through strong attendance at the annual community outreach events held in the spring as the culminating event for the course.

In light of these successes, Dr. Mayer has proposed to expand this model of undergraduate education to a second course which will offer a similarly innovative hands-on field-based approach to undergraduate education in conjunction with both existing and new community partners. In support of his application, I have compiled comments and feedback from the students and preceptors of this course over the past few years. The comments are organized around three key themes: first, that the Poverty in Tucson Field Workshop is a uniquely positive course; second, that the structure of the course (classroom instruction, field work, and community forum presentation) provides the students with the opportunity to develop skills that will help them both personally and professionally; and third, Dr. Mayer’s approach to teaching is innovative and engaging.

Poverty in Tucson Field Workshop is unique and exceptional
Students in the Poverty in Tucson Field Workshop course emphasized that the course was not only unique, but also one of the best courses offered at the university. For example, students of the course noted,

- “It is a one of a kind course that provides you with the opportunity to experience what the world endures through your own eyes” (comment from a preceptor and former student of the course); and
- “Poverty in Tucson was by far one of the most useful as well as meaningful courses I have ever taken here at the University of Arizona.” (comment from a preceptor and former student of the course)
Several students also noted that the course, while having a substantive focus on poverty, was beneficial for students from all majors. For example students reported,

- “I really enjoy this course and highly recommend it to all students at the U of A no matter what their background or major is” (comment from 2016 course evaluation); and
- The course “inspired my interest in a subject that I’m currently not even majoring in.” (comment from 2017 course evaluation)

Overall, students in the course repeatedly emphasized the uniqueness of the course and it was this uniqueness that so many of the students noted made the course so valuable. For example,

- “I really like the concept of this course and the fact that we’re doing field research about a relevant topic” (comment from 2017 course evaluation); and,
- “This has definitely been one of the best classes I have ever taken (really to be a part of). I’ll never forget the experience.” (comment from 2016 course evaluation)

**Positive learning outcomes for both professional and personal development**

Students enjoyed the structure of the course which provides students with the opportunity to be a part of a research team working in the field, conducting interviews with actual research subjects and presenting the results of that research at a community forum. Through this hands-on experience students develop essential soft skills such as working as a member of a team and interacting with people with whom one otherwise may be unlikely to engage including both members of the community and representatives of organizations such as local non-profits or public sector departments, which will help them both professionally and personally. For example students emphasized:

- “This will definitely help impact my future professional role” (comment from 2017 course evaluation); and
- “The hands on experience and seeing from start to finish how a research project comes along together. Also, learning how to interact with the community outside of the classroom setting.” (comment from 2017 course evaluation);
- “The practical tools used in the class through the survey” (comment from 2016 course evaluation); and
- “It was completely different than any other class I have took. I learned how to talk to complete strangers!” (comment from 2016 course evaluation)

Students also emphasized the personal growth that the course inspired noting,

- “This course taught me so much about people living in poverty and myself as a person. I was able to see myself grow and feel like I made a difference in people’s lives” (comment from 2016 course evaluation);
- “I learned so much about the community and also about people with different backgrounds than mine” (comment from 2016 course evaluation); and
- “It not only provides first hand experience but it has benefitted me personally as well as professionally in the sense that I was given new insights on research and the struggles many individuals go through in their lifetime. I was able to grow and learn things I would have never of learned in any other course.” (comment from a preceptor and former student of the course)

Finally, students appreciated the access that the course gave them to future opportunities that were previously unavailable due to a lack of experience. In particular students emphasized that this course opened the door for other research oriented and community outreach jobs by providing them with the opportunity to participate in an empirical research project and presenting that research in a community forum. For example,
“It is really hard to come by research positions that will take students with no prior experience and this class allows students to gain experience and more ground within research experience and opportunities” (comment from a preceptor and former student of the course); and

“I also really appreciated the interactions during the community forum. It enables us to showcase our hard work, network, and really take pride in our work.” (comment from a preceptor and former student of the course)

In sum, students gained a skill set, including research and interpersonal skills, which they then describe as beneficial both personally and professionally.

**Interactive and engaged approach to teaching**
While the course is itself innovative in its design, Dr. Mayer’s specific approach to teaching was also repeatedly emphasized by students of the course. In particular students indicated that Dr. Mayer was

- “Passionate about the course. Made me feel as though I was doing something valuable” (comment from 2016 student evaluation);
- “Very helpful and positive throughout the entire course. One of the best professors I have ever had” (comment from 2017 course evaluation);
- “Passionate about it [the subject] – which is infectious” (comment from 2017 course evaluation);
- “Very engaging and flexible when working with students...he also inspires all the students to want to do really well in his course” (comment from 2017 course evaluation);
- “Encourages critical thinking and is a smart and passionate teacher” (comment from 2016 student evaluation);
- “Inspired interest in the course by facilitating individual learning” (comment from 2016 student evaluation); and
- “I really liked how Dr. Mayer trusted us all going into the field. Many professors treat us as incapable students, where Dr. Mayer encouraged us to “be experts” and really apply our knowledge in a real, everyday setting.” (comment from 2016 student evaluation)

Many of the skills gained from a course such as the Poverty in Tucson Field Workshop, cross discipline boundaries. Students learn both research and interpersonal skills that they can take with them beyond the confines of the classroom and a course such as this requires the commitment and expertise of a professor such as Dr. Brian Mayer. Dr. Mayer’s commitment to hands-on learning and willingness to explore new innovative teaching models has led to institutionalization of a course at the university that while more resource and time intensive than other courses appears to be paying off in terms of student learning outcomes and evaluations. When asked what was missing from the course the most common response was that students had hoped to have a greater impact with more attention paid to solutions to social problems. The new course being proposed by Dr. Mayer has the potential to provide students with that additional experiential outcome. As one student noted,

- “This was a fantastic experience! I wish there were more classes and experiences like this...I learned more about Sociology in this one class than my entire college career. If UA wants to adopt a new way of learning and stand out the college norm, they would try to create more experiences like this. I would instantly take a similar class, if available.” (comment from 2017 course evaluation)

In summary, I encourage you to recognize Dr. Mayer’s commitment to innovative undergraduate education and support his application for the Center for University Scholarship Distinguished Fellowship Award. If you have any questions or need any additional information from me feel free to contact me at juliasmith@email.arizona.edu or (520) 661-6425.
Best wishes,

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