

Office of Research Development and Administration
Awards Report
July 2017
\$1,329,829

Dan Bonenberger, Geography & Geology

Wheeling Historic Landmarks Commission (\$12,000)

Early Dwellings of North Wheeling Intensive Survey: North Wheeling is famous for its late-Victorian architecture, yet its concentration of earlier, mid-nineteenth century dwellings is greater than any other neighborhood in Wheeling, potentially surpassing that of any other town in the state of West Virginia. These houses link the city with the most important events in its history: the arrival of the National Road terminus, industrialization, statehood movement, and the Civil War. Unfortunately, this collection of buildings remains hidden in plain sight, for while the age and history of a few of the earliest houses are known, many more remain intact but undocumented beneath a layer of later nineteenth century stylistic accretions or encapsulated in later additions that masquerade their age and importance. The EMU team's expertise in historical Geographic Information System (HGIS), vernacular architecture, architectural field surveys, and local archival research will bring these hidden treasures to light. The earliest dwellings in the neighborhood will be identified, researched, and described in detail using the WVHPIF following state and federal best-practices. A survey report will evaluate the significance of these buildings in the context of local, regional and national developments, and make recommendations for future recording, designation, and management options.

Stephanie Casey & Andrew Ross, Mathematics

National Science Foundation (\$264,941)

Collaborative Research: Mathematics of Doing, Understanding, Learning, and Educating for Secondary Schools: MODULE(S2) aims to improve preservice secondary mathematics teachers' mathematical knowledge for teaching with a three-pronged approach: (1) refine and expand instructional modules which improved preservice secondary teachers' MKT in pilot trials; (2) promote effective instruction by university faculty using these modules; and (3) investigate the impact of use of instructional modules and faculty quality of instruction on preservice teachers, so as to inform subsequent efforts in teacher education. This five year project will build on efforts by the Mathematics Teacher Education Partnership (MTE-P) to create a gold standard for preparation for secondary teaching. Using a Networked Improvement Community Model of design, three teams coordinate on the MODULE(S2) effort: (1) writing teams in four content areas (algebra, statistics, geometry and modeling) will expand, refine, and disseminate instructional modules and support materials for faculty; (2) the professional development (PD) team will develop and conduct activities to support faculty using the modules; (3) the research team will provide empirically-based insight into effective instructional practices to develop preservice secondary mathematics teachers' mathematical knowledge for teaching.

Anne Casper, Biology

National Institutes of Health (\$441,000)

Complex Genomic Rearrangements by BIR and mmBIR: When the process of copying a cell's DNA is stalled or damaged, human cells can use a break-induced replication (BIR)-like

mechanism for repair. However, BIR can cause the loss of genetic information and promote tumorigenesis. A related, more error-prone repair pathway, called microhomology-mediated break-induced replication (mmBIR), has been implicated in generating complex duplications and deletions in DNA, both in tumors and in copy number variations (CNVs). This proposal uses the yeast model system to investigate BIR and mmBIR. Our results will help explain how complex rearrangements form in tumors and CNVs and may suggest how the BIR and mmBIR mechanisms could be therapeutically targeted.

Claudia Drossel & Alexandros Maragakis, Psychology

Michigan Health Endowment Fund (\$391,098)

EMU Geropsychology Training: Advancing Late-Life Neurobehavioral Health: The goal of this project is to establish specialty training in geropsychology within Eastern Michigan University's Clinical Psychology Doctoral Program, thereby enabling persons 65 years and older with cognitive loss in Southeast Michigan to receive home-based or clinic-based integrated behavioral health services from doctoral students at low cost. During the two-year period of funding, faculty who are experts in geropsychology will model the service delivery, video-record the provision of services with seniors' (or their legal representatives') consent, and create a training package that will serve to sustain the state-of-the-art training in the future.

Ronald Flowers, Leadership and Counseling

Association of Leadership Educators (\$1,500)

DRAG-IT: A Guidebook for Engaging College Students in Critical Reflection to Support Student Learning and Leadership Development in High Impact Practices: This research project seeks to develop and pilot a guidebook designed to aid faculty, instructors, student affairs staff, and student leaders in leading critical reflection with students engaged in high impact practices. The DRAG-IT Critical Reflection Guide will be based on conventional and experiential pedagogy and provide a framework for designing and facilitating individual & group conversations, class curriculum, and student affairs programs. Professional and student leadership educators will gain specific techniques for engaging college students in critical reflection during and after participation in HIPs.

Ethan Lowenstein, Teacher Education

Great Lakes Fisheries Trust (\$145,000)

The Southeast Michigan Stewardship Coalition, GLFT Confirmation 5, SEMIS 2017-2019: The Southeast Michigan Stewardship Coalition (SEMIS) regularly achieves high levels of quality implementation of our core structures that support communities of practice and sustained professional learning. These have included: A 9-day sequence of professional development each year; organizational resources to support whole school communities of practice and create communities of practice that align to each school's structures; On-site curriculum coaching; A partnership-grant application process that provides a vehicle for assisting teachers and partners in focused planning and the formation of new community partnerships, and sustaining existing partnerships; Structures for public sharing of PBE efforts such as the Community Forum and Annual Place-Based Education conference and the development of new communities of practice; and structures for the formation of professional learning communities called affinity groups led by Coalition members and organized around relevant professional PBE practice topics. This continuation grant builds on those activities.

Bay and Paul Foundation (\$30,000)

Transforming Place-Based Education Practice through Personalizing Teacher Learning: The Southeast Michigan Stewardship Coalition (SEMIS) engages young people and adults in Place-Based EcoJustice Education efforts addressing local environmental issues. Through in-depth professional development and facilitation of school-community partnerships with teachers and community educators from 18 schools and 35 community organizations, SEMIS fosters visionary education communities. By focusing educational investigations on local issues, young people gain a deeper understanding of the interconnected social and environmental problems their communities face. As teachers and students see how they, themselves, can have a direct impact on creating just and healthy communities, they gain confidence and take agency as civic actors. Past Bay and Paul support has allowed us to use personalized curriculum coaching as a method of teacher support for fostering meaningful place-based learning. We have found that such support is especially critical in under-resourced schools serving high-poverty students. The proposed program would give us the opportunity to sustain and deepen our coaching efforts, refine our coaching protocols, and ultimately yield richer place-based experiences for students.

Bloomfield Hills High School (\$6,190)

BHHS SEMIS Professional Development Contract

John Paul Catholic Church (\$4,000)

JPIICS SEMIS Professional Development Contract

Ypsilanti Community Schools (\$4,000)

YCS Professional Development Contract

The above contracts provide professional development for teachers in how to use a place-based education approach

Wendy Thomas, College of Business

Grand Valley State University (\$30,100)

Michigan Small Business Development Center (SBDC) Regional Service Center 2017, Request for Supplemental Funding: Funding will expand SBDC counseling and training services to targeted industries within specific underserved markets in SE Michigan. This region currently has several business consultants with expertise in finance. The supplemental funding will be used to hire a consultant with expertise in marketing. The marketing consultant will be especially helpful for start-up businesses that require little or no financing.