Research and Creative Scholarship

As a doctoral university with high research activity (R2), and growing recognition of our high-caliber research and creative scholarship, we advance our institution by having a diverse portfolio of research and creative scholarship that engages students, benefits the planet, expands the frontiers of knowledge and elevates the human condition.

Full Recommendation

Research and Creative Scholarship

Seven cross-campus working groups composed of over 200 faculty, staff, students and community members were formed to address our institutional key priorities—Academic Excellence, Community Building, Diversity, Equity and Inclusion (DEI), Research and Creative Scholarship, Sustainability, Internationalization, and Well-being.

Numerous campus engagement activities were conducted by the seven key priority working groups during spring 2022, with over 450 registrations across the 18 themed listening sessions centered around the seven priorities. In addition, over 350 student survey responses were received that answered specific priority questions from a student lens. Next, the working groups began analyzing data and incorporating community feedback as they worked toward identifying, developing and recommending achievable, metric-based goals that centered around these seven key priorities.

The Research and Creative Scholarship working group was charged with analyzing opportunities for WMU to advance the frontiers of knowledge and foster excellence in scholarship, discovery and creative activities (artistic, historical, literary, philosophical, scientific and technical) as a public doctoral university and Higher Research Activity Institution.

After a multiple-step review process, the following is the final draft of their submitted recommendation which includes possible strategies and metrics that were essential in informing the goals and objectives. Further, they serve as a starting point for prioritization and refinement of institutional initiatives as the strategic plan moves into implementation. In addition, if available, the Strengths, Opportunities, Aspiration and Results (SOAR) summary reports, as well spring 2022 process reports, are attached as unedited appendices to provide further clarity and context.

Finally, this work could not have been completed without our dedicated community members who shared their time, expertise and commitment to improving our institution as they built these recommendations. Working group contributors are recognized in full at the end of this document.

Recommendation

Goal: As a doctoral university with high research activity (R2), and growing recognition of our high-caliber research and creative scholarship, we advance our institution by having a diverse portfolio of research and creative scholarship that engages students, benefits the planet, expands the frontiers of knowledge and elevates the human condition.

Research & Creative Scholarship Objective 1: Increase the engagement of all students in research and creative scholarship to help them gain knowledge, experience and practical skills that will serve their futures as lifelong learners and global citizens.

Objective 1 Possible Strategies:

- Increase equitable opportunities, rewards and incentives so that all students who wish to participate in research and creative scholarship may do so.
- Support faculty in integrating meaningful research and creative experiences for students into the projects they lead and the courses they teach.
- Increase financial support for students on externally funded projects.
- Encourage and support faculty and staff to include students as co-authors and co-creators of research and creative works.
- Increase students' awareness of opportunities to participate in research and creative scholarship by leveraging existing communication mechanisms (ORI website, departmental websites, newsletters and social media, Handshake.com and the Research and Creative Scholarship Signature Pathway).
- Collaborate with Faculty Senate to determine if WMU should explicitly require all undergraduate students to partake in research or creative scholarship.
- Implement tiered mentoring, with a specific focus on historically underrepresented students, to maximize students' access to mentors and further develop their teamwork and leadership skills (e.g., Ph.D. students mentor master's students and master's students mentor undergraduate students).

Objective 1 Possible Metrics:

- Number, diversity and disciplinary representation of undergraduate and graduate students involved in research and creative scholarship.
- Number of peer-reviewed publications and conference proceedings authored or co-authored by undergraduate and graduate students.
- Number of creative performances or exhibitions directed/curated by undergraduate and graduate students.
- Dollar value of undergraduate and graduate student research, creative and travel awards provided by WMU.

Research & Creative Scholarship Objective 2: Increase research and creative scholarship activity by cultivating a supportive environment that ensures faculty, staff

and students have equitable access to resources needed to participate in state-of-the-art inquiry, analysis and creativity.

Objective 2 Possible Strategies:

- Develop and implement a mechanism to identify and strategically respond to needs for resources that facilitate both research and creative scholarship, including:
  - administrative support;
  - streamlined procedures for obtaining items needed for research and creative scholarship, including equipment, instruments, materials, software and technology;
  - a dedicated budgetary line for maintaining and upgrading research and creative facilities and equipment;
  - ensure University Libraries is adequately funded to support research and creative scholarship;
  - legal services, and;
  - research compliance support.
- Recognize and reward faculty for engaging in research and creative scholarship to increase enthusiasm and satisfaction related to these pursuits (e.g., workload reassignment, merit pay, awards).
- Support leadership in research and creative scholarship in each college to enhance faculty engagement at all career stages.
- Encourage and support interdisciplinary collaboration on research and creative scholarship, including continuing or expanding the Interdisciplinary Teams grant.
- Recruit diverse, highly talented faculty and staff with strong potential to contribute to research and creative scholarship.
- Establish a mechanism for experienced faculty with successful track records in research and creative scholarship to mentor rising faculty; provide training to ensure engagement by people from historically underrepresented groups as mentors and mentees.
- Pilot research pods that include at least three members, preferably from multiple disciplines, and at least one tenured and one tenure-track member; provide seed funding to support their research and creative scholarship endeavors.

Objective 2 Possible Metrics:

- Annual research expenditures, with the goal of reaching $30 million in annual research expenditures by FY2025.
- Number and value of grant proposal submissions.
- Number and value of external funding awards.
- Number of books, creative works, performances and exhibitions produced by WMU faculty and staff.
- Number of peer-reviewed publications by faculty and staff.
- Annual research expenditures per tenured/tenure track faculty and research-classified staff.

- Number, diversity and disciplinary representation of faculty and staff serving as principal or co-principal investigators on externally funded projects.
- In fields that do not have external funding opportunities, the number of faculty and staff leading internally or self-funded projects, as reported by deans.
- Number, diversity and disciplinary representation of faculty and staff receiving external recognition for their research and creative scholarship.
- Usage of key research and creative scholarship-related resources and spaces.
- Value of direct or in-kind investment in research infrastructure or equipment (excluding grants).

Research & Creative Scholarship Objective 3: Strengthen community-engaged, public impact research and creative scholarship by leveraging existing partnerships and developing new ones with industries, businesses and nonprofit organizations in southwest Michigan and beyond.

Objective 3 Possible Strategies:

- Assess the efficacy of existing partnerships and identify needs for new or improved partnerships to enhance research and creative scholarship.
- Collaborate with WMU-based units to identify alumni positioned to partner with faculty and staff on research and creative scholarship projects (Alumni Association, Office of Diversity and Inclusion, Office of Multicultural Affairs, WMUx, Career and Student Employment Services, Lewis Walker Institute, Osher Lifelong Learning Institute, LBGT Student Services, Disability Student Services).
- Identify and establish a dialogue with industry, business, education, and nonprofit partners who could benefit from WMU's research and creative scholarship (invite to University-sponsored meetings, lectures, lunches, performances, exhibits and research events).
- Develop policies, procedures and tools to facilitate the University's engagement with external partners.
- Coordinate with local organizations to streamline engagement, reduce redundancy and enhance the value of research and creative scholarship-related partnerships for both WMU and our partnering entities.
- Develop policies, procedures, and tools to increase the number of patent applications and licensing of patents.
- Establish clear internal expectations that our institution engages in mutually beneficial partnerships that positively impact all involved.

Objective 3 Possible Metrics:

- Amount of research and development expenditures from business and nonprofit sponsors (in contrast with federal and state).
- Number of memoranda of understanding or contracts in place with external organizations.

- Number and diversity (location, size, type) of external organizations that partner with WMU for research and creative scholarship purposes, as tracked by the Office of Community Partnership's geomap.
- Number of federal Small Business Innovation (SBIR) and Small Business Technology Transfer (STTR) submissions and awards.
- Number of patent applications, patents licensed and copyrights for intellectual property.

Research & Creative Scholarship Objective 4: Create and celebrate the compelling narrative about our research and creative achievements and expertise by improving and better coordinating communication with all stakeholders.

Objective 4 Possible Strategies:

- Provide guidance to administrators about how to promote and celebrate the research and creative achievements of faculty, staff and students.
- Develop mechanisms to facilitate systematic and comprehensive communication campaigns about our research and creative achievements to engage external audiences.
- Provide clear mechanisms for faculty, staff and students to internally report their research and creative achievements to marketing, administration and the rest of our community, so that they may be shared with others.
- Provide faculty and staff with guidance about using press releases and social media to communicate about their research and creative achievements.
- Develop and sustain an easy-to-use database of faculty and staff expertise to facilitate the identification of research and creative partners and experts. Utilize existing information sources (e.g., annual faculty activity reports) to the extent possible and incentivize participation.
- Increase faculty and ORI staff participation in graduate student recruitment fairs to enhance the University's reputation for graduate research.
- Increase coverage of research and creative scholarship in our marketing and recruitment materials and activities.
- Submit short stories and announcements to professional society newsletters about WMU's achievements and expertise in research and creative scholarship.

Objective 4 Possible Metrics

- Number of print, radio and television stories related to WMU's participation in research and creative scholarship.
- Number of impressions regarding research and creative scholarship tracked by using tools including Salesforce (i.e., clicks and opening of links).
- Likes and positive responses on social media regarding the University's research and creative scholarship activities

Appendix A: Research and Creative Scholarship: Raw notes from SOAR discussion on 2/4/2022

STRENGTHS – things we are proud of right now

WMU's research and innovation activities are accessible and practical.

- Research often occurs in small groups so graduate students get more one-on-one attention.
- Students are engaged in research to lift them up, prepare them for jobs (not just cheap labor).
- Research is locally impactful through engagement with local communities, organizations, and businesses.
- Industry ties …

The physical and administrative location of disciplines at WMU facilitates interdisciplinary collaboration.

- CEAS, business park, paper pilot plant…
- Health and Human Services: Aligned with interprofessional approach
- HCOB has countless industry ties as well as excellent facilities to do research such as their Greenleaf Trust Trading Room. The Zhang Career center also offers students the opportunity to expand their network and explore a wide variety of fields relating to business.

WMU is home (or has close ties with) entities that are highly regarded nationally and internationally.

- WMU Medieval Institute
- WMU Evaluation Center
- WMU Music, Dance, and Theater programs
- Gilmore Foundation; Stuhlberg String Competition
- More Fulbright Scholars than any other university in state, and perhaps multi-state region
- College of Aviation...cutting-edge flight simulators, Cirrus-SR20 planes, and excellent ties to industries and opportunities for field research (partnerships with United Airlines, etc.)
- CEAS Paper Pilot Plant collaborated with Starbucks to develop a more sustainable cup, which the company now uses nationally.

OPPORTUNITIES – things we need to do to set WMU apart from our peers

- Disconnect between faculty perceptions of who we are compared with admin (e.g., research or teaching?
- Inadequate support of resources that facilitate work of all segments of the University (e.g., library – books, articles, scientific databases
- Rankings: research quality, publications, social mobility – make sure data are getting to the sources that do rankings. Need to know where we are.
- Communication: too many barriers

Actively facilitate interdisciplinary collaboration

- Engage more with medical school
- Identify and share expertise of WMU faculty and staff to facilitate collaboration
- Facilitate introductions/meetings between potential collaborators
- Foster networking events for faculty, staff and students that are not limited to one academic college

Increase integration of research and creative scholarship with teaching at both graduate and undergraduate levels

- Incentivize financial support of students on externally funded projects
- Leverage experiential learning projects to pursue external grants
- Encourage shift to two-way teaching styles so that students trust they can really make a difference in the research process, as well as motivating teachers to remain curious and try new approaches

Increase incentives for faculty to engage in research

- Currently, arbitrary salary caps for faculty disincentivizes additional research
- Need to review research incentives for staff and administrators to make sure aligned with our goals
- Equity in incentives for all stakeholders to engage in research (community, faculty, staff, students)
- Extra support for junior faculty (e.g., additional leave prior to tenure to focus on scholarship; workload release; too many different 'deals' now; need formulas
- Equitable workloads: quantitative metrics to measure productivity more fairly; maybe different categories of research-active (less research activity should mean higher teaching load). Hard to do across colleges/departments due to highly variable rates of output. Research-active faculty need to be incentivized.

Engage more with local organizations

- [Re]engage with Kellogg Foundation, Arts Council of Greater Kalamazoo, Kalamazoo Community Foundation, City of Kalamazoo Poverty Reduction Initiative]
- Maximize research with organizations on Kalamazoo Promise (policy, program, outcomes)

Celebrate WMU's research, innovation, and creative achievements and activities (widely, loudly, proudly)

- Internally: Better communication across campus utilizing multiple methods
- Externally: Press releases
- Artistic works shown more outside of WMU to show what is being created in CFA

Reassess investment in intellectual property development

- Currently, costs outweigh benefits

Invest in infrastructure that supports research, creative endeavors, and publication

- Libraries
- Grants, sabbatical, graduate student support to facilitate publishing
- More GA's, TA's, paid internships

Pursue earmark funding

Target areas research topics national importance

ASPIRATIONS – what can WMU be best at

Doing good for humanity and the planet

- Climate, environment, sustainability, diversity, inclusion, justice
- E.g.: Peak experience via WMU Signature program – solar tables (example project); student collaboration with Civic to install assistive vision services
- Denise [Kele's] work: voting initiative, research
- Office of Sustainability (funded student projects)

Being best at engaging students in research and creative activities

- Leverage research to prepare them for the job market and continued education
- Low student-faculty ratios; students get individual attention
- Further enhance high access

- - e.g., dance: performances and choreographic opportunities outside of WMU, not supported with funding because not within University; high student participation – incredible bridge to professional level
    - e.g., bio: high student-faculty ratio, bring students into research labs; undergrads publish research papers
  - need to balance research staff/postdoc v faculty

[Increased/continued] Global/local visibility in areas where we excel

- Medieval Institute
- Fine Arts/interdisciplinary work; product design
- The Evaluation Center
- Occupational therapy, blindness/low vision, and speech and language research ranking
- Aviation
- Fulbright scholars
- Sensor technology/3d printing
- CFA virtual image capture lab (Kevin Abbott) – arts & research lab
- Paper pilot plan (e.g., Starbucks paper cup liner)

Excelling at research that has real-world applications

Being known for pathbreaking scholarship and creative works

RESULTS – how will we know we've succeeded

NOTE: Add "per capita"

Students come to WMU because of opportunities to engage in research

Significant increase in the percentage of undergraduate and graduate students engaged in research

Significant increase in the percentage of faculty and staff engaged in research

Significant increase in external funding per capita

Retention of Carnegie classification (Doctoral University, higher research activity)

Increase in number of publications per capita

Fair and competitive wages for all

Improved university and departmental status in national rankings

Increased local and national attention to WMU's research, innovation, and creative accomplishments

Appendix B: Research and Creative Scholarship SOAR Summary

Research and Creative Scholarship Strategic Planning Working Group

SOAR Subgroup: Shameek Bhattacharjee, Jeremy Duncan, Sally Hadden, Jennifer Harrison, Kristina Lemmer, Kelsey Paschich, Matt Reeves, Haley Summerfield, Zeljka Vidic, Lori Wingate

This document identifies three broad strengths that emerged from discussions among members of the Research and Creative Scholarship working group charged with conducting a SOAR analysis (strengths – opportunities – aspirations – results), along with notes about what contributes to each strength and how WMU can be even better in these areas.

(1) Many undergraduate and graduate students participate in research and creative projects, giving them valuable experiences and practical skills that serve their future academic and career pursuits.

What contributes to this strength?

- WMU undergraduate and graduate students have ample opportunities to participate in research and creative endeavors.
- Students can work in small teams and receive individualized attention from the faculty and staff who lead research and creative projects.
- WMU faculty value engaging with students and actively create opportunities for students to be involved in their work. Students perform and publish alongside faculty.
- Students have opportunities and support to design and lead research and creative projects (e.g., Honors College theses, Office for Sustainability's Student Sustainability Grants, Signature Experiences, senior honors theses).
- WMU has an array of internal funding opportunities for students to participate in faculty-led research and creative projects (e.g., Lee Honors College Study Abroad and Research and Creative Support scholarships, LSAMP, College of Arts and Sciences Undergraduate Research and Creative Activities Grants, Office of Research and Innovation undergraduate research grants).
- Students have opportunities to engage directly with community organizations and local businesses to solve real-world problems.

How can we do even better?

- Increase and foster equitable opportunities, rewards, and incentives for all students to participate in research and creative projects, including supervision and mentoring.
  - Current opportunities tend to favor those already connected with faculty and those who can afford to spend time on research without compensation. LSAMP is a model.

- Incentivize faculty to integrate authentic research and creative experiences for students into the projects they regularly lead. This might include funding opportunities, awards, release time accumulated after working with X number of students, or workload space for faculty to engage in mentoring students on research
- Incentivize faculty and staff to include students on externally funded grants and contracts.
- Create and promote additional pathways for research-involved undergraduate students to transition into graduate programs (e.g., 4+1 programs).
- Students benefit from having research-active experts teach topics in their expertise. The multitude of important topics in most courses is a driver for team teaching. WMU needs to enable team teaching by having administration establish at the college level easy-to-understand, regular processes for team-teaching that would encourage those relationships to develop.
- Encourage departments, schools, and colleges to reevaluate procedures to determine student readiness for research and candidacy.

(2) WMU's diverse research and creative activities improve lives and organizations, expand the frontiers of knowledge, and elevate the human condition.

What contributes to this strength?

- WMU has talented faculty and staff who are intrinsically motivated to engage in research and creative activities.
- The physical and administrative location of disciplines at WMU facilitates interdisciplinary collaboration, both internally and externally. Examples:
  - The College of Health and Human Services' structure facilitates interprofessional education and research.
  - College of Engineering and Applied Sciences shares the Business Technology and Research park with 40 high-tech companies.
  - WMU Pilot Plants partner with businesses on research and developments, such as the collaboration with Starbucks to develop a more sustainable cup, which the company now uses nationally.
  - College of Fine Arts: Product Design program is a collaboration of the Frostic School of Art, Haworth College of Business, and College of Engineering and Applied Sciences, with the Richmond Institute for Design + Innovation serving as an interdisciplinary lab.
  - The Haworth College of Business has numerous industry ties that create opportunities for researchers to work on real-world problem solving.
- WMU faculty have contractually guaranteed opportunities for internal grants, awards, and sabbaticals.

How can we do even better?

- Adequately and equitably recognize and reward faculty and staff for engaging in research and creative endeavors. Current challenges:
    - Salary caps for faculty disincentivizes additional research
    - Little or no incentive for fiscal-year faculty and staff to engage in research
    - Highly variable practices across departments in terms of supporting junior faculty (e.g., additional leave before tenure to focus on scholarship, workload release)
    - Research-active and research-inactive faculty have the same teaching loads
    - Lack of consistency and transparency regarding faculty research and creativity expectations and workload credit
- Invest in resources that enable faculty, staff, and students to engage in cutting-edge research and creative endeavors (e.g., assistantships, endowed named professorships at all faculty levels, **equipment**, internal grants, library purchases and subscriptions, library staff, non-faculty research staff position, **university facilities,** sabbaticals, significantly increased financial support for graduate students, software, travel and visiting scholar/exchange opportunities, workload credit.)
- Improve efforts and investments to attract and retain talented, diverse faculty at all levels.
- Minimize administrative barriers related to grant development and management (e.g., lower costs for out-of-state graduate students, enhance IRB support, revisit University participation in E-Verify).
- Adequately staff the Office of Research and Innovation to enhance pre- and post-award research administration.
- Actively facilitate interdisciplinary collaboration. Examples:
    - Provide enhanced support for units that foster interdisciplinary collaboration, such as the Center for the Humanities
    - Promote networking across colleges, including WMed (e.g., faculty lounge, hold mixers at the pub in the new student center). Events can be both formal and informal.
    - Identify and communicate areas of faculty and staff expertise to make it easier to find potential research and creative partners on campus. Use annual faculty activity reports as a data source. Use existing systems to also announce calls for opportunities for research and creative collaborations.
- Leverage existing or create new partnerships with local organizations (e.g., Kellogg Foundation, Arts Council of Greater Kalamazoo, Kalamazoo Community Foundation, City of Kalamazoo Poverty Reduction Initiative, Kalamazoo Promise, Gilmore Foundation, Stulberg String Competition)

(3) WMU is home to many academic programs, centers, institutes, and individual scholars that are highly regarded nationally and internationally.

The following is a *non-exhaustive* list of WMU entities that have strong reputations:

- Center for Advanced Smart Sensors and Structures: https://wmich.edu/CASSS
- College of Aviation: Home to cutting-edge flight simulators, Cirrus-SR20 planes, and excellent ties to industries and opportunities for field research (partnerships with United Airlines, etc.)
- College of Fine Arts: [per CFA website: #3 Jazz program in America, #6 Music Therapy Program, #15 musical theater program]
- College of Health and Human Services: Programs in occupational therapy, blindness/low vision, and speech and language
- Medieval Institute: Home to the International Congress of Medieval Studies, Center for Cistercian and Monastic Studies, Richard Rawlinson Center for Anglo-Saxon Studies and Manuscript Research
- The Evaluation Center: The longest-standing evaluation-focused organization in the world, home to the Joint Committee on Standards for Educational Evaluation, home to the largest single grant awarded by NSF focused on evaluation capacity building.
- WMU has been a top 10 producer of Fulbright Scholars (in 2017) – see https://wmich.edu/news/2017/02/38326
- Jeffrey Angles (Dept. of World Languages and Literature) won Japan's Yomiuri Prize for Literature in poetry (comparable to the Pulitzer prize in the U.S.)
- Let us know if there are other exceptional centers, institutes, programs, or faculty that you should be added to this list to illustrate diverse examples!

How can we do even better?

- Enhance communication both internally and externally to increase awareness of WMU's exceptional research and creative achievements and activities:
  - Internally: Better communication across campus utilizing multiple methods (e.g., newsletters at multiple levels, exhibits of creative works outside of Richmond Center, electronic displays about research activities, news and website features, verbal communication). Need to ensure that staff charged with internal and external communication have information about research activities and achievements; need a clear pipeline/information channels.
  - Externally: Press releases, social media, newsletters
- Assess current allocations of resources (funding, time, space) for research and creative activities. Make strategic investments in promising and under-resourced research and creative programs, centers, institutes.

Research and Creative Scholarship
Working Group Membership

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