Starting a Research Center at WMU: Center for Research on Instructional Change in Postsecondary Education (CRICPE)

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Starting a Research Center at WMU
Center for Research on Instructional Change in Postsecondary Education (CRICPE)
Charles Henderson, Professor
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About CRICPE
Mission
CRICPE conducts and supports interdisciplinary research focused on promoting transformative change in postsecondary education

Strengths
Unique focus nationally
• CRICPE focuses on the study of change processes related to teaching and learning in higher education
• CRICPE is intentionally and strategically interdisciplinary

Supports WMU Pillars
• Discovery Driven
  o Catalyst for WMU research strengths in education and STEM
  o Interdisciplinary – involving all colleges at WMU
• Capacity Building – supporting, facilitating, and mentoring research collaborations
• Learner Centered
• Results from CRICPE research will directly impact educational practices at WMU

CRICPE Structure
Overview of Structural Characteristics:
• University level center, reporting to the Provost
• Administrators grants that support the Center mission
• Interdisciplinary co-directors and affiliated faculty
• Not a faculty "home" – faculty and considered affiliated with CRICPE when they are PIs on CRICPE grants
• Flexible focus areas, each headed by an associate director
• Funded by grant indirect funds
• Provides office and collaborative space for CRICPE grant personnel (postdoctoral researchers, graduate assistants, administrative support)

CRICPE activities are organized into focus areas, with each focus area managed by an associate director. Focus areas are meant to be flexible and may change over time.

CRICPE development is synergistic with the ongoing research program of founders Henderson and Beach

We are actively seeking collaborators. Please contact us with your project ideas.

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Projects Currently Under Development
National Research Coordination Network for Researchers in STEM Change
Summary: Scholars conducting research on faculty and institutional change in higher education come from a variety of disciplinary traditions, belong to different professional communities, go to different conferences, and publish in different journals. The efficacy of the community has been stymied by a lack of mechanisms to support collaboration. To address this problem, we propose to develop a professional community and home for the currently disconnected individuals and small groups who are conducting research in this area. We propose to adapt NSF’s Research Coordination Network (RCN) mechanism for this project.

Building Knowledge about Educational Transformation: A Synthesis of WIDER Institutional Implementation Projects
Summary: In 2013, the National Science Foundation allocated significant funding to eight WIDER II projects to support transformation in the teaching of STEM subjects at these institutions. There is a need and opportunity to learn from these efforts. We know from past large-scale STEM higher education change programs (e.g., ADVANCE, GERIT, Engineering Education Coalitions) that, although each project publishes its own results, a synthesis of the overall gains is scattered, unlikely to be synthesized, and ultimately a lost opportunity to inform future efforts. We propose to study and facilitate communication between the eight WIDER II projects to compare and contract their change models, local cultures, core project activities, assessment data, and outcomes for each project. Our syntheses, grounded in the data, will build knowledge about what works and what does not, and under what circumstances.

The Role of Accountability Structures in Shaping Teaching Practices
Summary: We propose to identify and analyze the key structures that exist in higher education. These include regional accreditation, disciplinary-based accreditation such as ABET, and program assessment such as done by the American Chemical Society. Each of these models has similar goals of assuring high quality education, but the impact of these models on teaching practices has not been studied. Such a study is very important in this era of increased scrutiny and accountability pressures on higher education.

Successful Use of Online Instruction in Technical Education
Summary: The National Science Foundation’s Advanced Technological Education (ATE) program has funded many projects that involve significant online instruction. But, there is not a lot of coordination and sharing of ideas across these different projects. We propose to work with the ATE projects that have developed or used online instruction to develop a set of lessons learned. The project will develop electronic tools to guide current and future ATE projects that are considering the use of online instruction, 2) recommendations for successful use of online instruction, based on evidence whenever possible, 3) impact of online instruction on teaching/learning, and the program institution, and 4) unanswered questions that would benefit from future research.

Describing Teaching Practices in Online Environments: Development and Validation of Observational and Self-Report Research Instruments
Summary: Online and blended courses are the fastest growing innovations in higher education today. The ability to accurately describe teaching practices used in these courses is important for documenting the range of teaching practices, improving teaching, and conducting research on teaching. This research instrument development project will use a sequential mixed methods approach to research, design, pilot-test, refine, and then implement an observation protocol and a self-report survey of instructional practices for online and blended post-secondary courses. Educational researchers and practitioners have access to and have made productive use of validated instruments for studying face-to-face, classroom-based teaching practices. No parallel validated instruments exist for use in researching the online and blended courses.