To: Vice Provost Dennis Groth
From: Jennifer Robinson (Chair; jenmetar@indiana.edu), Carol Hostetter and David Pace (Co-chairs), George Rehrey (CITL), and Justin Rawlins (Postdoc)
Date: May 22, 2015
Re: Planning grant for scholarship on teaching and learning--Report and Recommendations

Thank you for extending a grant earlier this year for a faculty cohort to explore the desirability and feasibility of a campus organization to support advanced scholarship on teaching and learning. With your support, we were able to make excellent progress on the project.

Embracing the "grand challenge" of outstanding teaching and learning at a flagship state university, we recommend establishing a formal research institute on discipline-based scholarship in teaching and learning. The institute would convene a multi-disciplinary community of scholars offering programming that deepens discipline-based research on teaching and learning in higher education while also capitalizing on crosscutting knowledge sharing. The institute would center on IUB scholars and organizations and selectively collaborate with external scholars, centers, universities, and other initiatives.

We provide some detailed description in the attached document. The highlights include:

- **Provisional Name:** Institute for Advanced Scholarship on Teaching and Learning (IAS-TL)
- **Mission:** An ambitious research and design collaborative for discipline-based scholarship on teaching and learning in higher education
- **Research:** Topical hubs would organize aggregate faculty research interests into important, crosscutting questions with the potential for large-scale improvement of student learning and success. The first hubs are described in more detail in the attached document.
- **Membership:** Actively seek out and support both established and new scholars of teaching and learning at IU.
- **Shorter-term Recommendations:** Additional start-up funding for 2015-2016 will expand participation, launch programs, and complete a formal proposal for an institute. We recommend the following activities begin immediately:
  - *Works-in-Progress Workshops* will provide constructive peer review and knowledge-sharing to foster the development of outstanding scholarship. Focus in the beginning will be workshopping 4-5 active research hubs funded with institute or other funds. These funded hubs will be drawn from the proposed 7 described in more detail below: Undergraduate Research and High Impact Practices, Preparing Future Faculty, Global Education and Diversity, Faculty Change, Scholarship of Learning Analytics, and Teaching for Environmental Sustainability. These workshops would also foster new research areas.
  - *Bridge Conversations* will cut across disciplines with discussion of important directions, questions, grants, and news that will broadly inspire and impact study in the field. Examples of Bridge Conversations include fostering undergraduate research, applying new learning theories, and coordinating shovel-ready projects for funding opportunities.
  - *Opening Symposium 2016*, "Hard Questions, Promising Directions in Discipline-Based Scholarship in Teaching and Learning," will invite IU scholars, keynoters, invited foundation guests, and competitive applicants to two days of discussion that identify the most important issues in teaching, learning, and their scholarship for the next 5-10 years and the relation of these issues to disciplinary education. In addition to guiding research directions for the institute, the symposium will generate a special journal issue.
  - *Budget development* will be aggressively pursued immediately, including by consulting with OVPR's Proposal Development Services. First and foremost, the institute will propose "Fulfilling the Promise: Outstanding Teaching and Learning in Higher Education" as an Indiana University Grand Challenge. In addition, the institute will submit other campus grant

proposals (e.g. to Grand Challenges, Collaborative Research and Creative Activity Funding, Ostrom, Addison Locke Roache Memorial Lecture, New Frontiers, etc.) as well as proposals to external funders (e.g., NSF Science of Learning Collaborative Networks, HHMI Undergraduate Science Education Program, Gates Foundation, Teagle Foundation, and BVA collaborations).

- *A formal proposal* for a continuing institute or other organization will be developed over 2015-2016.
- *National leadership and networking* will strategically begin by coordinating multi-institutional research projects, promoting faculty exchanges, and assembling a distinguished international advisory board.
- *Preparation for the first Summer Academy* in 2017 will begin. Each Summer Academy will offer a one-week meeting/workshop each year that is led or facilitated by IU researchers on a subject of national significance. The Summer Academy will fill the gap left some years ago when AAHE and the Carnegie Foundation ceased their summer workshops. Each Summer Academy would disseminate and operationalize a recent area of institute research and make IU and Bloomington a regular destination for top-notch discussions about teaching and learning. Each Academy would need IU staff support but would be self-funded by external participants. As an example, topics might unfold in this way:
  - *Summer 1:* Preparing Future Faculty for Teaching across the Disciplines. Led by O'Loughlin (Medical School), Robinson (Anthropology), Sherwood-Laughlin (Public Health), Kearns (CITL).
  - *Summer 2:* Decoding the Disciplines and Threshold Concepts Summit. Led by IU and University of the Free State (SA) researchers, including seminal scholar Ray Land from Durham University, SA. Other possible co-sponsors include the University of Bielefeld in Germany and La Trobe University in Australia.
  - *Summer 3:* Applying Learning Analytics across the Curriculum. Led by IU Learning Analytics Fellows.
  - *Summer 4:* Decoding the Disciplines Workshop. Pace (History-emeritus), Middendorf (CITL), Shopkow (History), Diaz (History), and collaborators from many fields including Informatics and Geology.
  - *Summer 5:* STEM Education think-tank discussion about a challenge of national significance addressed by institute research-in-progress, e.g., underrepresented populations in STEM majors.

- **Longer-term recommendations:**
  - *Sustain* a world-class research institute so that it (1) capitalizes on the productivity and international reputation of IUB scholars and organizations, (2) makes IU the go-to place for discipline-based teaching scholarship, and (3) selectively collaborates with external scholars, centers, universities, and other initiatives.
  - *Disseminate and network* by new and traditional means, including hosting a website, journal, and/or other publications, in possible partnership with IU Libraries and IU Press. Note that IU already sponsors the web site of ISSOTL in History, IU Press publishes the *Scholarship of Teaching and Learning* book series, IU formerly hosted the websites of the International Society for the Scholarship of Teaching and Learning, and IU's FACET sponsors the *Journal of Scholarship of Teaching and Learning*, begun in 2001 and the first journal specifically on the scholarship of teaching and learning. In addition, we recommend an international "2020 Symposium on Recommendations for Outstanding Teaching and Learning in the Next 100 Years" to be held in conjunction with IU Bicentennial events in 2020.

We recommend the following budget for 2015-2016:

Research hubs competitive funding (up to 5)	• $5000 (@ $1000 ea.)
Opening symposium on promising problems in higher education teaching and learning: open to IU participants and seeded with visiting scholars (2 days in May 2016)	• $4,000 (Travel and honoraria for 2 keynote speakers @ $2,000 ea.) • Refreshments: $1000 • Commitment of staff resources
Faculty chair for the first year (prototype for faculty director position): spearhead formal proposal to OVPR for an ongoing institute, lead grant proposal development, oversee monthly research meetings, and coordinate research and dissemination.	• 1 course release or equivalent
Graduate assistant for the first year (prototype for postdoc position): organize scheduling and logistics, facilitate dialogue, align with larger initiative goals, organize symposium, and network with outside scholars	• $4200 (10 hr/week for 28 weeks @ $15/hr)

There are, of course, ways to scale up or scale back next steps, as you think appropriate.

We are excited to share more detail with you at your convenience, and in the attached document. We very much welcome your advice on all areas of this plan and on other ideas for how to bring faculty enthusiasm and energy for this initiative to fruition.

Jennifer and others would be more than happy to meet with you over the summer to discuss what is possible.

Thank you, very much, for your support and consideration.

Institute for Advanced Scholarship on Teaching and Learning
A R&D Collaborative on Student Learning and Success

Mission: Discovery, Application, and Transformation

The IU Institute for Advanced Scholarship of Teaching and Learning (IAS-TL) will stimulate and facilitate scholarly inquiry in teaching and learning in order to advance knowledge and practice in higher education. The Institute will support faculty-driven research that studies common, compelling, and complex problems of learning and teaching in higher education.   It will serve as world-class research consortium where outstanding scholars from diverse disciplines can collaborate, network, and convene to pursue challenging problems, innovative technologies and pedagogies, and forward-looking questions about learning, teaching, and the field. Its programming will offer high-level critique, review, and coordination of research agendas. Building upon the tradition of research at IU, the Institute will seek audiences and applications for its work and establish itself as an international scholarly hub for teaching and learning inquiry. Globally, it will advance IU's international leadership in the field through disciplinary and multi-disciplinary scholarly projects among US and international participants. Locally, the Institute will serve as an essential resource for the University and its constituents, developing effective responses to major challenges facing the institution, aligning with strategic goals, and transforming undergraduate education.

More specifically, the Institute's mission will be:

Discovery
- Develop research addressing critical issues and problems in teaching and learning at the classroom, program, and institutional levels
- Provide leadership and knowledge-sharing networks among local, national, and international scholars, institutions, and scholarly organizations
- Seek external funding for scholarship on teaching and learning
- Create next-generation scholarship of teaching and learning that tackles big questions for big impact
- Share logistical supports such as data, research resources, and news of funding and other opportunities
- Provide high-level peer critique of participants' manuscripts, papers, and other published writing in the field of SOTL
- Establish an advisory board of internationally-known SOTL researchers both internal and external to IU

Application
- Use research on teaching and learning to advance the goals of the Campus and University Strategic Plans
- Provide research support for IU programs committed to teaching and learning, as funded
- Sponsor and support publications, academies, conferences, and workshops to disseminate, promote, and advance scholarship on teaching and learning
- Enhance IU's reputation in the state of Indiana and beyond for our excellence in teaching and learning

Transformation
- Collaborate with existing offices, programs, and initiatives at IU to disseminate findings and transform teaching here for positive developments in student success and retention, and faculty satisfaction and excellence

- Support IU as a visible and pivotal national leader in advancing the field of research on teaching and learning
- Influence the culture of the university and higher education to more fully value teaching, learning, and their scholarship

The Opportunity

Indiana University has long been considered a leader in the international movement to support research-based teaching and learning. This initiative begins with the premise that scholars, driven by questions, will offer uniquely productive expertise when they extend their skills to inquiry about education. In such scholarship of teaching and learning, researchers bring their disciplinary expertise to address productive problems in learning, teaching practice, and institutional effectiveness in higher education.

Since the 1990s, IU Bloomington faculty, staff, graduate students, and administrators have put the university on the educational map as a center for original work on teaching and learning. Numerous seminal projects have originated on campus that have since spread throughout the country and around the world (see Appendix C). Meanwhile, other universities have also invested substantially to support scholarship on teaching and learning—in multi-million dollar research centers, institutes, professorships, chairs, and so on. Thus, IU's attention to funding and support needs vision in order not to miss crucial opportunities to invest in learning and teaching.

With 2020 fast approaching, now is the time for a new investment in scholarship of teaching and learning at IU. We, like other universities and colleges around the country, feel increased responsibility to offer innovative and effective learning opportunities, provide evidence of student learning and achievement, and otherwise account for the education we provide. Unlike others, however, we have a unique record of scholarship of teaching and learning, and the University's bicentennial presents a unique opportunity to proclaim it in 2020, just 5 years away.

An Institute for Advanced Scholarship in Teaching and Learning aligns with numerous components of the University's Bicentennial and Campus Strategic Plans, identifying current and emerging research strengths around which strategic investment can advance our national and international leadership. IAS-TL would support:

> **Principle 1, An Excellent Education,** with evidence-based recommendations for academic programs, academic success and completion, a high-quality academic life for students, and effective innovations in teaching, including in the areas identified as high priority: information technology, health care, design, and environmental sustainability.

> **Principle 2, An Excellent Faculty,** with a community of scholars who can network, encourage, and support each other.

> **Principle 3, Excellence in Research,** by stimulating, expanding, and setting a high expectations for research and scholarship relating to teaching and learning. In this way we expect to activate the central occupational domains, research and teaching, held in common by all IU faculty.

> **Principle 5, A Global University,** by actively engaging leadership, partnership, and dissemination opportunities with higher education institutions around the world,

> **Principle 7, Building a Prosperous and Innovative Indiana,** with improvements to teaching and learning and renewed recognition across the country for IU's educational excellence.

Indeed in its first 6 months of meetings, the planning group has already shared important research questions and findings regarding undergraduate education; organized several research hubs; identified promising funding opportunities; met with scholars from three states and three nations outside the US, all of whom are eager for on-going relationships; and strategized ways to improve IU's profile for outstanding teaching and research in higher education.

An Institute for Advanced Scholarship in Teaching and Learning (IAS-TL) will coordinate the substantial energy and resources already percolating on our campus. It will catalyze the scholarly dimensions of faculty development already well-supported on campus by the OVPUE, allowing rigorous, new, and ground-breaking investigations on learning and teaching to be heard in the language of research so rightly persuasive to faculty members. With collective impact, IU will also be able to affect change in the wider arenas of the disciplines and peer institutions. New, high impact collaborations under the umbrella of the IAS-TL will renew Indiana University's extraordinary leadership among research universities in teaching, learning, and their scholarship.

The Plan

We recommend a formal Institute be established on campus, which will build on the substantial track record at IU that stretches back 25 years (see Appendices B and C). In this way, structure can keep pace with the current faculty momentum but not outpace the investment the University is able to make in the project.

The following plan will allow development to will proceed immediately and simultaneously along several lines, toward capacity:
- **Shorter-term Recommendations:** Additional start-up funding for 2015-2016 will expand participation, launch programs, and complete a formal proposal for an institute. We recommend the following activities begin immediately:
  o *Works-in-Progress Workshops* will provide constructive peer review and knowledge-sharing to foster the development of outstanding scholarship. Focus in the beginning will be on research hubs already identified, described in more detail below, with the intent to expand work' projects.
  o *Bridge Conversations* will cut across disciplines with discussion of important directions, questions, grants, and news that will broadly inspire and impact study in the field. Examples of Bridge Conversations include fostering undergraduate research, applying new learning theories, and coordinating shovel-ready projects for funding opportunities.
  o *Opening Symposium 2016*, "Hard Questions, Promising Directions in Discipline-Based Scholarship in Teaching and Learning," will invite IU scholars, keynoters, invited foundation guests, and competitive applicants to two days of discussion that identify the most important issues in teaching, learning, and their scholarship for the next 5-10 years and the relation of these issues to disciplinary education. In addition to guiding research directions for the Institute, the symposium will generate a special journal issue.
  o *Budget development* will be aggressively pursued immediately, including by consulting with OVPR's Proposal Development Services. First and foremost, the institute will propose "Fulfilling the Promise: Outstanding Teaching and Learning in Higher Education" as an Indiana University Grand Challenge. In addition, the institute will submit other campus grant proposals (e.g. to Grand Challenges, Collaborative Research and Creative Activity Funding, Ostrom, Addison Locke Roache Memorial Lecture, New Frontiers, etc.) as well as proposals to external funders (e.g., NSF Science of Learning Collaborative Networks, Gates Foundation, Teagle Foundation, and BVA collaborations).

- o *A formal proposal* for a continuing institute or other organization will be developed over 2015-2016.
- o *National leadership and networking* will strategically begin by coordinating multi-institutional research projects, promoting faculty exchanges, and assembling a distinguished international advisory board.
- o *Preparation for the first Summer Academy* in 2017 will begin. Each Summer Academy will offer a one-week meeting/workshop each year that is led or facilitated by IU researchers on a subject of national significance. The Summer Academy will fill the gap left some years ago when AAHE and the Carnegie Foundation ceased their summer workshops. Each Summer Academy would disseminate and operationalize a recent area of Institute research and make IU and Bloomington a regular destination for top-notch discussions about teaching and learning. Each Academy would need IU staff support but would be self-funded by external participants. Sample topics include:
    - *Summer 1:* Preparing Future Faculty for Teaching across the Disciplines. Led by O'Loughlin (Medical School), Robinson (Anthropology), Sherwood-Laughlin (Public Health), Kearns (CITL).
    - *Summer 2:* Decoding the Disciplines and Threshold Concepts Summit. Led by IU and University of the Free State (SA) researchers, including seminal scholar Ray Land from Durham University, SA. Other possible co-sponsors include the University of Bielefeld in Germany and La Trobe University in Australia.
    - *Summer 3:* Applying Learning Analytics across the Curriculum. Led by IU Learning Analytics Fellows.
    - *Summer 4:* Decoding the Disciplines Workshop. Pace (History-emeritus), Middendorf (CITL), Shopkow (History), Diaz (History), and collaborators from many fields including Informatics and Geology.
    - *Summer 5:* STEM Education think-tank discussion about a challenge of national significance addressed by institute research-in-progress, e.g., underrepresented populations in STEM majors.
- **Longer-term recommendations:**
    - o *Sustain* a world-class research institute so that it (1) capitalizes on the productivity and international reputation of IUB scholars and organizations, (2) makes IU the go-to place for discipline-based teaching scholarship, and (3) selectively collaborates with external scholars, centers, universities, and other initiatives.
    - o *Disseminate and network* by new and traditional means, including hosting a website, journal, and/or other publications, in possible partnership with IU Libraries and IU Press. Note that IU already sponsors the web site of ISSOTL in History, IU Press publishes the *Scholarship of Teaching and Learning* book series, IU formerly hosted the websites of the International Society for the Scholarship of Teaching and Learning, and has sponsored FACET's *Journal of Scholarship of Teaching and Learning* since 2001 when it became the first journal specifically on SOTL. In addition, we recommend an international "2020 Symposium on Recommendations for Outstanding Teaching and Learning in the Next 100 Years" to be held in conjunction with IU Bicentennial events in 2020.

Structure and Budget

Like other institutes of research, the IAS-TL will create networks of faculty, staff, and research support specialists (librarians, statisticians, etc.) to develop the data collections, tools, and methods for research and creative activity. Specializing in teaching and learning in higher education, the IAS-TL community will workshop faculty projects throughout the life cycle of research from conceptualizing projects,

designing prototypes, and preparing grant applications; to archiving, publishing, and dissemination. IAS-TL will also advocate for the needs of faculty in the development of campus infrastructure for the coordination, facilitation, and dissemination of this research and creative activity. IAS-TL will also support graduate students and upper level undergraduate students through faculty partnerships. Similar centers and institutes on campus include the Exploration of Energy and Matter Center, the Institute on Digital Arts and Humanities, and the Institute for Advanced Study.

In addition, the Institute will take up, in original fashion, the challenge set by "Moving Higher Education to its Stage," a working paper of the Harvard Business School that inspired that University's Advanced Leadership Initiative (2005). It calls for "third-stage schools" that educate already experienced, professional leaders for further leadership and service activities that address entrenched societal problems. In essence, the IAS-TL would be such an exemplar, focusing on important problems of higher education teaching, learning, and student success. However, rather than refocusing people of retirement age on outside new projects, the IU Institute would capitalize on the very high level of research and knowledge embodied by university faculty while they are still active in their primary careers. We want them to have great success in research and teaching *at the same time*, and in ways that activate their research habits of mind, their inclinations toward innovation and excellence, and their intrinsic motivation to do right by their students and their public service mission.

We recommend the following structure be put in place when the Institute is fully developed, and incrementally before that as is feasible.

- A Director.
- A Research Facilitator (Postdoctoral Fellow): to oversee all research and dissemination logistics, including advertising, outreach, applications, travel, accommodations, meeting support, food, technology, paperwork, budgets, visas, etc. This position would provide advanced professionalization toward a faculty or administrative position.
- Board of advisors, including representatives from CITL, the Office of Bloomington Assessment and Research.
- Affiliated Faculty, those working independently and those affiliated with a funded or unfunded research hub.
- Visiting Scholars (e.g., we already have been contacted by scholars at other US institutions and several other countries, including Turkey and Sweden, who would like residency at IU)
- External collaborations, such as with the Bay View Alliance, the CIC, and the International Society for Scholarship of Teaching and Learning, the History SOTL organization, etc.

Research
Development, Innovation, Dissemination

Research associated with the institute will be framed as problems of learning and teaching in higher education that are also opportunities. The institute identify complex problems that require diverse expertise in several disciplines with the potential of affecting local and field-wide practice. The research developed here is basic, translational, and transferable, using multiple registers—from humanistic critique to big data to experimental science—to address questions about learning that matter to faculty and their students. The organization of associated problems into research hubs that are connected to a community of reviewers and stakeholders will ensure high quality, rigorous, transformative work that is able to spread these ideas to the teaching culture and practice of Indiana and beyond. Locally, the Institute supports both intensive, contextual studies and those that drive toward significant impact. It actively

seeks local relevance and audiences for its research. It translates its work to support changes in the institutional culture and practice of teaching and learning at IUB. It seeks support and recognition for the scholarship of teaching and learning by growing into an essential resource for the University.

Hubs currently underway include the following (more detail on each is available upon request):

- **Hub 1: Preparing Future Faculty for Teaching**
  This hub examines graduate student's development as teacher-scholars across multiple disciplines. Research in this hub includes the effects of pedagogy courses on future faculty and researchers who may be interested in related professionalization efforts. The larger sample sizes possible through collaborative and cooperative research should allow for generalizable results that may affect graduate education broadly. We predict this research hub will help improve how research universities educate graduate students to be effective instructors at institutions of higher learning throughout the United States, positioning IU as the go-to leader in the subject.

- **Hub 2: Undergraduate Research and High Impact Practices**
  The Principles for Good Practice in SOTL (Felten 2013) include that SOTL research be conducted in partnership with students. However, very little of this work is being done at IUB. That is, there is a lot of research *on* students, but not *with* students. This hub takes on the challenge of undergrad research (UR) – inquiry conducted by undergraduate students that makes an original intellectual or creative contribution to the discipline (Council on Undergraduate Research). Design-based research in this area will help us understand the various ways that UR has been and can be carried out, including UR in which students and faculty partner to conduct research and learning. This hub offers the potential to collaborate with IU's Board of Aeons (http://www.iu.edu/~aeons/) as well as individual faculty scholars working in a host of specialized areas.

- **Hub 3: Global Education and Diversity**
  With additional diversity represented by international students from foreign cultures participating in American classrooms, both understanding learning behaviors and assimilating very styles within clusters of pedagogy is increasingly challenging for learning and inclusion. This research hub takes up the challenge of unpacking this cosmopolitanism, including asking such questions as whether the differences in learning behaviors between differing international and domestic students, how can inclusiveness be generated among cultural and language differences, what may global citizenship mean in a course, and what additional learning research resources are needed to address these challenges?

- **Hub 4: Faculty Change/Change in Higher Education**
  Faculty cite an array of reasons that they do not make major pedagogical changes necessary to improve learning. Many are overstated or spurious, others may be remedied with straightforward fixes, while still more present significant challenges requiring further
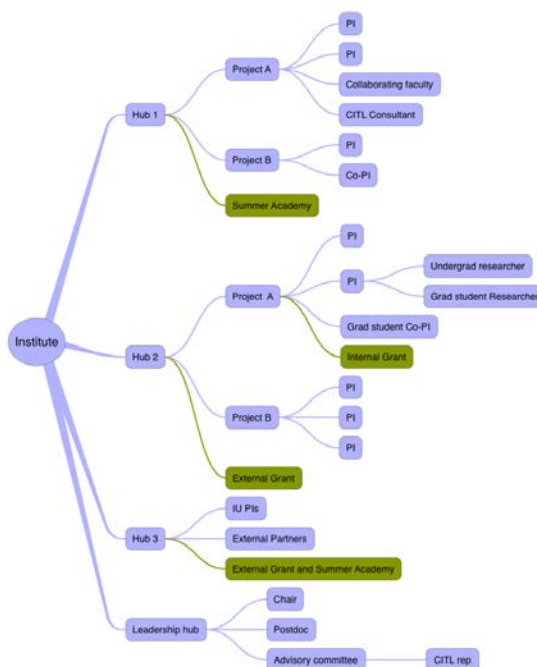
research and invention. This research hub unpacks the conundrum of why faculty members do not make pedagogical changes despite considerable data in support of those changes. It identifies obstacles to change and considers ways to modify higher education, large and small, to transcend resistances. The goals are to recommend approaches for disarming distance using such theoretical tools as Conceptual Change Theory, Gestalt Switching, Dysfunctional Illusions of Rigor, Fostering Grieving, Learning Theory, and Sunk Costs. This list should be expending considerably by our joint efforts.

- **Hub 5: Decoding the Disciplines**
  The Decoding the Disciplines approach to teaching and learning focuses on making explicit the mental operations in a discipline, modeling them for students, providing opportunities for practice, and assessing learning. Begun on the Bloomington campus, this approach has provided the framework for scholarship of teaching and learning, including a book (*Decoding the Disciplines: Helping Students Learn Disciplinary Ways of Thinking*), dozens of articles, and presentations and workshops on five continents. It has been used as a method for understanding learning in a number of disciplines, for dealing with emotional obstacles to learning, and for responding to specific problems, such as visual learning, diversity, and sustainability. Research groups throughout the world have now begun using this process in SOTL studies and publications. Our central questions are: How can we make explicit the mental operations in a discipline, model them, provide practice, motivate students, & assess their learning? Research areas include:
  - o Decoding Computing and Informatics
  - o Decoding History
  - o Decoding Visual Images
  - o Decoding Diversity
  - o Decoding Emotional Bottlenecks

- **Hub 6: Scholarship of Learning Analytics—proposed**
  This research hub would continue the work of the current Learning Analytics Fellows Program, sponsored by the VPUE, with further, advanced coordination, development, and dissemination. In particular, the group would continue to work on tools and strategies that could be used by faculty across campus to measure, collect, analyze, and report data about learners and their contexts in ways that would enhance learning. The Learning Analytics Fellows have already identified several important areas for development, including the usability of Canvas data, access to commonly-valuable parameters in institutional data, and access to statistical assistance. The institute would facilitate the transition of such technical work into scholarship that could be widely reviewed, used, and build upon.

- **Hub 7: Teaching for Environmental Sustainability—proposed**
  This hub will take on what may be the most important challenge of the 21st century: environmental sustainability. It will be the basis of a funding proposal (due June 15, 2015) to the Indiana University Consortium for the Study of Religion, Ethics, and Society for an interdisciplinary workshop that builds on three years of faculty communities of practice sponsored by the IU Office of Sustainability and the IU faculty-led volume on *Teaching Environmental Literacy across the Curriculum* (Reynolds, Brondizio, and Robinson 2010). The workshop would support a new volume that articulates the importance of "wonder" as a disposition with the potential to profoundly motivate aesthetic, emotional, and cognitive responses to the environmental crisis. Participants in the workshop would be drawn from IU and would articulate their goals and strategies for teaching wonder in courses across the curriculum and identify the impact of teaching innovations on the student learning experience. The results would be manifold and consistent with the goals of the proposed

institute: a core of IU faculty already doing thoughtful work in undergraduate teaching would expand their numbers, would validate their teaching innovations with evidence of learning, would advance the research mission of the institution by peer-reviewed publication, would address a strategic goal of the Bicentennial plan, and collectively would identify IU as a leader in theory-framed and evidence-based teaching.

Appendix A: Participants 2014-2015

1. Diaz, Arlene — History
2. Hickey, Daniel Thomas — Education
3. Hostetter, Carol — Social Work
4. Kahn, Hilary — SGIS
5. Kearns, Katherine Dowell — CITL
6. Kitzmiller, Greg L. — Business
7. Middendorf, Joan — CITL
8. Nelson, Craig E. — Biology, emeritus
9. O'Loughlin, Valerie — Medical Sciences
10. Pace, David — History, emeritus
11. Rawlins, Justin — Communication and Culture/American Studies
12. Rehrey, George — CITL
13. Reising, Deanna — Nursing
14. Robinson, Jennifer Meta — Anthropology/Communication & Culture
15. Savion, Leah — Philosophy
16. Schlegel Whitney — Biology
17. Sherwood-Laughlin, Catherine — SPH
18. Shopkow, Leah — History
19. Sievert, April K. — Anthropology

Appendix B: Campus SOTL Bibliography

The IUB SOTL Bibliography, http://citl.indiana.edu/programs/sotl/bibliography-IUB.php, cites faculty, staff and graduate student contributions to the scholarship of teaching and learning. It demonstrates both the strength and vitality of the research being conducted locally on this campus as well as collaborative efforts among faculty and initiatives at other institutions. Even a cursory glance at the bibliography reveals the many different ways SOTL practitioners here have shared their classroom research and theoretical understandings of student learning, as they "go public" through various local, national and international venues.

The bibliography cites articles, books, conference papers, keynote presentations, invited speaking engagements, and workshops, all of which broaden and deepen our knowledge of teaching and learning. We refer to the bibliography as an "incomplete" listing due to the difficulty of capturing all the contributions IUB has made to the Scholarship of Teaching and Learning during the past 15-20 years. As of this date, approximately **240 individual faculty, staff and graduate students have submitted 790 citations to the bibliography**.

Appendix C: Timeline of SOTL at IU, 1998-2015

- **Fall 1998**. A small committee of faculty, teaching development staff, and the Associate Vice Chancellor for Academic Affairs and Dean of the Faculties asked, "How can we best improve undergraduate learning?" The impetus for a SOTL initiative resulted.
- **February 1999**. Two hundred IUB faculty members attended a kickoff banquet. In the main presentation, a Chancellor's [Research] Professor asked "Why SOTL? Why now?" The event also included other SOTL presentations and remarks by several administrators including IU's President Myles Brand.
- **Spring 1999**. Small groups of faculty members discussed ways to engage research faculty in enhancing learning by focusing on existing and new SOTL. These "campus conversations" were part of an AAHE/Carnegie initiative. Broad faculty support for the formation of a SOTL program became evident
- **April 1999**. The Vice Chancellor for Academic Affairs and Dean of the Faculties appointed an Advisory Council to oversee the SOTL Initiative. Members include several deans, an associate vice president, an associate vice-chancellor, IUB's Carnegie Scholars, and other award winning professors.
- **May 1999**. The program initiated seed grants for scholarship in teaching and learning.
- **Summer 1999**. A faculty team attended IU's annual Leadership Institute. Their project focused on the new IUB SOTL initiative. Their report to the Advisory Council formed the basis for an expanded initiative.
- **1999-2000.** David Pace became the first of six IU faculty selected to be Carnegie Scholars of teaching and learning.
- **Fall 1999**. The program initiated an annual series of faculty presentations on their own scholarship in teaching and learning. In the first, the Vice President for Research emphasized the importance of SOTL to the research mission of the university. A key early presentation was a "SOTL jumpstart" designed to give faculty researchers the background and tools for pursing their own new projects.
- **Spring 2000**. Initiated (and have since continued) a SOTL paper series at the IUB Spring Symposium.
- **Fall 2000**. Initiated a local course portfolios group as part of a collaborative multi-university Pew-funded initiative. Our IU portfolio group has focused on an inquiry-based (i.e., SOTL) approach.
- **Spring 2001**. The SOTL initiative received a $5000 "Going Public" grant from AAHE to disseminate the work of "Bloomington Scholars of Teaching."
- **2000–01, 2001–02, 2002–03**. The basic approach set during 1999–2000—presentations, jumpstart and other workshop sessions, and grants—has continued each year through each year of the program.
- **July 2002**. A SOTL team received a $6000 grant to attend the AAHE Summer Academy and drafted a plan to broaden faculty participation, further institutionalize the program, and explore additional national leadership roles.
- **August 2002**. Twenty-seven members of the Bloomington SOTL community participated in a half-day retreat during which they refined and expanded the new plan for future directions. These include expanded support for research projects and exploration of both a possible Ph.D. Minor in SOTL and the foundation of a National Society for the Scholarship of Teaching and Learning (in conjunction with faculty elsewhere).
- **August 2002**. The Vice Chancellor for Academic Affairs and Dean of the Faculties announced a new $35,000 SOTL Leadership Grant for departments. The first grant awarded to the Department of Anthropology in April 2003.
- **September 2002**. The Chancellor announced a new IU Bloomington Academy that will start in May 2003 with a focus on Liberal Learning.
- **2003.** Craig E. Nelson named Carnegie Professor of the Year.
- **2003.** Program participates in The Woodrow Wilson National Fellowship Foundation's "Professional Development Assessment Project" as part of their Responsive Ph.D. Initiative.
- **February 2003**. The SOTL program was awarded the 2003 Theodore M. Hesburgh Faculty Development Award, $30,000, sponsored by TIAA-CREF. Later that year, the IU men's basketball

team has "storybook" season that prompts large newspaper advertisements that, among other achievements, we are the only university in the Big Ten "to be honored with the prestigious Hesburgh Award for teaching and learning."

- **March 2003**. IU Bloomington named the leader of a Carnegie Academy Campus Program cluster: "The Research University Consortium for the Advancement of the Scholarship of Teaching and Learning." Fourteen universities from three countries and one disciplinary society join.
- **March 2003**. IU Bloomington planning committee launched the International Society for the Scholarship of Teaching and Learning (IS–SOTL).
- **2004.** IU Professor of Economics William E. Becker and Dean of Faculties Moya L. Andrews publish *The Scholarship of Teaching and Learning in Higher Education: Contributions of Research Universities* (IU Press 2004).
- **August 2004.** IU Bloomington granted $5000 from AAHE for support of the Research University Consortium.
- **October 2004**. International Society for the Scholarship of Teaching and Learning held its inaugural meeting at IU Bloomington. Over 400 scholars from around the world attended. Over 60 Indiana University faculty, including 16 graduate students, presented.
- **October 2005**. ISSOTL members elect 2 from IUB to the executive committee.
- **October 2005**. Over 630 scholars from 10 countries attend the ISSOTL conference in Vancouver, BC, providing the crucial test that an international society is warranted. Fourteen Bloomington faculty members present.
- **Spring 2006**. The Research University Consortium, led by Indiana University, posts reports of its activity on the web.
- **Fall 2006**. The Carnegie Foundation for the Advancement of Teaching selects Indiana University to participate in their Leadership Program on SOTL and to coordinate a group of 9 institutions who will be "Expanding the SOTL Commons."
- **Fall 2006.** IUB becomes the base for the newly formed International Society for the Scholarship of Teaching and Learning in History.
- **Fall 2009.** Indiana University hosts the sixth conference of the International Society for the Scholarship of Teaching and Learning in Bloomington, Indiana.
- **2009**. Teagle Foundation funds two SOTL projects: Collegium on Inquiry in Action and History Learning Project. Two of many externally-funded research projects.
- **2010**. Indiana University Press publishes the first volume in its *Scholarship of Teaching and Learning* book series.
- **Winter 2011**. IUB program is reorganized under the new Center for Innovative Teaching and Learning.

Appendix D: Job Descriptions

Faculty Chair for the first year (prototype for eventual **Faculty Director** position). Responsibilities include:

- Spearheading the formal proposal to OVPR for an ongoing institute
- Leading grant proposal development
- Overseeing monthly research meetings
- Coordinating research and dissemination
- Networking with external funding organizations
- Spearheading advocacy and outreach

Graduate Assistant for the first year (prototype for eventual **Postdoctoral Fellow** position). Responsibilities include:

- Organizing schedule and logistics for monthly research meetings
    - Notifying members of various meetings, forums, and other events
    - Recording and posting meeting details to group's website (currently Box)
- Facilitating research and dialogue among research projects
    - Interviewing researchers and translating
    - Checking in with researchers, performing status updates
- Working with Faculty Chair/Director to maintain larger initiative goals
    - Devising relevant material (e.g., literature, rubrics, models) for institute members
    - Collaborating on and carrying out advocacy and outreach strategies
- Organizing the Summer Academy and Annual Symposium
    - Overseeing logistics related to event lodging, transportation, space reservations, meals
    - Serving as primary contact for correspondence related to two events
- Networking with outside scholars and institutions
    - Recruiting participants for Summer Academy and Annual Symposium
    - Assisting Faculty Chair/Director in cultivating relationships with institutions capable of