How Can We More Effectively Encourage Faculty to Apply and Do SOTL?

Carol Hostetter, PhD  
School of Social Work  
Funding Level Requested: Phase III  
Duration of Funding Period: Spring 2016 to Fall 2017

Abstract:  
The Scholarship of Teaching and Learning (SOTL) is research dedicated to improving student learning outcomes in higher education. Using evidence from SOTL, faculty can potentially improve their teaching and significantly increase their students’ learning. Helping faculty embrace the evidence-base of teaching can be challenging. The effectiveness of faculty development programs (led by faculty and professional developers) may vary depending on the reward structure in place. Often these programs have been designed using economic rewards as a primary motivator. In contrast, current research in behavioral economics reveals the power of non-economic rewards. In our expanded analysis, these include social rewards, indirect monetary rewards, indirect social rewards and intrinsic rewards. Our long-term research question is: Does re-designing faculty development programs to more intentionally and more deeply use such non-economic rewards more effectively encourage faculty to apply SOTL-based pedagogy in their classrooms and to include classroom research or SOTL in their research portfolio? We intend to collaborate with teaching/learning center staff to answer this question. We will use a multi-method approach, with several stages of survey research and program development. Our goal is to assess the effectiveness of different faculty development programs on the participants’ teaching improvement, their commitment to further changes and their ongoing efforts (if any) in classroom research and SOTL projects. The larger goal is to move SOTL toward a more effective force for change in college pedagogy.

Contact: chostett@indiana.edu
PROJECT DESCRIPTION

A. Purpose of the investigation with specific research objectives

A key ultimate goal of SOTL is the facilitation of reformed teaching. How can we use SOTL-based academic development programs both to foster an understanding of key SOTL findings and to elicit continuing commitment to using the reformed teaching practices that the SOTL findings make evident? Ideally this commitment will include using outcomes assessment, classroom research and SOTL. For this part of our ongoing efforts toward these goals we are developing and administering a survey for past and current participants in key SOTL-based and SOTL-advocating faculty development programs at IUB. Our fundamental goal is the improvement of undergraduate learning in the participants’ courses and programs. We expect to advance this goal by assessing the effects of different development programs on the participants' use of reformed teaching, their commitment to further changes and their ongoing efforts (if any) in classroom research and SOTL projects. We have ongoing collaborations with teaching and learning center staff aimed at learning more about the differential effects of various programs that they have fostered. This grant would be used to refine and then administer the survey, analyze the results and then use the results to foster more effective SOTL dissemination in our own work and in that of other key players (including CITL, FACET and the MACK Center). The larger goal is to move SOTL toward a more effective force for change. Through our dissemination, the results can be applied by faculty development programs at Indiana University and beyond.

Motivational Frameworks: Economic vs. Social Rewards

Programs directed at improving student learning by fostering more effective teaching frequently are designed with the idea that economic rewards are the key motivator for faculty participation in change. Recent research in behavioral economics (Ariely 2009, 2011; Bowles and Polania-Reyes 2012; Gneezy et al. 2011; Kamenica 2012) provides a new framework with which to examine the effectiveness of such practices. Social rewards provide powerful alternative or supplement to economic rewards. As Ariely notes (2009), most of us would be offended if a beloved dinner guest thanked us and then offered us $50 for the meal. Often, however, social rewards have not been a central design in fostering faculty change. Understanding the nuances of social and economic rewards for faculty involvement in SOTL is the primary objective of the present proposal.

Monetary rewards typically are ineffective for changing behavior long-term (Gneezy et al., 2011). Social rewards, defined simply as positive, task-reinforcing interactions, tend to be powerful. Other important motivators are indirect economic rewards (activities that lead to economic rewards such as noting an accomplishment on one’s faculty annual report), indirect social rewards (activities that provide positive feedback and increased standing in one’s academic community) and intrinsic rewards (activities that contribute to a sense of joy in one’s work or a sense of competence in one’s identity). Kim (2015) observes that doing good work is motivated less by the size of the paycheck and more by internal motivation – a sense of a “calling” or deep meaning can motivate many people to work far beyond the job requirements.

Experience with SOTL Development Programs
The primary investigator, Carol Hostetter, is a past director of the Mack Center for Inquiry on Teaching and Learning, an IU program on all eight campuses that worked to build capacity for SOTL research. In addition, she coordinated the FACET Leadership Institute for the Bloomington campus. The primary consultant, Craig Nelson, is the founding director of the Mack Center, the founding president of ISSOTL, and a faculty development consultant. As we examined our faculty development work through conversations with other faculty developers, we could see that some programs with very low economic rewards but very high social rewards seemed to have better outcomes in terms of fostering more scholarly teaching and more SOTL research and, thus, presumably better student learning.

B. Previous research results

Thus far, we have developed a framework building on behavioral economics for use in analyzing the ways faculty development programs really work to foster reformed teaching. We have presented this framework at the conference of the International Society of the Scholarship of Teaching and Learning (ISSOTL) in 2014 and are presenting it at the Professional and Organizational Development conference in 2015. We have also developed a draft survey for use with participants in faculty development programs. We will collect feedback on it as an instrument and on its appropriateness for use in other programs. We will then refine the survey and solicit further feedback from key faculty developers at IU. We will then revise the survey and submit it as an amendment to our already approved Indiana University Human Subjects Committee protocol. Upon approval of the amendment we will begin administering the survey. (Please see our CVs for our prior SOTL research and publications.)

C. Significance and impact the study may have upon undergraduate or graduate teaching, learning and assessment

Currently, little literature exists on the effectiveness of different types of rewards for encouraging faculty to improve either their scholarly teaching or their SOTL research. Indeed, it seems that we may routinely overestimate the effectiveness of faculty development programs (Ebert-May et al., 2011). As universities work towards better classroom environments designed to promote student engagement and increase retention and graduation rates, faculty must learn and grow. For this to happen, faculty development programs must become more effective in fostering assessment-framed, outcomes-based pedagogical reform. Hence our focus.

D. Outcomes from the work and how they will contribute to the assessment of student learning at Indiana University

As mentioned above, we aim to increase faculty use of assessment-framed pedagogical change.

E. Research methodology, including data collection and analysis

The study has two rounds, with action research as the basic perspective.
During the first year, we will conduct a survey on how faculty perceive the effectiveness of faculty development initiatives. Please see the appendix for the IRB-approved survey draft. We hope to learn how faculty actually used their learning from the initiative as well as what they perceive the value of the initiative was. The survey will be sent to faculty who have been engaged in a variety of faculty development initiatives. An online survey platform will be used, which will email faculty up to three times, with the ability to automatically distinguish those who have completed it and those who have not. The respondents will be kept anonymous to the researchers.

We are requesting funding for a graduate assistant to perform an in-depth SPSS quantitative analysis and to perform a qualitative content analysis on the participants’ comments. We will also ask CITL staff for additional input on understanding the results. In order to maximize the impact of this project, it will be essential that we seek collaboration with CITL staff and other people providing faculty development initiatives and work together as partners.

During the second year, we will cooperatively revise selected faculty development programs that emphasize scholarship teaching and SOTL. As changes are made, another round of surveys will be conducted to evaluate the effectiveness of the revised programs. The analysis of these surveys will probably extend into a third year, for which we may seek additional funding. See research timeline, below.

**F. Means by which the success of the project will be measured**

The success of the first round of the project will be evaluated in terms of the coherence of the results from the analysis of the surveys and our progress toward disseminating the work. Subsequent success will be evaluated in terms of the application of the analyses by faculty development programs at IU and beyond (in so far as we can ascertain the latter).

**G. Manner in which results will be disseminated**

We will propose to provide a presentation of the IU SOTL program, under the auspices of CITL. Additionally, we will propose to present at the Mack Center workshop at the annual IU FACET meeting. We will also propose presentations at ISSOTL and at POD. We will also publish the results of our work.

References

2. BUDGET NARRATIVE

Graduate assistant: We are planning to have at least 150 survey responses. These will require both quantitative and qualitative analysis. A graduate assistant skilled in mixed-methods research is the only feasible way to accomplish these analyses in a timely manner. We will pay the graduate assistant $20 per hour and expect an average of 5 hours per week of work over a 12-month period. Supervising this work will require the time and expertise of both the Principal Investigator and the Senior Consultant.

Senior Consultant: Hiring Dr. Craig Nelson as a consultant is crucial to reaching the goals of the project. His understanding of the data as well as program design will be invaluable. In addition, he has relationships with faculty who conduct programs as well as with CITL staff. Considering that presenting on this topic will be sought at two major conferences (ISSOTL and POD), it would be helpful for him to have a consultant stipend. The stipend of $750 matches the amount provided in Spring 2015 by Vice Provost Dennis Groth to each of the 10 consultants for the IU SOTL Institute (including Dr. Nelson).

Travel Stipends: Participation in key national/international meetings will be an important source of feedback to refine the design and analyses of this project, as well as its dissemination.

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<th>Date</th>
<th>Description</th>
<th>Amount</th>
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<tr>
<td>Spring 2016</td>
<td>Consultant stipend</td>
<td>$750</td>
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<td>Summer 2016</td>
<td>Graduate assistant 5 hours/week</td>
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<td>Fall 2016</td>
<td>Consultant stipend</td>
<td>$1000</td>
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<td>Fall 2016</td>
<td>Two travel stipends</td>
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<td>TOTAL</td>
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### 3. RESEARCH PLAN AND TIMELINE

<table>
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<tr>
<th>Activity</th>
<th>Dates</th>
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<tr>
<td>Identify collaborators in CITL and faculty-led initiatives</td>
<td>Fall 2015</td>
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<td>Refine survey</td>
<td>Fall 2015</td>
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<td>Distribute survey</td>
<td>Spring 2016</td>
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<tr>
<td>Analyze data sets</td>
<td>Summer and Fall 2016</td>
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<td>Collaborate with CITL staff and faculty leading initiatives for program design</td>
<td>Summer and Fall 2016</td>
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<td>Present results at conferences and begin manuscript preparation</td>
<td>Fall 2016</td>
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<tr>
<td>Revised programs are conducted and evaluated</td>
<td>Fall 2016</td>
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<tr>
<td>Analyze new data sets</td>
<td>Spring 2017</td>
</tr>
<tr>
<td>Present results at conferences and submit manuscripts</td>
<td>Fall 2017</td>
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Appendix

Survey questions, approved by IU IRB. Name of initiative will vary based on the participation of the recipient of the survey.

Please answer these questions based on your participation in the [INITIATIVE]. Thank you for sharing your thoughts!

1. I revised my overall approach to teaching since participating in the [INITIATIVE].
   - Very little
   - Quite a bit
   - Completely
   - Not applicable

   Please feel free to comment on this question (open ended response):

2. I revised the course I worked on during the [INITIATIVE]
   - Very little
   - Quite a bit
   - Entirely
   - Not applicable

   Please feel free to comment on this question (open ended response):

3. Since participating in the [INITIATIVE], I am reading more literature on teaching and learning (including peer-reviewed publications, blogs, list serves, etc.).
   - Disagree
   - Unsure
   - Agree

   Please feel free to comment on this question (open ended response):

4. Since participating in the [INITIATIVE], I have shared with others the changes in my teaching practices and my ideas about teaching and learning.
   - Disagree
   - Unsure
   - Agree

   Please feel free to comment on this question (open ended response):

5. I am considering publishing an article on teaching and learning since participating in the [INITIATIVE].
   - Disagree
   - Unsure
   - Agree
6. I have submitted at least one article on teaching and learning for publication since participating in the [INITIATIVE].
   - Disagree
   - Agree

7. I have participated in other activities on teaching and learning, such as attending workshops, joining other learning communities, attending a conference etc., since attending the [INITIATIVE].
   - Disagree
   - Unsure
   - Agree

Please feel free to comment on this question (open ended response):

8. What are four (or more) benefits you received from participating in the [INITIATIVE]? (open ended response)

9. How important was being in a community of like-minded teachers during the [INITIATIVE]?
   - Not important
   - Somewhat important
   - Very important

Please feel free to comment on this question (open ended response):

10. How important was receiving a stipend for participating in the [INITIATIVE]?
    - No stipend offered
    - Not Important
    - Somewhat important
    - Very important

Please feel free to comment on this question (open ended response):

11. I am more respected by my colleagues on matters of teaching and learning, since participating in the [INITIATIVE].
    - Strongly disagree
    - Disagree
    - Unsure
    - Agree
    - Strongly agree

Please feel free to comment on this question (open ended response):
BRIEF CURRICULUM VITAE
October 30, 2015

NAME: Hostetter, Carol

EDUCATION:
GRADUATE
Indiana University, Bloomington, IN Doctor of Philosophy October 1998
Indiana University, Indianapolis, IN Master in Social Work May 1977

UNDERGRADUATE
Indiana University, Bloomington, IN Bachelor of Arts May 1975

APPOINTMENTS:
ACADEMIC
Indiana University Bloomington Professor, Social Work 2013 – present
Indiana University Bloomington Associate Professor, Social Work 2007 – 2013
Indiana University Bloomington Assistant Professor, Social Work 2001 – 2007

PROFESSIONAL HONORS AND AWARDS:
TEACHING
P.A. Mack Award IU FACET May 2013
Most Valuable Professor Award IU School of Social Work Spring 2012
Trustees’ Teaching Award IU School of Social Work Spring 2009
Trustees’ Teaching Award IU School of Social Work Spring 2005
Trustees’ Teaching Award IU School of Social Work Spring 2007

Chancellor’s Award for Excellence in Teaching IUPUI campus 2009
Herman Frederic Lieber Memorial Award for Teaching Excellence Indiana University, 2008
for all eight campuses

Trustees’ Teaching Award IU School of Social Work Spring 2007
Trustees’ Teaching Award IU School of Social Work Spring 2005
Trustees’ Teaching Award                  IU School of Social Work            Spring 2003
FACET Member                             IU Faculty Colloquium on Excellence in Teaching (FACET)  Spring 2003
Teaching Excellence Recognition Award (later renamed Trustees’ Teaching Award) IU School of Social Work  1999
Lieber Memorial Teaching Associate Award  Indiana University Bloomington  1997
Edwin H. Sutherland Award for Distinguished Teaching Indiana University Department of Sociology  1996
Distinguished Contribution to Teaching Award American Sociological Association  1995 – 1996

CURRENT TEACHING:

UNDERGRADUATE
S371 Social Work Research Lecture Professor Spring 2015 25
S371 Social Work Research Lecture Professor Spring 2015 28

GRADUATE
S724 Social Work Teaching Lecture Professor Summer 2015 6

UNIVERSITY SERVICE
FACET Leadership Institute Planning Committee Member 2011 – 2014
Mack Center for the Advanced Study of Teaching and Learning Director 2005 – 2012
FACET Selection Committee (Bloomington) Chair Fall 2007 – present
FACET Steering Committee Member July 2006 – present
Journal of the Scholarship of Teaching and Learning Editorial Board Member June 2006 – present
Preparing Future Faculty Mentor Fall 2005 – 2011
PRINT AND ELECTRONIC PUBLICATIONS:
TEACHING
Refereed


Invited


RESEARCH
Refereed


CRAIG E. NELSON
Professor Emeritus of Biology, Indiana University (at I.U. since 1966; Emeritus since 2004) & Faculty Development Consultant
Email: nelson1@indiana.edu (where 1 is the numeral one)

Degrees:  • Ph.D. & M.A. Zoology. (‘66, ’64) University of Texas (Woodrow Wilson National Fellowship; National Science Foundation Pre-doctoral Fellowships, 4 years)  • B.A. With Honors, Zoology (‘62) University of Kansas.

Appointments at Indiana University:
• 1966-2004  Assistant Professor, Associate Professor, and Professor Department of Biology (initially Zoology)
• 2004-Present  Emeritus Professor, Department of Biology

Administration: Dr. Nelson directed the Graduate Programs in Zoology (1981-83) and in Ecology, Evolution and Organismal Biology (1984-87). He earlier was the first Director (1971-77) of Environmental Programs in IU’s then new School of Public and Environmental Affairs. Its interdisciplinary environmental programs (B.A. to Ph.D.) now rank among the best worldwide.

Awards & Honors:
• Tenured and twice promoted at IU with teaching specified as the area of excellence.
• Outstanding Teaching Award, Indiana University Student Alumni Council, 1981
• Indiana University-Lilly Foundation Postdoctoral Teaching Fellowship, 1981-1982
• Amoco Foundation Award “In Recognition of Distinguished Teaching,” I. U., 1983
• Outstanding Faculty Award, Indiana University Student Alumni Council, I. U., 1987
• Faculty Colloquium on Excellence in Teaching “In Recognition of Distinguished Teaching,” I. U., 1989
• Chancellor’s Lecture on Great Teaching, Vanderbilt University, 1991
• President’s Honor for Teaching, Northwestern University, 1994
• Sigma Xi National Lecturer, 1993-95 [for Scholarship on Teaching]
• Scholarship of Teaching and Learning Presentation Award, I. U., 1999
• Carnegie Scholar for 2000-2001, Carnegie Foundation for the Advancement of Teaching
• Outstanding Research and Doctoral Universities Professor Of The Year, 2000. Carnegie Foundation for the Advancement of Teaching & Council for the Advancement and Support of Education (CASE)
• President’s Medal for Excellence, Indiana University, 2001 [“The highest honor bestowed by Indiana University”]
• P. A. Mack Award for Distinguished Service to Teaching, Indiana University, 2003.
• Lifetime Contribution Award (for “Vision”), International Society for the Scholarship of Teaching and Learning, 2009

BIOLOGICAL RESEARCH: Dr. Nelson's biological research (60+ publications) has been in evolution and ecology. His first six scientific publications were based on undergraduate research. Initially his emphasis was on the systematics and evolution of amphibians and reptiles, especially in Latin America where he has done extensive fieldwork. Most recently his group focused on patterns of environmental sex-determination in reptiles.

FACULTY DEVELOPMENT CONSULTANT: Dr. Nelson has given invited presentations and workshops on topics in teaching and learning at national meetings and individual institutions in 37 states and 8 countries on topics including:  • Fostering Critical Thinking and Mature Valuing Across the Curriculum,  • Scholarship of Teaching that That Really Matters: Three Pedagogical Changes That Can Make a Real Difference in Achievement, Equity and Retention ANY College or University Classroom,  • Alternative Approaches to the Scholarship of Teaching and Learning and  • Effective strategies for teaching evolution and other controversial issues. For many years he has been a featured presenter (and occasional keynote speaker) at the International Lilly Conferences on College Teaching. He presented some 40 three-day NSF Chautauqua Short Courses for College Science Faculty.

TEACHING: Dr. Nelson's tenure and promotions cited excellence in teaching, an unusual accomplishment at a research university. He received several IU and nationally competitive teaching awards (above). He taught: introductory biology; graduate and undergraduate evolution and ecology; an Intensive Freshman Seminar (Biology, Critical thinking and Real Life) and several interdisciplinary and honors courses (e.g. Environmental Science and Policy, Ideas and Human Experience, the History of Everything Except Civilization), and part of a three course liberal-arts cluster (Knowing, Knowledge and Their Limits: Literature, Psychology, and Biology). He regularly taught a graduate biology course on "Alternative Approaches to Teaching College Biology." Dr. Nelson was one of IU’s teachers featured in the videotapes, Making Larger Classes Work: Experiences of Indiana University Faculty and What to Expect in the College Classroom.

SCHOLARSHIP OF TEACHING AND LEARNING OVERVIEW: Dr. Nelson's Scholarship of Teaching and Learning (SOTL) focuses on the scholarships of synthesis and application (per Boyer and Rice). When he began working in this area, it was clear that the empirical and theoretical base for much improved college teaching was well already in hand. The major effort needed was in developing ways to apply this base in the classroom. He has worked to develop such applications and to help other faculty understand the empirical and theoretical base, the most feasible ways to apply it, and the importance of doing both. He has published more than 50 articles and chapters addressing various topics including critical thinking and mature valuing, diversity, active learning, teaching evolution and SOTL.

Dr. Nelson was part of the small committee that founded the prestigious Scholarship of Teaching and Learning Program at IU (See http://citl.indiana.edu/programs/sotl/index.php and articles in the SOTL special issue of the Journal of Excellence in College Teaching. vol. 14, citations below). In 2003, this program won the prestigious Hesburgh Award for outstanding faculty development (newsinfo.iu.edu/news/page/normal/777.html). He chaired (2004-05) the founding committee for the International Society for the Scholarship of Teaching and Learning (http://www.isotl.org/) and became its first president. He is currently on the editorial boards or panels of The Journal of the Scholarship of Teaching and Learning (https://www.iupui.edu/~josotl/), His present and past editorial board or panel service includes: and College Teaching (http://www.tandfonline.com/to/cvol20/current#), The Journal for
SCHOLARSHIP OF TEACHING AND LEARNING PUBLICATIONS

Titles are grouped by topic and are in reverse chronological order within topic

1. HOW WE RESIST CHANGE: DYSFUNCTIONAL ILLUSIONS OF RIGOR

http://cgi.stanford.edu/~dept-ctl/cgi-bin/tomprof/postings.php (Enter 1058 & 1059 into search box at top of page.)


2. FOSTERING CRITICAL THINKING & MATURE VALUING ACROSS THE CURRICULUM


3. ACHIEVEMENT, RETENTION & EQUITY (DIVERSITY)

Nelson, C. E. 1996. Student diversity requires different approaches to college teaching, even in math and science. American Behavioral Scientist 40:165-175. [Ideas apply across the curriculum.]


4. ACTIVE LEARNING


Nelson, C. E. 1994. [Comments on teaching, with classroom videos and student comments] In: Making Large Classes: Experiences of Indiana University Faculty. Videotape. [Produced at IU and was distributed by: Instructional Support Services, Dean of Faculties Office, Indiana University].


5. TEACHING EVOLUTION & THE NATURE OF SCIENCE While Fostering Critical Thinking and Respecting Religion

Nelson, C. E. 2012. Why Don’t Undergraduates Really ‘Get’ Evolution? What Can Faculty Do? Chapter 14 (pp 311-
347) in Karl S. Rosengren, Sarah K. Brem, E. Margaret Evans, & Gale M. Sinatra (Editors), Evolution challenges: Integrating research and practice in teaching and learning about evolution. Oxford University Press.


6. ENVIRONMENTAL STUDIES AND LITERACY


Economic Cooperation and Development (OECD), Paris


7. THE SCHOLARSHIP OF TEACHING AND LEARNING (SOTL): PROGRAMS & GENRES


8. PREPARING FUTURE FACULTY FOR TEACHING


9. QUICK SUMMARIES OF KEY IDEAS


November 4, 2015

To the SOTL Grants Committee:

I am writing in support of Carol Hostetter’s application for a SOTL grant. Carol’s proposal is entitled “How Can We More Effectively Encourage Faculty to Apply and Do SOTL?” and will examine different motivational frameworks in use by faculty developers such as the effectiveness of monetary rewards vs. social rewards. Her proposal is supported by research from the field of behavioral economics that found that social rewards can be as powerful, if not more powerful, than monetary rewards. Since faculty development offices often do not have access to large sums of money, offering selected social rewards into programs to encourage adopting best teaching practices is an important strategy that potentially benefits faculty as well as students. Carol has presented on this at the International Society of the Scholarship of Teaching and Learning (Fall 2014) and will present this week at the Professional and Organizational Development Conference (Fall 2015).

I am confident that Carol’s involvement in the grant will not affect her carrying out any of her teaching or service responsibilities. She is an outstanding instructor and colleague who is very dedicated and passionate about her teaching and supporting the teaching of others. Further, having the support of an outside consultant and a graduate student will also help facilitate her work in this area.

I look forward to Carol sharing what she learns from this project with me and our faculty. I have no doubt that the results of her work will be well received by others as she continues to effectively disseminate her research through presentations and publications.

Sincerely,

Karen Allen, Ph.D., LMSW
Professor, Director
Indiana University Social Work Program
karealle@indiana.edu
812-855-6090