

# *SCHOLARSHIP OF E*

**Steve Abel, Associate Provost for Engagement**

**Marifran Mattson, Professor and Head, Brian Lamb  
School of Communication**

**Rod Williams, Assistant Provost for Engagement**

# Evolution of Engagement at Purdue

## Timeline



Boyer's  
"Scholarship  
Reconsidered"  
published

Service  
Learning  
Program  
Initiated

Purdue  
Engagement  
Council  
Established

Engagement  
Awards  
Program  
Initiated

Present  
at NFO

Purdue  
Policy  
for P&T  
Revised

Guidebook  
and Faculty  
Development

Kellogg  
Commission  
Released  
"Returning to  
our Roots"

&  
Purdue Office of  
Engagement  
Established

Promotion  
& Tenure  
Task Force

SoE  
Fellows  
Program  
Initiated

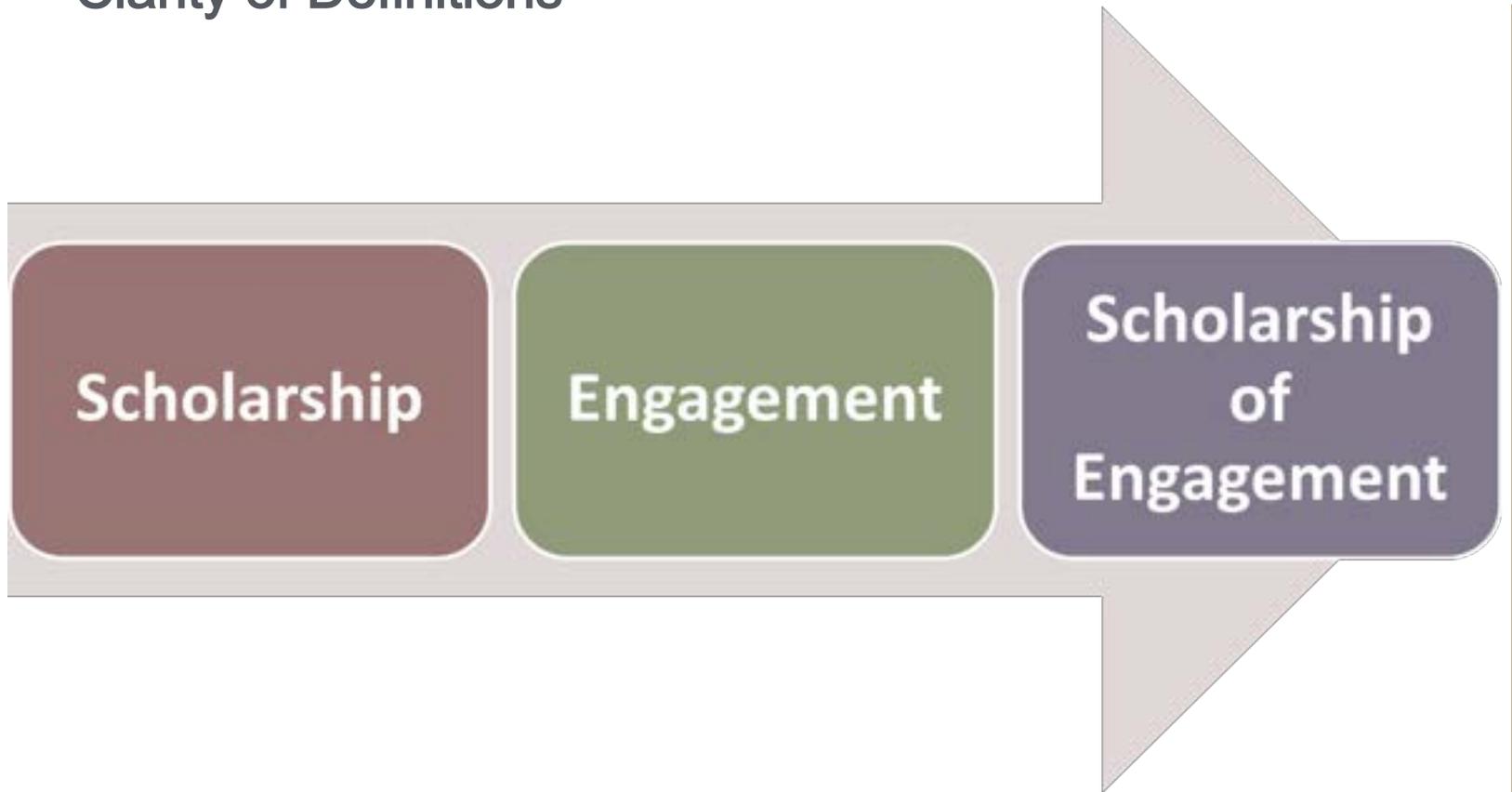
Faculty  
Engagement  
Survey

SI  
Fellows  
Program  
Initiated



# 2018 Faculty Engagement Survey Results

## Clarity of Definitions



# 2018 Faculty Engagement Survey Results

## Clarity of Definitions

### Scholarship:

- innovative with a high level of disciplinary expertise, can be replicated, produces documented results that are impactful, and is professionally or peer-reviewed

### Engagement:

- collaboration between institutions of higher education and their larger communities for the mutually beneficial exchange of knowledge and resources in a context of partnership and reciprocity

### Scholarship of Engagement:

- a reciprocal relationship that yields innovations with disciplinary expertise, can be replicated, documented, is professional and/or peer reviewed, and has evidence of impact

# *Characteristics of Scholarship & Engag*

High level of  
disciplinary  
expertise

Innovative

Capable of  
being replicated  
and elaborated

Documented  
results

Impactful

Professionally  
and/or peer  
reviewed

# Examples of

Laws/public  
policy

Video archives,  
documentaries,  
films

Adoption of  
innovations

Delivery of  
products/services

Changes in  
professional  
practice

Refereed  
publications

# *SCHOLARSHIP OF EN EXEMPLAR:*

# *MOTORCYCLE SAFETY AT*

MARIFRAN MATTSON, PHD

“...campaign literally by accident”  
(Kosmoski, Mattson, & Hall, 2007)



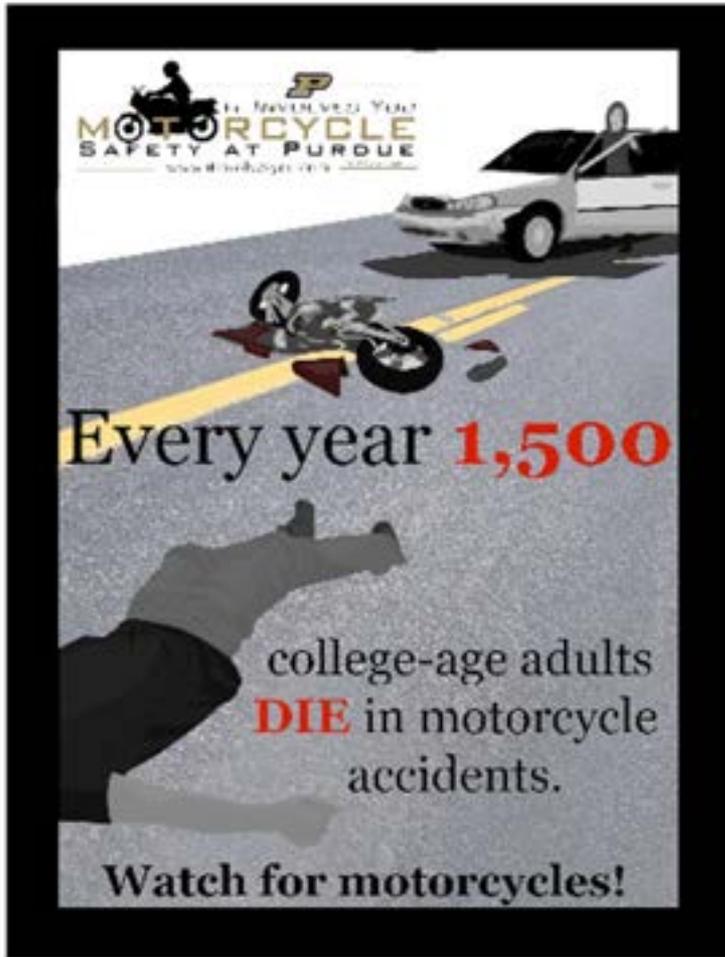
# Goals of MS@P

The goal of the Motorcycle Safety at Purdue campaign (MS@P) is to make the road safer for everyone while emphasizing motorcycle safety.

The campaign aims to accomplish this in three ways:

- Encourage motorcyclists to engage in safety practices such as wearing proper safety gear, becoming properly licensed, and obeying traffic laws;
- Encourage drivers of cars and trucks to be aware of motorcycles and to avoid distracted and aggressive driving;
- Encourage friends and family of motorcyclists to talk about motorcycle safety.

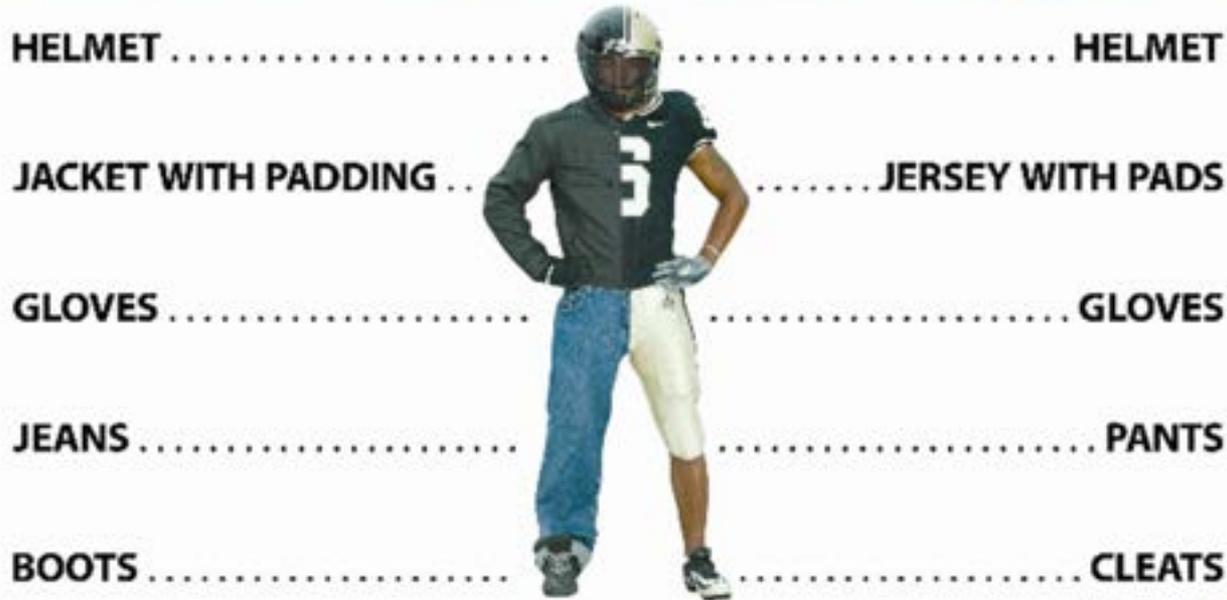
# DEVELOPING MS@P MESSAGES



# DEVELOPING MS@P MESSAGES

## GEAR UP PURDUE!

Whether you're on the road or on the field – Gear up and be safe!



HELMET ..... HELMET

JACKET WITH PADDING ..... JERSEY WITH PADS

GLOVES ..... GLOVES

JEANS ..... PANTS

BOOTS ..... CLEATS



# COMMUNITY and NATIONAL PARTNE

- Purdue
  - Marketing and Media
  - Football
  - College of Liberal Arts
    - Spring Fest
  - Office of Engagement
    - Service-Learning Grants



- Motorcycle Safety Foundation
  - Funding
  - Network

- Greater Lafayette City Bus



Wherever Life Takes You

# COMMUNITY and NATIONAL PARTNER



City of West Lafayette



# DEVELOPING MS@P MESSAGES with C

**YOU WOULDN'T TURN  
WITHOUT LOOKING  
WATCH FOR MOTORCYCLES  
AT ALL INTERSECTIONS**



IF IT INVOLVES YOU  
**MOTORCYCLE**  
SAFETY AT PURDUE  
[www.purdue.edu/motorcycle](http://www.purdue.edu/motorcycle)

**WATCH FOR  
MOTORCYCLES  
EVERYWHERE**



IF IT INVOLVES YOU  
**MOTORCYCLE**  
SAFETY AT PURDUE  
[www.purdue.edu/motorcycle](http://www.purdue.edu/motorcycle)

# MEASURING IMPACT

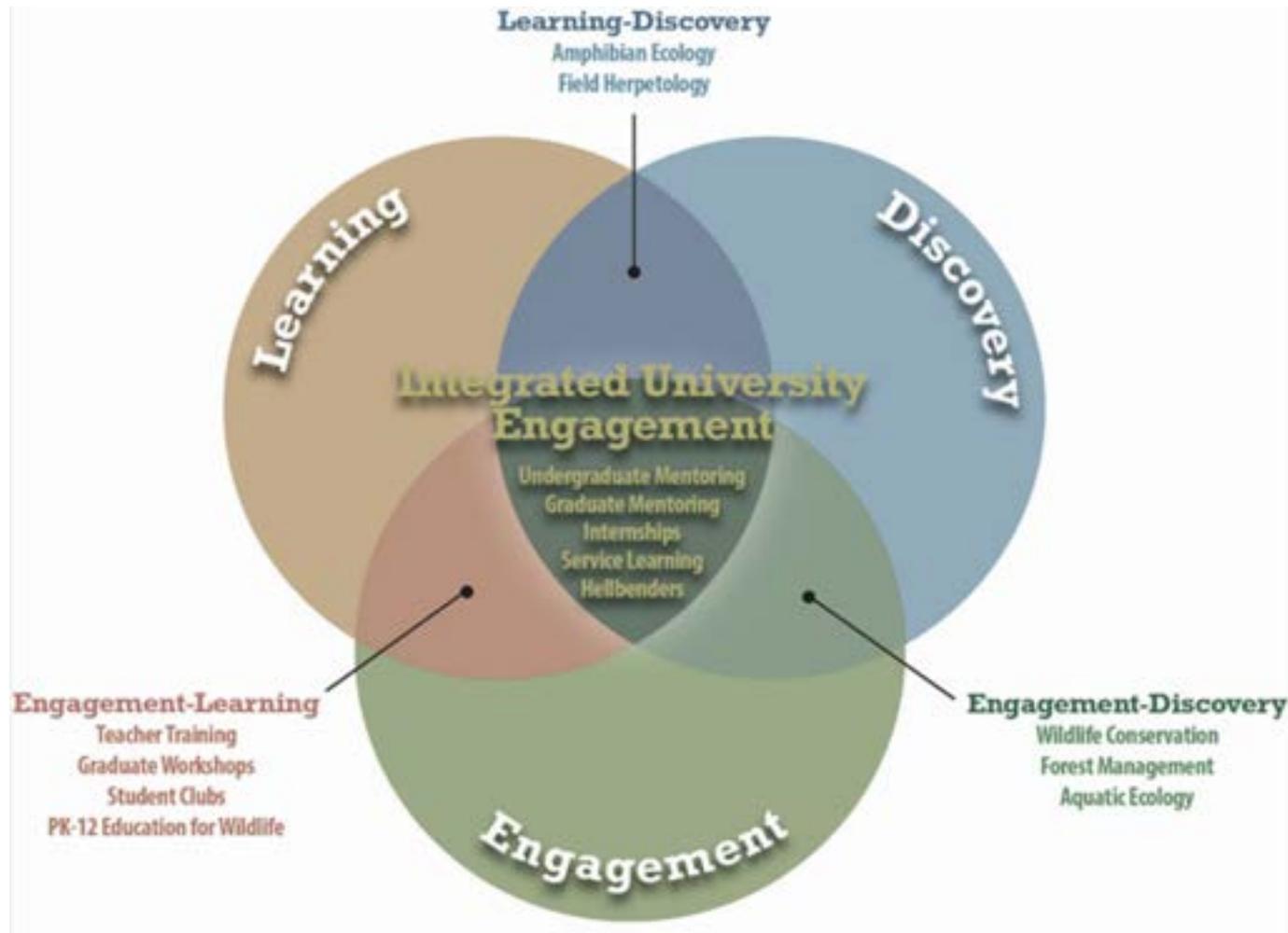
- Formative, Process, and Outcome Evaluation
- Annual Survey
  - 3 target audiences
  - Assess changes in knowledge, attitudes, and behaviors
  - Significant changes in awareness of campaign and familiarity with messages
    - Watch message most effective
    - Recommended more emphasis on death and injury statistics
- Media Attention
- Reciprocal Partnerships
- Students
- Publications (articles, books, book chapters)
- Promotion on Scholarship of Engagement

**SCHOLARSHIP OF ENGAGEMENT IS...**

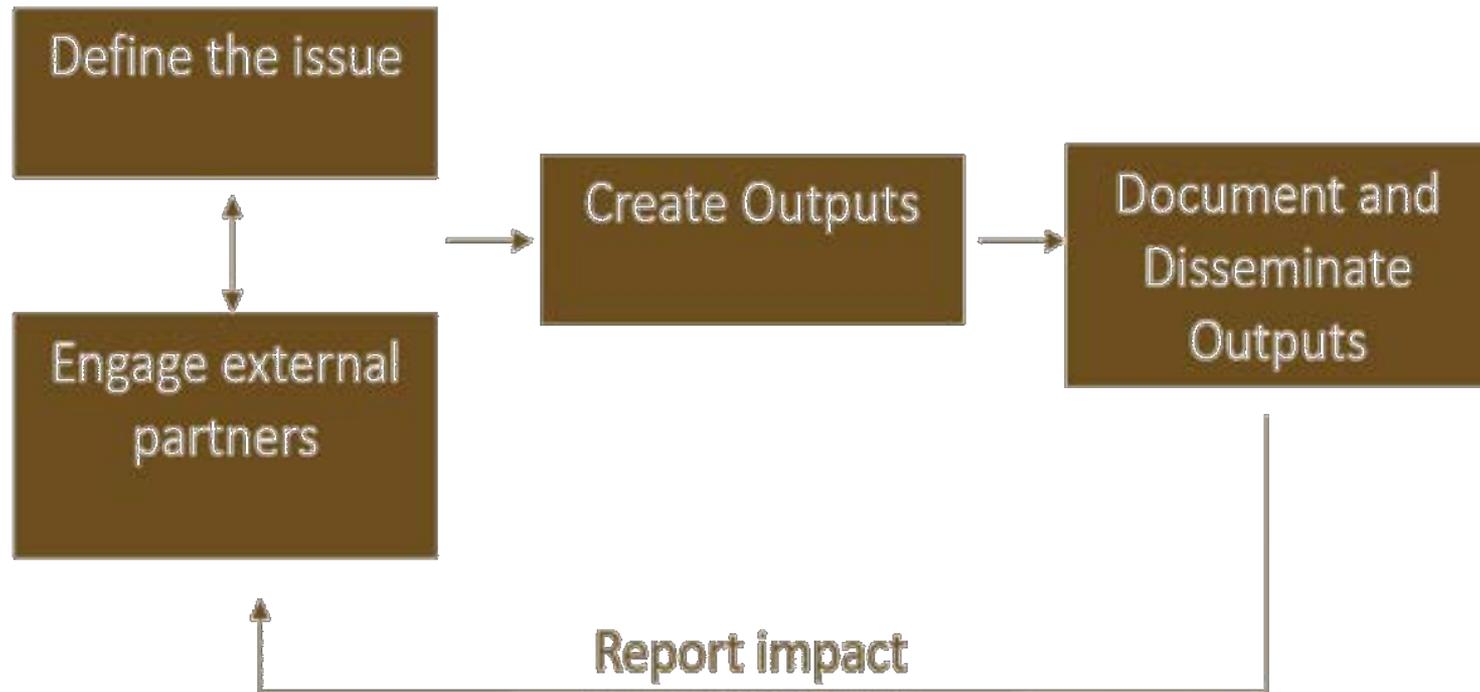
**MESSY  
TIME-CONSUMING  
FULFILLING**

# *INTEGRATING ENGA ACROSS MISSION A*

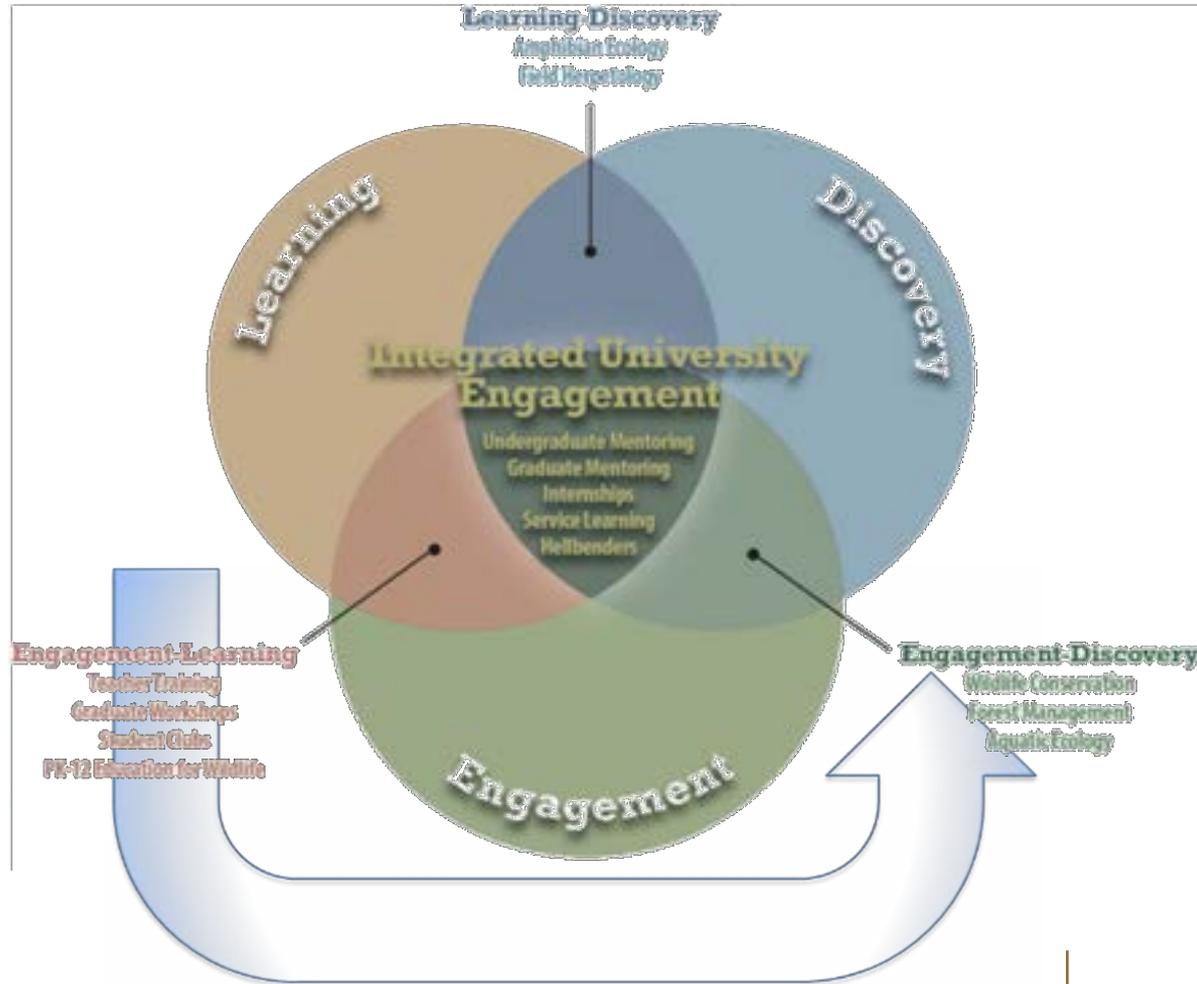
# General Approach



# *Secondary Approach*



# Teaching Engagement Research



# Teaching and Extension

Increased interest in “education” jobs

Poor communication skills

Lack of an understanding of Extension

STEM in schools



# 3D Model Teaching Extension

## Develop the skills

### *Weeks 1-4*

- Extension: history, logic model, program development, delivery

## Design the program

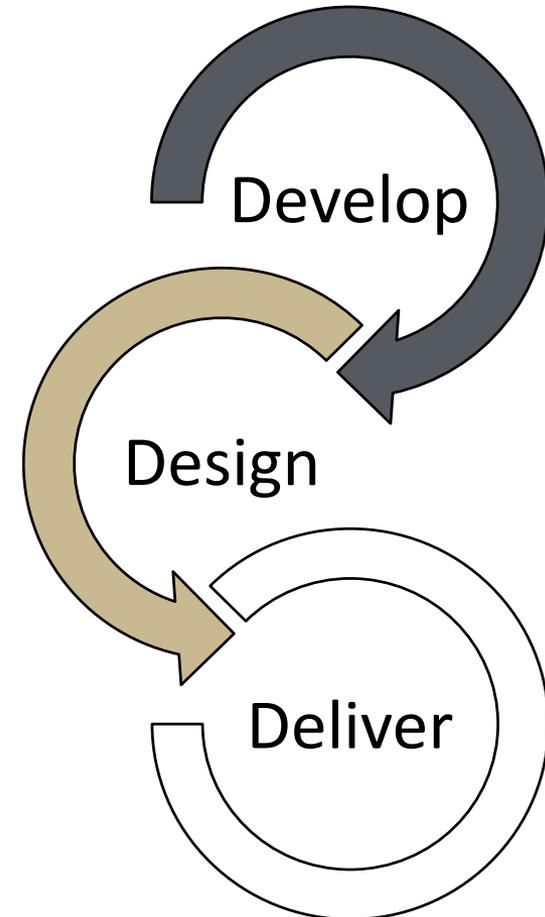
### *Weeks 5-8*

- Develop original program

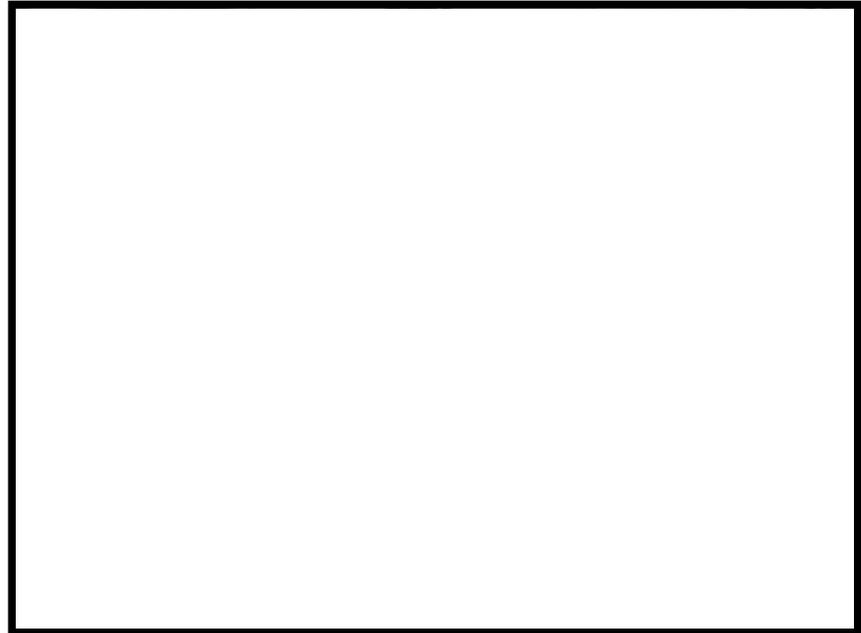
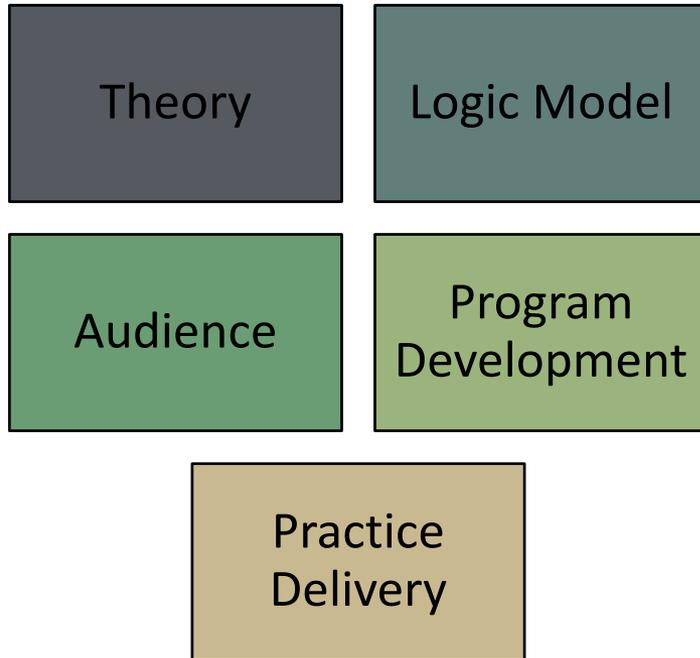
## Deliver the program

### *Weeks 8-15*

- Deliver programs

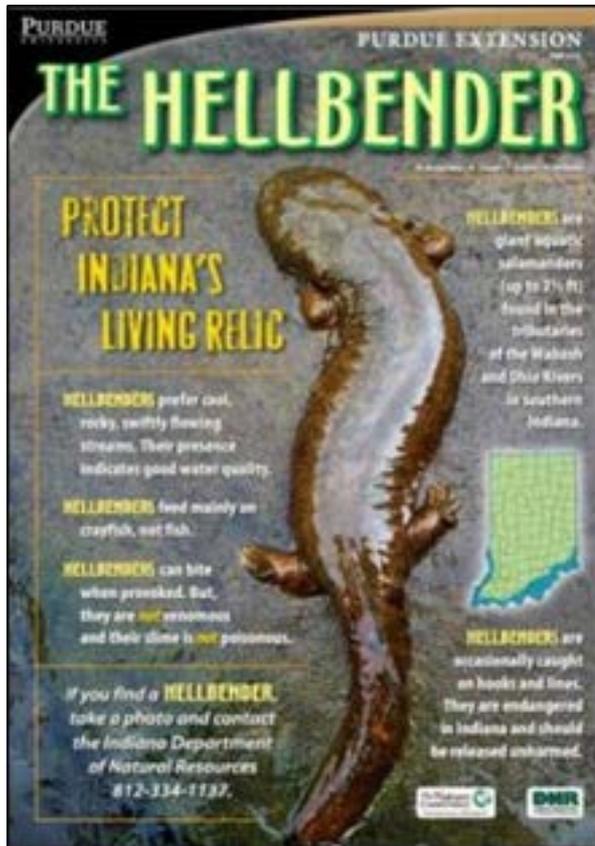


# *3D Model: Develop Skills*



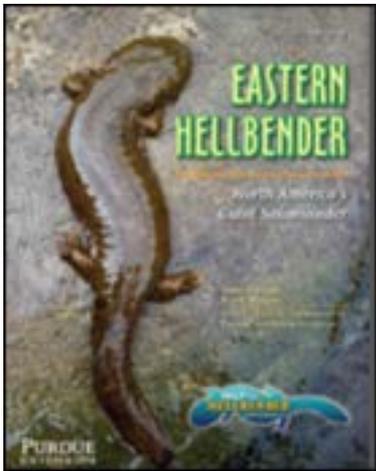
# 3D Model: Design

## General Audience



# 3D Model: Design

## General Audience



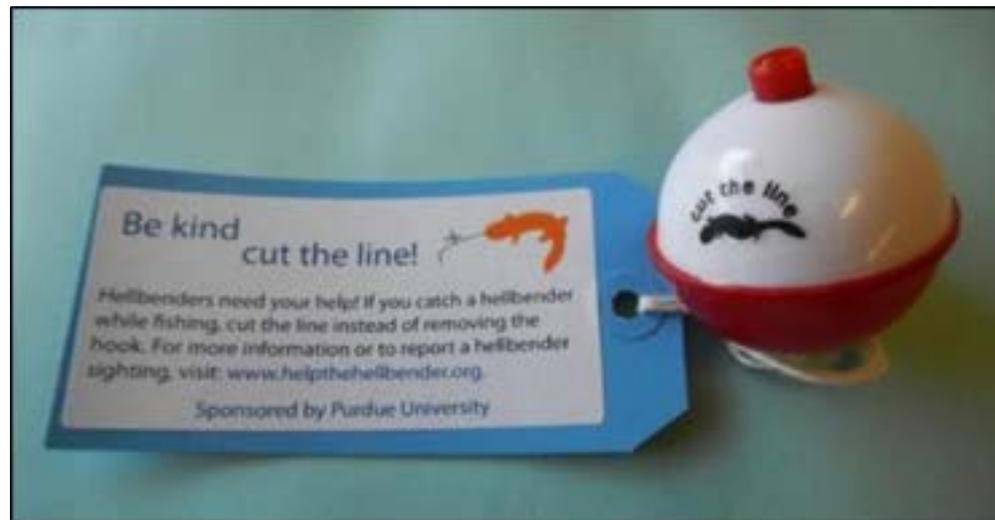
# 3D Model: Design

## General Audience



# 3D Model: Design

Design the content – Anglers



# 3D Model: Design

## Design the content – Kids



# *3D Model: Design & Deliver*

Deliver the Program – Local workshops

**Feast Like a Hellbender**

4 Programs targeting:

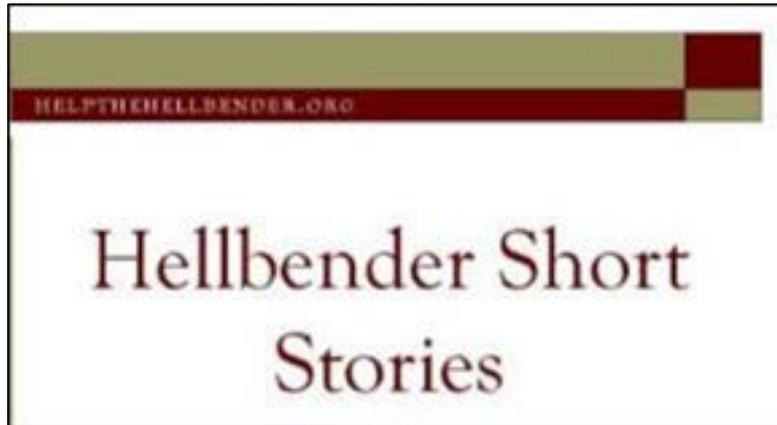
Anglers, teachers, youth, and farmers

School programs

Short stories, art, and mascot

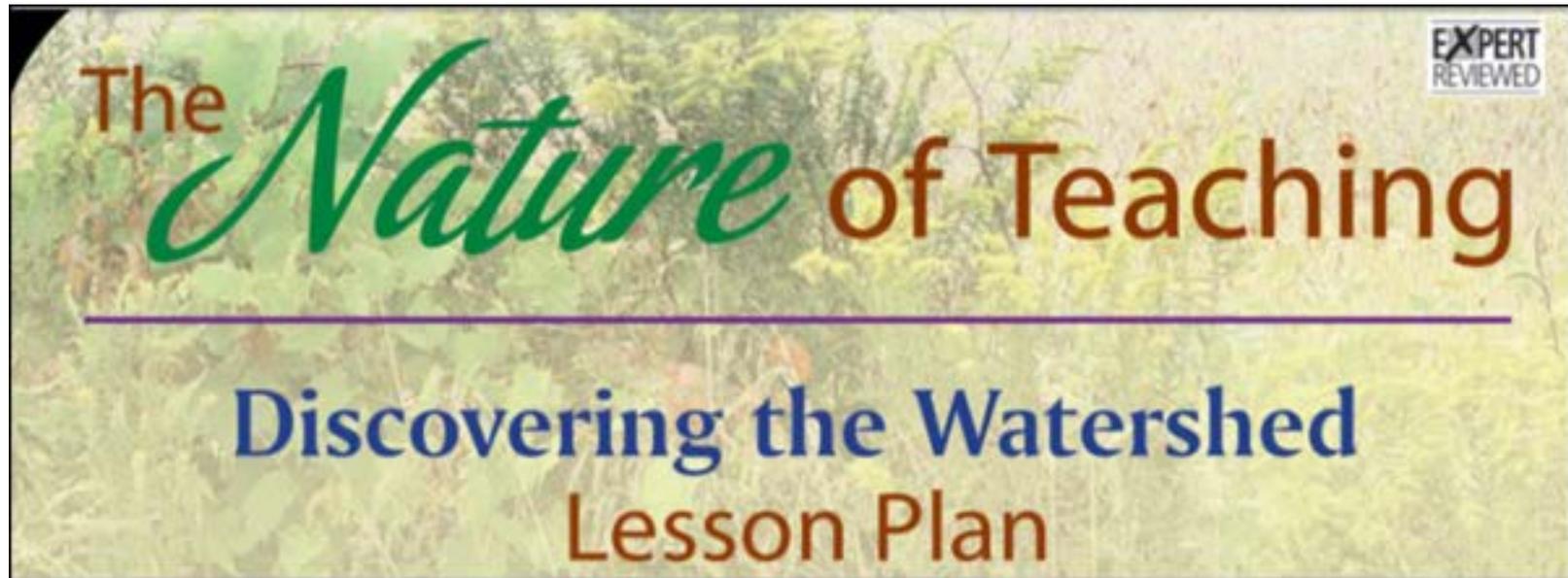
24 schools

3 counties



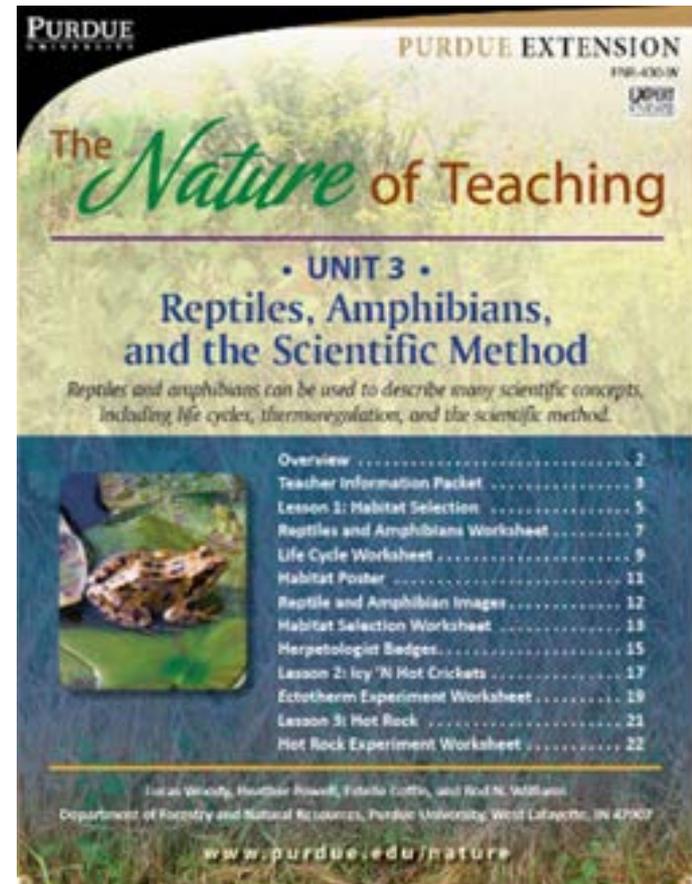
# *3D Model: Design & Deliver*

Design the content – Teachers



# 3D Model: Deliver

- > 80 presentations
- 10 workshops
- 13 peerreviewed pubs

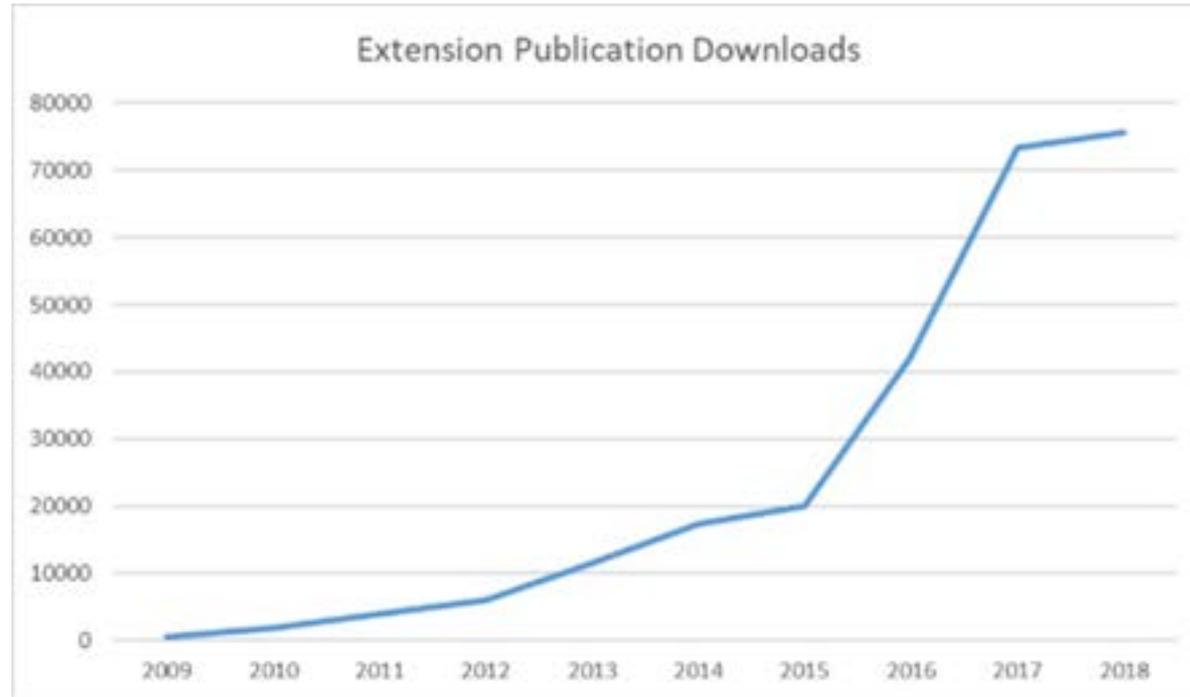


# Scholarly Impact

> 80 presentations

10 workshops

13 peer-reviewed pubs



# Linking Research with Extension & Tea

## Evaluating Extension Programming

- Pre- and post-surveys
- Informs future extension programming

### Service Learning In Natural Resources Classes: Measuring the Impacts on University Students

Linda Stalker Prokopy<sup>1</sup>, Rod Williams<sup>2</sup>  
and Laura Bowling<sup>3</sup>  
Purdue University  
West Lafayette, IN  
Aaron Thompson<sup>4</sup>  
University of Wisconsin  
Stevens Point, WI



Animal Conservation, Print ISSN 1367-9430

### The impact of information and familiarity on public attitudes toward the eastern hellbender

A. Reimer, A. Mase, K. Mulvaney, N. Mullendore, R. Perry-Hill & L. Prokopy  
Forestry and Natural Resources, Purdue University, West Lafayette, IN, USA

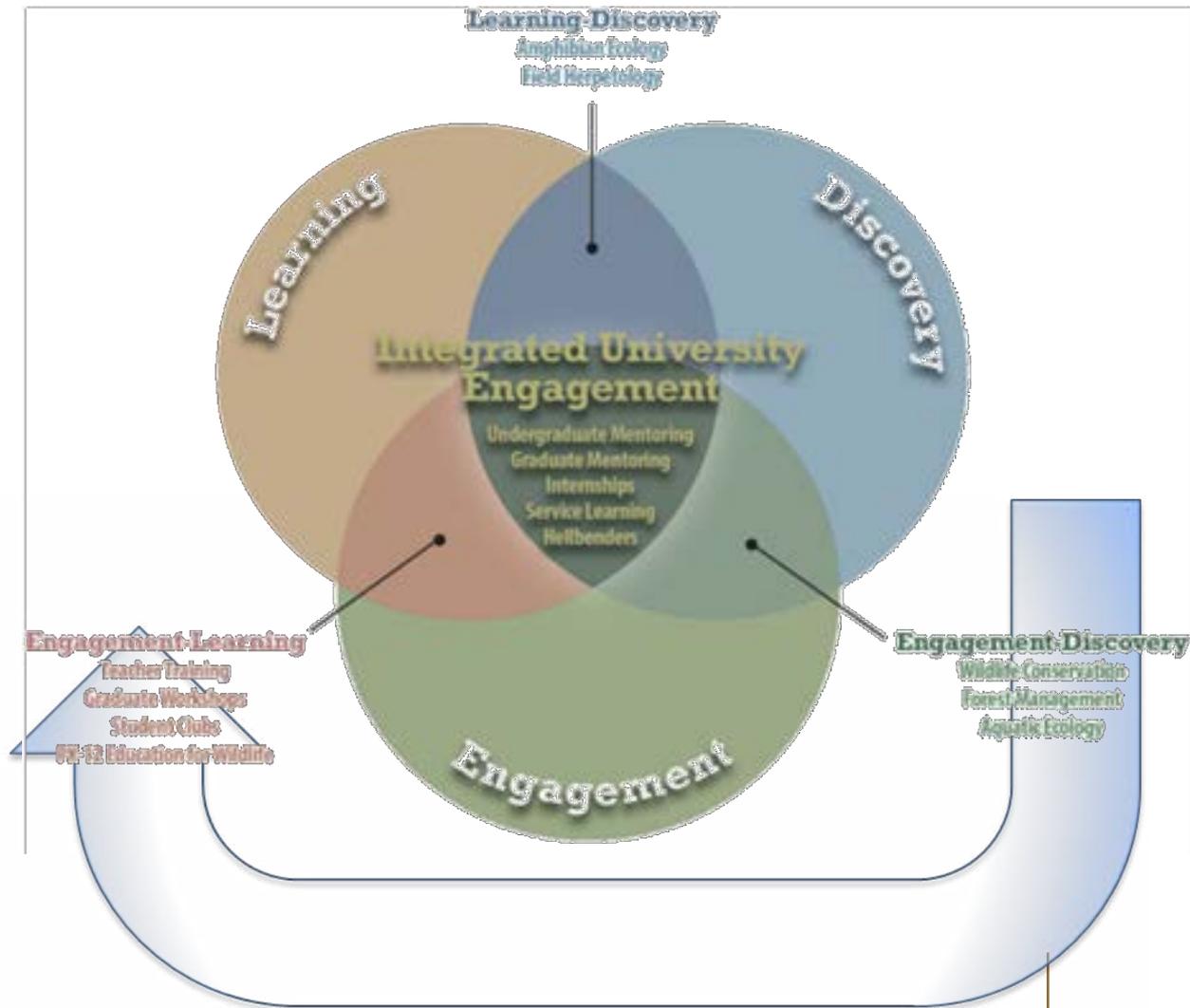
*Human Dimensions of Wildlife*, 19:166–178, 2014  
Copyright © Taylor & Francis Group, LLC  
ISSN: 1087-1209 print / 1533-158X online  
DOI: 10.1080/10871209.2014.853221



## Conserving the Eastern Hellbender Salamander

NATHAN MULLENDORE,<sup>1</sup> AMBER SAYLOR MASE,<sup>1</sup>  
KATE MULVANEY,<sup>1</sup> REBECCA PERRY-HILL,<sup>1</sup>  
ADAM REIMER,<sup>2</sup> LAMIS BEHBEHANI,<sup>3</sup>  
ROD N. WILLIAMS,<sup>1</sup> AND LINDA STALKER PROKOPY<sup>1</sup>

# *It can start with Research*



# Hardwood Ecosystem Experiment (HEE)

- 100-yr study
- 3 Treatments
  - Control
  - Even-aged
  - Uneven-aged
- 3 Replicates



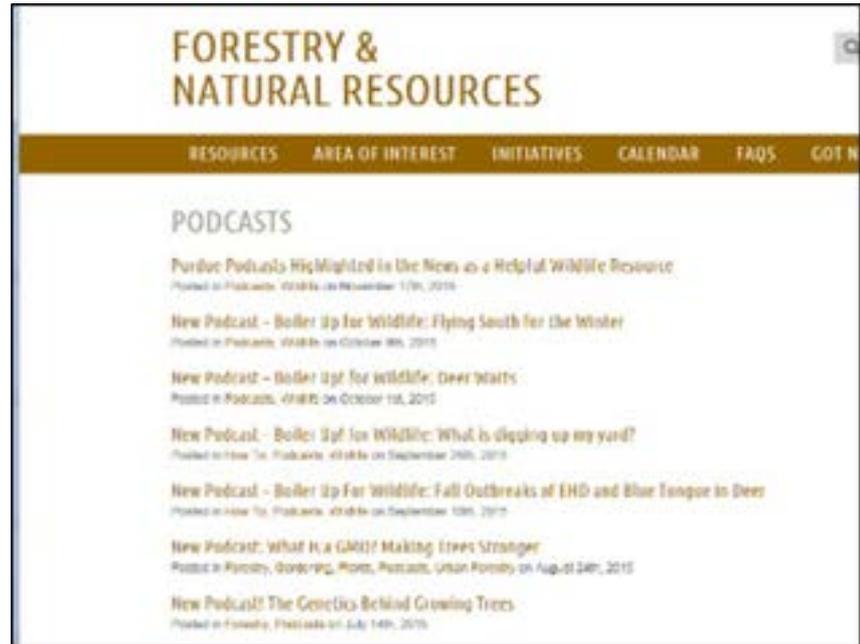
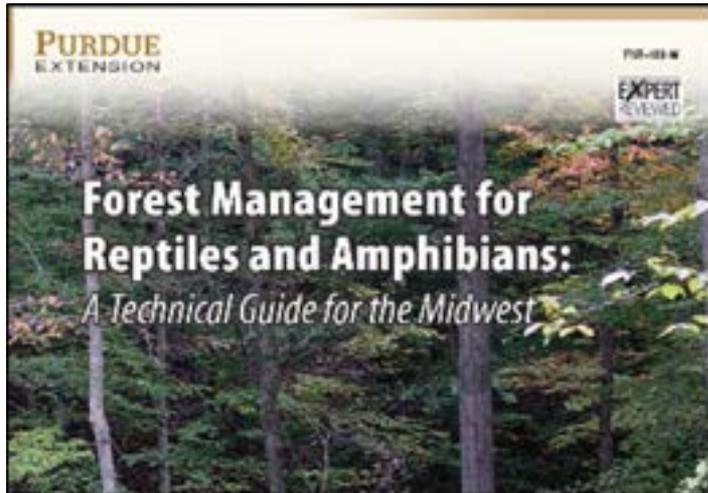
# *Hardwood Ecosystem Experiment*



# *It started with Research*

1. Survival of timber rattlesnakes: investigating individual, environmental, and ecological effects.
2. Effects of timber harvests and silvicultural edges on terrestrial salamanders.
3. Seasonal variance in hematology and blood plasma chemistry values of the timber rattlesnake.
4. Unexpectedly low rangewide population genetic structure of the imperiled eastern box turtle
5. Relatedness and other finescale genetic population processes in a declining forest-dwelling turtle, *Terrapene c. carolina*.
6. Ranavirus infections among sympatric populations of larval amphibians and Eastern Box Turtles (*Terrapene carolina carolina*).
7. Effectiveness of two artificial cover objects in sampling terrestrial salamanders.
8. Seasonal variation in plasma reproductive markers of male and female Box Turtles,
9. Hibernation thermal ecology of *Terrapene c. carolina* within a managed forest landscape.
10. Short-term forest management effects on the long-lived reptile
11. Temporal variance in hematologic and plasma biochemical reference intervals for free-ranging eastern box turtles (*Terrapene c. carolina*).
12. SalaMarker: A code generator for use of visible implant elastomers.
13. Identification of 12 polymorphic microsatellite loci for the eastern box turtle
14. A survival estimate of Midwestern adult eastern box turtles using radio telemetry.

# Ended with Extension and Teaching



# *Focus Groups ~~With~~ Indicators*

- Lack of professional training in natural resources
- Lack of knowledge to use outdoor space
- General mistrust of the outdoors and forestry





## About

*The Nature of Teaching* includes three signature programs: Wildlife, Health and Wellness, and Food Waste. Each signature program provides standards-based lesson plans free as a downloadable PDF. Lesson plans are classroom ready for grades K-5. *The Nature of Teaching* also offers professional development workshops for teachers focused on science, the environment, and getting students connected with nature.



WILDLIFE

 LESSON PLANS

 WORKSHOPS



FOOD WASTE

 LESSON PLANS

 WORKSHOPS



HEALTH & WELLNESS

 LESSON PLANS

 WORKSHOPS

# *Program Model*

Formal Classes/professional development

- Nature of Teaching Mammals
- Nature of Teaching Birds
- Nature of Teaching Forest Ecology

2-Day workshops



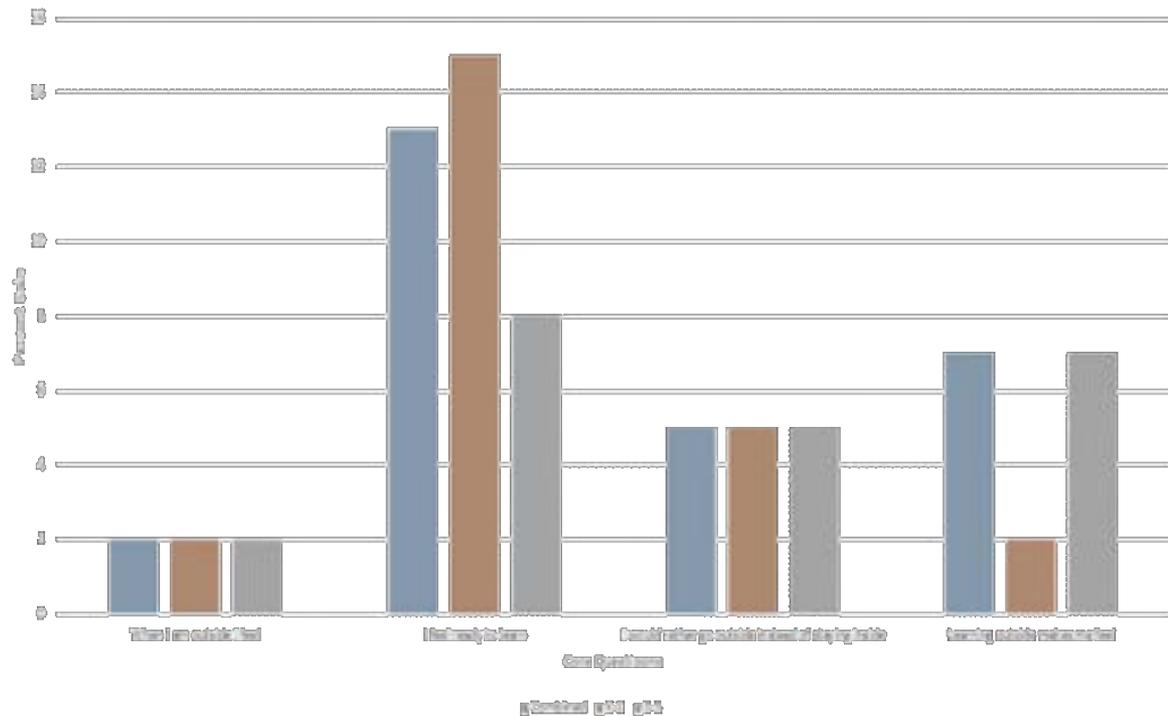
# Scholarship with Impact

Impact Metrics:

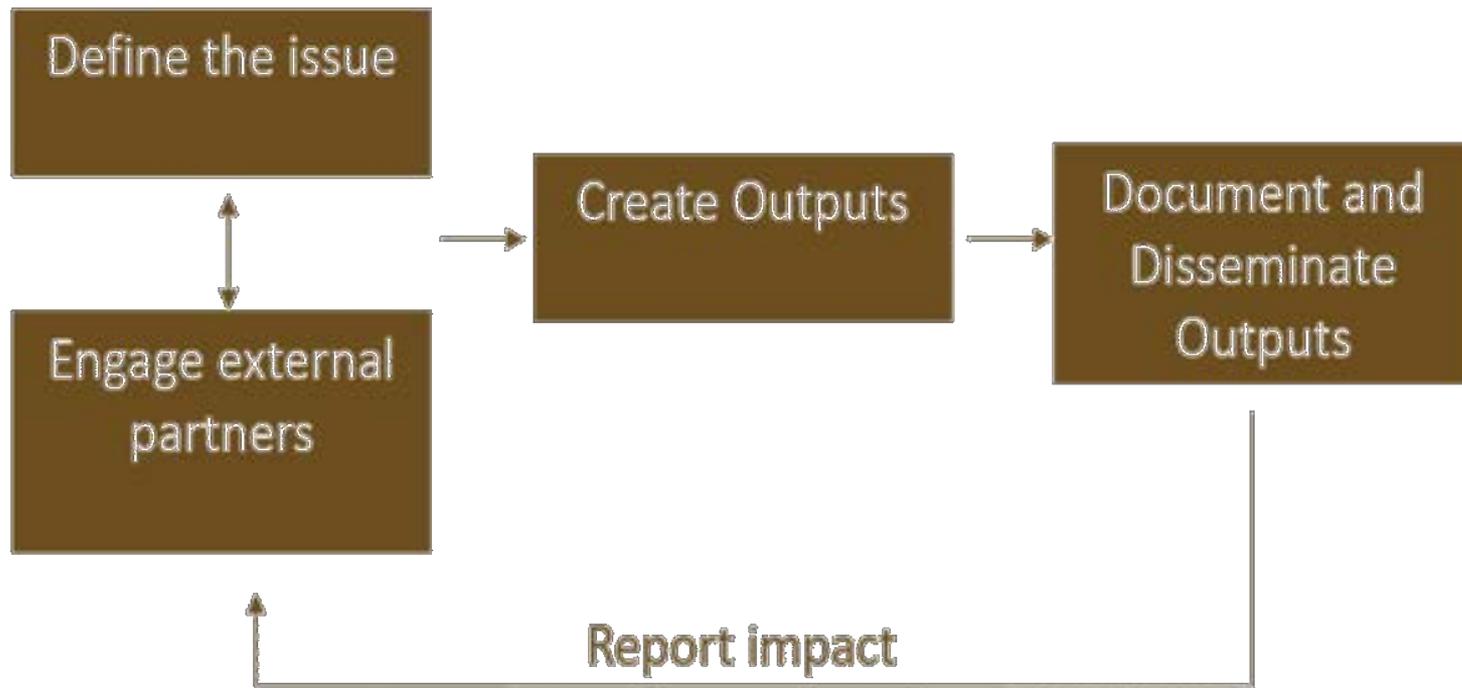
Publications  
(#, downloads,  
citations, etc.)

Workshops  
(knowledge,  
implementation,  
change, etc.)

## Percent Gain in Positive Attitudes



# *P&T Documentation*



# *Define the Issue*

## Engaging Students with Extension

**Issue:** The 1999 Kellogg commission reported on the future of state and land-grant universities. That report highlighted that an engaged institution must: **enrich students' experiences by bringing research and engagement into the curriculum and offering practical opportunities for students to prepare for the world they enter.** In response to these needs, Dr. Williams developed five Extension initiatives to engage university students with Extension: #1 an innovative service learning course, #2 an Extension internship program, #3 a formal Extension course for graduate students, #4 graduate student Extension workshops, and #5 connecting graduate student research with Extension.

# *Engage Partners*

Dr. Williams collaborated with numerous scholars (in addition to undergraduate and graduate students) on his Engaging Students with Extension signature program that resulted in the outputs below, including: Dr. Linda Prokopy (FNR), Dr. Laura Bowling (AGRY), Dr. Aaron Thompson (HLA), Mr. Brian MacGowan (FNR), Mr. Jarred Brooke (FNR), Dr. Steve Abel (Associate Provost of Engagement), and Dr. Fred Whitford (BTNY).

# Create scholarly outputs

*Peer-reviewed Extension Publications* (\*post-tenure; total downloads 41,886)

1. \*Busse, B., and R.N. Williams. 2017. *The Edible Issue*. *In review*.
2. \*Pedigo, L., M. Hunt, K. Zuber, and R.N. Williams. 2016. *Health Benefits of Connecting with Nature*. FNR-539W
3. Williams, R.N., and R. Chapman. 2009. *Animal Diversity and Tracking*. FNR-417-W (2,150 downloads)
4. Williams, R.N., and R. Chapman. 2009. *Food Webs*. FNR-418-W (3,715 downloads)
5. Chapman, R., and R.N. Williams. 2009. *Natural History of Indiana Mammals*. FNR 413 (36,001 downloads)
6. Williams, R.N., and R. Chapman. 2009. *Becoming a Tooth Sleuth*. FNR-408

## *Webster*

*The Nature of Teaching*, 2010-2016 Totals: 18,175 visits, 35,766

## *Exhibits for Small (10,000) Audiences*

1. *Tooth Sleuth*, Imagination Station 2014
2. *Tooth Sleuth*, Children's Museum of Illinois 2013
3. *Tooth Sleuth*, Clay County Science Day 2013
4. *Tooth Sleuth*, Oak Park Conservatory 2013
5. *Tooth Sleuth*, Explorium of Lexington 2013
6. *Tooth Sleuth*, Hannah Lindahl Children's Museum 2013

## *Workshops and Programs*

1. 2017 Nature of Teaching: Maine Wildlife Curricula. Augusta, Maine. (n=10)
2. 2016 Nature of Teaching: Maine Wildlife Augusta, Maine. (n=8)
3. 2016 Nature of Health and Wellness. West Lafayette, IN. (n=17)
4. 2016 Nature of Health and Wellness. Kokomo IN. (n=14)
5. 2016 Nature of Health and Wellness. SIPAC. (n=16)
6. 2016 Nature of Health and Wellness. Davis PAC. (n=18)
7. 2015 Salazar, K., and R.N. Williams. Building State-wide environmental Education programs. EEAI annual conference. Chesterton, IN
8. 2015 Bringing natural resources to K-8. Tippecanoe School Corporation Elementary Science Committee. Lafayette, IN (n=25)
9. 2011-2014 It's a Gene Thing. Purdue zipTrip. Participants: (n=35,500)
10. 2014 Junior Master Naturalist, Herpetology Workshop. Clinton County Soil and Water Conservation District. (n=20)
11. 2014 Mind Boggling Event, Tippecanoe County Parks Dept. Lafayette, IN. (n=30)
12. 2014 Conservation Field Day, Snake Ecology. Tippecanoe County Parks and Water, Lafayette, IN. (n=300)
13. 2013 The Nature of Service Learning. Lafayette, Indiana (n=75)
14. 2013 Forest Education. Martell Forest, West Lafayette, IN. (n=60)
15. 2013 Animal Diversity. Tippecanoe Co. Mayflower Mill (n=120)
16. 2013 Wildlife Tracking Workshop. Annual Conference for Indiana Master Naturalists. West Lafayette, IN

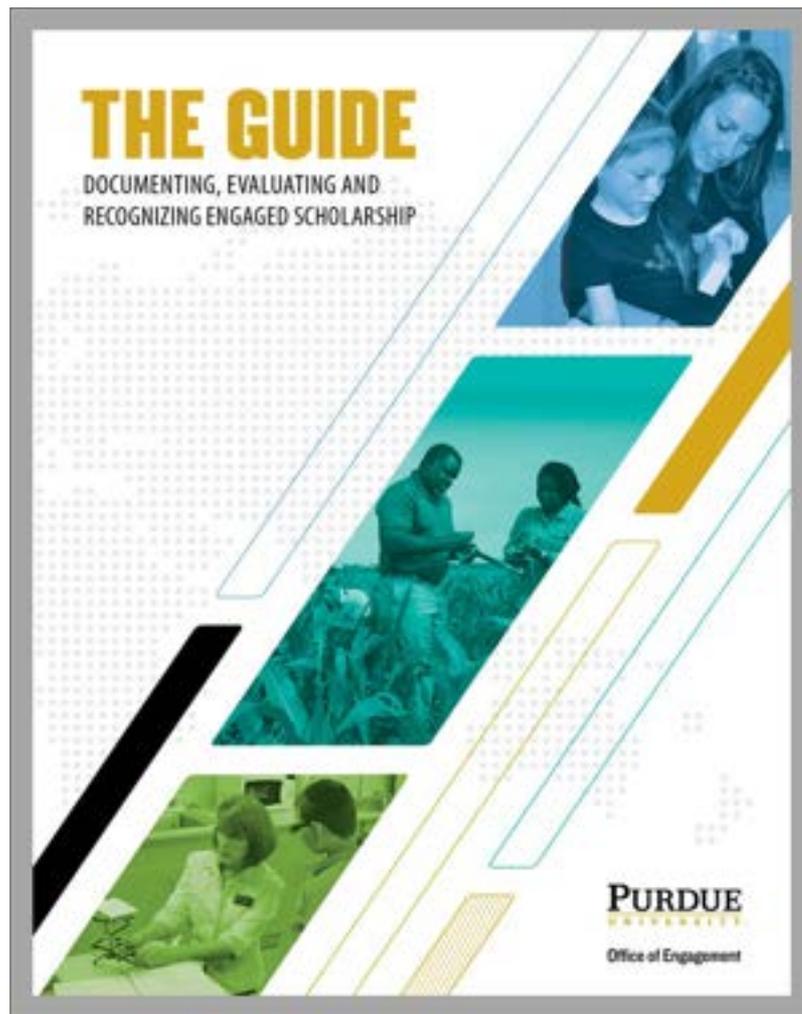
# *PK12 Natural Resources Education*

## Impact

A total of 56 students have taken this service learning course and all have participated in developing and delivering Extension programs. **Fifty-one percent of the student's have produced a numbered, peer-reviewed Extension publication.** Those publications are lesson plans and used in the Nature of Teaching teacher workshops (that have trained hundreds of teachers). The nine publications students co-authored have been **downloaded 275,268 times.**

In 2015, Dr. Williams was awarded the **College of Agriculture Kohls outstanding undergraduate teaching award.** In 2016, he was awarded the prestigious **University-level Charles. B. Murphy Award for Undergraduate Teaching** for his scholarship and integration of Extension with undergraduate learning. In 2017, he was awarded the **Office of Engagements Service Learning award** for his innovative Service Learning course. In 2018, Dr. Williams was inducted into **Purdue's Book of Great Teachers.**

# Engagement Resource



# *Table of Contents*

## Chapter 1

- The Evolution of Engagement

## Chapter 2

- Drafting Impactful Dossiers

## Chapter 3

- Evaluating Engagement Dossiers

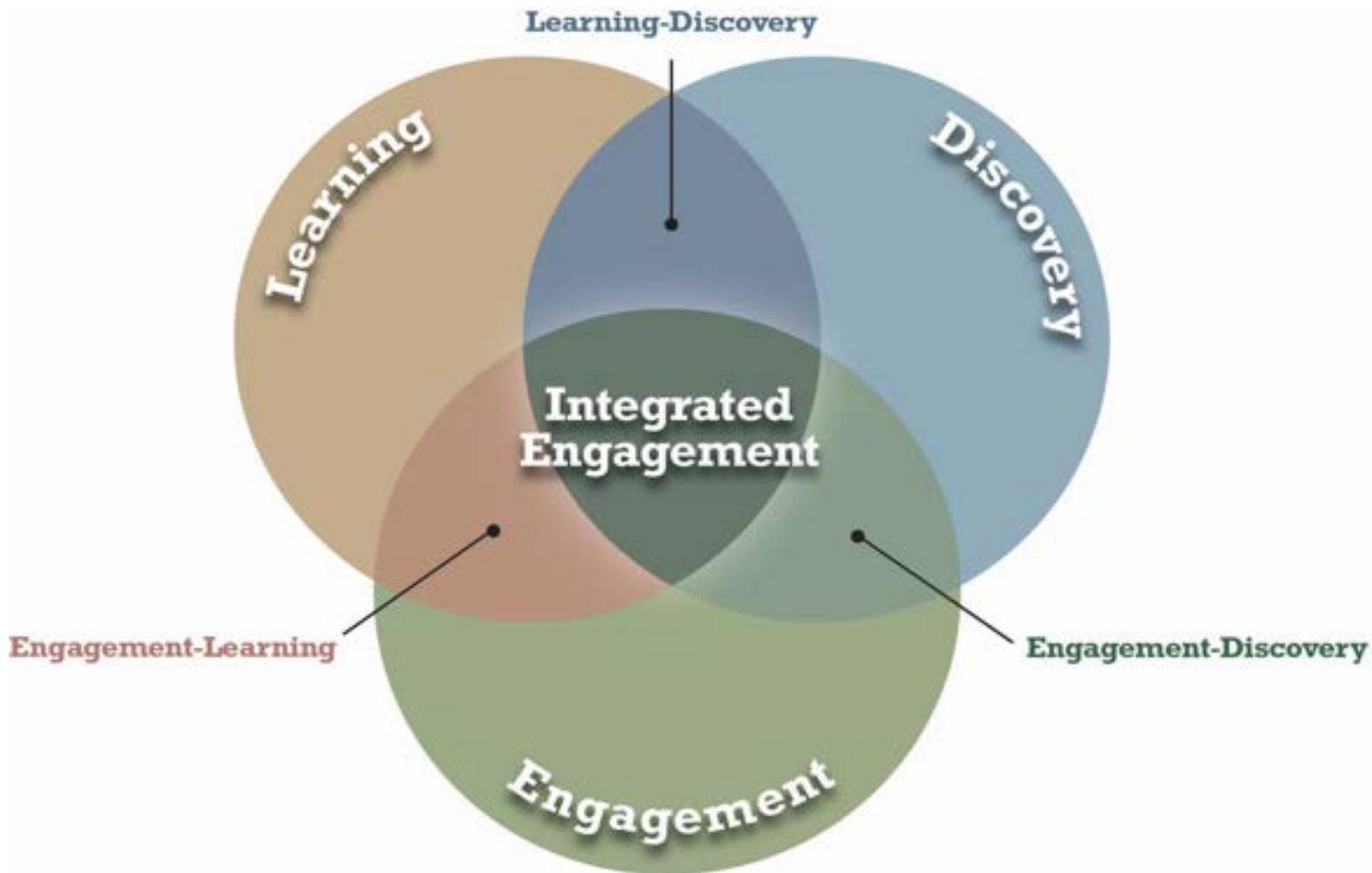
## Chapter 4

- Awards and Resources

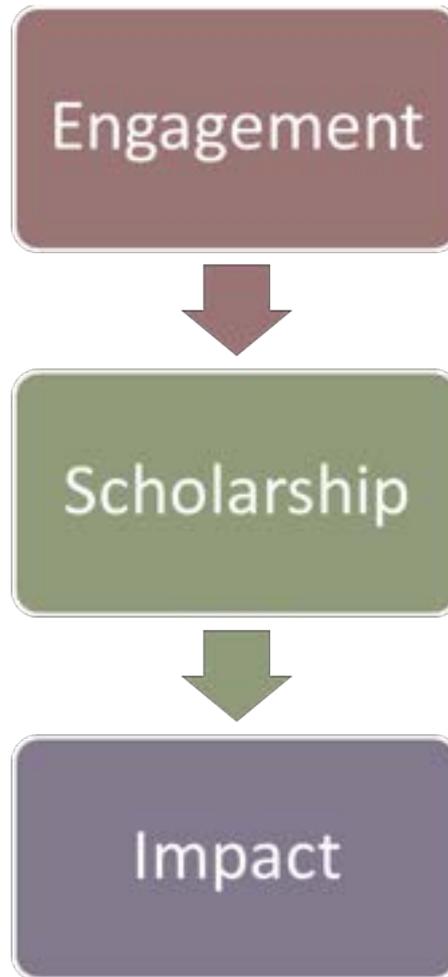
# *Drafting Engagement Dossiers*



# *Framing the Dossier*



# *Evaluating Engagement Dossiers*



# Evaluation Questions

## EXPERTISE

How is the work viewed within the scholar's field?\*

## INNOVATION

How does the work build upon the knowledge, research, or practice in the field?\*

How does the work respond to an identified need?\*

Did the work result in the development of new information, methods or approaches?\*

## REPLICATED

Was the methodology clear and sound?

Are results valid and reliable?

Were limitations discussed?

## DOCUMENTING

How has the work been shared with colleagues?\*

How has the work added to the body of knowledge?\*

Where is the work accessible?\*

## REVIEWED

How has the scholar's work been shared: published articles, academic presentations, exhibition of work, creative performances?\*

How has the scholar's work resulted in the receiving of an award, honor by peers?\*

How has the scholar's work resulted in testimonials, letters of recommendation, or adaptations that affirm the value of this work?\*

## IMPACTFUL

What actions did the intended audience take as a result of this work?\*

What measurable impacts occurred as a result of the effort (e.g., knowledge gained, information shared, behavior changed)?\*

How were the developed materials or processes subsequently used by others?\*

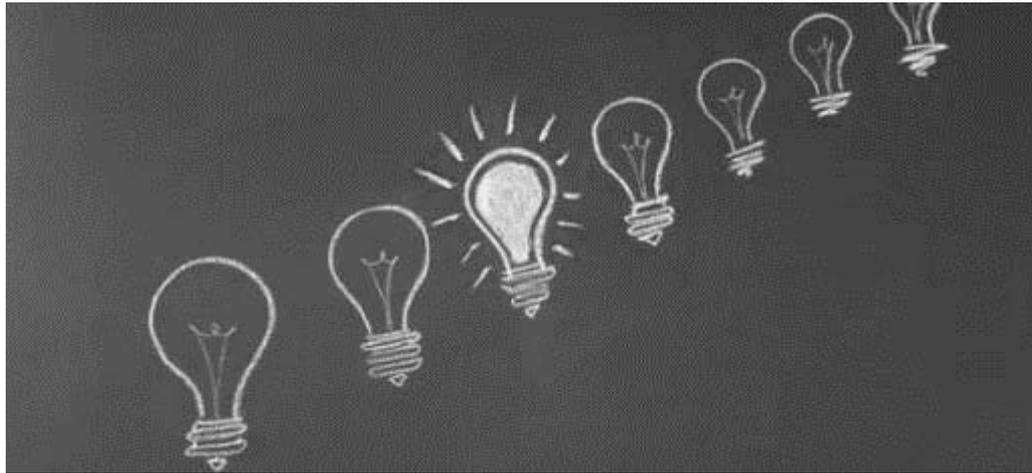
## ASSESSING SCHOLARLY WORK

# Resources and Recognition

- Service Learning
  - Five fellows per year
  - Designated community partners
  - Up to \$5K project support
  - Support for instructional design content and assessment
- Scholarship of Engagement Fellows
  - 12 fellows systemwide
  - \$1.5K per project
  - Complete scholarship of engagement project
  - Mentor review of promotion documents
- Societal Impact Fellows
  - Up to 12 per semester
  - \$1.5K per project
  - Focus on SI identity and development of a grant proposal
- Awards & Recognition
  - Faculty Engagement Scholar
  - Faculty Engagement Fellow
  - Corps of Engagement
  - Service Learning
  - Christian J. Foster Award for contributions to K-12 STEM education
  - Jefferson Awards (Multiplying Good)



# *Transformation Has Begun*



2010–2014

17

Individuals promoted and/or  
tenured fully or partially on  
the basis of engagement

2015–2023

133

Individuals promoted and/or  
tenured fully or partially on  
the basis of engagement

*THANK YOU*