



PURDUE
UNIVERSITY

LIBRARIES

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**MAKING AN
IMPACT!**

Advancing Student- Centered Learning at Purdue University

SCUP's 49th Annual, International
Conference

July 15, 2014

AT SEA IN A DELUGE OF DATA

CHRONICLE OF HIGHER EDUCATION – JULY 2014



“Employers said they need workers who can collaborate with colleagues to solve problems and who can engage in thoughtful analysis and integrate contextual organizational details rarely found online.”

Allison Head & John Wihbey

Campus Partners & Collaborating on Course Redesign

Changing Role of Libraries and Librarian Contributions

Evaluating Learning Spaces to Support Active Learning

Identifying Elements for Developing Faculty Learning Community

LEARNING OUTCOMES

ACADEMIC LIBRARIES TODAY

CHANGES IN HIGHER EDUCATION & TECHNOLOGY

Rapidly changing technologies

Increasing amounts of digital information

Scholarly publishing

Teaching and learning changes

Scholarly communication

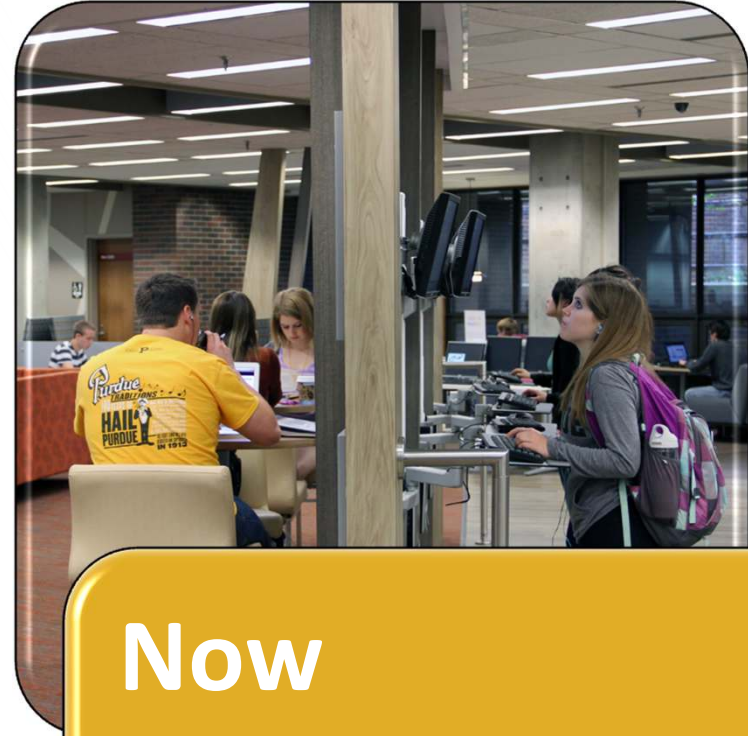
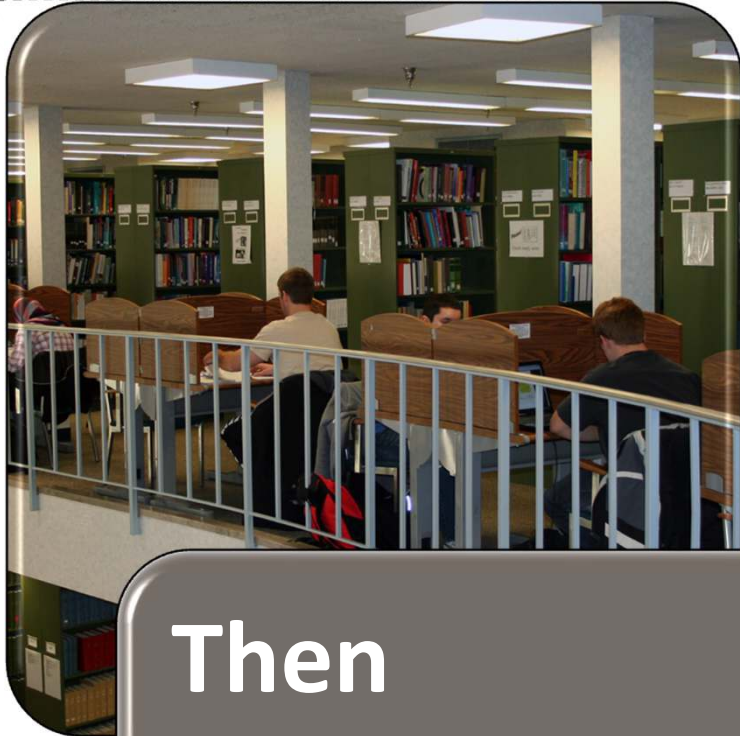
Federal agencies

Increasing calls for accountability



ACADEMIC LIBRARIES TODAY

CHANGES IN HIGHER EDUCATION & TECHNOLOGY



Then

- Library as study space
- Course reserves and assignments
- Collections role

Now

- Library spaces redesigned for teaching and learning
- New models for collections and access to resources
- Instruction in library use is radically different

EVOLVING ROLES FOR LIBRARIES

TRANSFORMING & REDEFINING

- Moving from **collections-centric** to *engagement-centric*
- Library spaces as *learning* spaces



Look Outward

- University needs, initiatives, motivations

Interact

- Partner
- Collaborate

Think!

- Scale
- **Scale**
- **SCALE**

“An engaged liaison seeks to enhance scholar productivity, to empower learners, and to participate in the entire lifecycle of the research, teaching, and learning process.”

-Jaguszewski & Williams

LESSONS LEARNED

ADMINISTRATIVE VIEWS

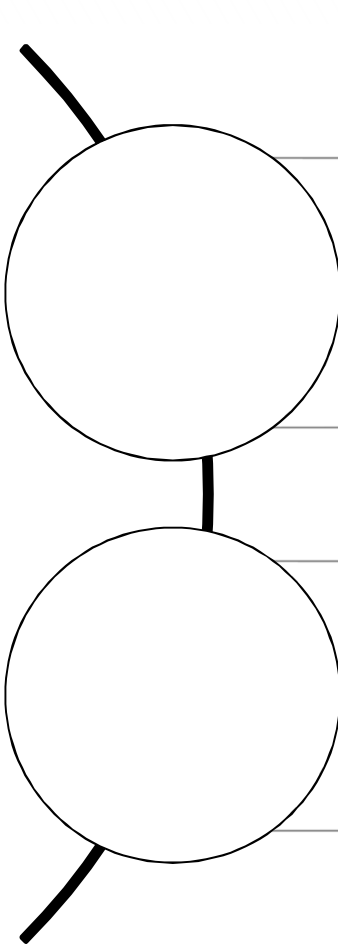
LIBRARIAN AS INSTRUCTIONAL PARTNERS

INSTILLING RESEARCHED-BASED PEDAGOGIES

- Research-based best-practice pedagogies
- Information literacy expertise
- Interdisciplinary
- Collaborative
- Scholarship of teaching and learning research



Librarians working with IMPACT, 2012



How do librarians on your campus support institutional goals for learning?

How could you work with librarians on your campus to maximize their support for learning?

**“LEVERAGING
LIBRARIAN EXPERTISE”**

A PARTICIPANT EXERCISE

WHAT IS IMPACT?

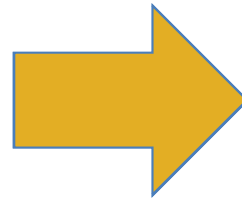
INSTRUCTION MATTERS: PURDUE ACADEMIC COURSE TRANSFORMATION

OUR MISSION

Redesign foundational courses by using research findings to create student-centered, teaching and learning environments.



Faculty Redesign Teams

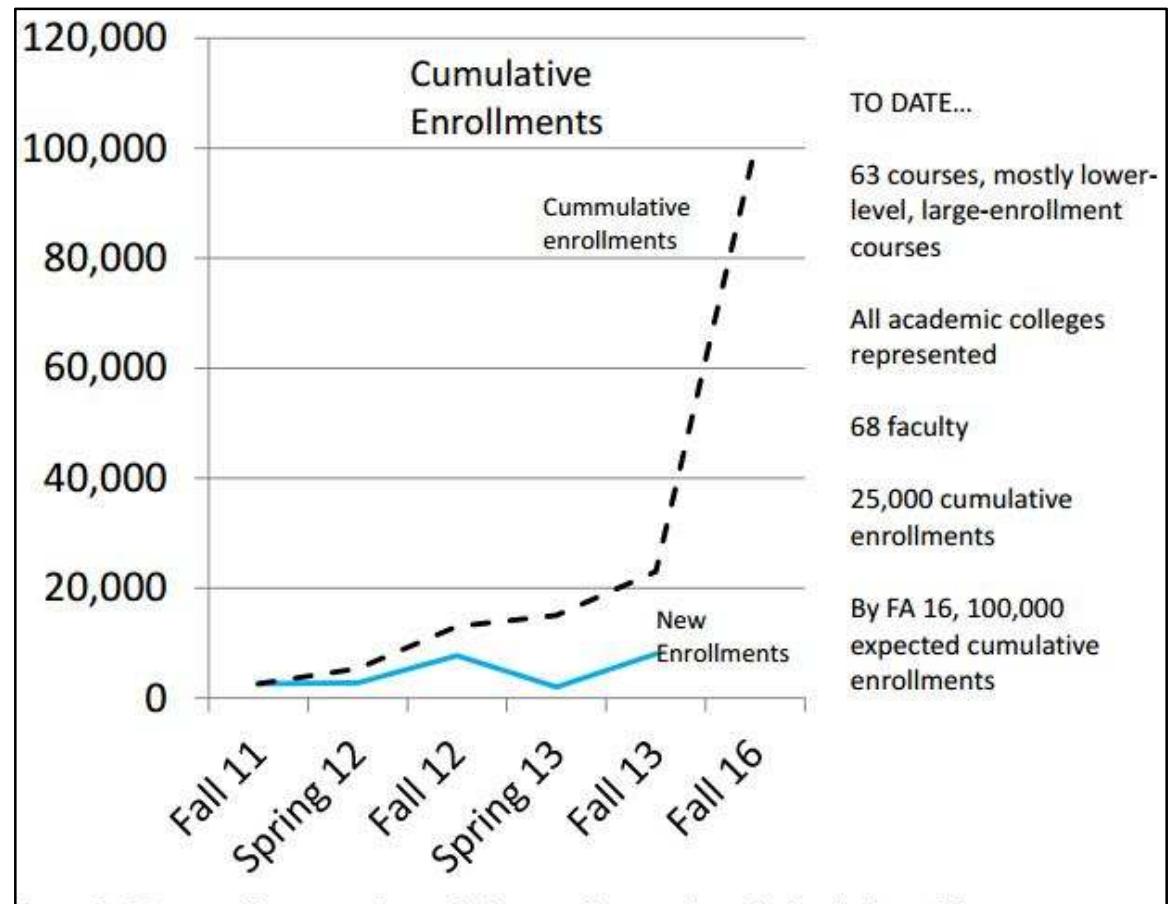


Student-centered learning
in the classroom

CAMPUS CONTEXT

COURSES & ENROLLMENT

- Purdue Move: Change the way learning occurs
- Redesign 60 courses a year
- By Fall 2016 at least half of the undergraduate population will be enrolled in an IMPACT course
- Redesign 180 core courses



PURDUE CORE CURRICULUM

Purdue Core Curriculum

Implemented
in 2012

Over 250 courses
approved for the
foundational
outcome

Foundational
& Embedded
Levels

43 of the core
courses have
been through
IMPACT



Purdue Libraries holds **LEARNING** as one of three major strategic goal areas.



Purdue University has Big Move to **CHANGE THE WAY LEARNING OCCURS**

Natural for Purdue Libraries to be support and take a lead in the campus-wide course redesign effort via

IMPACT

**STRATEGIC
ALIGNMENT**

WITH INSTITUTION

COLLABORATIVE ENTERPRISE

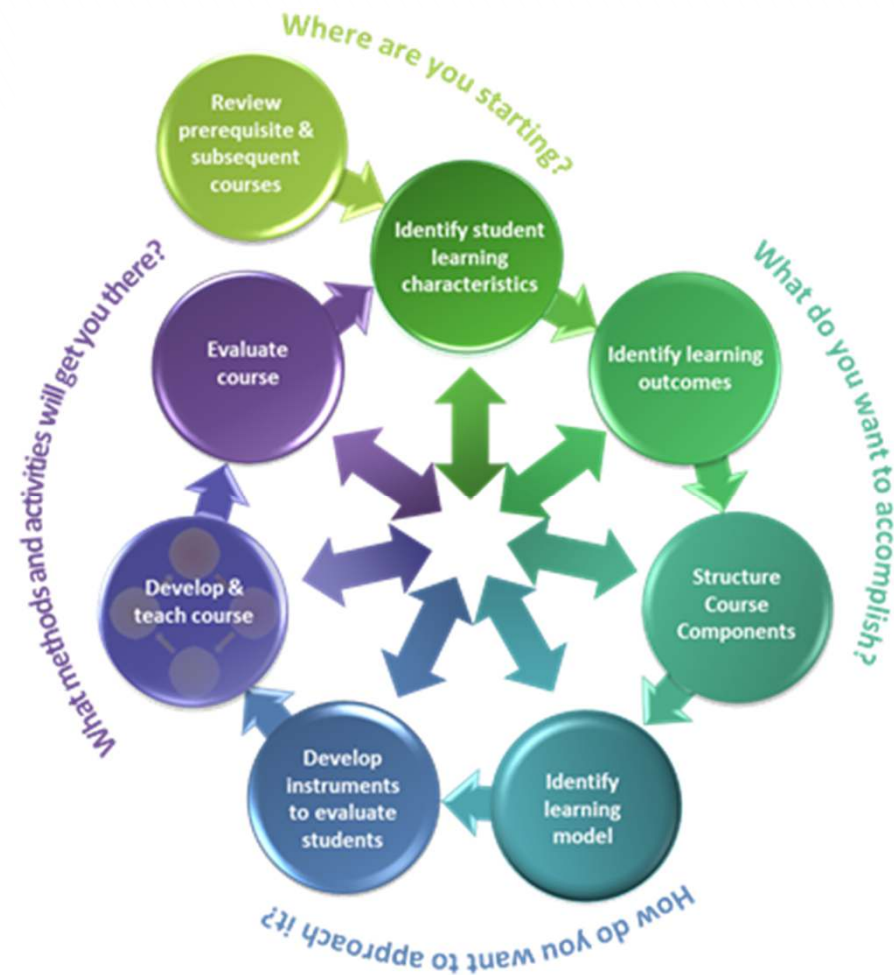
ROLE OF THE UNITS INVOLVED IN THE COLLABORATION

- Financial Support: Provost's Office, President's Office, and Extended Campus
- Support Staff: CIE, Libraries, ITaP, and Extended Campus
- Program Assessment: DLRC and CIE
- Scholarship of Teaching and Learning: DLRC, CIE, Libraries, and ITaP



IMPACT CURRICULUM

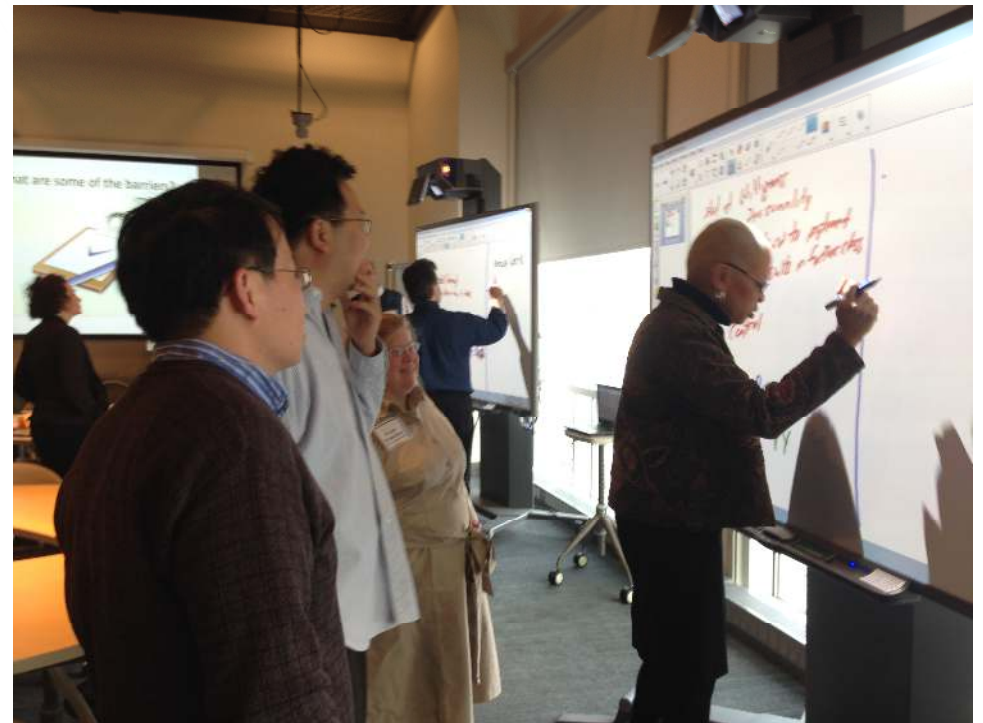
- 14 weekly meetings of instructors and support team members
- Flipped model
- Teams meet independently bi-monthly



IMPACT LIBRARIANS

SUPPORT & EXPERTISE

- Team of 3 people that typically includes a librarian work with a group of 3 classroom faculty
- Librarians alternate between team leaders, secondary team members or consultants
- Librarians provide pedagogy support and information literacy expertise





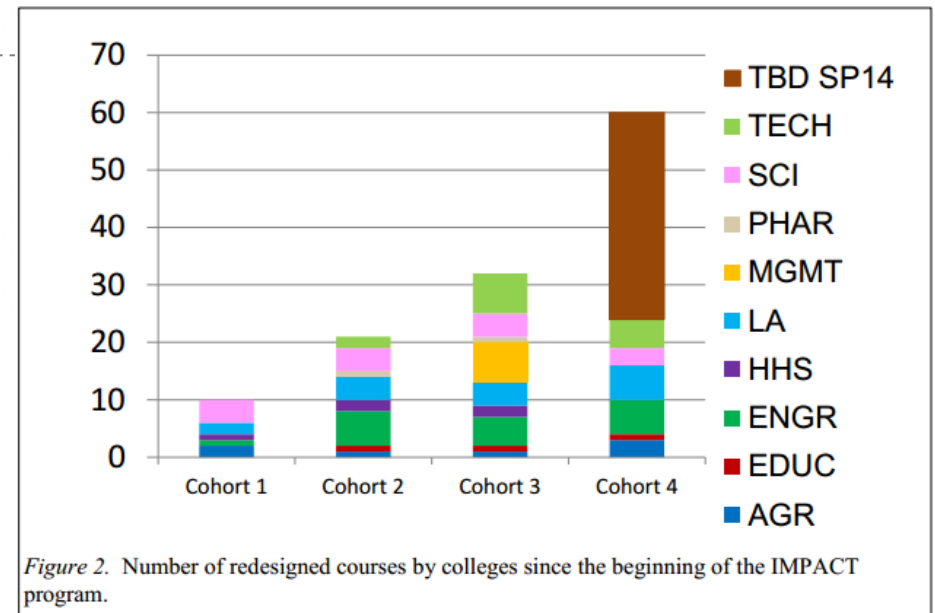
- **Biology** - course refocused from having students complete information literacy “tasks” to asking students to **develop** and **explore** a personal question that can be answered by biology
- **Communication** - course shifted from a “library/research day” focused on decontextualized skills to more **integrated** information literacy approach, with topics sprinkled throughout the semester
- **Environmental engineering** – new module added where students learn to **locate** and **analyze** city data to inform environmental problems and environmental design solutions

EXAMPLES OF IL SUCCESSSES

REFOCUSING & CONTEXTUALIZING

ANALYZING THE IMPACT

- 119 courses transformed since 2011
- 10 of 11 colleges participating
- 29 course transformations in progress for Fall 2014
- Average course grades are higher in the presence of a high student-centered learning environment



Exam Scores Before and After the Redesign for the Three Redesign Models.

	Section	Exam 1	Exam 2	Final Exam
Before Redesign Spring 2012	Traditional	74.0	74.7	69.4
	Online	69.3	66.8	62.1
After Redesign Fall 2012	Traditional	84.4	87.8	82.2
	Online	79.1	82.8	80.1
	Hybrid	81.6	83.0	78.8

Statistics taken from STAT 113 Redesign by Ellen Gundlach

IL & IMPACT COURSES

FOCUS ON INFORMATION LITERACY

- 49% had IL focus (n = 22)
- Of the 49%:
 - 27 % added IL component for the first time (n = 6)
 - 32 % IL became a major focus (n= 7)

(from cohorts 1, 2 & 3; 45 courses):



SCHOLARSHIP OF TEACHING & LEARNING

INVESTIGATIONS

- **Statistics**

Using social networking media to enable students to become savvy consumers of statistics

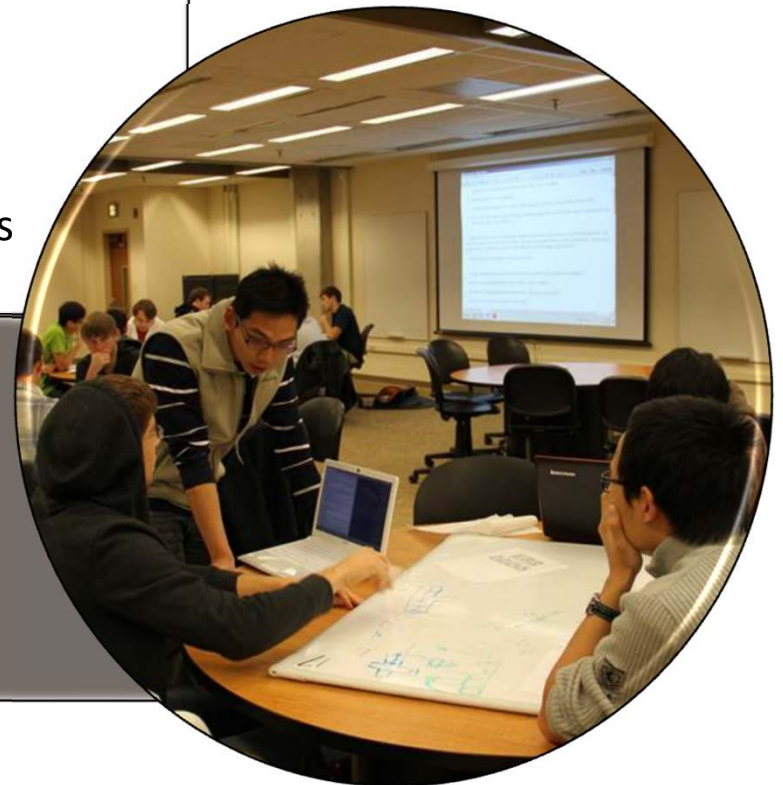
- **Biology**

Refocusing information literacy as using biological information to answer personally relevant questions

- **Honors**

Influencing students to be multi-dimensional thinkers seeking to collaboratively change the world

Examples





Draw the learning space you would envision for 60 students.

Draw the learning space you would envision for 180 students.

What technologies would you use in this environment?

Would they differ between a 60 and 180-person classroom?

“VISIONING” ACTIVE LEARNING SPACES

A PARTICIPANT EXERCISE

PHYSICAL SPACE

RESEARCH QUESTIONS



What technology is being used in IMPACT classrooms during courses that are a part of IMPACT?



In IMPACT courses, how does the learning climate in IMPACT classrooms compare with the learning climate in non-IMPACT classrooms?



How do pedagogies in IMPACT courses differ in IMPACT rooms versus non-IMPACT rooms?



How is technology being used in IMPACT classrooms during courses that have been redesigned through IMPACT?

PHYSICAL SPACES

NOTABLE FINDINGS



Active Learning Spaces

- Students in IMPACT courses in active learning spaces spend **significantly less time** in lecture activities and **more time** in problem-solving, higher-order thinking, and student collaboration than those in non-active learning spaces



Learning Climate

- Student perception of learning climate is **higher** in active learning spaces versus non-active learning spaces



Technology

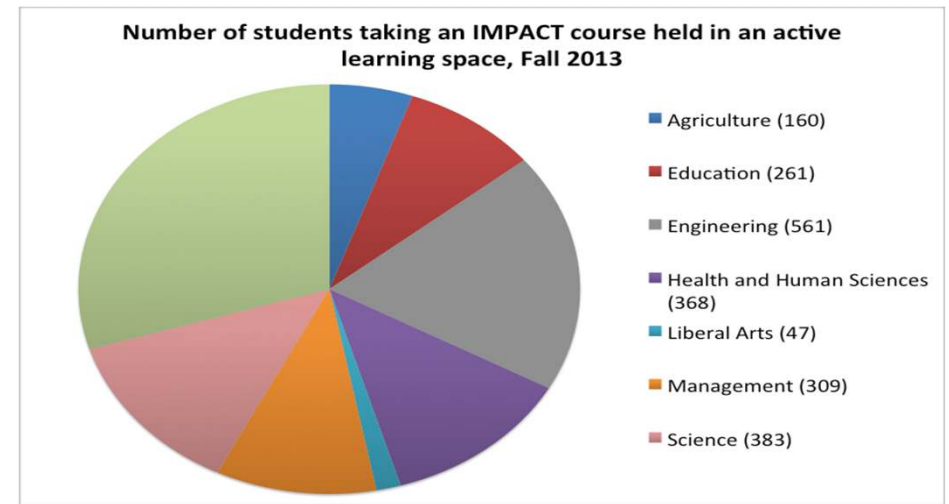
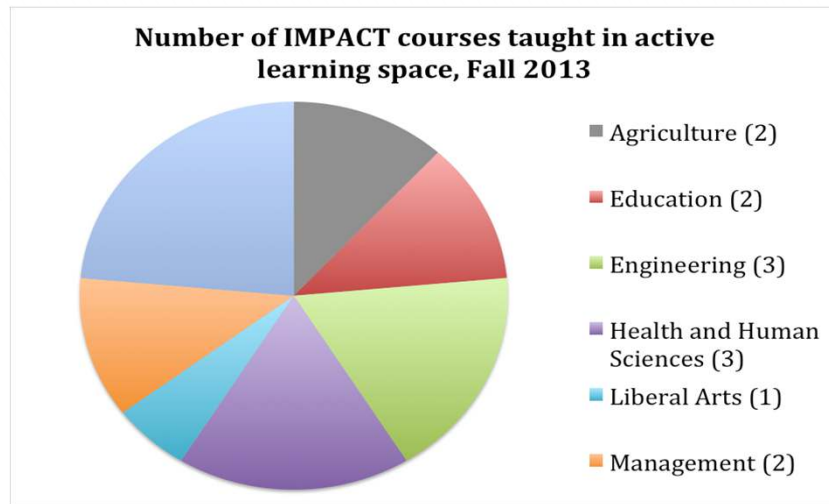
- Students use technology to participate in student-to-student interaction during face-to-face contact 61% of the time in active learning spaces, versus 41% of the time in non-active learning spaces

IMPACT CLASSROOMS



STUDENT IMPACT

COURSES, STUDENTS, AND STUDENT PERCEPTIONS



Student perceptions of active learning spaces in IMPACT courses, Spring 2013.
On a 7-point likert scale (with 7 being the highest)—

Question	M	SD
"The classroom physical space met my needs for learning"	5.52	1.52
"The instructor utilized classroom technologies which further engaged my interest in the class"	5.66	1.36

ACTIVE LEARNING

ENGAGEMENT & COLLABORATION

- A teaching/learning methodology characterized by student's' engagement in activities that require *greater responsibility* for the knowledge they gain.
- Is **collaborative** and is premised on students and instructors being *mutually responsible* for the knowledge and academic success as an outcome of learning activities.
- **Enhanced** IMPACT curriculum transformation
- **Enriched** learning environment based on the close proximity between teaching and study space.



ACTIVE LEARNING CENTER

COLLABORATE | SUPPORT | GIVE

- Combines 6 libraries into 1
- ***A **collaboration** between the Office of the Provost, Purdue University Libraries, College of Agriculture, College of Engineering, College of Science and College of Technology, the ALC facility will be the hub for the IMPACT Program and "changing how learning occurs", one of the ten Purdue Moves as recently cited by President Daniels.***

Collaborative Learning Halls



- ❑ One 465-seat lecture hall
- ❑ One 325-seat lecture hall & theatre
- ❑ One 225-seat lecture hall & theatre
- ❑ One 180-seat collaborative lecture hall for small teams
- ❑ One 120-seat collaborative lecture hall for large teams
- ❑ One 90-seat lecture hall

Collaborative Classrooms



- ❑ Two 108-student rooms
- ❑ One 90-student room
- ❑ Two 72-student rooms
- ❑ One 60-student room
- ❑ Seven 50-student rooms
- ❑ Six 40-student rooms

Active Learning Center

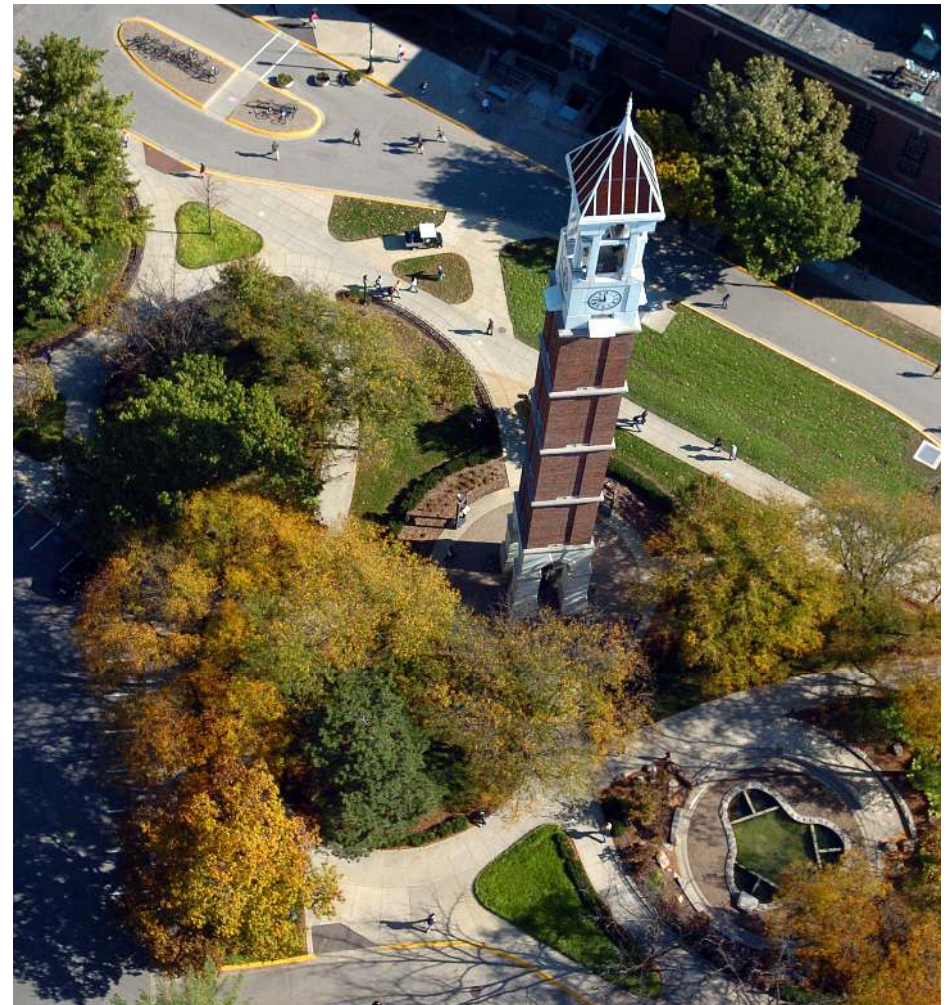
teaching and learning with **IMPACT**



LESSONS LEARNED

SUPPORTING STUDENT-CENTERED LEARNING

- ❖ Assessment; Office of the Provost
- ❖ Registrar
- ❖ Institutional Review Board
- ❖ Space Management
- ❖ ITaP for Tech Teaching and Learning





What is the role of libraries in your institution? As partners?

How can/do you facilitate partnerships on your campus?

Where does active learning happen on your campus?

DISCUSSION

DEVELOPING & EXPANDING STUDENT-CENTERED LEARNING INITIATIVES

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