## **2025 Festival of Teaching and Learning Awards**

## Blue Sky Award for Excellence in Interdisciplinary and Inclusive Pedagogy

#### Melanie Beasley, Anthropology, College of Liberal Arts

#### **Generating 3-D Scans of Bone Fragments**

Students generate 3-D scans of animal bone fragments for a DOD grant proposal about using AI for bone identification. Students learn various skills related to forensic anthropology: photography, bone identification, and how to generate a 3-D scan of a bone. This is an outside-the-classroom learning opportunity that gives students experience working in a team, shows them the process of project design for a grant, and provides skills beyond listening to passive lectures. It has been a successful way to engage students with course material to develop skills more directly related to their individual majors.

## Stuart White, Biological Sciences, College of Science

#### The Wobble Bot Project

The "wobble bot" project involves integrating STEM disciplines to explore genetics, natural selection, and species change over time. It uses vibrating robots that students design based on inherited traits, motorize, and then run through a series of survival of the fittest competitions. Survivors then compete for mates and "produce" the next generation of wobble bots. Students use what they learned from round one design thinking and survivability to create the next generation of wobble bots with best fit traits. Throughout the project, students integrate math, science, engineering and technology in natural ways.

#### Jacob Adler, Biological Sciences, College of Science History, Ethics, and Genetics Across Disciplines

In the science course The Gene and Human Society, students undertake an interdisciplinary creative project involving history, ethics, and genetics. After visiting various museums and archives for experiential learning on the history of genetics in the state, students research and create unique projects like paintings, crochet displays, websites, posters, and games, showcasing historical scientific events and their global impact. Peer reviews are conducted based on a holistic rubric by the students and the instructor. The course culminates in a gallery walk where the community engages with students and their creative works.

## Jason Ware, John Martinson Honors College The Wabash Murals Project

This project conceptualizes community engagement as experiential pedagogy that facilitates measurable learner and community impact via undergraduate scholarship, public art, and community enhancement. HONR 461 and HONR 499 students created work that became the Wabash Murals, as well as articles and a film. The goal of this work is to facilitate public response to community enhancements, such as murals, pocket parks, and various improvements to the built environment.

## **IMPACT Festival of Teaching and Learning Recognition**

## **Student Integration**

Beatriz Castro (faculty lead), Ayush Bansal, Gabriella Conjelko, Alana Diedrick, Carla Hernandez, Samantha Johnson, Wojciech Kielbus, and Madison Munoz, Biological Sciences, College of Science \*\*

### LearnerX Lab

Dr. Castro and undergraduate students from her LearnerX Lab (former students of BIOL 203 & 204) are co-creating customized learning resources for Human Anatomy and Physiology I and II, which serve over 1,000 students annually across various majors. Supported by the Department of Biological Sciences, these resources include interactive ebook chapters, H5P-based homework (e.g., drag-and-drop tasks), and practice quizzes with detailed explanations, all carefully aligned with class notes and learning objectives. Created to replace expensive, generic textbooks, these tools address course-specific needs. Students praised these innovations in end-of-semester surveys, highlighting their value beyond cost reduction.

# Ximena Bernal (faculty lead), Anthony Ilobinso, and Tomas Vargas-Bernal, Biological Sciences, College of Science \*\*

### The PokéBio Project

Using a fictional world and video games to deepen understanding of complex concepts, PokéBio courses use Pokémon to teach students about ecology, evolution, and conservation biology. Students navigate an alternate reality, collecting data and applying biological concepts to learn about ecological and evolutionary processes and develop group projects to delve deeper into biological phenomena within the Pokémon world. By using 3D printing technology, students bring their custom Pokémon creations to life, merging artistic expression with scientific understanding.

## Mary Beth Lencke (staff lead), Karla Cunningham, Maggie Doran, and Nick Quinn, Exploratory Studies

#### **Academic Fellows and Exploration**

The idea of using peers in higher education is nothing new; we solicit their help and expertise for recruitment, mentoring, and advising. How can you harness their wisdom in your own teaching? Exploratory Studies created a program utilizing former students in the first-year course EDPS 105, Academic and Career Planning. These "fellow students" help emphasize the importance of the class in the exploration process while reinforcing class learning outcomes. Academic Fellows combine the best qualities of a TA and a mentor, supporting the instructor, engaging with new students, and becoming an integral part of the classroom structure.

### **Imaginative Activities**

## Josh Polk and Madison Schnurpel, Computer Graphics Technology, Purdue Polytechnic Institute

#### The Miniature Dark Ride Project

This Purdue-themed miniature dark ride project was created by a summer class that included both in-person and online students from across various states. The project uses novel technology for themed entertainment design, addressing the need for hands-on, multidisciplinary learning. Despite limited synchronous meeting time, the team successfully utilized asynchronous planning. The project mirrored real theme park attraction development, offering practical experience in project management and production.

## Michael D. Johnson, English, College of Liberal Arts Grading for Growth

Grading for Growth is an alternative grading framework that uses a hybrid system of a grading contract with a self-assessment measure. This approach emphasizes the learning process and asks students to take agency in their growth and development across the semester. Grounded in Self-Determination Theory, which emphasizes student autonomy, competence, and relatedness, the Grading for Growth framework promotes active learning

and metacognition, aiming to support the transfer of learning. Beyond an alternative approach to assessment, the implementation of this framework also fosters a learning climate that is dynamic, encouraging, and empowering to students.

### Tom Lucas, Engineering Technology, Purdue Polytechnic Institute Photovoice & AI for Data Analysis

Photovoice reflection can be used to capture rich qualitative data, foster inclusivity by giving all students a voice, and address the challenge of analyzing written feedback from large classes. Students document their learning journey through photographs and narratives, reflecting on their nature-inspired design project. Google Gemini efficiently analyzes these reflections, identifying key themes and providing valuable insights. This novel combination of photovoice and AI-powered analysis promotes student metacognition and offers an efficient, inclusive assessment solution.

# Natalie Schneider, Organization Behavior and Human Resources, Daniels School of Business

#### The Gameplay Project

Board, card, and party games can be used to provide students a form of experiential learning, during which they encounter course concepts first-hand. Popular game play operates as a form of teaching pedagogy that uses minute-to-win-it games, escape rooms, tower building, common card games, and more. For example, when learning about forms of organizational justice, students experience minute-to-win-it games where rules are built in to give random teams advantages over others, replicating an unjust environment.

## **Community Impact**

#### Casie Bass, Animal Sciences, College of Agriculture

#### The Equine Project

This project incorporates three high-impact teaching practices, each providing students with direct access to horses: 1) providing collaborative learning opportunities during weekly experiential labs; 2) mentoring course-embedded undergraduate research projects; 3) integrating field experiences, wherein students completed weekly chore sessions. Each of these opportunities allowed the 24 Animal Science majors within the class to obtain valuable equine-specific handling skills that promoted critical thinking skills, teamwork and communication, and deeper engagement with course content.

# Zachary La Fratta, Speech, Language, and Hearing Sciences, College of Health and Human Sciences

#### **Blended Learning and Competency Perceptions**

"Evaluating the Impact of Blended Learning Strategies on Competency Perceptions in Pediatric Audiology Education" explored diverse blended learning components, from traditional didactic instruction enriched by expert guest lectures to student-driven activities like journal clubs and case studies. The of this initiative is to assess how these methodologies influence students' confidence and perceptions of key competencies, and how these perceptions correlate with academic performance. Data is currently being analyzed to determine the effectiveness of these innovative teaching strategies in enhancing understanding and mastery of pediatric audiology.

## Katie Jarriel, John Martinson Honors College

## Spring Break Game Jam

Students taking a course to learn about how to translate research via the medium of video games—an under-utilized application of games—participated in a 48-hour hackathon-style game jam the weekend before spring break, working in teams to produce a video game that translates scholarly research to a broad audience. The 2025 theme is "Climate Crisis: Local Stories, Global Responsibility." All games produced in the Spring Break Game Jam translate research done with local communities around the world who are facing issues related to climate change.

## \*\* Denotes winner of the IMPACTful Audience Choice Award—IMPACT and SoTL Fellows Poster Session

## **Innovation Hub Award for Generative Uses of Al**

### J.T. Eagan, Accounting, Daniels School of Business

### The Griswold Family Tax Case

The Griswold Family Tax Case is an immersive experiential teaching case allowing students to experience a simulated tax client project. Students prepare a tax return using realistic source files such as a W-2 and 1099, interact with the client through email, and even need to call and leave a voicemail explaining technical concepts. The case has been recently enhanced using AI-generated client voice and video which maximizes student engagement

through production value. As a result, students gain practical, hands-on skills in a realworld professional situation.

### **Teaching Academy Award for Pedagogical Innovation**

Krystal Hans, Forensic Entomology, College of Agriculture Cold Case Investigations: Engaging Students and the Community as Citizen Detectives Students work in small groups to research unresolved cases, and the project teaches students research techniques, digital and information literacy, designing infographics and advocacy skills. Students engage with community partners as they work on a cold case investigation, participating in research and generating visualizations for cold cases in preparation to become Citizen Detectives. This project provides a problem-based learning framework to introduce students to the concepts of investigations and research techniques using cold cases, while providing a thorough understanding of the consequences of violent crimes beyond the crime scene.