Academic Innovation Accelerator Proposal Submissions

The Office of Instructional Innovation’s (OII) Ideation Event on September 16 sparked ideas for teaching and learning that could be implemented across OHIO. After in-depth discussion and guidance between attendees and Advisory Group members, these ideas were transformed into formal proposals to be considered for possible funding through the Academic Innovation Accelerator.

The Advisory Group is currently reviewing the proposals, and the Champions Group will make funding decisions by the end of December.

October, 2016
MICROCREDENTIALING AT OHIO UNIVERSITY
Submitted by Imants Jaunarajs

Proposed Innovation:
Offer microcredentials to Ohio University students.

Innovative Pilot Purpose:
Provide the opportunity for students to develop and articulate transferable leadership skills. The Division of Student Affairs (DOSA) will pilot this innovation with student employees (1,000+), with the overarching goal of scaling microcredentialing across the institution.

A microcredential is being defined as a non-credit bearing, performance-based, observable competency, which serves as a symbol of accomplishment. Microcredentials are issued when a student completes a set of activities successfully and then demonstrates the competency.

Why This is Innovative:
Employers report a major gap in college student preparedness in leadership skills. Hard or technical skills (highly specialized tasks that are unique to an occupation or industry) are typically taught in the classroom; leadership or soft skills (teamwork, adaptability, interpersonal development, etc.) are typically developed outside of class.

Microcredentialing does not exist at Ohio University. OHIO would be a leader in offering specific microcredentials based on transferable leadership skills that stakeholders demand (self-awareness, interpersonal development, team development, problem solving, adaptability, innovation, cross-cultural competency, and wellness).

What has Already Been Done:
A DOSA Task Force was created in December 2015 to begin making progress on student employee development and microcredentialing. This group has identified opportunities for each DOSA student employee to develop the eight leadership skills, designed a leadership skill rubric based on competency level, and collected skill development activities and mapped these to the competency rubric. This initial work provides the foundation for the innovative pilot program, with the goal of scaling this skill development for all OHIO students.

Outcomes of the Pilot:
- Represent students’ competency through microcredentialing and display it on a co-curricular transcript or an ePortfolio
- Assess over a thousand students’ motivation, confidence, and importance of transferable leadership skills
- Assess student interest in obtaining microcredentials
- Assess leadership skill confidence and development in over a thousand student employees (pre/post/annually)
- Assess DOSA professional development infrastructure for student employee skill acquisition
Impact:
- Students will be better prepared to enter the world of work.
- Students will find opportunities to develop, articulate, and showcase transferable leadership skills.
- Pilot will encourage significant student involvement in skills desired by stakeholders.
- Students will reflect on co-curricular experiences, and catalogue and synthesize their college experience more effectively.

Questions that Could Be Researched Through This Pilot:
- How effective are students at developing and articulating transferable leadership skills?
- Does microcredentialing encourage students to develop and articulate transferable leadership skills?
- What is the ideal structure for a microcredential or badge?
- Who should own, create, and award microcredentials at OHIO?
- Is microcredentialing effective in validating competency attainment?

Need for Funding:
- We need help developing a microcredentialing assessment process in order to test student achievement of a competency level.
- We need help identifying a microcredentialing platform for students to store and display their microcredentials that could be universal.

Next Steps Toward a Broader Application:
- Scale the DOSA pilot program to other university student employees.
- Implement an institution-wide process for students to gain microcredentials.

LEARNING INNOVATION MANAGEMENT SYSTEM
Submitted by Bill Young

Proposed Innovation:
In this project, an established, custom-built Learning Management System (LMS) will be enhanced with Team-Based Learning (TBL) components. These components include immediate individual and team quiz recording, live and timed group application answering, live classroom display, answer analysis for instructors, timed discussion management, and enhanced academic integrity features. The integration of these features will create the first standalone LMS with integrated TBL features for classroom, blended, and online settings.

Impact:
TBL’s innovative approach to teaching facilitates high levels of learning and engagement among students by guiding them through thoughtful exercises, group analysis, and discussions. This active learning approach helps deliver the transformative education we promise at Ohio University, even in large class sizes, which aligns with state initiatives.
The robust LMS could be used by any instructor looking for a streamlined, easy-to-use LMS, but will be especially beneficial for instructors adopting flipped classroom techniques or TBL methodologies. While effective, the standard method to implement TBL techniques is to develop numerous printed placards, paper quizzes, and scratch-off answer forms. Managing the materials and large numbers of students can be cumbersome and expensive. The new features will eliminate paper materials, saving time and resources. More importantly, it will enrich the engagement and learning among students and instructors.

The features of the LMS will also enable blended and distance courses to manage TBL components in synchronous and asynchronous environments though custom timing controls, which is something that is not currently available. As the demand for online courses increases, utilizing this LMS will enable more effective teaching and learning to a greater number of students.

**Need for Funding:**
Grant money will be used to fund the development and integration of the new components of the LMS. The developer is a College of Business (COB) instructor, which is ideal for support and additional custom development as necessary. The features will be tested by instructors on the team in flipped and online classes.

**Broad Application:**
The custom-built LMS currently used in the COB features multi-section course synchronization, efficient content management, real-time analytics, rubric grading, group management, attendance and participation recording, advanced academic integrity features, and more. The current system is already used by around 25 instructors and around 1,200 students per semester.

The enhanced LMS will be available for use by all Ohio University instructors, especially those looking to implement flipped classroom and TBL methodologies. Over 30 OHIO instructors already use TBL techniques. The College of Arts and Sciences has funded three TBL Faculty Learning Communities, and the Bruning Teaching Academy continues to encourage TBL adoption. Therefore, the demand at the University for this type of system is increasing. Additionally, the LMS could be made available for use outside of the University. Those using TBL techniques, such as medical schools, are most likely to be interested.

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**DIABETES PRESCRIPTION TOOL**
Submitted by Nicholas H. E. Mezitis, M.D.

**Proposed Innovation:**
The Diabetes Prescription Tool is planned as a novel application that utilizes the “shopping cart” concept in selecting medications for the treatment of diabetes mellitus. Prescribers can enter relevant patient characteristics and then select appropriate medications from an updated list of approved drugs by either specifying a drug class (e.g., biguanides) or a desired action (e.g., weight reduction). Choices can be validated for compatibility, cost, and insurance preference (i.e., “tier”). The combination of drugs chosen can then be “checked out” (i.e., confirmed for further processing by prescription software communicating electronically with the pharmacy and with the medical record).
The tool facilitates teaching the prescription process to medical students who are confronted by an increasing array of available medications targeting various aspects of diabetes pathophysiology (e.g., insulin production, insulin action, gastric emptying, etc.). These medications are frequently used in combination as expressions of a coherent strategy evolving over many years. Understanding how to make appropriate choices and appreciating the available options is vital in the education process.

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**INCREASING STUDENT ENGAGEMENT IN LARGE ENROLLMENT CHEMISTRY CLASSES THROUGH THE USE OF MENTOR-LED VIDEOS**

Submitted by Lauren McMills

The Department of Chemistry and Biochemistry has implemented various innovative teaching techniques such as Peer-Led Team Learning (PLTL), clickers, and the flipped classroom model in order to increase student engagement and enhance success in our large lecture classes. We propose to add to these successful innovative efforts through the introduction of mentor-led videos on chemical topics that students have difficulty understanding in order to increase student understanding. It is our intent to develop a library of mentor-led videos that not only include a wide range of topics that are currently taught in general chemistry (CHEM 1210, 1220, 1500, 1510, 1520), but also videos that focus on particular student interests/goals (forensic, medical, nursing, engineering, materials, etc.) in order to increase engagement in the class material. Future goals also include expanding the University Libraries to include upper-level discipline-specific chemistry courses.

This proposal has the potential to positively affect two groups of students: the students enrolled in general chemistry classes and the mentors who provide the video content as outlined below.

**Mentors:**
The mentors will provide their own script consulting with faculty. This process will help them to learn the material more in-depth and therefore help them as they prepare for either their first job or graduate-level work (M.D., Ph.D., M.S., GRE, MCAT, PCAT, etc.). Mentors will work with a faculty member as part of this process, which in turn will foster powerful interactions between faculty and students. This has the potential to increase the retention of majors as well as increase student participation in undergraduate research, a trend we have observed with PLTL mentors.

**Enrolled Students:**
The enrolled students will benefit from the easy accessibility of the videos, enabling them to view them while in the course, as well as review in subsequent courses. It is hoped that by using student mentors in addition to faculty members, the material will appear to be more relevant and accessible to the enrolled students. A second application for these videos would be to aid students who do not meet the general chemistry entrance exam requirements at Bobcat Student Orientation. By allowing those students access to the videos followed by a second attempt at the entrance exam, the students may be able to increase their base knowledge to the point where they will place into CHEM 1510 during the fall semester rather than requiring remedial study in CHEM 1500. This would allow a greater number of students to start on-sequence in their first semester at Ohio University.
Resources Required for This Proposal:

- Training for mentors and faculty advisors in video production
- Technical expertise for video storage and dissemination techniques
- Salary for mentors and the faculty advisors (summer salary) will be requested.

USING COMPUTER-ASSISTED PEDAGOGY TO MAKE ANCIENT GREEK SUSTAINABLE
Submitted by Greg Kessler and William Owens

Proposed Innovation:
Our innovation employs computer-assisted pedagogy to help students master the basics of ancient Greek. Ancient Greek is a highly inflected language. Each noun, pronoun, and adjective has endings that indicate not only singular and plural, but also syntactic function, such as subject or object. Greek verbs are even more highly inflected than nouns. Students give up not just because of the detail and quantity of what must be memorized, but also because of the complexity of the noun and verb systems.

Other ancient Greek courses exist online. However, these courses do little more than transfer the text-and-translation pedagogy of the textbook from page to screen. Our course will reflect the current state of research in computer-assisted language pedagogy—one that comprises shorter, focused lessons that feature repetition. Exercises will employ reading, writing, listening, and speaking. An attractive interface and a program of computer game-type rewards will incentivize students to stick with a lesson until it has been learned. In addition, our course will track progress and direct students to repeat lessons in areas of revealed weakness. In short, our course will not only help students learn the many inflections of the Greek linguistic system, but will also direct them how and what to memorize.

Our course will comprise approximately 100 learning units. In comparison, ancient Greek textbooks comprise 20 to 40 chapters. This spring semester, academic specialists in ancient Greek will work with specialists in online language learning and programmers to create the first 10 to 15 units. These lessons will be beta-tested in fall semester OHIO Greek classes and inform our work over year one in creating the remainder of the course over year two.

Need for Funding:
AIA funding and support are essential to procuring the expertise of the Greek language specialists, the experts in online language pedagogy, and the programmers, as well as coordinating their work.

Impact:
These online lessons will enable us to flip the ancient Greek classroom. Students will learn the noun and verb systems more efficiently than home book study and class review. These lessons will thus make it possible to reduce class meeting time and devote that time productively to learning to read ancient Greek.

Our course can reduce student attrition; online lessons will direct students right to what they need to memorize. Our course can also reduce the cost of offering Greek; the online work of the flipped classroom provides both for more productive and less frequent in-class meetings.
**Broad Application:**
This innovation is scalable in three dimensions:

- Within OHIO, to instruction in other languages
- Outside OHIO, to instruction in other ancient Greek programs
  - Indeed, low enrollment and high attrition threaten the undergraduate study of ancient Greek nationwide. The Classics faculty at Miami University have already expressed interest in the project. Colleagues from other institutions will be invited to join as content providers.
- Outside OHIO, our course can make Greek accessible to the general public, help generate popular interest in the language, and thereby help make study of ancient Greek broadly sustainable.

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**ACCESS OHIO**
Submitted by David Koonce

**Proposed Innovation:**
Imagine a world in which a group of OHIO educators offer a program of learning focused on a vital subject such as global warming, sustainable agricultural, or community leadership in a diverse and changing world. It might be online, community-based, or a hybrid. We can imagine that this material would be of interest to enrolled undergraduates and graduates and an array of other learners who may or may not need credit or certification. To meet the diverse needs of these different audiences, the University offers a flexible series of portals through which learners can join the program. The necessarily unique credentialing and billing processes are managed; support for housing, dining, and transportation needs is available; and a business planning service can help assess feasibility and develop a budget.

The ability to quickly launch multi-audience programming would bring a series of clear benefits: a capacity to experiment, the value of mixing audiences into an authentically diverse learning community, and the potential to live test a program's interest to different audiences.

For these reasons, we propose developing an institutional capacity to support programming that will provide the following services:

- Promoting the University's ability to deliver programs to the external market and then working with faculty, departments, schools, colleges to create programs that meet the needs of the external market
- Assisting the coordination of intersecting internal and external programming
- Conducting an analysis of marketability of desired program when faculty, departments, schools, colleges have a desire to deliver a non-credit program
- Establishing an appropriate budget to support the desired program
- Facilitating summer-based, educational programs for high school through post-graduate audiences
- Coordinating physical space, dining, and housing, if applicable
- Coordinating appropriate technology support
- Marketing/advertising of the program
• Managing registration, billing, fee payment, refunds, etc. for non-credit programs
• Coordinating with Undergraduate Admissions/Graduate College, Office of the University Registrar, Financial Aid, and Office of the Bursar for academic credit bearing programs
• Tracking and certifying Continuing Education Units (CEUs), if appropriate.

Lifelong and Distance Learning, a division within Ohio University, used to provide these types of services. According to http://web.archive.org/web/20111016043559/http://www.lifelong.ohio.edu/, the University has been providing these types of services since 1919. From its beginnings as the University Extension Division, Lifelong and Distance Learning was committed to taking the University’s resources beyond the campus walls to serve its neighboring communities, the state of Ohio, the nation, and the world.

We propose the creation of a new unit, Access OHIO, to provide the above services to meet the changing needs of today’s learners. A pilot implementation for the College of Arts and Sciences and the College of Health Sciences and Professions would enable the University to try this on a small scale prior to expanding the scope to all OHIO colleges. It is envisioned that all colleges would find this unit to be a valuable service to expand the learning opportunities provided by Ohio University to the local community, neighboring communities, the state of Ohio, the nation, and the world.

IDENTIFYING, ASSISTING, AND ADVANCING BIOLOGY STUDENTS IN THE MURKY MIDDLE
Submitted by Chris Schwirian

Proposed Innovation:
We propose a program to identify and help middle-of-the-pack students who have a chance at success, but who are not currently on the path to success. We put most of our resources into students at the bottom (who clearly need help) and to students at the top. There is a large population of students who aspire to attend graduate or professional schools who are doing well enough to graduate, but who won’t get into these programs unless they significantly increase their GPA. If we can identify the student early (e.g., a sophomore with a 3.2 GPA), we may be able to get their GPA up to around 3.5, which is needed to have a chance at getting into medical, physician assistant, and physical therapy programs. This would also improve their career potential. This program is innovative because there has not been any attempt to systematically identify and improve the performance of these students in the middle. We have also never formally used an experimental approach to finding out what advising techniques work for a specific population.

Impact:
Helping to raise the performance of these middle-performing students could have a huge impact on our students and programs in several ways.
• It would significantly increase the number of our students who are admitted to graduate/professional programs and generate a larger number of successful alumni.
• It would improve our program reputation and help attract better students.
• Student retention might also improve if students have a legitimate chance of matriculating to graduate/professional programs.

Questions that Could Be Researched Through This Pilot:
This pilot study would determine:
• What interventions are successful at improving the performance of these students (peer mentoring, tutoring, financial incentive, better/more advising, more recitation time)
• How to best identify the different sub-populations in this group of mid-performing students and determine how to best help each of these groups

Need for Funding:
Funding is vital if we are to proceed with this program. We have around 1,400 biology majors in Athens; over half intend to attend graduate/professional programs. Our advisors are already overloaded, and while we have a pre-professional advising coordinator and peer mentors, we do not have enough manpower for this pilot. Even with resources from the College, we do not have enough staff to begin this pilot. Funding for an additional advisor, expansion of our pre-professional advising coordinator’s office, and peer mentors is critical.

Broad Application:
If this pilot program is successful, there are many programs that serve similar, nearly-thriving students. If we can demonstrate that targeting them and figuring out what strategies are working, many of these principles could be applied in other programs. We believe that investing in these students who are on the cusp of succeeding has the potential for a huge return on investment in the form of more of students going on to the graduate/professional programs of their choice, increasing program reputation, recruiting outstanding students, improving students’ career potential, and increasing the number of highly successful alumni.

CERTIFIED ELECTRONIC CERTIFICATES
Submitted by Debra M. Benton

Proposed Innovation:
Ohio University has significantly increased its certificate program offerings through the years. We currently offer over 70 certificate programs, all of which are approved by the University Curriculum Council, and may be completed by our current students. We anticipate increases in the number of available certificate programs and the population to whom they are available.

Currently, when a student completes a certificate program, their Ohio University transcript is updated to reflect that completion. However, unlike when a degree is awarded and a diploma is provided, we do not centrally provide to the student any physical credential document. There are some certificate programs that print certificates for their students, but there is no centralization nor consistency when a student completes a certificate program, other than the notation on the transcript. I propose we change this practice and begin issuing an additional document to students who complete certificate programs.
We recently launched the certified electronic diploma service for our spring 2015–16 graduates. However, our graduates must pay for the electronic diploma. I propose that we provide certified electronic certificates to our students completing a certificate program at no cost (in addition to continuing the notation on the transcript). This is a way for students to prove their completion of the certificate program (without requiring them to order a transcript) and to showcase their accomplishment. This certified electronic certificate could be downloaded as a secure PDF, shared through social media, and validated by an employer as proof of completion of the certificate program.

For more information about our certified electronic diplomas go here: https://www.ohio.edu/registrar/CeDiploma-Benefits.cfm

V-THINK: A THINK TANK BASED ON VETERAN EXPERIENCE
Submitted by Nukhet Sandal

Proposed Innovation:
I propose establishing a research group, in the form of a “think tank,” that matches veteran students with scholars in different areas toward completing projects with deliverables. There are multiple think tanks and research initiatives that are dedicated to issues facing veterans. However, in my review of think tanks and policy institutes in the United States, I could not locate a think tank that is based on veteran insights and experience. I reviewed other relevant structures too; the closest initiatives to a think tank idea were the classes that brought veteran students together. There are some higher education institutions, such as San Diego State University, that continue to offer veterans-only classes, while others, such as Ohio State University, closed down similar classes because of lack of demand and logistical difficulties. Merits aside, these are one-way experiences that do not link veterans with the wider segments of the campus and society.

Working closely with the on-campus military and veteran communities in my capacity as the Director of the War and Peace Studies degree program, I would like to move toward filling this gap by establishing a veterans research group at OHIO.

If funded, I will work closely with the Veterans Center on campus, and issue invitations for applications both from veterans and from faculty members. We will establish five to seven research teams by matching interested faculty members and veterans, and we will call this proto-think tank, V-think (“V” for Veterans). We will pay attention to including diverse disciplines and schools in this initiative. Each team will work on a deliverable, which can be creating an online class, writing an academic or policy paper, or making a creative project. The team members will convene every month to brief each other and brainstorm, and there will be Skype sessions and guest speakers to help the teams stay on track. V-think will also have a website where the projects will be showcased.

Impact:
The anticipated impact of the proposed experiment is to increase veteran student engagement by helping them articulate their skills and contribute to the creative activities and policy discussions. If funded through the AIA, we will be able to explore what a veteran-focused think tank will look like, and how best to engage our veterans in diverse projects, serving societal and policy needs.
Broad Application:
The project is easily scalable. The Department of Veterans Affairs’ count of military veterans enrolled in higher education more than doubled between 2000 and 2010 to nearly 820,000. In 2010 alone, it increased by one-third (Called to Serve: A Handbook on Student Veterans and Higher Education). This drastic increase comes with a need to creatively engage these veteran students, helping them adjust to civilian life and translate their skills to outputs that will enrich and educate both themselves and the society. If our pilot project succeeds, we can increase the number of veterans and faculty involved, and apply for federal and private grants. OHIO can also cooperate with other institutions—universities and otherwise—and create a wider network of institutions that bring veterans with civilian experts to meet societal and policy needs. In short, if it is done right, this can be a nationwide trend and project.

TURNING THE TIDE: TRANSFORMING INTERNATIONAL AND DOMESTIC EDUCATION ON YOUR CAMPUS
Submitted by Dawn Bikowski

Proposed Innovation:
Our project proposes to flesh-out and implement a “Train-the-Trainer” workshop series on globalizing college curricula and campus experiences that would be contracted by other universities for payment, thus bringing revenue to Ohio University and increasing awareness on our campus of this important issue. The project builds upon over two years of work with Faculty Learning Communities, first in the College of Arts and Sciences, and now also supported by the Office of Instructional Innovation and the Office of Global Affairs.

Dawn Bikowski (Department of Linguistics) and Talinn Phillips (Department of English) would head this initiative. Ultimately, we would travel to universities to train faculty and/or administrators to lead similar initiatives on their campuses. Given that every campus is unique, existing leadership is the best poised to facilitate change within their own environments. Yet, many faculty and administrators are unsure of how to move forward on their goals of increasing a sense of inclusivity and a global perspective on their campuses.

There are many resources that address the issues of global education, but they are either overly theoretical or too specific to one population (e.g., only for teaching international students). For this reason, we have created our own handbook, titled Global Education and Diverse Classrooms: Supporting International and Domestic Students in Your University. This handbook covers topics related to curriculum design and classroom dynamics and provides strategies faculty can try with their own students. Key features of this hands-on resource include a workshop section, classroom tips, and case studies written by students and faculty across various disciplines.

Research is ongoing into (A) to what degree Ohio University students hold a global perspective, and (B) what campus faculty support is needed. In 2015–16, a survey within the College of Arts and Sciences carried out by our Faculty Learning Community indicated that faculty are concerned about global perspectives and needs not only of their international students, but of their domestic students as well. Focus groups with
undergraduate students on the Athens Campus are planned for November–December 2016, which will explore how undergraduates define “global perspective,” challenges of domestic students in reaching out to international students, and strategies to help students take advantage of opportunities they may be overlooking. These findings and implementation strategies will be included in our Train-the-Trainer workshop series.

Need for Funding:
With the budget supplied by this AIA grant, we plan to fund:

- A market analysis, including where this service may be most competitive, fees the market would bear, optimal length of time for a training course, a name, etc.
- Site visits (e.g., to universities interested in this training)
- Professional development opportunities such as conferences
- Marketing materials (e.g., a website and promotional materials)
- Development of the training course
- Additional materials, such as adding a web-based learning management system to our handbook

This project will benefit Ohio University not only through revenue and name recognition, but also as our students embrace a diverse and global perspective. We welcome the opportunity to work on this project and any feedback you have.

LON-CAPA CURATOR
Submitted by David C. Ingram

Proposed Innovation:
LearningOnline Network with Computer-Assisted Personalized Approach (LON-CAPA) is an open-source course content management system (CMS). It was the result of the combination of CAPA and a learning management system at Michigan State University, both developed with NSF grants in collaboration with several universities including Ohio University. This is a distributed system with major universities, like OHIO, hosting materials that they have created. The course materials that are stored in the system can be accessed by faculty at any university or college that has a domain within the LON-CAPA system. In addition, many high schools can also access the system at minimal or no cost. While content can be incorporated into a course seamlessly between institutions, finding the content can be a significant challenge. When resources are created and published, the system allows for meta-data to be attached to the material. This process unfortunately relies on the creator to take the time to input reasonable meta-data. The search function uses this meta-data, which is often very incomplete, when trying to locate materials.

To enable better access and utilize the resources, we propose a two-pronged approach to curating resources in the LON-CAPA network. One part involves using the techniques a professional librarian would use to collect and identify materials that faculty use and think effective. The other approach is to develop an automated search program to find materials in the LON-CAPA network and catalog them. This approach would rely on a significant amount of usage data compiled by the system in addition to relying on the expertise of a librarian and that of the faculty using the materials.
Need for Funding:
At this stage, the proposal is for sufficient funding for professionals to identify the costs and resources needed to undertake this project. In particular, it is thought that time from an IT specialist and a librarian will be needed to develop a full proposal. They will require some funded time to investigate the problem with the assistance of the faculty using the system. It is anticipated that faculty in the Department of Physics & Astronomy will lead this proposal but will not be funded as this is part of their teaching and service workload.

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REMOVING TWO BARRIERS TO ACTIVE LEARNING IN LARGE CLASSES AT OHIO UNIVERSITY
Submitted by David C. Ingram

Proposed Innovation:
The Department of Physics & Astronomy recently tested active learning modeled on SCALE-UP. During this three-year trial, several significant obstacles to successfully implementing active learning were identified. One of these is the lack of suitable spaces for active learning for large classes (over 70 students). Another barrier is the classroom scheduling policy of the University, which limits class duration for large classes on Monday, Wednesday, and Friday to 55 minutes during most of the day.

In the Schoonover Center, one room has been provided that has a flat floor and can accommodate over 100 students at tables. More spaces like this are needed for easier access within the ten-minute limit students have between classes. STEM students in Stocker or Clippinger are more than ten minutes from Schoonover. Where Margaret Walter Hall is located would be the best place for STEM students. It may be possible to convert several of the lecture theaters in there to flat floored spaces. 29 Park Place is also within the ten-minute range for STEM students.

This project would investigate where active learning classrooms can be located and at what cost. At a minimum, this project will involve both faculty interested in teaching these classes and personnel from Architecture, Planning, and Design.

The barrier of not allowing large section classes to have more than 55 minutes of time during most of Monday, Wednesday, and Friday requires detailed investigation. Other universities have managed to accommodate active learning classes. At a minimum, it will require resources from the Office of the Registrar to study the scheduling issues for active learning classes.

Both of these activities will also need the assistance of Office of Instructional Innovation to coordinate since they will require cooperation across the University in order to be successfully implemented. It is anticipated that faculty in The Department of Physics & Astronomy will lead this proposal but will not be funded as this is part of their teaching and service workload.
Problem:
Academic dishonesty is a serious burden on professors and administrators. Rises in class size and increased technological sophistication of the cheaters only compound this burden. It is imperative to find ways of reducing the burden of identifying academic dishonesty.

Proposed Solution:
We propose a system to automate dishonesty detection on scale for digital submissions. The difference between our solution and alternatives available today is that unlike Turnitin or SafeAssign, our system is not limited to textual submissions. SecurAssign presents an easy way to secure many different types of submissions, such as code, excel spreadsheets, and images.

Named SecurAssign, this system will make a better and a definitive assessment of assignments to detect academic dishonesty instances as compared with contemporary solutions. The system will deploy individual digitally signed copies of assignments to students in order to thwart plagiarism. As an added step, it will utilize common meta-data stored in files to detect dishonesty. Furthermore, this system will provide a facility that allows the teacher to test the digital signature of a submission against the digital signature that was originally given to the file to ensure authenticity. SecurAssign will be neutral to Learning Management System (LMS) types and will use existing University authentication systems.

Features and Benefits:
The proposed solution will incorporate individual student file integrity, focus on ease of use for both professor/administrator and student alike using the following features:

Ease of use:
- Given that a key directive is to reduce burden, ease of use will be the first key directive
- Minimal extra work for student and professors—standard upload facility and the professor does not need to make any custom changes to the document

Seamless integration and scalability:
- Nearly invisible to the student except for an authentication step—behind-the-scenes public/private key encryption to ensure file integrity
- Compressed file upload facilities so a professor can validate an assignment for the entire class in one step
- Since there are no complex API or storage of files, the system is very scalable.

Impact:
- Improved work ethic in the classroom
- Increased prestige for the diploma

Need for Funding:
The funding obtained through the AIA will be used for the design, development, hosting, and testing of the system as follows:
• The design and development of the system will require a small team of developers to work for six months.
• This will be followed by a testing phase for functionality, adaptability and ease of use using student and faculty groups.
• Hosting policy and details will need to be worked out in compliance with OIT’s policies.

Future Steps:
Upon successful testing within the College of Business, we hope to first deploy the system campus-wide through ISMS and Blackboard integration. We hope the system can be used in other universities nationwide eventually.

AUTOMATED PERSONALIZED LEARNING TO INCREASE STUDENT RETENTION AND ENGAGEMENT IN GENERAL EDUCATION CLASSES
Submitted by John McCarthy

Proposed Innovation:
Imagine taking a general education course where the examples, practice, and assessments were automatically linked to each student’s interests and photos. We can retain, engage, and challenge students according to their needs all within the same course through automated personalized learning.

In general education and introductory courses, students have a variety of motivations. Some students are taking a course because they “have to” fulfill a requirement. They may or may not have difficulty with the actual content of a course, but they have difficulty feeling invested in it. They may enter with an assumption that the course isn’t applicable to them. Some students are exploring and are interested, but may have some difficulty with the content. Other students are highly interested and want to get to more advanced study in the area as soon as possible. There is a challenge to differentiate instruction for these groups of students. All may cover the same content in a course but could access that content in different ways. It is possible that there are subgroups within these student cohorts, but it is clear that the examples chosen to illustrate concepts, connect to students’ prior knowledge, and allow students to demonstrate learning will ideally differ.

There are two phases to this approach. The first is to develop an assessment instrument that determines the motivation for why a student is taking a course. The instrument will also gather information about their own personal interests and background. In future iterations, infrastructure would need to disseminate background information University-wide so that a student wouldn’t need to repeatedly enter information; instructors could just ask about motivations for taking a course.

The second phase involves using the assessment results to differentiate instruction through student-oriented and -generated content examples and materials. A key element of retention of students in engaging them in their own learning. The project will build a system that delivers examples of instructional concepts using contexts or situations that match their reported interests. Instructors generate generic template examples, problem sets, writing prompts, etc. that can be automatically customized via a form interacting with a detailed database according to individual student interests and motivations. Once
established, the program can be expanded to allow students to load their own photos to personalize examples even more. Students will be able to rate the helpfulness of a particular personalized example or problem to make the system increasingly more accurate in the future. Their profiles can be stored and modified as their interests change through graduation from Ohio University and the approach could be replicated University-wide (including regional campuses).

Next Steps:
A pilot can be done in the Tier II course, Introduction to Communication Disorders, to validate and assess the approach on student retention and engagement. The next steps would involve incorporating three additional general education classes.

Need for Funding:
AIA funding is required for equipment and personnel to develop the assessment instrument and instructional templates, to design pathways to link examples with student interests, and to document student retention, learning, and preferences.

CROSS-CONTEXTUAL STEAM LEARNING
Submitted by Jennifer Hines

Proposed Innovation:
An innovative instructional approach is proposed that bridges formal (in-classroom) and informal (experiential) learning across the disciplines and within the community. Students from different disciplines would work as collaborative teams to curate/design informal learning opportunities for the community (local, regional, and beyond). This cross-contextual learning would fulfill different requirements (e.g., 2AS, 2HL, 2SS) depending on the students enrolled.

Informal learning that merges science, technology, engineering, and math (STEM) with other disciplines to foster STEAM learning (STEAM = STEM + Arts/Humanities) has been growing in popularity in museums and makerspaces. In the classroom, K-12 educators have enhanced student engagement and self-efficacy by having students curate/design museum exhibits that build connections across their disciplinary studies. As this approach taps students’ talents and interests and provides multiple means of engagement and expression, it aligns with “strengths-based” rather than “deficit” models of teaching, an equitable framework that has barely been explored at the college level.

Impact:
This innovative approach has the potential to engage OHIO students in a manner that builds their knowledge and enhances their confidence and capabilities as lifelong learners and effective communicators in an increasingly complex and technological world. By bridging formal and informal learning experiences, STEAM learning is situated within meaningful contexts for all students and enhanced through integration of transdisciplinary, real-world practices. For example, students majoring in STEM disciplines would learn effective communication or educational skills, while students majoring in non-STEM disciplines would gain an understanding of how STEM relates to what is important to them. All students would gain experience working as a team on challenging, intellectually
diverse, and complex projects that model authentic, real-world experiences and benefit the greater community.

To pilot the concept, coordinated courses could be taught in a flipped format with class time spent working as collaborative teams composed of students from each course (e.g., a 2AS, 2HL, and 2SS course). For their summative experience, the teams would produce a STEAM “exhibit” for the community (local, regional, and/or online) such as an infographic, podcast/video, game, presentation, or interactive exhibit. Teams would explore transdisciplinary connections across the University and community, presenting their final exhibit projects during a series of events in the community.

Questions that Could Be Researched Through This Pilot:
- What is optimal enrollment (and scalability) for effective collaborations?
- What are the best strategies to achieve learning objectives for each course involved and the collaborative learning?
- Does approach improve student self-efficacy for STEM and other disciplines?

Value Proposition:
- Increased student engagement and self-efficacy
- Enriched, student-led community engagement and service-learning experiences
- Innovative experiential learning
- Authentic, real-world learning
- Fostering a vibrant STEAM-learning ecosystem for the region

Need for Funding:
Faculty release/salary to develop, flip, and deliver courses. Championing new Tier II course(s) and ultimately a “moveable container” course that fulfilled different Tier II requirements, depending on the faculty involved in teaching it. Instructional technology support for creating online content and facilitating project collaborations. Funding for project supplies, field trips.

Next Steps:
Scaling to more students and/or online; expanding to other disciplines and/or required courses (e.g., Tier III); involving graduate students as mentors.

THE SHORT COURSE INITIATIVE
Submitted by Traci Connor

Proposed Innovation:
Intensive classes, or “short courses,” have proven successful at other top-tier universities, but are “for the most part” still an unrealized opportunity at Ohio University. We propose a University-wide initiative to develop a large cluster of seven-week spring and fall semester classes that meet Tier and/or major requirements.
Student-centered incentives: Short-course offerings benefit many student populations, including those who may enter college underprepared, those who want to maximize their time at the University, and non-traditional students, both degree- and non-degree seeking.

**Benefits include:**
- More efficient and cost-effective progression to graduation
- Increased opportunities to maintain sufficient GPAs and financial aid
- More flexibility for non-traditional students
- Greater student satisfaction
- Improved student learning outcomes

All of these have significant impact on student retention and persistence to graduation.

Faculty-centered incentives: Numerous studies prove that students achieve identical, if not better, learning outcomes in short courses. Furthermore, short courses provide faculty with:
- More consolidated time to work on research and projects
- Opportunities to teach courses that take advantage of the intensive format

Financial and administrative incentives: Not only is the proposed short-course initiative likely to create an external market for courses, but it also addresses a number of OHIO higher education initiatives, specifically:
- Affordability and efficiency, by offering courses integral to—rather than peripheral to—graduation requirements and more opportunity to complete minors, certificates, and dual degrees
- Attainment, due to the greater flexibility and potential appeal of short courses
- Bridges to success: Short-course offerings extend this initiative’s goals.
- Three-year degree plan: Short-course offerings create potential for students to graduate in three years and will likely increase the four-year graduation rate.

**Questions That Could Be Researched Through This Pilot:**
- Infrastructure: Collaboration is necessary to create an effective implementation model (e.g., classroom availability).
- Assessment: The Department of IHS is currently surveying IHS 3700J (online; offered as seven- and 14-week courses) and will expand this survey to other courses. Similarly, while assessments of face-to-face short courses at other universities are positive, we should assess face-to-face short courses at Ohio University.
- Department and faculty interest: Initial conversations indicate strong interest, but further exploration will determine the best and most appropriate course offerings.
- External opportunity and demand: Short courses may appeal to a larger number of potential students, a possibility worth consideration.

**Need for Funding:**
Funding is crucial to faculty recruitment, but more importantly, to the creation and support of course development and assessment teams essential to achieving successful learning outcomes.

Further, short-course development will also contribute efficiently and substantively to online course development. Thus, additional funds for instructional design assistance is a worthwhile investment.
CREATING THE HOLISTIC RESEARCHER
Submitted by Merri Biechler

Proposed Innovation:
I am proposing that theater improvisation be taught to research students as a tool to facilitate better communication skills. Having trained at the Alan Alda Center for Communicating Science, I have seen firsthand how these improvisational techniques bring a level of understanding and ease to scientists as they learn how to communicate their research.

Innovation in research is twofold: creating a supportive environment to conduct the research, and having the skills to explain the innovation once created. Many brilliant scientists remain stuck with their burden of knowledge, unable to communicate their ideas to the world outside of their literal or figurative laboratories. These simple but powerful improvisation techniques allow students at every level to explain to fellow students, professors, granting institutions, policy makers, and the general population why their research is important.

This proposal is innovative in its approach to creating the holistic researcher. Theater improvisation in itself is not innovative; using it to unlock our university’s ability to impact research around the globe is.

Impact:
Practicing these improvisational techniques is impactful at every level of student learning. Undergraduates would benefit by being able to better articulate their passion for entering the sciences. Graduate and Ph.D. students would profoundly benefit by learning how to tell the story of their research’s global impact as they compete for ever-shrinking grant dollars. These techniques help students at every level distill their message.

I propose to use the pilot period to work with the medical students at the Heritage College of Osteopathic Medicine and the Ph.D. students in Biological Sciences since the professors are already familiar with this work. We would hone two separate tracks moving forward: healthcare students and scientists.

Questions That Could Be Researched Through This Pilot:
Questions during the pilot program would be to identify the best way to implement the program.

- Would this be a series of theater classes? If so, would colleges be willing to change their curriculum?
- While we would certainly investigate a badge or certificate program, is that the best way for students to continue to learn and practice these techniques?
- A weekend workshop is impactful, but is it best practices for sustaining the learning?

Funding:
We would ask for help in creating a qualitative survey to track student opinions before and after the classes to show how these technique work or need to be further developed.
Lynn Harter and Tom Hodson of the Barbara Gerals Institute for Storytelling and Social Impact have already committed to affiliating with the Alan Alda Center for Communicating Science. Funding for three more facilitators to attend the training session would be necessary to take this program beyond the pilot stage. Teaching would be sustained by adjunct or overload contracts. As we broaden across the University, tailoring the program to individual schools would be required.

Next Steps:
We talk about support for turning STEM into STEAM (adding Art to Science, Technology, Engineering and Math) and this is a tangible first step to expanding beyond the laboratory. Art is the necessary counter-stretch our scientific brains need to create holistic researchers.

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LGBTQ BLENDED COURSE CONTENT FOR REGIONAL CAMPUS STUDENT AND FACULTY ACCESS
Submitted by Loran Marsan, Ph.D.

Proposed Innovation:
The Women’s, Gender, and Sexuality Studies Program is invested in broadening regional campus access to LGBTQ Studies Certificate classes via hybrid online courses and mentoring of regional faculty to provide LGBTQ modules and training for existing WGSS regional courses. Offering this content is important from the perspective of social justice concerns for inclusion. Research suggests such curricula options facilitate retention of under-represented students. We move forward in these initiatives with the support of Chillicothe Associate Dean Brenda Phillips, Zanesville Associate Dean Jerry Kiel, and Lancaster WGSS Liaison Pam Kaylor with an eye toward future application of this project to the creation of a virtual LGBT Center linking all University campuses.

We propose a pilot blended course for WGSS 2200 Introduction to LBGTQ Studies that would create regional campus accessibility while maintaining necessary critical discussion elements. We would simultaneously work with regional campuses to update content with LGBTQ modules and reflect the recent addition of “sexuality” to our name and mission. This is innovative because there is a demand that’s not being met, interest from regional campuses to offer this material, and an opportunity to collaborate with regional campuses in ways that will improve student access to diverse content and certificate opportunities. This project is unique because it will initiate course delivery that blends online learning, pre-recorded lectures, original graphic media content, and in-person critical discussion.

Impact:
This initiative would increase student participation in the LGBTQ Studies Certificate on regional campuses and improve LGBTQ content available in existing regional campus WGSS courses by collaborating with existing faculty through supplemental online modules and training. Creating this hybrid content will provide greater efficiency in teaching more students LGBTQ content, wider access to course materials, and will spark interest in other LGBTQ studies courses to be hybridized in the future.
Questions That Could Be Researched Through This Pilot:
The pilot experiment of a blended WGSS 2200 and online LGBTQ modules will help us understand how to successfully deliver LGBTQ materials that sustain the critical dialogue necessary to WGSS, productively teach the same course online and in person simultaneously using cross-over materials in both, and disseminate relevant LGBTQ continuing education materials to regional campus WGSS faculty who teach our courses. This pilot will provide a platform to assess the provision of all LGBTQ Studies Certificate courses in a cost-efficient hybrid design to the regional campuses and facilitate future collaboration with regional campuses and OHIO’s LGBT Center to generate an interactive online LGBTQ community space that is more accessible to remote areas.

Need for Funding:
AIA funds are necessary to provide faculty buy-out for a one-course reduction in spring 2017 for Dr. Loran Marsan. Dr. Marsan will collaborate with Instructional Innovation staff and regional campus personnel on course content production/conversion for a fall 2017 regional campus WGSS 2200, as well as LGBTQ content additions for existing courses.

Broad Application:
Within the overall University context, this initiative could help create innovative ways to offer certificate programs and improve course content at regional campuses, as well as create cost-effective hybrid courses that allow for flexibility of both faculty and student populations.

NORMALIZING COLLEGE CHALLENGES: INCREASING STUDENT SUCCESS THROUGH A LAY THEORY INTERVENTION
Submitted by Carey Busch

Proposed Innovation:
This project proposes to develop a pilot lay theory intervention to help new OHIO students develop a sense of belonging and a growth mindset during their transition to college (leveraging the time between Bobcat Student Orientation [BSO] and arrival on campus, and continuing through their first semester). These lay theories—the informal conceptual structures through which people make sense of behaviors—can be fostered in several ways:

- By presenting specific difficulties in college as routine and able to change (social norming)
- By using the near-peer student voice to exemplify these challenges and present stories that resonate with new students’ experiences
- By presenting research about learning as a malleable trait (growth mindset)
- By helping students personalize and commit to these lay theories through application and reflection

Experimental lay theory interventions have been shown to increase student success, retention, and to reduce achievement gaps in some underrepresented populations (Yeager et al., 2016). The pilot proposes using both new lay theory research in psychology and behavioral sciences, and new and existing campus technologies to help OHIO students develop critical and durable non-cognitive skills needed to succeed while researching the
long-standing challenge of improving student success in a scalable, innovative, and cost-effective manner.

This project would require the development of an effective lay theory intervention(s) (for examples, see Stanford’s Resilience Project) and the integration of existing and possibly new campus technologies to create, disseminate, and maintain the intervention. Research indicates that optimal intervention and communication strategies differ for different student groups. Through an Institute of Education Science (University of Virginia) grant, OHIO is currently working with Persistence Plus using text-based nudges grounded in behavioral science to communicate with students nearing degree completion; their expertise would be invaluable in developing a communication strategy for the proposed pilot.

This project also necessitates coordination between numerous offices, including Enrollment Management, BSO, Learning Communities, the Allen Student Advising Center, Instructional Technologies, The Office of the University Registrar, University Communications and Marketing, Diversity and Inclusion, and other student service offices. The integration of both existing and new campus technologies such as Peoplesoft, MyOHIO Success Network, Slate, OrgSync, and Blackboard is critical for the identification and tracking of different student populations and the distribution of appropriate and automated communications.

Need for Funding:
While future funding from granting agencies or foundations is possible with a proof of concept, the high level of interoffice coordination and technological support required for success even in a pilot project is prohibitive without AIA project management support and funding. We propose utilizing the first generation, new student population as the pool to select a treatment and control group for the pilot project.

Broad Application:
If fully implemented, this project could impact all OHIO students, with benefits continuing through commencement and into their careers. The pilot would create the infrastructure that could be reused to scale up for different purposes (e.g., minority populations, Pell-eligible students, students with disabilities, regional students, “non-traditional” students, international students, upper-level students, micro-interventions for specific areas [STEM] or high DWF courses, and areas where staff or faculty retention is challenging).

REMOTE ACCESS LABORATORY: SEEKING NEW WAYS OF TEACHING PRACTICAL SKILLS
Submitted by Zaki Kuruppalil

Proposed Innovation:
Delivery over the Internet or online has gained importance and has become a popular mode of teaching in recent years, especially in the higher education sector. Several tools and technologies exist to assist this medium of class delivery in an attempt to compensate for the student’s physical presence. Online live lectures, recorded sessions with videos, interactive and collaborative tools such as computer simulations, and online proctoring of assessments are examples to take. However, when it comes to hands-on experiential
learning for conducting experiments or problem-solving tasks, the online medium of instruction is still challenging. Bringing such experiences online is complex, but it is critical in STEM (Science, Technology, Engineering and Mathematics) areas such as engineering, physics, and chemistry. This proposal seeks to contribute to the area of online practical learning using augmented reality.

The proposed project is to create a laboratory workstation setting at Ohio University, such as a fully automated manufacturing process with a robot, a computer numerical control (CNC) machine, and a conveyor system. This laboratory workstation will be integrated and interfaced using web-based applications so that students can access and perform practical experiments remotely through the Internet. This augmented lab model will integrate with sensors, cameras and other hardware and will be programmed using open source software.

If successful, the proposed experiment can serve as a pilot and template for implementing remote access laboratories in different disciplines at Ohio University—for example, physics and chemistry courses with lab components. Implementation of such labs could open up a new avenue of offering lab-based courses over the Internet and could increase the availability of lab equipment/instruments beyond regular business hours for traditional in-class students, online students, and for workforce development, which is not currently available. On a broader scale, remote labs could enable opportunities for collaboration between different institutions, not just within OHIO but outside as well, where equipment and resources across disciplines could be shared.

Questions That Could Be Researched Through This Pilot:
This research is intended in answering the following questions:
• Factors that need to be considered when setting up a course that has a remote lab component
• Potential impact of remote labs when applied at a broader scale, and their generalizability across different disciplines
• Equipment and components required for a remote lab as well as the possibilities of interfacing them in a cost effective manner
• Limitations of a remotely operated lab and the level of significance in terms of student learning outcomes compared to a traditional in-class lab

Need for Funding:
The AIA funding will enable this pilot implementation by providing essential interface hardware and software, as well as support faculty with release time and/or summer time.

Broad Application:
Upon completion of this research, the results could serve as a basis to support a National Science Foundation (NSF) grant application to establish a full-scale remote laboratory. This full-scale laboratory could also be utilized by two-year colleges, other technical institutions, and industry, as well as serve as a source of revenue for Ohio University.
**IMPLICATIONS FOR PRACTICE: AN OPEN-ACCESS, MULTIMEDIA DIGITAL JOURNAL**  
Submitted by John McCarthy

**Proposed Innovation:**  
An open-access, multimedia digital journal, Implications for Practice, can engage students in making clearer connections with University research and the jobs they will be entering after graduation. Although researchers write implications sections in their research articles or present their findings to live audiences at conferences, students at the University and practitioners and other consumers outside of the University may still struggle to make connections. As an institution that generates new knowledge through research, it is important to disseminate that research in a way that can easily translate to changes in practice in the world.

Understanding applications for practice and how researchers translated in one field could likely have benefits for lots of different fields. Each issue of the journal will be thematic so that some of these links around issues of translating research that are common to fields across the University could be highlighted. In terms of structure of the journal, we would target already-published research and then invite the authors to submit “extensions” of their work. This way, authors wouldn’t have to make a choice about where to send their original research. Implications would include links to social media (Facebook groups, Twitter chat, Pinterest boards) and videos of how to conduct the procedures done in research articles in clinical or “less-than-ideal” settings. Sections of the journal would also include tutorials and links for students to social media and other tools for accessing the research literature. Finally, results of hack-a-thon sessions where students and faculty University-wide work to solve a difficult translational issue facing a field would be published.

**Broad Application:**  
The pilot study would be to create a test issue involving the following projects that can be scaled later to include more fields and the University as a whole. First, there will be focus groups to identify issues from employers in two different fields (about challenges they find with new OHIO graduates in terms of preparedness) and with students about challenges they find in accessing research. The results of the focus groups will inform the kinds of materials solicited for a pilot issue. Researchers in the pilot issue would partner with students to extend their work with multimedia examples and connections to social media.

**Need for Funding:**  
AIA funds would be needed for infrastructure of journal including, web server PHP support on said server, MySQL database support (or another supported DB) permission for web applications to write to the filesystem on the server, DOI membership, and archival fees. Funds would also be needed for students and faculty to participate in the editorial board, peer review process, copy editing, and proofreading. The University Libraries would be a major partner moving forward.
Proposed Innovation:
We propose a restructuring of advising in the Department of Biological Sciences to create a center for academic and pre-health advising. This would be an innovative way to most efficiently utilize our resources in serving the growing number of majors requiring advising in the natural sciences at Ohio University. This center, with staff for both pre-health and academic advising, would offer far more expanded programming in pre-health advising and a centralized way to coordinate BIOS advising. According to the tracking efforts of the Pre-Professional Advising Center, the following numbers reflect some of the services provided in 2015:

- Pre-Health advising appointments, including walk-ins and scheduled appointments: 812
- Total applied to Med programs through this office: 48
- Total accepted: 42 (acceptance rate = 87%)
- Coordinated Advising for approximately 1,400 BIOS majors (around 500 freshmen)

Need for Funding:
The Pre-Professional Advising Center is currently housed in the Department of Biological Sciences and most students served are BIOS majors. Expanding and tracking programming would allow it to serve a higher number of students from other majors, increasing students’ overall success and creating a stronger sense of collaboration between departments and colleges. I have been benchmarking and implementing changes to improve the pre-health advising center (i.e., creating an advisory committee and an office name change is pending), but support is needed to fund the additional staff required to put many needed changes into action.

Academic advising is another area of concern, as the advisee numbers have risen dramatically and created a drain on faculty time. Currently, BIOS faculty advisors are serving approximately 45+ advisees each. Rather than separate the pre-health advising and academic advising resources, I believe we could create an advising center that coordinates the academic advising for all BIOS majors, provides professional advising for all first-year BIOS majors, and houses a pre-health advising office as well. We need:

- One additional full-time advisor for pre-health
- Two full-time academic advisors to support the BIOS academic advising
- One administrative assistant to support all of the above

This model would also incorporate the BIOS Advising and Resource Room, a current resource that utilizes undergrad student help, and possibly graduate students.

Questions That Could Be Researched Through This Pilot:
- Could this academic advising model be useful across science departments within Arts and Sciences?
- How can we better support students who are not in the GPA (or standardized test score) range to be successful in applying to professional schools?
- How can we identify these students early and effectively reach out to them (guiding them with resources to increase GPA or encouraging a change of major)?
• What programming is most needed by pre-health student organizations that support specific career interests and diverse populations on this campus (MAPS, Pre-Vet, AMSA, etc.)?

Impact:
This model would allow us to better serve students by providing strong academic advising and academic support, greatly reduce the strain on faculty advisors, and enhance the current pre-health advising resources.

SIMULATED STUDENTS TO PREPARE TEACHER CANDIDATES FOR REAL-WORLD CHALLENGES
Submitted by Jennifer Ottley

Proposed Innovation:
Quality classroom management is associated with greater learning outcomes for P-12 students. When interviewing teachers for employment, many principals inquire about the strategies used by teachers to manage challenging behaviors and create a positive environment that is conducive to learning. Yet, managing classroom behavior remains one of the greatest challenges for novice teachers and many teacher candidates graduate from their teacher-preparation programs without the confidence and competence to appropriately prevent challenging behaviors from occurring or to manage them when they do occur.

The proposed innovation in teaching utilizes simulated students through a mixed-reality classroom (i.e., TeachLive) to provide real-world scenarios that could arise in the classroom that require teacher candidates to respond. Through TeachLive, candidates teach a lesson to simulated students, who, in turn, respond with varying degrees of engagement and problem behaviors. Candidates will then implement positive behavior intervention strategies with the goal being to mitigate the disruptive situation and achieve the academic objectives of the lesson. Through the simulated student interactions presented through TeachLive, all teacher candidates will have experience with challenging behaviors and have a safe environment in which to utilize strategies learned in coursework with the students. In this manner, we can bridge the research-to-practice gap by assisting our teacher candidates in implementing evidence-based behavioral strategies, which we theorize will result in improved confidence and competence.

Broad Application:
The co-investigators on this project represent faculty who teach courses for all of our undergraduate teacher preparation programs in the Department of Teacher Education. Consequently, this instructional innovation would have far reach as we would include candidates from various teacher education majors. Although we are proposing to pilot the program with the Department of Teacher Education, the scalability of the innovation is apparent as other disciplines could also benefit from the simulated experience (e.g., communication sciences and disorders, music education, psychology, child and family studies). If the pilot is successful, we will begin exploring other reasons for using the program (e.g., transition skills, explicit instruction, STEM-related instructional practices) and reaching out to other programs across the University who may be interested in having their
students participate in the simulation. Moreover, utilizing simulated students can resolve challenges associated with securing high-quality clinical placements in our rural locale.

Ottley’s primary line of research has investigated the impacts of immediate feedback provided through bug-in-ear technology on teachers’ use of evidence-based practices. To date, two studies have investigated this phenomenon and found that it improves teacher candidates’ use of evidence-based instructional practices. However, more research is warranted to examine the impacts of the intervention on candidates’ use of evidence-based behavioral practices.

Need for Funding:
Funding is required to purchase the technology necessary to create the TeachLivE lab for implementation of the simulation experience. We need funding to cover the costs associated with membership as a TeachLivE partnership institution for higher education, which covers the cost of the program and staff who “control” the simulated students from a distance. We also request funding for a graduate assistant to support faculty as they implement TeachLivE in their courses.

PODCAST ETHNOGRAPHY
Submitted by Smoki Musaraj

Proposed Innovation:
I propose a pilot project that would engage high-achieving students in ethnographic research projects that would lead to the production of short podcasts. The podcasts would be short (10-15 minutes) and crafted along similar lines to https://storycorps.org/, http://snapjudgment.org/.

They would be based on a first-hand ethnographic research—qualitative research involving participant observation, interviews, tag-alongs, life stories—with people in and around Athens and Southeast Ohio. Stories can focus on a range of subjects—from race, class, and gender on campus to the diverse economies of the Athens community. The key requirement is that students learn to take an ethnographic approach—seeking to understand the emic perspective, using empathy—to issues and lives of the people interviewed/observed.

Need for Funding:
While we have required students to do similar projects for my courses (especially ANTH 101: Introduction to Cultural Anthropology) we want to bring this assignment to the next level to produce well-crafted podcasts or video essays that can circulate through various media (WOUB, or embedded in a website to be created alongside the project). The funding would enable the purchase or access to various audio-visual equipment that would facilitate the research and production of this project.

Broad Application:
We hope to incorporate this exercise/research assignment into future upper-level courses (i.e., economic anthropology, visual anthropology, cultures of capitalism, writing ethnography) to begin building an archive of such stories. Beyond our classes, this innovation has potential application in a number of other programs at the University—in
particular, it would be a great place to intertwine our strengths in media and communications and our resources in qualitative research in the social sciences. If the sky is the limit, we’d love to create an ongoing radio/online media project available to the broader public that will feature ethnographic podcasts and video-ethnographies on particular themes.

MANUFACTURING AUTHENTIC LEARNING EXPERIENCES: THE OHIO MANUFACTURING COMPANY
Submitted by Neil Littell

Proposed Innovation:
This proposal seeks to create an authentic applied learning experience through enabling students to work within an academic company to design, produce, and sell physical goods. Building partnerships between the Colleges of Business (COB), Engineering and Technology, Fine Arts, and Visual Communications will enable experiences for the students who take these classes by employing them within the OHIO manufacturing company as a cross-college STEAM initiative.

For a case study of a similar program, reference the MAFES program at Mississippi State University. Students in this program run a company where they manufacture items such as cheese, which is sold to the alumni annually. Over the past 80 years, the purchase of MSU cheese has grown into a tradition with the alumni, allowing the students to produce and sell over 50,000 units of cheese annually at $23–25 each (Northway, 2013). This project is innovative because it seeks to replicate this success at OHIO.

This proposal will connect the components of a manufacturing company together to form an actual manufacturing company. Students from COB will develop a comprehensive business plan, including sales, marketing, finance, and distribution. Engineering students will develop the manufacturing documentation, tooling, and work instructions to enable the production process to take place. Students from Fine Arts and Visual Communications will develop graphics for the products. Engineering students will work together to produce several hundred products. Profit of the product sales will be used to pay students and fund the next round of products and will be used within OHIO and to expand the capabilities of existing labs. Example products could include clocks, diploma display cases, picture frames, and similar gift-type items.

This proposal is innovative because it enables authentic learning as well as creating a uniquely OHIO experience for both student and alumni engagement. This proposal leverages existing lab equipment located within Stocker 005. We also anticipate that we will be able to provide many secondary learning opportunities for many other classes who currently work to analyze and optimize manufacturing processes. Being able to provide unlimited access to an authentic manufacturing environment will allow instructors of a multitude of classes the opportunity to validate simulations in a real setting, extending the value of this proposal.
**Next Steps:**
If accepted, we will work to identify the appropriate collaborators across OHIO for the next phase of the application process. As a first phase, the collaborators of this proposal are asking for summer funding for 2017 to develop the curriculum to deploy this project in the fall 2017–18 semester. For the second phase, the collaborators are requesting funding for the first three semesters of raw materials for products to enable the OHIO Manufacturing Company to become profitable enough to where it can sustain and grow itself. Deliverables from this project will include a manual for replicating this program within other departments at Ohio University, which have labs that can produce a good or service.

**Reference:**

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**GAMIFYING THE TEAM-BASED LEARNING APPROACH TO INSTRUCTION USING MOBILE TECHNOLOGY**
Submitted by Dr. Leah Sheridan

**Proposed Innovation:**
An interactive, mobile device-based application to gamify the Team-Based Learning approach to instruction in active learning classrooms.

Team-Based Learning (TBL) is a collaborative instructional strategy that fosters student accountability, active learning, and enhanced student interaction and communication. TBL is structured around procedures for creating high-performing student teams capable of solving problems beyond the capability of even the most talented team member. These procedures include elements of individual student pre-class preparation, an in-class pre-quiz to incentivize student preparedness, and post-quiz application activities in which student teams use content knowledge to answer questions and/or solve significant problems.

TBL can be resource intensive in terms of administrative, faculty, and student preparation, but a valuable strategy in terms of its enhanced effectiveness in student learning over other teaching strategies (e.g., lecture). One such essential resource for administering TBL includes the manner in which both the pre-quiz and applications are delivered. Students take an individual quiz at the outset of class, either paper-based or often electronic (e.g., via Blackboard or Examsoft). Students then take the same quiz with their team, a process that requires printed or electronic quizzes and a card to record the team’s answers (i.e., immediate feedback assessment technique, or IF-AT card), which, similar to a lottery card, identifies the correct answer choice with a star when scratched. Following this quiz, student teams then apply their knowledge to solve problems. These problems are often complex, sometimes necessitating printed paper copies over PowerPoint projection.
Pre-sing these elements can be labor intensive for the facilitator. Furthermore, collecting and grading these materials takes additional time, and maintaining the security of printed materials in large classroom settings is difficult. We propose the development of a mobile device-based application that can be used to facilitate the logistical aspect of the TBL process, while also providing students a new and fun way to interact with the content and their peers.

The application itself will be designed as a game. The program will use elements such as touch-screen interaction, a point system, and badges. We specifically aim to:

- Create a simpler and streamlined process for instructors to implement TBL
- Develop a competition-based environment to increase student motivation and engagement in the learning process

**Need for Funding:**

Significant experience in program design is necessary to develop this program, and in such, AIA funding and support is essential. The proposers of this innovation have created a prototype and have a solid foundation on the theory and process of TBL.

**Broad Application:**

We have witnessed early success in the implementation of TBL at our college over the past year. We see the evolution of TBL being furthered by the development of this tool which we believe will improve our students’ learning experience, reduce the resource burden on faculty, and enhance their teaching satisfaction. This mobile device-based application can be used University-wide and licensed by the University for distribution. Any instructor or program engaging strongly with TBL would have the ultimate engagement tool at their disposal.

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**AUGMENTED REALITY FOR ACADEMIC INNOVATION**

Submitted by Athan Vouzianas and Deanna House

**Proposed Innovation:**

The demand for universities to increase student success, the widening of demographic, academic, and non-academic factors which characterize OHIO’s student body and affect student success, and the complex nature of learning are prevalent themes in our classrooms. In addition, scientific insights into how humans learn, understanding of students’ learning-profiles variation, and evidence that students learn better when knowledge is grounded in an authentic context call for an optimization of teaching and learning (T&L) to accommodate the different learning needs and create a whole learning experience for the students. Finally, today’s operating environments for universities are characterized by budget cuts and increased costs to accommodate learning for all students. Therefore, it is essential to not only improve and optimize T&L for all students, but also practice T&L pedagogies that have financial impact on OHIO.

Our project, “Augmented Reality for Academic Innovation,” aims to affect student engagement, retention, and success, by applying augmented reality (AR) to optimize teaching, learning, and research, and to simulate real-world contexts.
Questions That Could Be Researched Through This Pilot:

- What is the impact of AR on first-year student retention?
- What is the impact of AR on first-year student success?
- What is the impact of AR on student engagement?
- How can AR facilitate Universal Design for Learning (UDL) by creating inclusive learning environments?
- How can AR facilitate the achievement of course outcomes?
- How can AR affect collaboration for teaching, learning, and research?
- What is the impact of AR on experiential learning?
- What is the financial impact of AR for teaching, learning, and research on OHIO?

Impact:
Additional benefits derived from the research to the previously-mentioned questions:

- Inspiration for research on the factors affecting student success
- Collaboration from different programs across different colleges for optimization of T&L
- Availability of projects and research opportunities for undergraduate and graduate students. For example:
  - Engineering students may work on AR content development as part of senior design projects
  - Students in theater may rehearse performances utilizing AR environments
  - Students in the arts may take AR visits to museums around the world
  - Students in history may “walk” in to the life of colonial America
  - Students in any discipline may participate in simulations of real-world environments
- Prospective international students may take AR visits to the United States and OHIO as part of acclimatization to OHIO and preparation for academic studies
- Classes without “borders”
  - Students from different physical locations can experience “face-to-face” interaction with instructors and classmates through AR virtual classrooms
  - A platform to create inclusive learning environments (UDL) for all students
  - Virtual office hours—instructors and students able to meet in virtual places for out-of-class support
- Students will be learning in an innovative environment with the opportunity to build their resume, knowledge, and skills related to AR
- Financial impact to OHIO
  - Anticipated reduction to physical classroom utilization by OHIO being able to practice blended learning environments
  - Anticipated reduction in costs of textbooks/materials through increase in teacher-created-materials

Need for Funding:
AIA funding and support will bring together resources from the Colleges of Business, Communication, Education, Engineering and Technology, and Fine Arts to work in a pilot project to investigate ways AR can optimize teaching, learning, and research. Successful implementation of the project will inspire implementations across different programs and colleges.
INTERNATIONAL PERSPECTIVES ON SERVICE LEARNING
Submitted by Aaron Schwartz

Proposed Innovation:
In pursuit of the goal of fostering intercultural communication and understanding, as well as strengthening bonds between the campus community, the regional community, and the world, a course (or series or courses) is proposed that would embed both Ohio University students and Ohio Program of Intensive English (OPIE) students in regional non-profit and service-oriented organizations for a specified number of hours.

Some potential non-profit organizations that could be part of this program are:
- Atco
- Acenet
- Habitat for Humanity
- Monday Creek Watershed Project
- Ohio Valley Museum of Discovery
- Team Heart and Sole
- Timothy House
- United Campus Ministries

The initial course would be a survey of service learning opportunities in the region, with the potential to return to one of the organizations for the completion of the project. In addition to actual site visits, regular group discussions where both populations are present would be held in a classroom on the Athens Campus.

Questions That Could Be Researched Through This Pilot:
Through implementing this program, there is potential to research the following questions:
- To what extent do service-learning experiences contribute to better understanding of regional, national, and international issues?
- How can service-learning experiences be best designed to balance the service and learning components and provide benefits to the participants and to the organization?
- How can engagement with community organizations facilitate the development of language skills (specifically the language skills necessary for academic success)?
- Is it possible to measure engagement within or amongst communities? Can a service-learning program be shown to increase such engagement?

Need for Funding:
Potential costs of this course would be the transportation to and from sites where the service learning occurs. Donations to the organizations may also be necessary to support any materials or resources used by the students. This course would also likely require a coordinator who laisses with the various organizations, arranges transportation, and solves other issues that may come up. Staff (likely chosen from an existing pool of Group II and Group III faculty) would also be needed to lead the discussion sections, drive to the site visits, and evaluate student journals, papers, and projects.
Impact:
A program like this would achieve several goals for a variety of stakeholders. The community and its organizations benefit because of the work of the students, including any raised awareness created by the student projects. The OPUE students benefit by getting opportunities for meaningful use of English, reflection (through writing and speaking) on their experiences, and interaction with other members of the campus and community. The OHIO students benefit from getting experience in the world of non-profits and a better understanding of the issues facing the region, building inter- and intrapersonal skills that may be useful in their fields of study or future careers. While such factors as engagement may be difficult to measure, an argument can be made that, for the University, this program also would increase engagement among domestic and international students, as well as Ohio University and regional communities.

ACADEMY FOR THE CREATION OF ADVANCED E-LEARNING (ACE)
Submitted by Michael Kushnick

Proposed Innovation:
Using resources from within the Office of Instructional Innovation, create an Academy for the Creation of Advanced E-Learning (ACE)—a renewable, reusable, and discipline-independent place for dissemination of simple and high-tech online pedagogical tools and approaches, with examples of their use and basic resources needed for their implementation for faculty and instructional design teams across campus.

With online education becoming a larger component of academic programming at Ohio University and throughout higher education, faculty require more support, but lacking is someone bringing new, fresh ideas to make their courses more dynamic and improve learning experiences. The College of Health Sciences and Professions has an Online Academy—an intensive summer service provided for those moving courses online. This isn’t necessarily novel. Moreover, our instructional design team is available throughout the year and very good, but they lack time and resources to seek out “cutting-edge” technology.

The Innovation of ACE:
Bring new online course tools and approaches to the faculty and instructional design teams to:
- Develop, from scratch, “cutting-edge” online courses (whether it is their first or tenth)
- Improve existing online courses
- Experiment within online classrooms (like is done within “four-walled” classrooms)

Impact:
- Improved quality of new and existing courses
- More effective alignment of objectives, activities, and assessments
- Increased experimentation within online courses
- Increased enthusiasm/confidence of faculty for developing, and students taking, online courses
- More wholly promoting student–student and student–faculty interaction online
The success of ACE will be documented by assessment of the quantity and quality of online courses from both student and faculty perspectives. Topics for assessment include grades, achievement of select student learning outcomes, the number of and enrollment in online courses, satisfaction, perceived engagement, and comparisons between the ACE course vs. other online or traditional “brick and mortar” courses.

The pilot experiment, bringing ACE to CHSP, includes:
- Finding new online pedagogical tools and approaches
- Developing examples of their use
- Creating a “catalog” (of two items above)
- Holding routine informational sessions for the online education faculty in HSP, at Ohio University and others exploring their options
- Develop basic resources for implementation by teams across campus

Need for Funding:
Unfortunately, without AIA funding for experts, developing this breadth of online course development will not succeed. In addition, funding will be needed to garner new subscriptions or requested software/apps.

Items to be Included:
- New approaches/forms of assessment (online tests/quizzes or an e-portfolio)
- Incorporation of weekly live lectures (recorded for later play-back, but also with the ability to ask questions) or recorded expert interviews specific for a class topic
- Apps used to communicate and document student experiences
- Technology to create virtual reality cases with feedback, or other simulation-based tools for experiential components of a class
- Apps to create games for learning (“gamification”)
- Faculty to ACE expert—“Can you find me a tool to do this?…”
- Many specific examples available (not enough space here)

Next Steps:
Create a team to begin investigating and cataloging the technology for the Academy and bring it to the faculty!

EXPANDING UNIVERSAL DESIGN FOR LEARNING: FOSTERING ENGAGING AND INCLUSIVE CLASSROOMS
Submitted by Carey Busch

Proposed Innovation:
This project proposes to expand a current pilot project implementing Universal Design for Learning (UDL) funded by an 1804 grant. UDL is best described as a framework of teaching that designs with learner variance in mind. The utilization of UDL has been shown to increase access to the curriculum for students from culturally diverse groups. Additionally, it has also been shown to reduce the need for many individual accommodations for students with disabilities. The implementation of UDL on a broad level at Ohio University
has the potential to address issues of access and retention for underrepresented populations while creating a more engaging learning environment for all students.

The current project seeks to understand the potential effectiveness of UDL in increasing student engagement and learning as well as the reduction in need for individually coordinated accommodations for students with disabilities. Presently, a group of six faculty is teaching courses using UDL principles after receiving a basic training in the framework. A Faculty Learning Community (FLC) has been used to support faculty in their implementation of these principles in courses they have previously instructed. The FLC has been an effective method of supporting a cross-disciplinary group of faculty who self-selected to participate in the project. While early indications are that positive outcomes will be noted from this pilot project, the expansion of UDL is currently limited by its coordination through Student Accessibility Services.

The proposed project seeks to put faculty at the center of expanding UDL on campus. Faculty participants are uniquely positioned to understand how UDL can be integrated into the subject matter they teach and to engage other faculty in identifying potential benefits and ways to utilize UDL within their disciplines. Presently, five of the six participating faculty have expressed an interest in championing UDL within their colleges as well as potentially leading groups of colleagues in learning and implementing UDL in their own courses. The opportunity exists to use Faculty Learning Communities led by faculty to develop a working understanding of the framework of UDL as well as support faculty in its implementation. Additionally, one faculty participant is attending a conference to become a UDL trainer, which presents the opportunity for formal training to be delivered on campus.

**Impact:**
If successful in broadening the use of UDL, this project stands to increase student retention and academic performance and reduction in the resources required to support students with disabilities. The completion of the pilot project in December 2016 will provide baseline data regarding student performance as well as provide a basis for the development of future research questions. Additional institutional support is required to expand the implementation of UDL through providing central support to faculty leaders as well as providing compensation or incentive.

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**PROMOTING EXPERIENTIAL LEARNING IN STEM PROGRAM THROUGH THE INTERNET OF EVERYTHING (IoE)**
Submitted by Godfrey Ogallo

**Proposed Innovation:**
Developing a makerspace where students can collaborate on designing and prototyping digital solutions based on Internet of Everything (IoE) platforms to enhance learning.

Such a learning space will promote a student-centered approach of learning, resulting in increased motivation and engagement. As technological innovation and advancement transforms IoE into common knowledge (similar to how smartphones have become tools of learning), students will embrace IoE as a tool for learning.
**Impact:**
This will lead an increase in motivation and engagement amongst students

**Question That Could Be Researched Through This Pilot:**
Will there be an opportunity to collaborate with experts in other disciplines?

**Need for Funding:**
AI/A funding will be essential for acquiring hardware for prototyping with emerging technology.

**Next Steps:**
After building and testing the prototype, the next step is to test it in a learning environment.

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**ONLINE CERTIFICATE AND MASTER’S OF GENDER, SEXUALITY AND INCLUSION**
Submitted by Myrna Sheldon

**Proposed Innovation:**
There is a critical need for continuing education programing on gender, sexuality, and diversity for professionals in the education, social work, psychology, and health care fields. Although these fields significantly impact the emotional, physical, and mental well-being of LGBTQ persons, racial minorities, and diverse populations of women, few professionals in these fields have adequate training in the best practices for teaching, serving, and/or treating these populations. As Title IX mandates coverage of LGBTQ individuals in its equal access mission and LGTBQ communities demand better social services and medical access, there is an opportunity to provide training to these professionals to set them apart from their peers as uniquely qualified to serve these communities.

We propose the development of an online baccalaureate curriculum aimed at professionals in these fields. The ultimate goal of this programming would be to offer an independent certificate and then a master’s degree in Gender, Sexuality and Diversity. We will offer courses on the foundations of LGBTQ and feminist studies, as well as specialized courses developed by Women’s, Gender and Sexuality Studies (WGSS) core faculty, including Medicine and Sexuality, LGBTQ Diversities, and Work-Life Balance in Diverse Societies. Additionally, Dr. Dan Skinner in Social Medicine at the Dublin Center Medical Campus has agreed to help facilitate our workshops aimed at medical professionals, and Delfin Bautista, Director of the LGBTQ Center and faculty member in WGSS, has also expressed interest in developing content for these programs. The specific format of individual courses remains to be determined, but we envision a primarily online, high-touch class format, with a component of face-to-face learning built in.

Given the urgency of these issues in the contemporary culture, we are confident that there is an existing demand for this programming. However, to ensure the highest level of quality in our curriculum, as well as to develop a concrete market, we suggest a steady roll out of this proposal in successive stages. First, we will hold single-day workshops in the spring of 2017 at the Dublin extension, in order to garner and assess interest in this program. Also in the spring, Drs. Moran and Sheldon will work with AIA innovators to build online versions of their courses in tandem with the teaching of their Athens Campus
courses, “LGBTQ Diversities” and “Medicine, Science and Sexuality,” respectively. The intent would be to offer these courses during the 2017-18 academic year. Subsequent courses for the certificate and master’s degree would be developed and rolled out as these pilots are successful.

**Need for Funding:**
We are able to identify key areas of support that will ensure the success of this proposal. WGSS faculty who are involved in the Dublin workshops, as well as in the spring online course development will need staff support, course reduction and workshop compensation. If online courses are indeed offered during the 2017-18 academic year, the WGSS program will need faculty replacements to fill in for courses offered on the Athens campus. We suggest the hire of a Group IV faculty member for a three-year term beginning in the fall of 2018. This faculty member would act as the coordinator for the online curriculum, teaching in the online programming, as well as relieving existing faculty who teach for the online program.

The faculty of the WGSS program is energized by this opportunity to extend the scope of our social justice mission to new populations of students. We look forward to feedback from the AIA program.