

Expanding Access to Engaged
Scholarship Opportunities
for Online Adult Learners
in Earth and Mineral Sciences

Shirley Hendrick Award Lecture
May 12, 2015

My Introduction to Adult Learners

- Active-duty Air Force students in Meteorology
 - Second Bachelor of Science
 - Master of Science
 - Driven, organized individuals often with a family
 - Focused on objective of earning a degree in limited time
 - Eager to learn
 - Had been away from college for some time, so courses were a big adjustment
- Handled the special challenge remarkably well
- Adult learners have a special place in my heart

Penn State: One University Geographically Dispersed

- Originally majority of Penn State students were resident learners
 - Phrase typically applied to students and programs across our 20 physical campuses
- New degree programs have been developed for online students—typically adult learners
 - Presents a significant challenge for them to feel a part of the university owing to their geographical spread
 - Nevertheless, it is essential that we strive for them to do so

Energy and Sustainable Policy

- Online BA degree, through World Campus
 - First one in College of Earth and Mineral Sciences (EMS)
 - Academic home is John and Willie Leone Family Department of Energy and Mineral Engineering (EME)
 - Degree launched in Summer 2010
 - Sloan Consortium Outstanding Online Program Award for 2012
 - Designed for students having:
 - Associate degree or
 - Two years completed toward a bachelor's degree
 - First degree granted in Summer 2012
 - Twelve degrees granted through Spring 2015



Energy and Sustainable Policy Program Educational Objectives

- The Bachelor of Arts degree in Energy and Sustainability Policy (ESPBA) will help students achieve five broad educational objectives:
 - (1) energy industry knowledge
 - (2) a sustainability ethic
 - (3) analytical skills
 - (4) communication skills
 - (5) global perspective
 - <http://bulletins.psu.edu/undergrad/programs/baccalaureate/E/ESP>

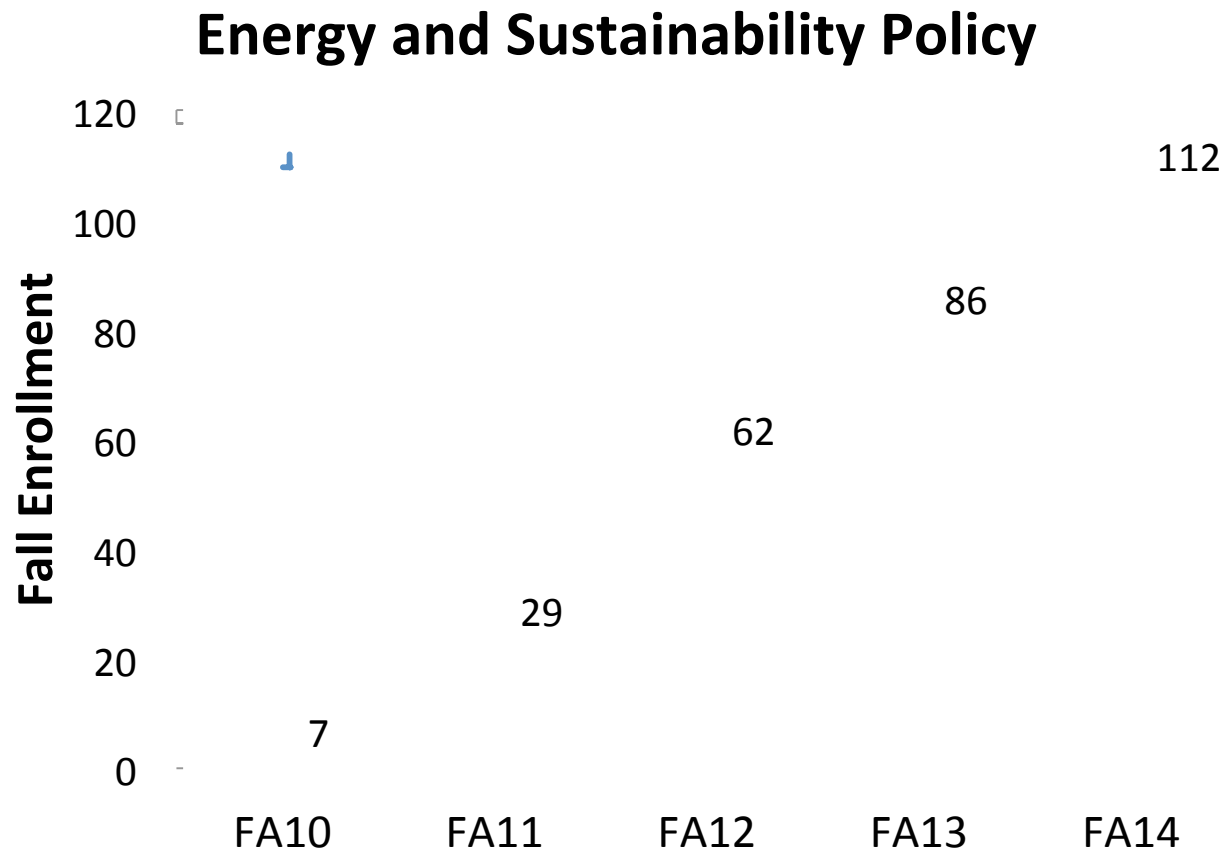
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Energy and Sustainable Policy Program Educational Objectives

- Graduates will be prepared to act as agents for stakeholders
- Graduates will facilitate communication, design, and planning between the executive wing and operations wing of organizations
 - Commercial firms
 - NGOs
 - Governmental bodies
- <http://bulletins.psu.edu/undergrad/programs/baccalaureate/E/ESP>

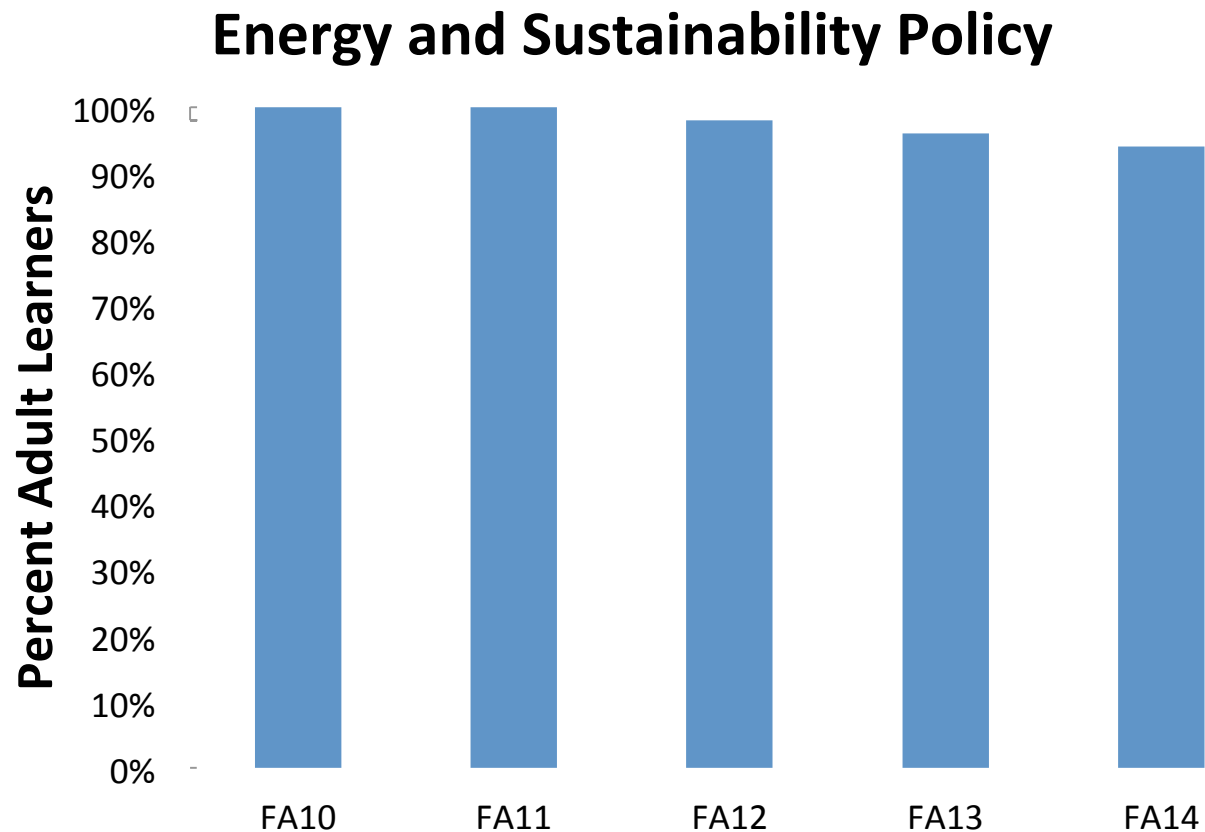
Energy and Sustainable Policy

- Enrollment has grown steadily from Fall 2010



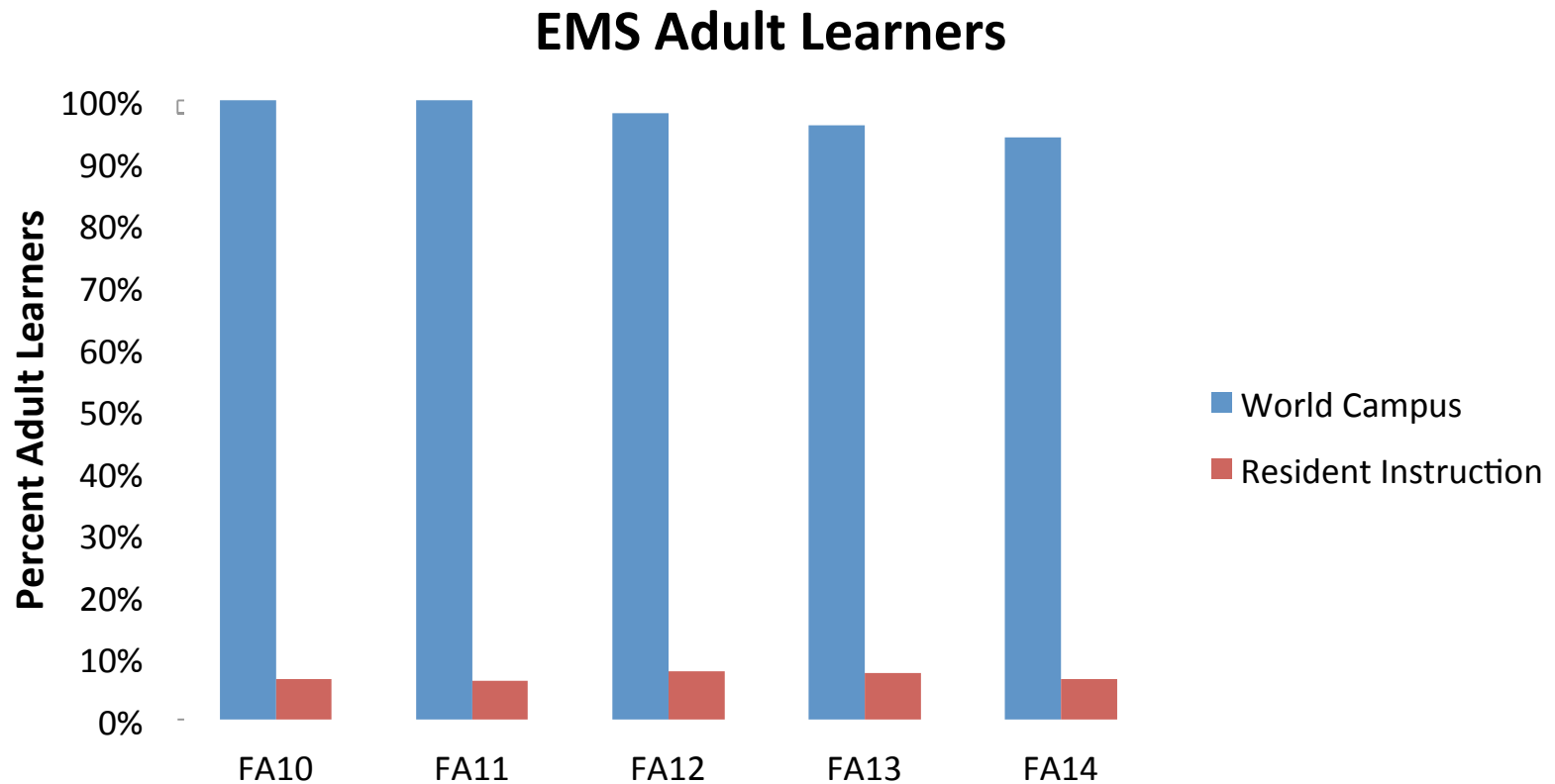
Energy and Sustainable Policy

- Predominantly adult learners (> 90%)



Adult Learners in EMS

- Resident EMS adult learners < 10%



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EMS Strategic Plan 2014-2019

An Undergraduate Education Goal

- “Earth and Mineral Sciences: One College, Geographically Dispersed”
- Unify student experiences and access to opportunities across all locations
- Include students from
 - All 20 Physical Campuses *and*
 - World Campus: *ESPBA*

Including ESPBA Students

- Simple ways to open up access to opportunities traditionally available to Resident Instruction (RI) students
 - Since 2012, eligible to be EMS College Marshal at commencement
 - First ESPBA student in Fall 2014, Lori O’Neill



Including ESPBA Students

- Other ways to open up access to opportunities traditionally available to Resident Instruction (RI) students
 - Since 2012-13 year, became eligible for EMS merit scholarships that are based on minimum cGPA cutoff
 - Since 2014, added their e-mail addresses to the EMS undergraduate list serv which is used to send weekly e-newsletter
- Additional opportunities?

Energy and Sustainable Policy Degree Requirements

- Typically designed courses that span topics in:
 - Business Administration
 - Economics
 - Energy Business and Finance
 - Energy and Geo-Environmental Engineering
 - Geography
 - Mathematics and Statistics
 - Meteorology
 - Political Science
- Capstone research class
 - EME 466, Energy and Sustainability in Society
- *Unique requirement that sets the program apart is to require an engaged scholarship course*

Energy and Sustainable Policy

Engaged Scholarship Requirement

- Engaged scholarship:
 - “Engaged scholarship is out-of-classroom experiences that complement classroom learning”
 - <http://www.outreach.psu.edu/engaged-scholarship/>
- Study Abroad or Internship requirement for ESPBA degree: Students must take either
 - EGEE 299 IL (3) Foreign Studies, or
 - EGEE 495 (3) Internship
- Forward thinking of faculty who designed curriculum
 - Helps develop key global and industry links

GREEN Program

- GREEN—Global Renewable Energy Education Network



<http://thegreenprogram.com/>

- Founded in 2009 by Rutgers University students
- 8- to 12-day study abroad experiences whose main focus is to educate students about the role that renewable energy can have
- Perfect fit for most ESPBA students, given emphasis on renewables and sustainability
 - <http://news.psu.edu/story/312763/2014/04/20/academics/green-program-empowering-tomorrow%E2%80%99s-renewable-energy-leaders>

GREEN Program

- EMS Associate Dean's office wrote proposal in Fall 2010 to support EMS students in GREEN Costa Rica
 - John Hellmann, Associate Dean for Education
 - Stacy Davidson, Academic Advisor
 - Awarded January 2011
- A Future Fund initiative as part of enhancing the new EMSAGE laureate program that is described below
 - 12-day Costa Rica excursion and instruction
 - Renewable energy system tours
 - Help with local community projects
 - Capstone team project
 - Part of a PSU course
 - Initially residential but then web-based

<https://environmentlink.files.wordpress.com/2011/04/green-2011-program-package.pdf>

GREEN Costa Rica

- Open to all EMS students, including ESPBA
 - In 2011-2013, we awarded scholarships
 - 47 students
 - 5 EMS departments and 8 majors
 - 6 ESPBA students
 - All funding after initial year from EMS college budgets
- Hiatus in 2014 to reevaluate program owing to the elimination of the Costa Rica option

Reflection from Funded ESPBA Student Michelle Miller

- "When I arrived in Costa Rica, I had no idea how profound my study abroad journey would be. I had arrived with a bag full of fears. I was fearful of animals. I was fearful that I was not athletic enough to endure the physical activities. I was fearful that I would be too old to connect to the younger students on the trip. I was fearful, 'what if I am not good enough to be a leader in the renewable energy field'? All of those fears were laid down with each passing day. I allowed myself to be open, present and therefore, had a positive experience on my study abroad journey.

Reflection from Funded ESPBA Student Michelle Miller (con't)

- I realized that all of the people who I came to Costa Rica with... had their own distinct piece of the renewable energy puzzle. Some were engineers, environmental science majors, and journalists; all of us sharing our ideas and curiosities. It was in those moments that I realized that we all needed each other. In order for the renewable energy movement to foster any substantial, meaningful and positive change, every discipline needs to work together to solve this problem. My study abroad trip to Costa Rica changed my life. I am more connected, enthusiastic, and assured in my belief that this is the field that I want to work in for the rest of my life.
- Running for commissioner on the Public Service Commission of the state of Georgia

GREEN Iceland

Renewal Energy & Sustainability

- GREEN Iceland summer program seemed to be a rigorous, promising replacement of the Costa Rica one



<http://thegreenprogram.com/otw2-portfolio/iceland-summer-10-day/>

GREEN Iceland

Renewal Energy & Sustainability

- ESPBA faculty member Haley Sankey applied in Fall 2013 for a Gladys Snyder Education Grant
 - Awarded by EMS Associate Dean for Education Office
 - Aimed at development of young faculty
 - Emphasis on improving undergraduate education
 - She proposed to go to Iceland to see first-hand what the program offers students
 - If viable, then it would be an option for all EMS students

GREEN Iceland

Renewal Energy & Sustainability

- In March 2014, Haley attended 8-day program
 - Iceland: Renewable Energy and Sustainability
 - 29 students
 - 7 from PSU



<http://news.psu.edu/story/312763/2014/04/20/academics/green-program-empowering-tomorrow%E2%80%99s-renewable-energy-leaders>

GREEN Iceland

Renewal Energy & Sustainability

- Tutorials on hydropower, bioenergy, thermal, solar, and wind power were read in advance
- Lectures on hydropower and geothermal power given at Reykjavik University
- Tours of hydropower and geothermal power generation sites and biofuel production facility
 - Full access to facilities provided
- Capstone project, presented to Reykjavik faculty

<http://news.psu.edu/story/312763/2014/04/20/academics/green-program-empowering-tomorrow%E2%80%99s-renewable-energy-leaders>

GREEN Iceland

Renewal Energy & Sustainability

- To explore further, sent 3 folks to Iceland for Summer Educators Program in June 2014
 - Stacy Davidson, GREEN coordinator in EMS
 - Energy Engineering faculty Jeffrey Brownson and Sarma Pisupati
 - Deemed viable
 - Decided to offer scholarships in 2015
 - Will sponsor 4 ESPBA students out of 12 EMS
 - All students may take EGEE 299, Foreign Studies, in Fall 2015
- <http://thegreenprogram.com/otw2-portfolio/iceland-summer-10-day/>



Other Engaged Scholarship Experiences

- Developed initially with RI students in mind
- EMSAGE (*Earth and Mineral Sciences Academy for Global Experience*) laureate program (fall and spring)
- EMS Undergraduate Poster Competition (fall)
- William Grundy Haven Memorial Award that recognizes excellence in scholarly writing (spring)
- ***Can we expand access to these for ESPBA students?***

EMSAGE Laureates

- EMS students should strive to be a cut above
- Students seeking laureate status
 - Pursue activities and accomplishments that demonstrate breadth and depth in the areas of:
 - Global awareness
 - Professional and civic service
 - Leadership
 - Achieve a substantial competitive edge in the global economy



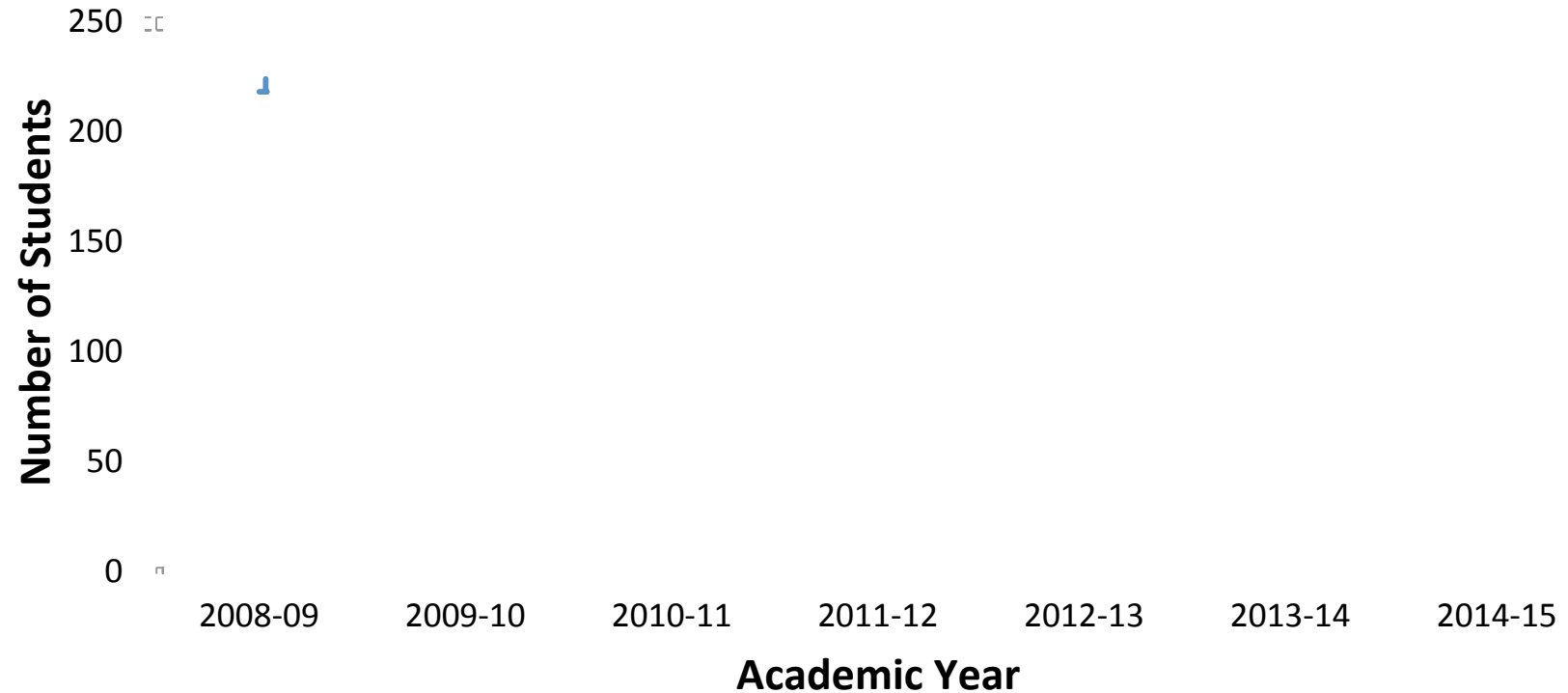
EMSAGE Laureates

- Created by Dean John Hellmann in Spring 2009
 - 222 initiates through Spring 2015
 - ~8% of graduates; graduating seniors must apply
- Excel in 3 areas with at least 9 total examples:
 - Scholarship
 - Experiential Learning and Global Literacy
 - Service
- Write essay explaining how experiences transformed them
- <http://www.ems.psu.edu/EMSAGE>



EMSAGE Laureates

Running Total Number of EMSAGE Laureates Since Program Inception



EMSAGE Laureates

- Examples given on EMS website have resident learners in mind
 - <http://www.ems.psu.edu/EMSAGE>
 - *Scholarship:*
 - Completion of one or more e-Education classes
 - Participation in a poster competition
 - Participation in William Grundy Haven Memorial Award Paper Competition

EMSAGE Laureates

- Other examples fit right in to ESPBA program:
 - *Scholarship*
 - Dean's list at least 4 times
 - Scholarships
 - Honor society membership
 - College marshal
 - Capstone course research leading to an award
 - PSU Undergraduate Research on Sustainability and the Environment competition
 - » ESPBA student Mark Staub received first place in Sp14

<http://news.psu.edu/story/313668/2014/04/28/academics/awards-given-undergraduate-research-sustainability-and-environment>

EMSAGE Laureates

- Other examples fit right in to ESPBA program:
 - *Experiential Learning and Global Literacy:*
 - Participation in internship
 - Participation in study abroad program
 - *Service:*
 - Civic or voluntary service

EMSAGE Laureates

- Opened access to ESPBA students beginning in Fall 2014
 - Required some creativity and flexibility given RI emphasis in examples
 - EMS Fall 2014 Student Marshal Lori O’Neill first ESPBA EMSAGE laureate
- Need more examples to fit adult learner circumstances to encourage others to apply
 - Review/update EMS criteria in Summer 2015
 - EMSAGE committee will explore with ESPBA faculty

Opening Up Access to Other Engaged Scholarship Opportunities

- EMS Undergraduate Poster Competition
 - December exhibition
 - Showcases undergraduate research
- William Grundy Haven Memorial Award
 - Paper competition
 - February 15 deadline
 - Papers on a technical subject suitable for a general reader

EMS Undergraduate Poster Competition

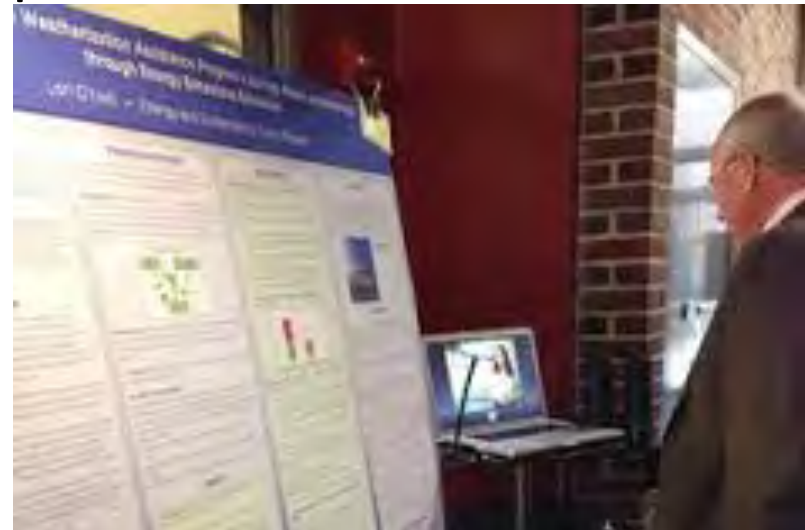
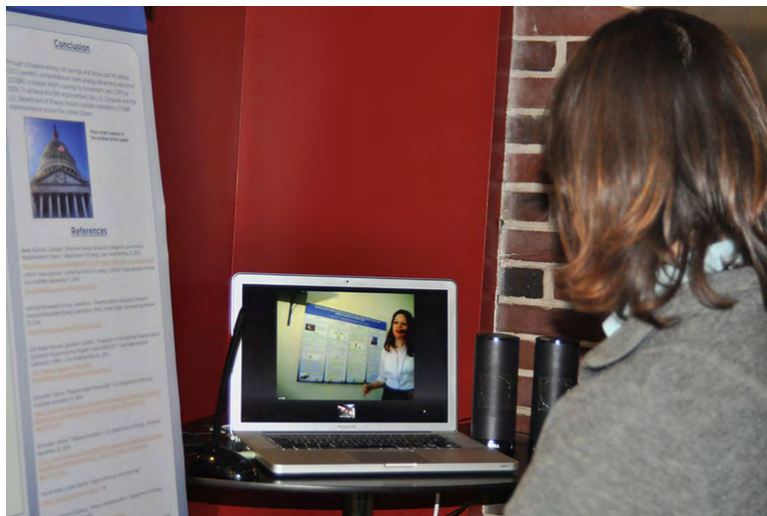
- Began in Fall 2012 with 26 posters
- Third edition in Fall 2014 with 32 posters:
- In Deike Building
- Faculty judges
- Prizes:
 - First, Second, Third
 - Student Choice
 - Freshman



<http://www.ems.psu.edu/ugposterexhibit>

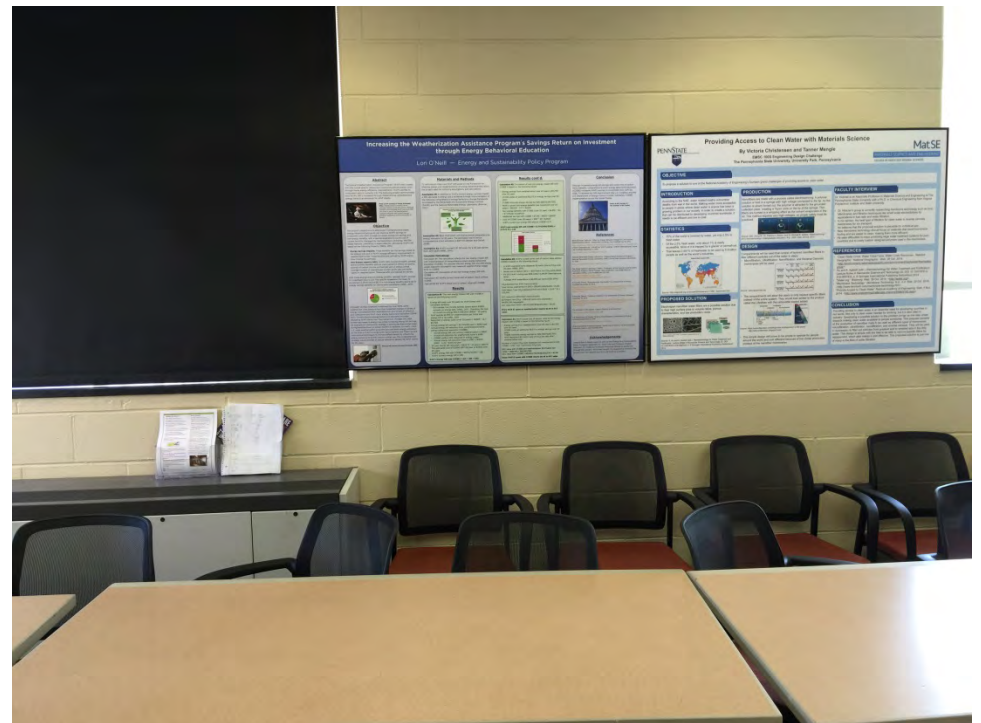
EMS Undergraduate Poster Competition

- Fall 2014 expanded eligibility to ESPBA students
 - *Creativity needed*: Faculty and staff from Dutton e-Education Institute in EMS key to set up
 - Brandi Robinson & Sing Wong
 - Used Adobe Connect on a laptop with speakers
 - Lori O’Neill stood in front of poster at her location



EMS Undergraduate Poster Competition

- Lori O'Neill won Student Choice Award!
 - Poster on display in an EMS First-Year Seminar room in Deike Building



EMS Undergraduate Poster Competition

- Lori O’Neill comments on Student Choice Award
 - "I was honored to explain my work to administrators in the college, and I am thrilled that my peers from the college selected my poster for the Student Choice Award," she said. "This experience showed me that I am a valued member of the College of Earth and Mineral Sciences."
 - She will seek an MSc in Environmental Policy and Regulation from the high-ranking Geography and Environment Department of the London School of Economics

William Grundy Haven Memorial Award Paper Competition

- Several decades-old and for EMS students
 - Established in 1950 in memory of a Penn State geology student who was killed in action during World War II
 - Recognizes excellence in scholarly writing
 - http://www.ems.psu.edu/current_undergrad_students/grundy_haven
- Students write a paper aimed at a general audience
 - First, Second, Third, Honorable Mention prizes
 - Evaluated by faculty committee each spring

William Grundy Haven Paper Competition

- To expand access to ESPBA students, worked in January 2014 with World Campus personnel
 - Coordinated by Michelle Wiley
 - Academic Resource Manager, Academic Support Services
 - Support of Karen Pollack
 - Assistant Vice Provost for Online Undergraduate and Blended Programs
 - World Campus writing tutors would offer assistance to ESPBA students
 - Eager to help
 - <http://student.worldcampus.psu.edu/student-services/tutoring-technology-resources>
- First ESPBA paper has yet to be submitted

Plans for Future

- Work on advertising opportunities better to ESPBA students
- Expand examples used for EMSAGE laureate applications to increase ESPBA participation
- Encourage participation of ESPBA students in William Grundy Haven Memorial Award paper competition
- Explore other means for participation in UP activities
 - Streaming University Park talks and meetings to ESPBA students

Summary

- Extending traditionally Resident Instruction opportunities to World Campus students who are typically adult learners requires:
 - Being creative and flexible
 - Holding meetings with key individuals
 - To explore options
 - To listen to concerns
 - To try out new ideas
 - Applying resources as needed, both funds and people's time

Acknowledgments

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- Ryan Family Student Center Personnel
 - John Hellmann, previous Associate Dean for Education, EMS
 - Stacy Davidson, Academic Advisor and EMS GREEN coordinator
 - Kimberly Del Bright, Giles Writer in Residence
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