



Animal Sciences

Implementing the HyFlex Model in a Large Second-writing Course



This project will implement the HyFlex instructional model in a large lecture course, which also serves as both a second-writing course and a GEC course. Students will have the choice whether to attend lectures in-person or via Adobe Connect.

Dept.

Animal Sciences leads

- **Jeanne Osborne** (osborne.2@osu.edu)
- **Dr. Henry Zerby** (zerby.8@osu.edu)

Animal Sciences constituents

- **Michelle Hendrick** (hendrick.17@osu.edu) - communications
- **Michael Chakerian** (chakerian.1@osu.edu) - IT, infrastructure support
- **Cheryl Deisch** (deisch.2@osu.edu) - fiscal
- **Dr. Pauleen Bennett** (Pauleen.Bennett@latrobe.edu.au) - Adjunct Faculty

College of FAES constituents

- **Ken Kulka** (kulka.1@osu.edu) - technology to enhance extension and classroom teaching
- **Dr. Warren Flood** (flood.13@osu.edu) - assessment

LT Members

Project Leads

- **Robert Griffiths** (griffiths.44@osu.edu, ltgrants@osu.edu)
- **Tom Evans** (evans.1517@osu.edu), main lt grants team additional support

LT Constituents

- **Henry Griffy** (griffy.2@osu.edu), lt grants team member
- **Joni Tornwall** (tornwall.2@osu.edu), Quality Matters Expert

Changing instructional modes:

Traditionally, instructors who teach Animals in Society, ANIM SCI 240 (ANIM SCI 2367 after semester conversion), deliver content via traditional lecture and use recitation as a venue for discussion and peer interaction.

Solution: Develop a HyFlex (Hybrid-Flexible) instructional model for Animals in Society lecture.

- Adapt selected course activities to fit anytime/anywhere access.
- Develop course management processes and instructional best practices for handling students accessing course material from multiple media.

Providing opportunities for student engagement with peers, instructors and content in a large enrollment course:

The lecture instructional method provides limited student engagement with the course content at the time when students first see/hear the material. With this method, students have not collectively participated to the level desired to ensure student success and learning, which hampers the instructor's ability to assess course progress toward deep conceptual understanding.

In addition to fostering interactivity and engagement during lecture, more work should be done to assess student concept comprehension. Further, recitation activities need to be consistently aligned with the lecture material so that students can engage more fully with course content via guided interactions with peers and instructors.

Solution: Provide students with an opportunity for:

- Active content engagement at the time when they first see and/or hear the material.
- Synchronous and asynchronous response and query across the entire learning community of the class.
- Continual comprehension-checks toward course concept goals.
- Learning activities seamlessly integrated between lecture and recitation.

Enhancing written and oral communication course content:

The Animals in Society written and oral communication components have been enhanced to provide students with a second writing Gen Ed course. To fulfill course goals, reflective writing assignments and an oral communication component have been added to the course. With the anticipated increase in course enrollment, other instructional methods are necessary to achieve the learning goals, while paying particular attention to the oral communication component.

Solution: Develop an oral communication assignment in which students will:

- Work in groups in and out of class to develop a presentation using a predefined presentation methodology (e.g. Ignite; PechaKucha).
- Have the opportunity for collaborative and/or peer mediated learning and assessment.

Providing anytime/anywhere content engagement:

As a result of becoming a second writing *and* a Social Sciences Gen Ed. course, demand for the course is anticipated to increase at the same time that availability of large classroom spaces on the Columbus campus is anticipated to decrease, particularly at times preferred by students.

Solution: Provide students an opportunity to:

- Choose one of three lecture attendance modes for any given lecture (face-to-face, synchronously online, or asynchronously online).
- Access course materials anytime/anywhere, while continuing to require face-to-face recitation attendance.

In the semester system, ANIM SCI 2367 will fulfill a Social Sciences and a Second Writing GenEd.

Problem

The ideal for Animal Sciences 2367 is a small learning community; however, due to institutional resources constraints and course changes, the class size is expected to increase. With the changed status of the course to fulfill a second writing GenEd (in addition to the Social Sciences GenEd that the quarter version fulfills), the course is expected to fill to capacity (currently established at 100, with four, 25 students recitation sections). Further, it is expected enrollment numbers will mandate an increased number of offerings each year to meet the demand. (* footnote)

The problem that arises with a high demand/high enrollment course with a diverse student population is how to continue to engage students in their learning process, to meet the intensive demands of a writing course, and to provide the opportunity for student interaction and dialogue regarding the many issues, questions, and debates related to the subject of the course – the past, present, and future roles of animals in our global society. An additional challenge is to provide anytime/anywhere access, which flows from the desire of a growing number of students for this type of course engagement, and the limited availability of large classroom space on the Columbus campus.

(* footnote) Students in the Animal Sciences major as well as the Meat Science major and the BS Nutrition program with an animal interest will be advised to utilize this course as their second writing course. This equates to estimated 125 to 150 students per academic year at current enrollment levels, which are anticipated to increase. Additionally, enrollment in ANIM SCI 240 demonstrates that this course is of interest to the wider University population, with approximately 60% of students enrolled coming from Animal Sciences (major or minor), and the remaining 40% coming from programs ranging the full gamut from pre-law to psychology to art. This diverse demand is anticipated to continue and increase due to the interest students have in the subject (animals) and the ability to use the course to progress toward graduation in multiple GenEd categories.

Opportunity

The nature of the course and subject matter are best served when a community of learners is established. To accommodate the need for a diverse and inclusive community, a HyFlex instructional model will be employed as a scalable solution meeting the enrollment demand and responding to student access preferences. Through the innovative uses of technology and creative changes to pedagogy, the course experience will maintain the small class feel and meet or exceed current expectations for student success and satisfaction.

The overarching goal of this project is to develop a community of learners in a large enrollment, high demand course. To achieve success, we have a critical need to:

- 1) Support anytime/anyplace learning - provide a means by which a majority of students will actively engage with content, peers, and the instructor regardless of attendance modality (face-to-face, synchronous online, asynchronous online).
- 2) Support anytime/anyplace processes for peer feedback, discussion, and debate.
- 3) Provide a meaningful oral communication component involving collaborative work that is manageable within the constraints of large enrollment and course time.

Project Objectives contributing to Project Goals

- 1) Support anytime/anyplace learning - provide a means by which a majority of students will actively engage with content, peers, and the instructor regardless of attendance modality (face-to-face, synchronous online, asynchronous online).
 - Investigate the HyFlex instructional method for students to participate in the lecture component by multiple modalities (f2f; online synchronous; online asynchronous).
 - Select and utilize solution to capture, broadcast, and archive lectures.
 - Incorporate a method by which a majority of students will respond to questions, provide opinions or interact with the instructor when prompted during lecture.
 - Increase opportunities for students to ask questions and interact with the course instructor during lectures.
 - Develop a process to assess active student participation and engagement during content delivery in the context of greater student enrollment and larger lecture size.
 - Identify best practices based on assessment of student participation.
 - Provide online activities to reinforce course concepts addressed in lecture and/or recitation utilizing Quality Matters(TM) criteria.
 - Provide students anytime access to archived lectures.
- 4) Support anytime/anyplace processes for peer feedback, discussion, and debate.
 - Develop an anytime/anywhere topic/issue related discussion venue for students to engage with each other and the instructor.
 - Organize small (4-5) student work groups that interact in and out of class for assignments and peer feedback, as well as serving as a peer resource for information sharing.
 - Identify best practices based on results of efficacy comparison
- 5) Provide a meaningful oral communication component involving collaborative work that is manageable within the constraints of large enrollment and course time.
 - Provide a venue and/or method to support out of class group discussion and work for the oral presentation assignment.
 - Provide technical support for student development of oral presentation assignment.
 - Utilize technology and presentation methodology to allow all students to actively participate in the oral presentation assignment.
 - Provide a method for student delivery of the oral presentation assignment that supports student learning while addressing the time constraints of the course and the number of students enrolled.
 - Develop a method for peer, instructor, and guest feedback to student groups on oral presentation assignment.

In-Scope

- Autumn 2012 semester of ANIM SCI 2367
- Provide lecture via multiple modalities (face-to-face; online synchronous; online asynchronous) with HyFlex model
- Capture/archive lecture
- Select method for students to participate in lecture (respond to questions, polls, ask questions, etc.)
- Recitations occur face-to-face.
- Align lecture, recitation, and online activities to reinforce course concepts
- Develop an online interaction forum
- Develop group-based oral presentation
 - As many as 20 presentations from 100 students (in groups of 5, 5 groups per recitation, 4 recitation sections)

Out-of-Scope

- Develop 2nd and 3rd tier action items that could be used for the Spring 2013 semester, Autumn 2013 semester
- Develop a May-mester version of the course
- Submit course to Ag IDEA
- Develop a completely asynchronous course experience, including online recitations
- Build or adapt a model for another course
- Create a platform for web-based “Class Portfolios” for each recitation class (e.g., a Webzine)
 - Developed and edited by students, incorporating each student’s self determined “best work”
 - Develop method to capture/archive student oral presentations for a class portfolio

Project Process Goals

- Student perception that technology utilized aids learning
- Student perception of course and student course satisfaction are the same or greater than historical
- Student use preference - lecture attendance measures and mode preference
- Student performance on the final writing assignment, integrating course concepts, is the same or greater than historical data
- HyFlex model does not provide additional instructional burden
- Best practices document created
- Online course components and course support materials adhere to Quality Matters guidelines
- Accessibility is addressed in development of course materials
- Student engagement with course content at point of access,
- comprehension checks (polling?) participation or self report,
- lecture/recitation/online activity alignment self report,
- group project methodology preference,
- group work (technology facilitation)

Learning Goal 1 and related objectives:

Support anytime/anyplace learning - provide a means by which a majority of students will actively engage with content, peers, and the instructor regardless of attendance modality (face-to-face, synchronous online, asynchronous online)

- A community of learners exists
 - Demonstrated by greater than 75% of students utilizing one or more methods of participation in the lecture component to respond to questions, provide opinions or interact with the instructor when prompted
 - At least 90% of students achieving course standard of competency for participation in online discussion
- Student feedback indicates sufficient opportunities to interact with and question instructor during lecture component of course
 - Measured by self reflection survey item
- Anytime/anyplace access to lecture component of course is provided to and utilized by students
 - Measured by Connect log-ins and Carmen data
- A majority of students demonstrate understanding of concepts and ability to use concepts to analyze issues related to course content
 - Measured by student success criteria on assignments
- Students attain core competency goals of the course regardless of modality utilized (f2f, online synchronous, online asynchronous).
 - Measured by statistical analysis of relationship between GPA mean and average attendance mode
- Student satisfaction with the course will not be impacted by modality utilized by the student (face-to-face, online synchronous, online asynchronous)
 - Measured by self-reported feedback using a course evaluation instrument

Learning Goal 2 and related objectives:

Support anytime/anyplace processes for peer feedback, discussion, and debate

- Students engage with peers in anytime/anywhere topic/issue related discussion and feedback.
 - Engagement defined by online post activity, contributions during discussions in lecture/recitation
- Student members of workgroups are actively engaged and equally responsible for participation in group activities

- Measured by student self-report in survey and peer evaluation tool
- Student evaluation of the workgroup concept demonstrates that students value the process.
 - Measured by student self-report in survey

Learning Goal 3 and related objectives:

Provide a meaningful oral communication component involving collaborative work that is manageable within the constraints of large enrollment and course time

- Group members contribute equally in development and presentation of oral project
 - Measured by student peer evaluation of group members
- Students perceive the oral communication component to be a valuable activity
 - Measured by student self-report in survey
- Students link oral communication activity to course goals
 - Measured by student self-report in survey

Project Assumptions

- Technology solutions will be supported by the OCIO, with contributions by the CFAES and the Department of Animal Sciences.
- Polling solution may not be supported by the OCIO - dependent on method selected
- Adobe Connect will continue to be supported by CFAES and OCIO for use in teaching activities (in addition to Extension activities).
- Carmen will continue to evolve to enhance opportunities for student engagement with courses.
- Course GRAs will receive training from Writing Across the Curriculum for assessing writing assignments.
- At minimum, 2 GRAs provided per term by the Department of Animal Sciences to assist with the course.
- Technology solutions will support/enhance accessibility
- Students will have/develop necessary needed to participate fully in the course

Risk				Mitigation
Carmen issues	1	2	2	Upload materials before term and test run the course
Adobe Connect issues	2	2	4	Troubleshoot per recommended solutions, set course expectations for those in the online (sych/asynch) delivery methods, provide disclaimer at beginning of course, develop and support student alternatives (e.g., establish student work groups to provide peer support in the case of missed lecture/recitation)
External	2	2	4	Cross-training, redundancy, ongoing communication
	2	2	4	Work with OCIO and registrar to determine alternative solution.
Required 2 GRAs not provided to support this course	1	3	3	Determine processes and procedures for a scaled-back version of the course that is feasible with one professor and one GRA or just one professor.

- 2nd Writing course approval in flux.
- Classroom for Autumn 2012 is Smith 1009 - not sure of classroom capabilities to support enhanced technology applications
- Continued use of enhanced technology applications for the course will require support by registrar to ensure appropriate classroom assignments
- Consistent access to hardware/software in classroom settings

Schedule Considerations / Other / Related Projects

Dept.

- Ohio State Fair July 19-August 7, main constraints July 25-August 7
- Jeanne Osborne starts PhD work Fall Semester 2012

LT

- Simultaneous Impact Grant (SPP0)
- Additional round of Impact Grant applications (due May 21)
- Learning Technology initiatives and high-priority projects yet to be determined
- Rob 000 Aug 11-19

Project Milestones and Major Deliverables

Milestone/Deliverable		
Blog		Jeanne Osborne
Idea Lab - Accessibility (Ken Petri)		Organized by LT Grants
Charter finalized and approved by LTLT and Animal Sciences		Jeanne Osborne, LT Grants
Determine if any spring quarter data collection should occur		Jeanne Osborne, Warren Flood, Henry Zerby
Blog		Jeanne Osborne
Conversation with Library Staff (i.e., Brian Leaf) for developing effective online discussion		Jeanne Osborne, Michelle Hendrick
Writing book for course selected and read		Jeanne Osborne
Course syllabus finalized		Jeanne Osborne, Henry Zerby
Final decision for 2nd Writing Course Status		College of Arts and Sciences
Initial Connect overview training		LT Grants, AS Team (Jeanne and Mike?)
Define lecture polling needs for modules/lectures		LT Grants, Mike Chakerian, Jeanne Osborne (Ken Kulka?)
Identify team members for IRB	April 2, 2012	Jeanne Osborne & LT Grants
Blog	April 9, 2012	Jeanne Osborne
Decide final evaluation methods, survey, focus groups, and so on	April 9, 2012	Warren Flood, Jeanne Osborne, Michelle Hendrick, LT Grants
Contact UCAT should focus groups be an evaluation method	April 9, 2012	Jeanne Osborne
IRB forms downloaded and reviewed	April 16, 2012	Jeanne Osborne, Michelle Hendrick

Milestone/Deliverable		
Online activities for 13 chapters initially identified	April 16, 2012	Jeanne Osborne
Blog	April 16, 2012	Jeanne Osborne
Idea Lab - Quality Matters (Joni Tornwall)	April 17, 2012	Organized by LT Grants
Initial walk-through of classroom and technology with OCIO staff	April 23, 2012	Mike Chakerian, Jeanne Osborne (Ken Kulka?), LT Grants
Blog	April 23, 2012	Jeanne Osborne
Success measures finalized (survey items identified)	April 30, 2012	Warren Flood, Jeanne Osborne, Michelle Hendrick
Team members trained in CITI and COI (those named on IRB application form). http://citiprogram.org http://orrrp.osu.edu/irb/training/citi.cfm http://researchonline.osu.edu/conflict-of-interest/	April 30, 2012	AS Team, LT Grants (as needed)
Initial internal review of course in context of Quality Matters	April 30, 2012	AS Team, LT Grants (Tom Evans)
Final selection for polling solution	April 30, 2012	LT Grants, Mike Chakerian, Jeanne Osborne (Ken Kulka?)
Success measures placed in survey form, in IRB template Including mid-term feedback for writing component	May 7, 2012	Jeanne Osborne, Warren Flood, Michelle Hendrick
Blog	May 7, 2012	AS Team Member
Literature review for IRB written (1-2 pages)	May 14, 2012	Jeanne Osborne, Warren Flood, Michelle Hendrick

Milestone/Deliverable		
Carmen course thoroughly reviewed, commented, plan next steps	May 21, 2012	Jeanne Osborne, Warren Flood, Tom Evans
Online activities for 7 chapters are completed	May 21, 2012	Jeanne Osborne
Idea Lab	May	Organized by LT Grants
Blog	May 21, 2012	AS Team Member
Second walk-through of technology set-up with OCIO staff, practice Connect set-up	May 28, 2012	Mike Chakerian, Jeanne Osborne, LT Grants (Ken Kulka?)
Decision about final oral presentation finalized; coordinate room for final presentations, if necessary	May 28, 2012	Jeanne Osborne, Univ Registrar (FAES contact - Laurie Stokoe)
Final project group creation method selected (define work groups, set-up in Carmen)	May 28, 2012	Jeanne Osborne
Blog	June 4, 2012	AS Team Member
IRB finished and submitted; http://orrrp.osu.edu/irb/exempt/index.cfm	June 4, 2012	Jeanne Osborne, Michelle Hendrick, Warren Flood
All pre-existing course content and activities reviewed and finalized	June 4, 2012	Jeanne Osborne
[Pauleen's content added into Syllabus], Syllabus finalized	June 4, 2012	Jeanne Osborne
Idea Lab	June	Organized by LT Grants
Course review to QM Standards	June 18, 2012	Jeanne Osborne, Warren Flood, (Ken Kulka?), Tom Evans
Draft of quiz questions completed	June 18, 2012	Jeanne Osborne, Michelle Hendrick

Milestone/Deliverable		
Blog	June 18, 2012	AS Team Member
Practice Adobe Connect session, including polling solutions	June 18, 2012	Mike Chakerian, Jeanne Osborne, LT Grants (Ken Kulka?)
Rubric developed for oral presentation	June 25, 2012	Jeanne Osborne, Warren Flood
Select method for oral presentation feedback	June 25, 2012	Jeanne Osborne, Warren Flood
Student handout for final assignment expectations completed	July 2, 2012	Jeanne Osborne, Michelle Hendrick
Blog	July 2, 2012	AS Team Member
Quiz questions imported into Carmen, set-up	July 9, 2012	Jeanne Osborne, Mike Chakerian and IT support
IRB approval gained	July 16, 2012	IRB
One online activity, and one reinforce opportunity completed for all 13 chapters.	July 16, 2012	Jeanne Osborne
Third walk-through of technology set-up with OCIO staff, practice Connect	July 16, 2012	Mike Chakerian, Jeanne Osborne, LT Grants (Ken Kulka?)
Final draft of Carmen template completed	July 16, 2012	Jeanne
Student handout for final assignment training (how-to) completed	July 16, 2012	Jeanne Osborne, Michelle Hendrick
Blog	July 16, 2012	AS Team Member
Idea Lab	July	Organized by LT Grants
Blog	July 30, 2012	AS Team Member

Milestone/Deliverable		
Course prepared and in final state, and tested (conditional releases, and so on)	July 30, 2012	Jeanne Osborne
GRA training by Writing Across Curriculum completed	July 30, 2012	Jeanne Osborne, Chris Manion, Grad Students
Final Review for QM Standards	July 30, 2012	Jeanne Osborne, Warren Flood, (Ken Kulka?), Tom Evans
Final walk-through of technology set-up with OCIO staff, practice Connect	Aug 13, 2012	Mike Chakerian, Jeanne Osborne, Grad Students, LT Grants (Ken Kulka?)
Idea Lab	Aug	Organized by LT Grants
Blog	Aug 13, 2012	AS Team Member
Blog	Sept	AS Team Member
Idea Lab	Sept	Organized by LT Grants
Blog	Oct	AS Team Member
Idea Lab	Oct	Organized by LT Grants
Blog	Nov	AS Team Member
Idea Lab	Nov	Organized by LT Grants
Blog	Dec	AS Team Member
Participate in the 2013 Selection committee?	Dec	Jeanne Osborne
LT Support phase out agreement	Dec 31, 2012	Jeanne Osborne, LT Grants
Project report finished, including Chair statement	Feb 18, 2013	Jeanne Osborne, LT Grants
Submit Abstract for 2013 ASAS/ADSA Annual Meeting (Indianapolis, IN, July 2013)	Feb 2013	Animal Sciences Team

Milestone/Deliverable		
Final Best Practices document finalized		Jeanne Osborne, Warren Flood, Michelle Hendrick
Apply to present at Innovate! 2013		AS Team, LT Grants Team

Project Resource Summary

- \$7500: 10% salary of course coordinator – Jeanne M Osborne (20% total time committed to this project and course delivery)
- \$11,900: Aggregate 5% salary for each of the following:
 - Dr. Henry Zerby – Co-Project Leader and Dept of Animal Sciences Academic Affairs Chair
 - Michelle Hendrick – Project support and Dept of Animal Sciences Grants Development Specialist
 - Michael Chakerian – Project support and Dept of Animal Sciences IT Coordinator
- \$3000: Cash commitment – equipment and software as needed
- \$7500 - Cash commitment – expert consultant for conversion of content from traditional to online format
- \$7500: 10% salary of course coordinator – Jeanne M Osborne
- \$7500: Technical support/technical consulting services (utilize LT to determine what is needed and locate source)