



Learning through a Project- Based First Year Seminar Course

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Agenda

- FYS at Elmhurst College & Its Objectives
- “Local Choices Global Effects” Course
- Course Structure - Self-Directed Learning
- Student Development Theory underpinnings
- Program and Course Evaluations
- Post- Course Activities
- Q&A

The FYS at Elmhurst College

- In Fall 2006, the Dean proposed the concept of a FYS program and a pilot
- One of four volunteer groups
- Personal interest in Sustainability
- Course title – ‘Local Choices Global Effects’
- Have offered it in Fall semester – 2007, 2008 and 2009

Desired Outcomes of the FYS

- Articulate an understanding of the value of a liberal arts education and its synergy with professional preparation.
- React ethically to varied perspectives and experiences to stimulate intellectual curiosity and to expand cultural awareness.
- Articulate and demonstrate ways to ethically gather, synthesize, and present information in school, work, and life.
- Respond critically to varied texts from different disciplinary spheres of knowledge and perspectives.
- Contribute to the campus and society through varied means, including civic engagement.

“Local Choices Global Effects”

- Students, like other members of society, face choices in nearly every aspect of life. These choices often made locally can, in the aggregate, have powerful global consequences. **This course introduces students to the power of individual choice in sustainable living.** The roles of individuals, communities, and nations in the development and sustenance of a healthy eco-system will also be examined.

Alexander Astin's Involvement Theory

Student Involvement: A developmental theory for higher education. 1984. *Journal of College Student Personnel*, 25, 297-308.

The more students are involved academically, co-curricularly, and socially, the more they will learn.

Chickering's Theory of Student Development

7 vectors – Developing Confidence

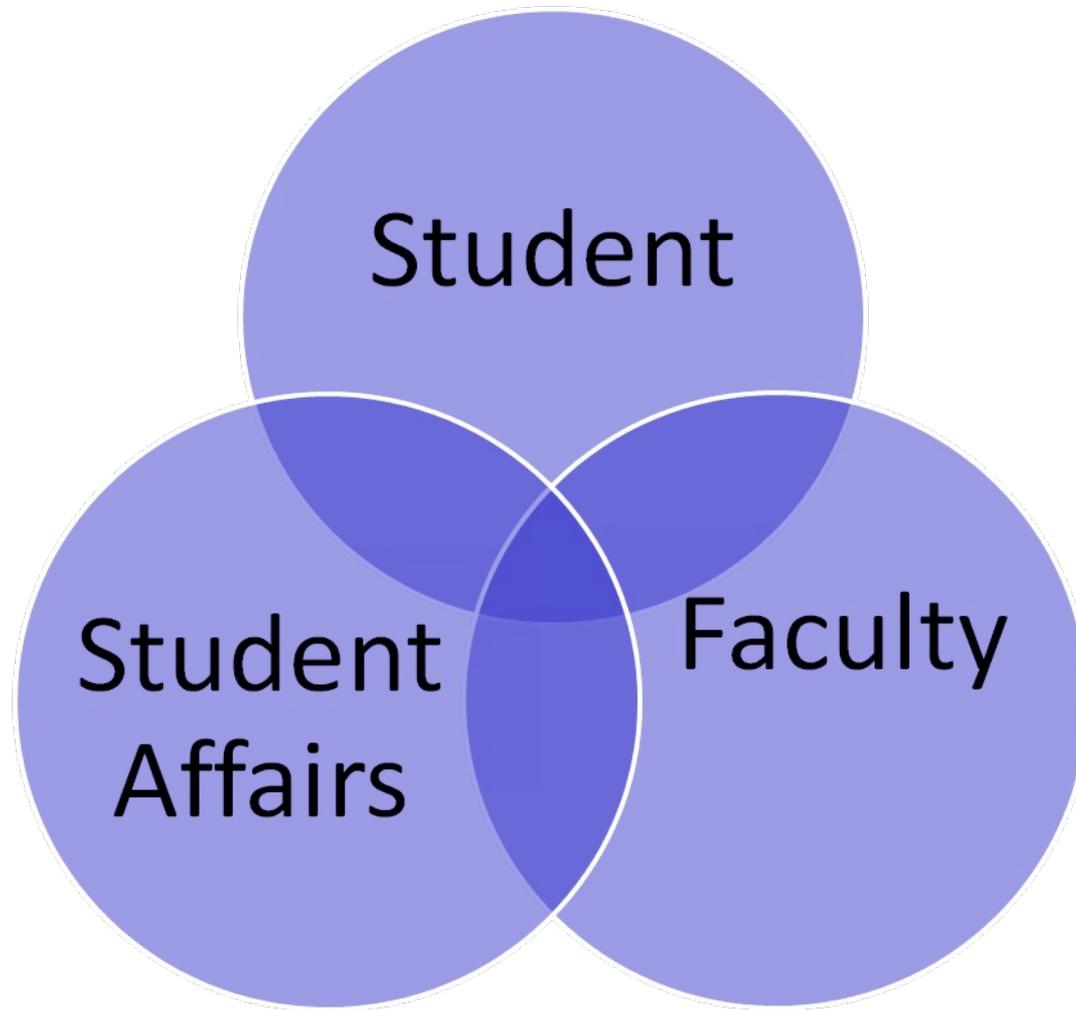
The student is truly the most critical component in determining student involvement (and, by extension, student learning and success).

3 Is: Involvement, Investment and Influence.

How?

- Faculty to redirect traditional pedagogy to **students taking control over their own learning and that of their peers** in the course – which, is similar to RAs doing educational programming (teaching) for residents (fellow students) in a learning environment (residence hall instead of the classroom).

Our Model



Never treat your audience as customers,
always as partners



Objectives

Process

1. Articulate an understanding of the value of a liberal arts education and its synergy with professional preparation.

Readings, discussions,
Reflections

2. React ethically to varied perspectives and experiences to stimulate intellectual curiosity and to expand cultural awareness.

Readings, Projects,
Presentations

3. Articulate and demonstrate ways to ethically gather, synthesize, and present information in school, work, and life.

Info. Literacy
exercises,
Project work

4. Respond critically to varied texts from different disciplinary spheres of knowledge and perspectives.

Projects, book readings

5. Contribute to the campus and society through varied means, including civic engagement.

Presentations, Actions,

“Local Choices Global Effects”

- **The course consists of mini-projects** where student teams research a number of areas including management of trash, energy consumption, alternate energy sources, product lifecycles and food production and consumption. Models from multiple disciplines including economics, physical sciences, political science, and business will be used in analyzing the global impact of local choice. **Students will gain hands-on experience in identifying, selecting and implementing their choices** within the College and the greater community. The research findings and recommendations are presented to representatives from the College and Community.

Sustainability



Resources



Format of Our Classes, in general....

- Start with a review of the homework
- Lecture / Guest Speaker
- Work on the project (Once a month you will present your project as a team) – limited class time
 - September – Food
 - October – Energy
 - November – Waste Management

Project Goals - Example

- Educate ourselves about food –
Read ‘In Defense of Food’ by
Michael Pollan
- Benchmark against others- How
are we doing?
- Should we make any changes?
- Implement at least one idea in
the College and one idea in the
community

Teams

- Demand Side- Students, Faculty, Staff(3)
- Supply Side (4)
- Food Economics (3)
- What other schools are doing? (3)
- Community (3)





Content and Rigor

- 15 A / 5 B / 5 C / 4 D.....GPA
Average 3.07
- Presentations, Papers on each
of the three thematic projects,
Final exam
- Paper-less, all electronic

Learning Outcomes and Evaluation...

Instruments

- Student Papers
- FYS Questionnaire & Other Course Evaluations
- Actions- During and After the Course

From a Student's Paper- Understanding Students' Food Consumption on Campus

- We decided to start off by **administering a survey** consisting of ten short answer questions to students here on campus
- **After reading through all of the surveys** and analyzing the results, we came to the **conclusion that many students were less than honest**, and that these surveys were not an accurate representation of what students were really eating.

From a Student's Paper- Understanding Students' Food Consumption on Campus

- Although the surveys were anonymous, social desirability bias became a factor as we discovered that almost all students claimed to not drink pop, not eat processed foods, read ingredients labels, eat fruits and vegetables every day, and consciously watch what they eat.
- We found the information from the surveys to be valuable, but we still needed a more accurate representation of what students were really eating.

From a student's paper - continued

- We went back to the other approaches we had discussed and decided that the **second method our group would use was observation.**
- **We observed students** in the cafeteria and in the roost at all different meal times and **tallied up what objects students were buying** as they went through the line.
- The data we collected from observation somewhat contradicted the results of our surveys since it appeared that the **majority of students purchased rather unhealthy foods** and very few purchased fruits or vegetables.

Another Student

- Last week I had to buy a new tube of mascara. I took a look at the ingredients on the labels. I didn't know what any of them were. So I thought to myself, is it a good idea to put this into close contact with my eyes? So instead I found organic mascara...Not only are the ingredients all natural, but the company does not perform animal testing, and the tube is made of recycled materials. I hope that after this class I learn to make more decisions like the one I made last week.

Another data point

- I work at an After-School Program at my local park district and I brought up recycling to one of the administrators. Since my mention of this topic, we have added the three R's, Reduce, Reuse, and Recycle, to the curriculum and require all counselors to encourage the kids to do so. The administration also added several new recycling bins and recycling encouraging signs to all their properties. In addition, I questioned the Park District's use of plastics and electronics and how they dispose of them. Due to the poor process of disposal and use, the administration plans to dispose of the electronics properly and reduce the use of plastics.

Evaluation of the FYS and the Course

% of students who answered 4 or 5 on a 5-Point Likert-Scale

	AY 2007		AY 2008	
	ALL	OUR	ALL	OUR
# Students	63	13	128	16
Academically Rigorous	81%	77%	70%	75%
Lib Arts/Prof Ed success	79%	100%	86%	94%
More engaged ON campus	64%	85%	77%	81%
More engaged OFF campus	54%	77%	38%	63%
Addressing national or global inequalities	70%	85%	56%	56%
Power of individual choice	76%	92%	73%	63%
Connected to Elmhurst College	N/A	N/A	76%	94%
Influenced my values and belief system	N/A	N/A	46%	56%



Our 2008 Course had a different classroom- it made

After the Course is Over...

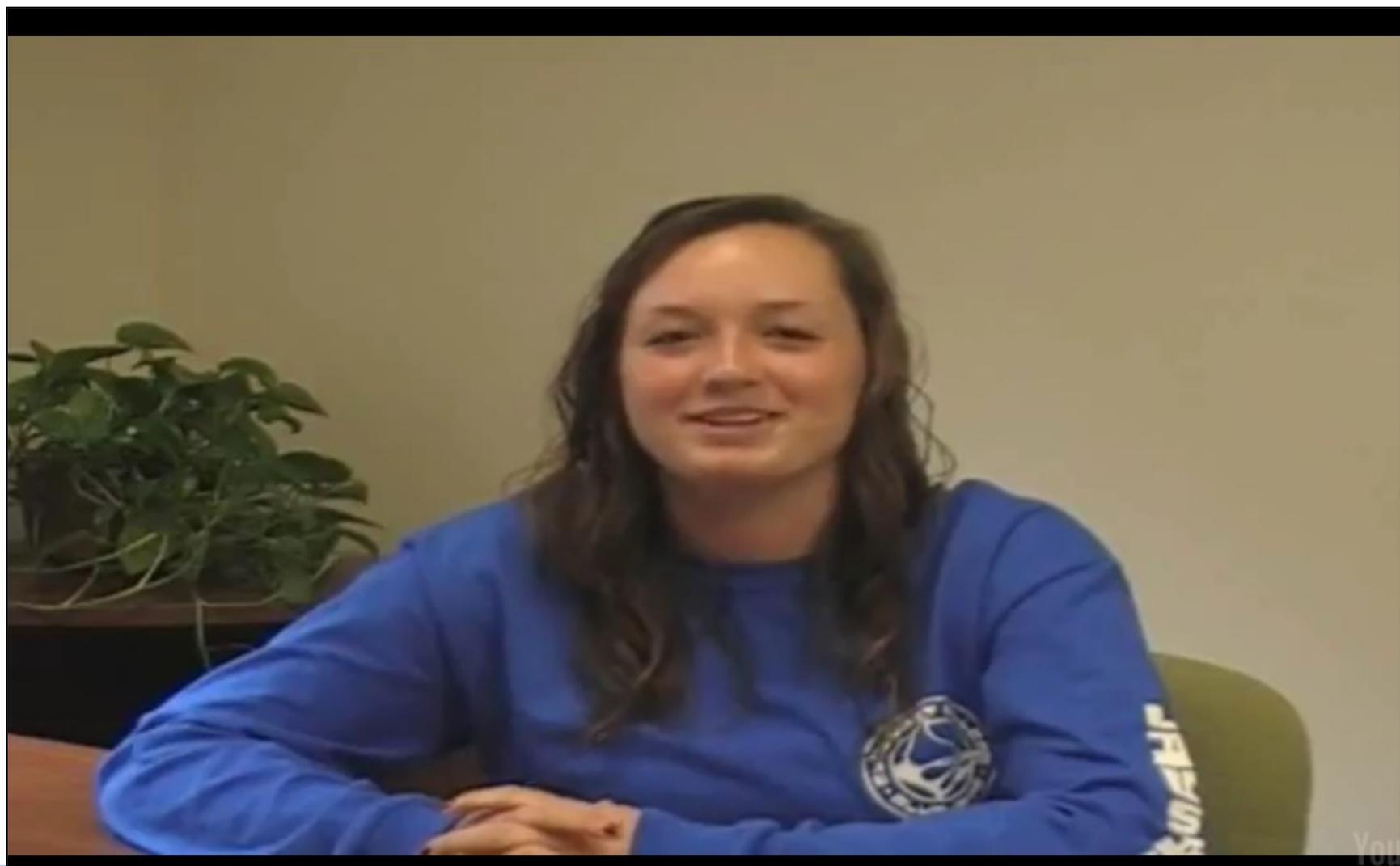
The Civic Impact

- Student Behavior Changed
 - Recycling, eating healthier, conservation
- Increased Student Knowledge of College Organization and Resources
 - Makes them better contributors
- Students are pushing their parents, friends, and community organizations for lifestyle changes
- Increased Student Awareness of Eco-System
 - Prairies, green roofs, butterflies,

Post-Course Activities

- EC Greenjays- formed by students associated with the course (EC Unplugged)
- Some of the students have pursued the topic further in other courses
- Students incorporating the topic into the major
- Students have worked with administration on implementation and marketing

Now, some messages from our students...



Research on Project Based Courses on Sustainability

- Project-Based Learning for Sustainable Development- Marcia L. Nation (Geography- Graduate Students)- J. of Geography. 2008.
 - Its emphasis on learning-by-doing and problem-solving allows students to untangle the complex web of issues surrounding sustainability.
 - As commentators on sustainability science have stated, problem-solving and "use-inspired research" are central to the sustainability enterprise (Clark 2007; Kates et al. 2001).
 - Project-based learning not only develops students' critical thinking and problem-solving skills, it gives them experience in applying these skills to real world situations.
- Problem-Based Inquiry on World Water Problems in Large Undergraduate Classes - Sarah J. Halvorson and James L. Wescoat, Jr. J. of Geography. 2002.
- Project-based learning in post-secondary education - theory, practice and rubber sling shots- Laura Hellel, Pawvi Tynjala & Erkki Olkinuora- Higher Ed. 2006.

This is the most challenging,
time consuming, and
rewarding course I have ever
taught...

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