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Looking at Sustainability on the Lakeshore

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Introduction

A new team-taught course with a focus on interdisciplinary teaching and integrative learning was offered at the Holland Meijer Campus. Faculty from Engineering and Marketing developed a community-focused course with an alternative schedule to engage students in the question: *What will the community look like in ten years? A unique course emerged—Socially Conscious Innovation—that took place in an intense four-week semester. Students spent a significant amount of time in the community exploring local markets for innovation in the realms of sustainability, globalization, and active aging. This article focuses on issues relating to the sustainability segment of the course.*

Why Socially Conscious Innovation?

Grand Valley State University's Continuing Education Office is dedicated to using innovative teaching methods to meet the needs of non-traditional students. The office supported a unique pedagogical venture during the summer of 2008. The course, developed and co-taught by faculty in Business and Engineering, sought to employ alternative formats and pedagogy to address the educational needs of the Holland community in an interdisciplinary fashion. Socially Conscious Innovation asked the questions: *What will Holland look like in ten years? What will the city be as a market? What will the markets be for this manufacturing center?* After completing a module focused on the processes and tools for innovation, students considered three topics: independent aging, sustainability, and globalization. Students engaged these topics through independent reading projects; lecture and discussion; site visits with business, industry, and nonprofit organizations in the community; and individual sourcebooks, accompanied by business plans, for the development of innovative and feasible solutions.

Socially Conscious Innovation was offered in an accelerated format to meet the unique needs of the non-traditional student and to provide ample time to engage with the community. The intensive format created an environment that allowed for what Scott (2003) refers to as "focused learning." The class met twice a week for six hours. This unique structure, along with the commitment to respond to the needs of the lakeshore community, really set the course apart from other offerings at the University."

Assignments and Site Visits

The first sustainability assignment was entitled, "What is your carbon footprint?" Students calculated their carbon footprints and then made changes in the calculations to see the resulting impact. Table 1 provides a list of the assignments and exercises related to the class and topic areas.

Table 1 List of course assignments per content area

Topic Area	Assignment/ Exercises	Central Focus	Pros/Cons
Aging	The aging experience and product design	Ethnographic and experiential research	Awakens students to realities of aging Promotes discussion
Aging	Interview an active senior	Learn the problems and desires of active seniors	Value and experience
Sustainability	Reducing household ecological footprint	Assess the footprint of your household and devise a plan to reduce the footprint by 5% a year for 3 years	Math and technical illiteracy
Sustainability	Determine carbon footprint	Learn about global impact of individual choices	Discussion Interest in understanding calculator
Globalization	Holland's Competitive edge	Assess the strengths and weaknesses of the community relative to international competition	Community and global awareness
Globalization	Import analysis	Survey products in a department store to determine country of manufacture; geographical awareness	Explicit measure of global connectivity
Innovation	Source book	Record ideas, thoughts, and linkages	Students learn to sketch; capture ideas for later use
You choose	Read a book on one of the major topics	Provide background for student and class	Great for the student; faculty may not have accentuated this information enough

Table 2 List of community site visits per content area

Topic Area	Community Visits	Central Focus	Pros/Cons
Aging	Active senior residence	Investigated lifestyles of residents	Students learned about issues facing seniors, and market opportunities
Aging	Senior Community Center	What does a non-residential senior center do?	Learned about changing activities and services offered
Aging	Senior Lunch at an organization of faith	Concerns of seniors	Spent time with seniors
Aging	Presentation by a local minister	What it is that active seniors want and need?	Powerful, personal summation to aging
Aging	Local big box retailer similar to a Wal-Mart	Store design with the active seniors in mind	Learned how basic signage size, height of shelving, and width of aisles are impacted
Sustainability	LEED Certified Hotel	How "green" is marketed	Appearance vs. reality
Sustainability	Large recycling facility	Waste stream and recycling	Understanding the importance of profit or return in a sustainable world
Sustainability	Local grass roots organization focused on the 3 p's: People, Planet and Profit	Focus on the people portion of the 3 P's in the form of social equity	A different view of sustainability
Globalization	Major retailer	Import analysis	Where is the competition?
Globalization	Community power company	Impact of international development on the cost of energy	Learned how dirty electricity is
Globalization	Global furniture manufacturer	Impact of global competition on manufacturing	Opportunity abounds
Sustainability	Community power company	Coal to power conversion	Technical literacy; grasping the scope of the problem
Sustainability	Global furniture manufacturer	Greening of manufacturing	Where in the world does this stuff go and what are the challenges?

Both professors and students concluded that the most interesting exercise was "Reducing your household ecological footprint." Students were asked to look at one of the energy sources they use in their homes. Everyone chose electricity. The challenge was to reduce the use of electricity five percent per year for three years. For most, the first year was simple – using more energy-efficient bulbs. The second and third years required more in-depth analysis. Some would rewire circuits to decrease light that could come on with the flip of the light switch. Another would plant pines to reduce the impact of winter winds on the home as a passive way to reduce heat loss and thus the need for heat. This exercise was customized to West Michigan where the students were living.

The table at left on community visits lists the actual site visits by topic. One class met at City Flats Hotel on 7th street in Holland and toured one of the rooms, the lobby areas, and the restaurant. The emphasis was on *Why a LEED (Leadership in Environmental and Energy Design) certified hotel in Holland?* This is the first of what is hoped to be many hotels that will be built with LEED certification. The hotel boasts cork floors and bathroom counter tops made from concrete containing recycled glass. To conserve electricity, the lights in the room shut off after a certain period without movement. The class learned about many other innovative features that were integrated into the design of the building.

The next stop was a visit with Doug Padnos, the fourth generation of Holland's legendary recyclers. The tour illustrated how recycling has been done profitably for generations. Students learned how cars and other items are shredded and then consolidated into saleable bricks of similar materials. The bricks are shipped all over the world and made into new products. Doug Padnos was especially proud of the special water run-off containment system that was installed to prevent contaminated water from seeping into the environment. Doug explained how they work with manufacturers, encouraging them to consider how their products will enter the waste stream when consumers discard the product. Small changes in design can allow a product to be much less difficult to recycle. The Padnos recycling operation is impressive in scope and execution.

Next door to the Padnos recycling yard, Holland's Board of Power and Water (BPW) operates a coal-fired electrical power plant. This community-owned power plant has been creating power for Holland's residents for over 100 years. President Loren Howard is concerned about sustainability and agreed to meet the class and describe how BPW is working to create a more sustainable power plant. His discussion of global issues with coal and electrical generation alternatives challenged the students. BPW is doing much to enlighten and challenge the greater Holland community.

The students were alarmed by the mountain of coal that the lake freighter had unloaded at BPW dock. President Howard explained that the mountain of coal would only run the plant for a week. In addition, the Holland BPW plant is small

compared with other coal-fired plants in the region. Although many of the students were aware of the environmental issues associated with burning coal, the realization of the many mountains of coal that were burned in the lakeshore region alone gave them an appreciation of the scope of the problem.

The students also learned how the larger, national energy distribution system works. In a computer-packed control room, BPW employees monitored the cost of producing electricity in their plant compared to the price of electricity from the grid. It is an incredible balancing act of buying, selling, and generating sufficient power so that when you choose to flip the switch, your light goes on. Sustainability had a new meaning for students and faculty as everyone headed across town to the newly remodeled Haworth headquarters.

What a dream to get inside the newly-built show complex with many sustainable features. It was hard to know whether to focus on the recycled content of their product line, or on the wonderful walls of glass that let in light, or the planted roof that was insulating the entire building. It was the end of a long day, but no one left as the tour progressed and the individual technologies were explained and dissected.

It is worth noting that both Haworth and Padnos are members of Seidman's Family Owned Business Hall Of Fame.

Reflection

A member of the Biology Department volunteered to evaluate the Socially Conscious Innovation team as an unbiased observer. This faculty member gathered information by attending in-class sessions, accompanying students for on-site visits, conducting group discussions, reviewing materials submitted by students, and participating in classroom activities such as brainstorming sessions and idea pitches. The following general observations and recommendations pertain to the unique nature of this educational experience through discussions on the architecture of the course, the extensive community outreach opportunities, and the dynamics of team teaching that took place.

Interdisciplinary

Anthony et al. (2003), in a case-study on effectiveness in team-teaching and general education environment, reported that the use of team teaching can aid in the achievement of active learning goals and improve students' ability to establish connections. The diversity of instruction styles and the variety of background expertise greatly contributed to the success of Socially Conscious Innovation. A well-rounded team delivered a sound and rigorous class that was enriching as well as entertaining. Even the most skeptical students quickly embraced the originality and complicity of the team teachers and all reflected positively on the experience. The nature of Socially Conscious Innovation was an ideal setting for team teaching.

Course Structure

All three topics included one in-class six-hour day for subject presentations, related activities, discussions and brainstorming sessions and one six-hour day in the community doing appropriate site visits. In addition, it was imperative that the course offer long time blocks to permit the multiple site visits and logistics of transfer between locations. It would be interesting to divide the visits into two blocks of three hours followed by time in the classroom to summarize the information received on the sites. This scenario may lead to more processing of the educational experiences and potentially lead to more learning and better preparation for the upcoming visits.

Community Involvement

The community aspect was a tremendous success and a key part of this course. The students were engaged, were enthusiastic, and became more and more "socially conscious" with each visit. The locations chosen for the site visits were all within the immediate community served by the University campus.

Summary

Although the pilot class is over, Socially Conscious Innovation is just beginning. The biologist, engineer, and business professor are working to improve the course and refocus it. The fourth co-author, an administrator on the campus and adjunct faculty member in the Liberal Studies Department, is working with the faculty team to create ideas for other interesting courses that meet the needs of nontraditional students. The authors are actively seeking ways to sustain the momentum that began with Socially Conscious Innovation because they realize that there is much innovative pedagogy in the community to be explored. There is still work to be done. ■

References

Anthony A. Olorunnisola, Srividya Ramasubramanian, Chris Russill, and Josephine Dumas; Case study effectiveness in a team-teaching and general education environment, *The Journal of General Education*, Vol. 52, No. 3, 2003.

CNN Money 2006 Best Places to Live, http://money.cnn.com/popups/2006/moneymag/bpretire_2006/frameset.exclude.html, retrieved 10/17/08

Scott, Patricia A., Attributes of high-quality intensive courses, in *Interscience*, Wiley, *Volume 2003 Issue 97*, Pages 29–38, March 10, 2003, <http://dx.doi.org/10.1002/ace.86>, verified October 19, 2008.