

# Teaching Global Sustainability in an Integrated Way

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## ABSTRACT

*This paper describes the planning process of an interdisciplinary course for sophomores that deals with a field of study that crosses traditional boundaries between academic disciplines or schools of thought, global sustainability. The course proposal directed the faculty team members to develop a course on global learning, along interdisciplinary lines. This course aimed to help get the students accustomed to thinking across disciplinary lines in the study of Business Administration, even before they are admitted to the College of Business, as well as provide opportunities for research and professional development across departmental lines for three faculty members.*

## INTRODUCTION

Florida International University (FIU) in preparation for reaffirmation of accreditation by The Commission on Colleges of the Southern Association of Colleges and Schools (SACS) has chosen to “Globalize the Curriculum” for its Quality Enhancement Plan (QEP). The purpose of FIU’s Global Learning QEP is to educate for global citizenship—to ensure that every FIU graduate has the educational opportunities to acquire the knowledge, skills, and attitudes necessary to actively address issues and challenges in an interconnected world. FIU’s primary learning initiatives require a perspective consciousness, knowledge of global dynamics and a shared responsibility. The first goal focuses on the recognition of one’s own perspective and the diversity of other perspectives. Students will be able to detect the distinctive and common qualities between one’s own perspective and the perspective of others, as well as, assemble a multi-perspective analysis of a problem. The second goal strengthens the knowledge of issues, processes, trends and systems. Students will be able to discuss prevailing world conditions associated with global dynamics and demonstrate an understanding of interrelatedness of global dynamics. The third goal addresses the willingness to use knowledge of multiple perspectives and global dynamics to solve global, international, and intercultural problems. Students will be able to accept shared responsibility for solving problems and implement strategies that allow them to take action in the context of their own lives.

To achieve these goals the Faculty Senate endorsed a plan that would require all undergraduate students entering FIU without an Associate of Arts (AA) degree from an accredited Florida public institution to take a minimum of one lower division foundational global learning course within the university’s core curriculum and one upper division global learning course within the context of their major.

Taking into consideration FIU's goals and the pressing need to enhance the university curriculum, the academic leadership made a university wide call for course proposals that would facilitate global learning, through an interdisciplinary lens.

The university leadership included in the definition of "global learning" the understanding of global systems and phenomena that transcend national borders, international phenomena that refers to nations and their relationships, and intercultural knowledge and skills necessary to understand and communicate with different cultures. Interdisciplinary teaching required to build teams of faculty from various disciplines to teach the knowledge and skills required to produce a deliverable. It is important to distinguish this type of teaching from multidisciplinary teaching which includes team members from across completely separate disciplines without the connecting and integrating aspects. The key question is how well the deliverable can be decomposed into separable subparts, and then addressed using the separate knowledge and skills possessed by the individual team members.

As part of the proposal requirements the initiative outlined certain parameters for the proposed course. The newly designed course must include the following features: a global component, core course for sophomores, include pedagogy to effectively teach a large section comprising of 250 students, interdisciplinary in nature, and must be team taught by faculty members and five teaching assistants.

In response to FIU's request, this paper describes the conceptualization and design of a lower division global learning course that will address themes and content with an interdisciplinary teaching method. In the following sections we will develop the course rationale, course learning objectives and outcomes, and teaching method. At the end of the paper we will offer some insights into the issues of implementing such model.

## **COURSE RATIONALE**

The Brundtland Commission, formally the World Commission on Environment and Development (WCED), was convened by the United States in 1983 to address the concerns about the deterioration of the environment and this impact for future economic and social development, a problem global in nature. According to the Brundtland Commission's report, "Sustainable development is development that meets the needs of the present [generations] without compromising the ability of future generations to meet their own needs. It contains within it two key concepts: the concept of 'needs' in particular the essential needs of the world's poor, to which overriding priority should be given; and the idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs."<sup>1</sup>

Recently, there has been increasing interest in developing sustainable business practices around the world. Sustainability is topical, a great introduction to business curriculum, and lends itself to integration. This subject matter cannot be properly conveyed and taught without presenting the material and analyzing it across various disciplines. The whole is much greater than the sum of its parts. The subject of Global Sustainability is naturally interdisciplinary; it transcends all functional areas in business in an increasingly interconnected world. The study of sustainability partly focuses on the tri-component model of the Triple Bottom Line, people, profit and planet. The "people" component is addressed in the areas of International Business,

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<sup>1</sup> From the World Commission on Environment and Development's (the Brundtland Commission) report *Our Common Future* (Oxford: Oxford University Press, 1987).

Strategic Management, Human Resources, Corporate Social Responsibility and marketing. The “profit” sector is dealt with in economics, finance, accounting and cost analysis. The “planet” part is addressed in legal, ethical and environmental quality courses. An organization’s ultimate success or health is not only measured by its financial profit, but also by its performance in corporate social responsibility, its ethical standards and environmental performance. “Green” activities have minimal impact on the environment and can be profitable while incorporating the positions of numerous stakeholders. Consequently, the understanding of sustainability includes the perspective of multiple stakeholders – customers, employers, suppliers, local and foreign Governments.

Most businesses are global in nature, as is the field of sustainability; businesses depend globally for product/service inputs and markets. Graduates are expected to integrate their learning to find jobs in a global economy. Sustainable Investment Research Analyst Network (SIRAN), a working group of the Social Investment Forum (SIF), is a network that supports over 220 analysts who specialize in integrating environmental, social, and governance research with investing. The press release which summarized the findings of their 2009 S&P 100 Sustainability Report Comparison, which evaluates SIRAN data through the end of 2008, described a significant increase in sustainability reporting and the use of the Global Reporting Initiative standards by the top U.S. companies since mid-2005. Noteworthy was their observation that during 2008, 93 companies included sustainability information on their web site, up by more than 60 percent from 58 companies in 2004.<sup>2</sup> Therefore, students’ careers today, will benefit from an introduction to the understanding of the global impact of sustainable practices by recognizing the benefits as well as the disadvantages of sustainability in a global context. Taking into consideration the natural benefits of teaching global sustainability in an interdisciplinary way our team decided to create a sustainability course with a finance, corporate law and marketing component. It has long been claimed that Business Schools do little to eliminate the silo mentality; the purpose of our proposal was to create a course that would help get the students used to thinking across disciplinary lines, even before they are admitted to the College of Business. It is expected that as an introduction to these fields, students will gain a core understanding of the concepts, ideas, and vocabulary of global sustainability that might encourage them to seek a more in-depth understanding through specialized upper level courses.

Additionally, the team expected to create synergies that could provide opportunities for research and professional development across departmental lines for three faculty members. Team teaching requires a huge commitment of resources that could affect the faculty overall performance. Such risk would only be offset by ensuring that the faculty involved would also benefit from the synergies created.

## **COURSE LEARNING OBJECTIVES AND LEARNING OUTCOMES**

The team decided to set four major learning objectives. First, this course will integrate the various disciplines from the Business school to design a multi-perspective analysis of an organizational problem. This objective is aimed at providing students with an interdisciplinary view of business opportunities; students will be given the tools to holistically recognize and make recommendations for solving problems. Second, the course will integrate FIU’s mission to promote public service at the local, national and international levels. Third, the course will increase student’s self-awareness of personal, managerial, and business attitudes towards global

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<sup>2</sup> <http://www.siran.org/pdfs/SIRANPR20091217.pdf> (downloaded on December 18, 2009)

sustainability and increase students' understanding of the major issues affecting a global business enterprise in the area of sustainability.

Student learning outcomes were defined to accompany the learning objectives. After completing this course, students should be able to identify an organization's mission and its sustainability strategy. Additionally, students should be able to identify the goals of the organization and the key stakeholders. Furthermore, the student should also be able to devise checklist/definitions about sustainable business practices and metrics, determine the effects of sustainable business practices on the value of the organization, the community and the planet. Last, the student should be able to make recommendations for a vision and strategic direction for "triple bottom line" success.

## **TEACHING METHOD**

According to FIU requirements the course should be designed to be delivered in an interdisciplinary format. The requirements aimed at making synergies between academics with different expertise that would complement each other in order to achieve the course objectives. The members of the team would share, to some degree, the responsibility of a group of students. These responsibilities include course planning, content delivery, and course assessment. There are several co-teaching models (e.g. Friend, Reising, and Cook 1993); from the five models proposed in the literature, team teaching is the most appropriate. Under a team teaching model the team participants share the planning and instruction of students in a coordinated fashion. In this type of joint planning, time, knowledge of the content, a shared philosophy, and commitment to all students in the class are critical. Team teaching can be achieved through different styles or *motifs* as explained by Wegner and Hornyak (1999). In particular, the team members seek to work on an integrated curriculum. In integrated teaching, the course is organized around a complex, multifaceted topic or theme, and it draws on theories and methods from many disciplines (From and Stoehr, 1991). This model was selected after taking into account the course requirements, the nature of the subject to be taught (Global Sustainability), and the expertise of the members of the team.

The course requirements also specified the class section size; the course should be designed to accommodate a class section of 250 students. This requirement implied two additional design elements. First, the integrated curriculum should not only include the three faculty members, but also include the five teaching assistants to support the faculty members. Each assistant would be responsible for a smaller section of 50 students for a weekly study group session. The assistants' support would be channeled into two main activities. In order to achieve the learning outcomes previously defined, the faculty decided to include an integrated project that would require each student to develop a plan to make his/her country, city, home, dorm, office, or business greener. Group cases should provide examples of actual global business situations and lead the students to identify the issues and formulate recommendations. The teaching assistants would monitor the progress of such project on a weekly basis, providing individual feedback to each team. Additionally, the assistants would work with the teams on group cases assigned as follow-up activities to the lectures provided by the faculty members. The teaching assistants will grade the cases and projects under the direction of a faculty member, but all three faculty members will assess samples of students' work independently to validate the graders' assessment of the course learning outcomes using the same rubrics provided to the teaching assistants. This course and its embedded assessments need to be thoroughly validated

to ensure inter-rater reliability and to accurately measure the necessary knowledge, skills and attitudes that pertain to the Course Learning Outcomes as well as QEP's Global Learning Goals & Outcomes.

The second design element includes the use of technology. It seems logical to include a learning management system, for organizational purposes. Additionally, the faculty will make use of student response systems like the "clickers" not only to assess students' reading assignments and provide instant feedback, but also to engage them and improve their performance. Alternatively, the faculty could employ Twitter to provide instructors with an opportunity for constant feedback on the class as it is occurring and to encourage the reserved individual to have his or her views heard.

## **BENEFITS AND BARRIERS OF INTERDISCIPLINARY PROGRAMS**

There are numerous benefits to the faculty, as well as, the students in blended interdisciplinary programs. A survey was conducted examining the practices of faculty teams in blended teacher preparation programs in early childhood education. These programs have been in operation from 1 to 12 years. From the faculty perspective advantages include, collaboration in research, enhanced trust and respect for colleagues and the opportunity to learn from peers (Miller Stayton, 2006, page 58). Furthermore, the modeling of teaming and collaboration by faculty led to reduced separatist identities on the part of the faculty because they were obligated to combine forces, coordinate and cooperate. Being forced to join forces requires each individual faculty member to maintain a reflective stance on their approaches and methodologies. It has been determined that frequency of team meetings is directly correlated to the effectiveness of the program and to the interpersonal relationships among the team members (Miller Stayton, 2006, page 56). Additional benefits include improved professional development for faculty and enhanced quality of the curriculum for students. (Miller Stayton, 2006, page 58). These features lead to shared responsibility for the course as a whole. Other "...potential benefits might include maximum use of resources across disciplines, departments and colleges..." (Miller Stayton, 2006, page 58). Faculty members who have experienced teaching in integrated curriculums claim that greater emphasis is placed on inclusion and diversity and builds the expectation for inclusive services.

From the student perspective, they reap the benefits of being exposed to various viewpoints, teaching styles and philosophies of each individual faculty member which enables them to develop analytical and critical thinking skills. As a result, the blended approach has led to significant proficiency in student communication abilities. Students have expressed positive feedback regarding emotional well being and improved teacher/student relationships. Overall the integration has fostered and facilitated an enhanced quality of the entire curriculum. Additionally, graduates of blended interdisciplinary programs assert that they benefit from immediate employment upon graduation (Miller Stayton, 2006, page 58).

There are also some barriers to integrated teaching that need to be mentioned. In theory, the university administration highly encourages the philosophy of team teaching and faculty interaction. However, in actuality there are institutional structures and policy obstacles as well as externally imposed standards and regulations in every university. (Miller Stayton, 2006, page 58). The faculty is judged by an entirely different set of criteria for tenure and promotion, (ie. publications and research). Therefore, the faculty is in fact being penalized for engaging in teaching in an integrated fashion due to the huge time commitment allocated to interdisciplinary

programs, thus reducing the available time faculty can devote to research. (Zigo & Derrico, 2009, page 137).

All faculty are not created equal, meaning they do not necessarily have the same work loads in terms of hours required for preparation, class size, papers and assessments that need to be graded. Due to the workload disparity, it is evident that some faculty have significantly more time to collaborate with colleagues than other faculty members. In a team teaching environment extensive collaboration is required before, during and after the course is completed (Swanson, Signe & Bicknell-Holmes, Tracy, (2003) [libraries at UNL 158]).

Teaching styles differ among faculty and learning styles differ among students and these two approaches don't always blend. Integrated teaching requires extensive compromises on everyone's part in order to accommodate different learning styles such as visual learners, tactile learners, audio learners, verbal learners and non-verbal learners. Additionally, each instructor maintains his or her own set of expectations. Oftentimes, students become confused because they do not know who is teaching and who is grading. Grading subjectivity is a major concern for the students. It is imperative that the faculty design a rubric to measure and assess learning objectives and student outcomes. It is also critical that one stresses the importance of articulating clear instructional goals. (Zigo & Derrico, 2009, page 146). Students also complained about continuing repetition and theoretical inconsistencies. This could prove to be frustrating both for the faculty and the students (Zigo & Derrico, 2009, page 151).

Last, a possible barrier to interdisciplinary teaching is the integration of the curriculum. Such integration must show cohesiveness. Content issues can affect the design of the course (Shapiro & Dempsey, page 157). This barrier can be overcome by extensive planning and the careful design of the core themes included in it.

## **CONCLUSION**

This paper describes an innovative pedagogy for teaching in an integrated manner. To overcome some the barriers inherent in team teaching it supports the notion that several conditions must be in place. First, there must be a strong theme which promotes teaching of core knowledge, skills and attitudes that is naturally interdisciplinary, in this case global sustainability. Second, in order for the course to be effective there must be support from the university to overcome the barriers; the existence of monetary support that is complementary to the QEP will help somewhat. Third, the faculty members involved should know each others' teaching philosophy, but must be led by a strong team leader. Commitment amongst the Faculty members is essential. Faculty members should also incorporate a common research topic that would create an opportunity for research and professional development, thus providing the incentive for continuing engagement.

## REFERENCES

- Cook, Lynne. (2004, April 29) *Co-Teaching: Principles, Practices, and Pragmatics*. New Mexico Public Education Department, Quarterly Special Education Meeting.
- Dugan, Kimberly & Letterman, Margaret. (2008) *Student Appraisals of Collaborative Teaching*. *College Teaching*, Volume 56, No. 1.
- Fogarty, R., and Stoehr, J. (1991) *Integrating Curricula with Multiple Intelligences: Teams, Themes, and Threads*. Palatine, IL: Skylight Publishing, Inc.
- Friend, M., Reising, M., & Cook, L. (1993) *Co-teaching: An overview of the past, a glimpse at the present, and considerations for the future*. *Preventing School Failure*, 37(4), 6-10.
- Miller, Patricia S. & Stayton, Vicki D. (2006) *Interdisciplinary Teaming in Teacher Preparation*. *Teacher Education and Special Education*, Volume 29, No.1, 56-68.
- Shapiro, Elayne J. & Dempsey, Carol J. (2008) *Conflict Resolution in Team Teaching: A Case Study in Interdisciplinary Teaching*. *College Teaching*, Vol. 56, No. 3.
- Swanson, Signe & Bicknell-Holmes, Tracy. (2003) *A Model for Strategic Business Instruction*. Faculty Publications, UNL Libraries.
- Tannock, Michelle. (2009) *Tangible and Intangible Elements of Collaborative Teaching*. *Intervention in School and Clinic*, Volume 44, No. 173.
- Wenger, Mike S. and Martin J Hornyak (1999), *Team teaching for higher level learning: A framework of professional collaboration*. *Journal of Management Education*, Volume 23 No. 3, 311- 327.
- Zigo, Diane & Derrico, Regina Dunlavey. (2009, January) *Co-Learning Agreements in Research and Teaching: Another Approach to Collaboration in Teacher Education*. *English Education*, Volume 41, No. 2.