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Boyer Plus: Field Study Courses for Sustainable Education

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Abstract: The field study (or short-term study abroad) creates a successful hybrid of study abroad and field research. These short-term educational adventures (edu-ventures) give environmental or sustainability students opportunities to gain practical knowledge while traveling domestically or overseas. In addition, it presents the opportunity for both faculty and students to extend the traditional Boyer model of scholarship, a reputable professoriate model, by developing continuity. The field study fulfills the four pedagogical goals of the Boyer model: creating research opportunities (*discovery*); breaking down the silos of traditional academic departments (*integration*); acting as consultants on-site (*application*); and educating students beyond the faculty members' expertise (*teaching*). In addition, these field studies fulfill a fifth goal: building relationships and transgressing time (*continuity*). The development of this Boyer *Plus* model from a field-study experience serves as a tremendous tool for colleges, universities and professors to build the opportunities and necessary pedagogical skills for both traditional and non-traditional students.

Keywords: Pedagogy; field study; study abroad; sustainability education; environmental studies; Boyer model

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Colleges and universities across the world strive to develop new curricula, attract diverse students, and further refine the role of higher education, especially with respect to sustainability and the environment. Two archetypes, the Boyer pedagogical model and study abroad education, while very different, can be combined and refined to develop successful experiential education. A variety of research exists which demonstrates the benefits of the Boyer model of scholarship, as well as the advantages of study abroad education. Little has been documented, however, regarding the relationship between the academic model and the study abroad experience, particularly shorter term programs. The lens of this research seeks to fill this gap by focusing specifically on courses with short-term embedded education opportunities.

The successful development and completion of a field study (also known as embedded, short-term study abroad, edu-venture) course allows faculty to convey and students to fulfill the academic contract of the Boyer pedagogical goals (discovery, integration, application, and teaching). Traveling to a specific site utilizing the field-study model transcends the traditional Boyer paradigm to a Boyer *Plus* exemplar.

A Case for Short-Term Field Studies

Field research can allow students to focus on scientific analyses of specific locations or subjects, sometimes as a lab component to a regular class. Alternatively, traditional study abroad programs provide opportunities for students to spend one or two semesters taking courses at global institutions, to experience new cultures and often to travel widely. There has been a 232% increase in study abroad from 1985-2002, however the amount of time a student goes abroad is decreasing (Institute of International Education, 2011). The short term study abroad (eight weeks or less), in 2010, accounted for 56.6% of all US study abroad. Some continue to posit that there are greater benefits from the longer periods of studying abroad (Institute of International Education, 2011; Dwyer, 2004).

However there has been little consideration given to students who often do not have the flexibility to move for a semester or more. The field study (or short-term study abroad), creates a successful hybrid of study abroad and field research, and will often be the best choice for students who seek to gain the experiential benefits of out-of-classroom experiences.

The short-term study abroad program does not have the same problems as semesters or more away. Obligations such as, jobs, sports, family commitments, sometimes other classes, and finances often prevent students from participating (Paus, 2008; Pappano, 2007). Short-term study abroad alleviates some of these concerns as most students can be absent from short-term academic requirements with notice, take a week of vacation from work, forego a few days of extra-curricular events, or make arrangement for family care for approximately one five-day work week period.[i] In addition, even though a fee is usually added to the course, it is smaller than a traditional semester abroad. Students can more easily save or find funding for the out of classroom experience. This flexibility is resulting in a greater demand for these types of programs.

In 2004 to 2005, the proportion of total U.S. students participating in a short-term study abroad program quadrupled from 1.7% to 8% (Institute for International Education, 2006). Given that more than half of all enrolled undergraduate students in the United States are non-traditional (Coulter, 2012); building, marketing and capitalizing on these attractive field study courses is essential. A well planned, more intensive and focused experience can leave students with a holistic understanding of the issues surrounding the course material as well as their personal and academic growth. The course fulfills the goals of learning through the Boyer model and adds a unique personal element.

Application of the Boyer Model

Boyer proposed an in-depth representation of scholarship that balances four subsets of academia: discovery, integration, application and teaching (Boyer, 1990). His breakthroughs in pedagogy have justified a variety of academic techniques, including the cooperative extension and service learning as an important and relevant form of scholarship (Campbell, 1999). Building on these niches, short term field studies embedded in truncated course semesters is the newest opportunity for students to have hands on educational experiences and overcome new academic challenges of getting students interested and focused on the material.

While developed in the early 1990s, the Boyer model still remains relevant, necessary and essential for all colleges and universities. We should not discard the important principles guiding our academic system. However, moving beyond Boyer's ideas, implementing the model, and integrating the philosophies into the institutional fabric have been more difficult than anticipated. The pedagogical goals must be more deeply considered, analyzed, and implemented at the college, university, and national level of education (Johnston, 1998). It requires cohesive support and leadership by both faculty and staff—in short, institutionalization. Professors and administrators must continually reinforce communication, remain agreeable to inputs and constantly reinforce the changes (Diamond, 2005). These modifications then require a redefinition of faculty expectations and representative alterations in how they are evaluated and then rewarded (Nibert, 2006).

In this new short-term study abroad model, faculty and students perform first-hand research. Travel groups are often diverse and interdisciplinary as they study issues and transcend academic departmental boundaries. Meetings with government officials, business executives, everyday citizens and generally underrepresented stakeholders facilitate the opportunity for students to have a hands-on approach to the material. Also, during the travel portion students can transition what they learned in class to first-hand knowledge, and develop specificity and expertise in their research endeavors (Long et. al, 2008). In the end, students can go beyond what the professor knows and develop a deeper network of educational sources than found in a traditional college classroom environment.

The field studies fulfill the four pedagogical goals of the Boyer model by: creating research opportunities (*discovery*); breaking down the silos of traditional academic departments (*integration*); acting as consultants in the field (*application*); and educating students beyond the faculty members' expertise (*teaching*). In addition, these field studies fulfill a fifth goal: building relationships and transgressing time (*continuity*). The development of this Boyer *Plus* model from field-study courses serves as a tremendous tool for professors, colleges, and universities to build the necessary bridges between pedagogy and environmental practice for all students.

Boyer Plus

Where does the field study fit into the university model? The techniques, methodologies, and processes are so diverse across colleges or universities and fields of study that there has been little written about their theory or application. The Boyer method has been chosen as the pedagogical framework for transferring the benefits of the field study from an academic tool to applied learning. These studies lend themselves to understanding diverse environments far from the campus. When applied to an environmental field problem and when the travel component occurs after a semester worth of learning on specific subject matter, students can have a comprehensive sustainable understanding of the issues, the places, the people and the complexities. While away, students meet with stakeholders, tour natural environments, receive presentations from experts, and live and breathe the issues and culture all day. When faced with real complexities of sustainability problems, students must think and research more deeply. This experience, if properly repatriated into the student's lives, can lead to greater impact on themselves, their families, peers, careers and the local community.

Student learning moves beyond class discussion, words in a text book, or images on a slide and takes form in front of all of their senses. The class experiences heightened sense of discovery each day in new places. They integrate complex topics with background material on the ground. They apply this knowledge by researching on-site and acting as consultants in the field. It is important that the professor and student present themselves as there to learn, local communities should not feel patronized or colonized, rather informed and partnered. Students experience advanced teaching methodologies not only from their professor but from local experts, people affected and from those who normally would not be invited into a classroom. Having these stakeholders available to students is a critical connection. Furthermore, depending on the nature of the course material, working in the natural environment can have greater health benefits and spark new interests which were not part of the course objectives. For example, a course focused on international rainforest management can lead to a variety of unintended subtopics, including, agriculture, habitat, water management, grazing, entomology, indigenous anthropology, energy, biology and many more. Complex problems are often multi-disciplinary.

Finally, this learning technique moves beyond the Boyer model and offers a form of continuity. Students returning year after year can build on previous research from their predecessors. Contacts and observations made during the field study can turn into

independent studies, research projects, or develop volunteer opportunities locally. Furthermore, faculty continues to engage and network new connections, have opportunity to develop financial resources, and create or strengthen research opportunities at the destination, as they continue to grow at the pre-tenure and post-tenure levels (Moseley, 2009). The achievement of the field study is found in the strength of the pedagogy and the successful transition from learning to research for both students and faculty.

Conclusion

There is a unique opportunity for staff and faculty in environmental and sustainability programs to encourage and develop short-term study abroad programs. Often, these programs are managed in-house, can be international or domestic, and have the potential to heighten learning for the traditional and non-traditional students. Building upon the essential pedagogical objectives developed by Boyer – discovery, integration, application and teaching – the field-study course has the opportunity to achieve a fifth goal of continuity.

As we move to a globalized and sustainable educational model at most of our institutions of higher learning, it is important that we continue to seek experiential opportunities for students. Global careers are changing and our techniques must prepare students for these complexities (Norris, 2009). In conclusion, education and pedagogy are in a state of change. Field-study courses not only teach students about complex topics, but also introduce them to potential professions, prepare them for graduate recruitment and develop an interest in scholarship and research (Yin, 2006). We must be poised to train existing and future leaders with new methodologies that can propel them to address the multidisciplinary issues of the future.

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[i] This assumes a 9-day field-study component encompassing two weekends.