

# **Sustainability Education, Food and Study Abroad: A Florence Experience**

**by Peter Fischer, PhD**

## **Introduction**

Considering the current state of the world signed by environmental degradation, economic crisis and social inequality, and the role that educational institutions can play in shaping the future, sustainability education is no longer an elective. The global community rightly looks to universities to provide leadership to address these challenges by building on the core mission of research, teaching and learning.<sup>1</sup>

International Education is exposing students to the world. However, it also exposes the world to the environmental, economic, and socio-cultural impacts of travel and program activities. A round-trip flight from Boston to Rome, for example, requires the consumption of more fuel and more carbon emissions than most people in the world will use in a year for all the tasks of their daily life<sup>2</sup>.

Sustainability and study abroad seems to be almost an oxymoron! Would it not be more sustainable to avoid these 'unnecessary' greenhouse gas emissions and study at home? Program decisions about transportation, accommodations, food and even recreational activities affect not only the integrity of student's experiences, but also the integrity of cultural identities, natural resources and local economies. The growing awareness of these issues will arguably increase demand for programs to incorporate more sustainability education.

However, study abroad is well positioned to contribute to the search for and sharing of sustainable solutions within different societies. There are interesting and valuable opportunities for students and teachers to learn, experience, and promote best practices for sustainability while studying abroad.

## **The Sustainable Food and Environmental Systems Program**

We at the International Studies Institute (ISI) in Florence<sup>3</sup> are committed to making our contribution. More than encouraging our students, staff and faculty to reduce the ecological footprint of our academic community, we have created a special program named the 'Sustainable

---

<sup>1</sup> See: *The Presidents Council on Sustainable Development* ([www.ffof.org/pcsd](http://www.ffof.org/pcsd))

<sup>2</sup> See: *Sustainability in International Education - Recommendations for Education Abroad Administrators and Faculty*, Report submitted to NAFSA, April, 2008 ([www.nafsa.org/\\_/File/\\_/NAFSA\\_Sustainability\\_Report.pdf](http://www.nafsa.org/_/File/_/NAFSA_Sustainability_Report.pdf))

<sup>3</sup> ISI operates an accredited and highly selective study abroad program for students from US colleges and universities in Florence ([www.isiflorence.org](http://www.isiflorence.org))

Food and Environmental Systems Program (SFESP)' which we offer every year in the fall semester, from August until December, since 2009.<sup>4</sup>

The curriculum integrates humanities as well as social and natural sciences and uses a distinguished international faculty. Multimedia lessons in the classroom (in English) and workshops are combined with innovative field experiences through activities in local markets, soup kitchens, transport companies, restaurants and grocery stores, using Florence and Tuscany as a living laboratory for how to best integrate theoretical and experiential learning.

In 2014, seventeen American undergraduate students with diverse educational backgrounds and a shared interest in food and the complexity of food systems have participated<sup>5</sup>.

The three key themes of the SFESP are:

- food and sustainability
- a systems perspective on food
- the Italian experience

### **Key Theme 1: Food and Sustainability**

Food is essential to life. It also forms an central part of our cultural identity, and plays an important role in the economy. People are aware that the food they eat is an important factor affecting their health, but what is less well known is the impact that producing and consuming food has on the world's resources. Alongside the cars we drive and the energy we use to heat our houses, the food we produce and consume has a significant impact on the environment through, for example, greenhouse gas emissions, the use of land and water resources, pollution, depletion of phosphorus, and the impact of chemical products such as herbicides and pesticides.<sup>6</sup>

A growing number of analyses question the long-term sustainability of the current food system in a world, where today more than a billion people are obese, and about an equal number are undernourished.

But what exactly is meant by 'sustainable' food systems? There are many different views as to what constitutes a 'sustainable' food system, and what falls within the scope of the term 'sustainability'. Strictly speaking, sustainability implies the use of resources at rates that do not exceed the



---

<sup>4</sup> ISI Florence has been the first American Study Abroad Program in Italy, to develop and to launch a program of this kind. For information material, see: <http://isiflorence.org/academics/sustainable-food-system-program/>

<sup>5</sup> Their home universities were: University of Connecticut (8), Pennsylvania State University (7), Connecticut College (1) and University of Virginia (1)

<sup>6</sup> See European Commission, *Sustainable Food*, retrieved from: <http://ec.europa.eu/environment/eussd/food.htm>

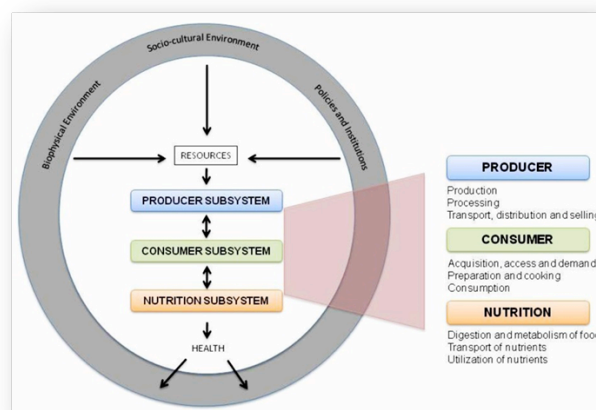
capacity of which the Earth is able to replace them<sup>7</sup>.

A sustainable food system might be seen as encompassing a range of issues such as security of the supply of food, health, safety, affordability, quality, a strong food industry in terms of jobs and growth and, at the same time environmental sustainability in terms of issues such as climate change, biodiversity, as well as water and soil quality. But how can we move towards a more resource efficient and sustainable food system?

A first step towards greater awareness of sustainability challenges related to food is a worldview that sees one's own circumstances in the context of wider systems of ecological, social, and economic interactions.<sup>8</sup>

## Key Theme 2: Systems Perspective on Food

The SFESP starts from a systemic or a holistic perspective. Students are invited to look at the complex and interdependent relationships between humans and their food from the field to the fork, i.e. from production, processing, transport, distribution, and preparation to consumption, so that they can better understand how the entire food system works and interacts with the environment, the community, and with our health. In a food systems perspective, food is not conceptualized as an isolated object but rather as a dynamic element of interactions and processes.



**Figure 1: The Food and Nutrition System according to Sobal et al.<sup>9</sup>**

<sup>7</sup> See the famous definition of 'Sustainable Development' in the so-called Brundtland Report: "Our Common Future" (1987) (<http://www.un-documents.net/wced-ocf.htm>)

<sup>8</sup> See P.F. Barlett, (2008), Reason and Reenchantment in Cultural Change. Sustainability in Higher Education, in: *Current Anthropology*, Vol. 49, N° 6, pp. 1077-1098

<sup>9</sup> J. Sobal, Khan, LK; Bisogni, C. A Conceptual Model of the Food and Nutrition System. in: *Soc. Sci. Med* 1998, 47, 853-863.

The rapidly developing global industrial food system has undeniably developed an unprecedented capacity to increase food production, and to offer for the first time a solution to respond to the chronic hunger and starvation that have plagued mankind throughout history. However, the solution has progressively become part of the problem. The global industrial food system has both contributed and been subject to dramatic ecosystem changes, including water and soil contamination and depletion, energy shortages, decreases in biodiversity, and climate change.<sup>10</sup> The adopted systems approach is recognizing the Florence food system as a microcosm of the global food system.

### **Key Theme 3: The Italian Experience**

Why offer such a program for study abroad in Italy? The answer: The same reason for which this country has been entrusted with the organization of the World EXPO 2015 on “Feeding the Planet – Energy for Life”. While it should not be overlooked that this country has also been involved in some major food scandals in recent history<sup>11</sup>, it is equally evident that more than in many other countries, food in Italy is taken seriously. The same unusual attention which Italians pay to art and music, they also pay to food.

In this country, American students can learn to understand that food is culture and that food can be considered as a “decisive element of human identity and as one of the most effective means of expressing and communicating that identity”<sup>12</sup>. In Italy, the quality of food and conviviality at the table equals quality of life. These experiences could lead to a “cultural food shift” providing American students with a new paradigm to perceive food.

Over the centuries, cities and provinces of Tuscany (‘città e contado’) have developed models of sustainable development, which - reinterpreted in a modern way - create a priceless heritage for the training of young Americans.

---

<sup>10</sup> See J. Ikerd, *The Failure of Industrial Agriculture - The Path to a Sustainable Food Future*, paper presented at a “Humane Farming Discussion,” Omaha, NE, October 11, 2014, retrieved from: <http://web.missouri.edu/ikerdj/papers>

<sup>11</sup> Just to mention the recent waste management scandal in the Naples area and related high levels of dioxin in buffalo milk for mozzarella (see [www.theguardian.com/world/2004/oct/14/italy.sophiearie](http://www.theguardian.com/world/2004/oct/14/italy.sophiearie)), as well as the embarrassing counterfeit scandal with (Tuscan) olive oil which is much debated in the United States today<sup>11</sup> (see [www.nytimes.com/interactive/2014/01/24/opinion/food-chains-extra-virgin-suicide.html?\\_r=0](http://www.nytimes.com/interactive/2014/01/24/opinion/food-chains-extra-virgin-suicide.html?_r=0)),

<sup>12</sup> M. Montanari, *Food Is Culture*, New York: Columbia University Press 2006, p. xii

Florence is a world renowned food capital. Its vibrant traditional food markets, restaurants and grocery stores offer unique opportunities for engaging with the local community and exploring the global-local linkages of food, from production to consumption, in a historical and contemporary perspective. Italy also hosts numerous important international food organizations such as the Food and Agriculture Organization (FAO) of the United Nations in Rome, and the European Food Safety Agency (EFSA) in Parma. This offers unique opportunities for learning outside the classroom and how to critically engage with top international experts to address the 'big questions' of food systems and sustainability.

### **Partners and Collaborators**

The Sustainable Food and Environmental Systems Program is a collaborative project, involving multiple partners and collaborators with various levels of commitment to the program. So far, partnerships have been created with leading government and non-governmental organizations, such as the Council of the Tuscan Region and the 'Fondazione Sistema Toscana', the prestigious Georgofili Academy, Navdanya International and Caritas Florence.

We also work with prestigious Italian universities like the University of Florence', the University of Bologna' and the University of Pisa. Furthermore, the SFESP collaborates with a variety of Tuscan farms, food and environmental groups, food processing, retail and transport companies as well as with local restaurants and chefs.

### **Organization and Pedagogy of the SFESP**

Intense classroom lessons, thematic workshops, project-based group work, and a variety of out-door experiences comprising hands-on activities are coordinated in a rich schedule to integrate theoretical and experiential modes of learning. The curriculum combines social and natural science together with a humanities approach to analyze historical and contemporary food systems in Italy through diverse disciplinary and methodological frameworks.

During the Fall of 2014, the following classes taught by a multi-disciplinary team of faculty have been offered:

- Fundamentals of Sustainable Food Systems in a Historical Perspective (3 credits)
- The Business of Sustainable Food Supply Chains in Italy (3 credits)
- The Sustainability of Food and Environmental Systems in Italy and in the United States in a Comparative Perspective (3 credits)

These three courses share a focus on sustainability and interdisciplinary studies on food systems. The objective of these courses is to help train students, both as citizens and professionals, as future leaders with a sound understanding of the ecological, social, and economic sustainability of food systems. To these three core courses, two auxiliary courses have been added:

- The Florence Experience: Italian Language (4 credits)
- Cultural Literacy: Pathways to Intercultural Competence (1 credit)

While the first auxiliary course provides students with a basic level in cultural and linguistic communicative competences (with a focus on building up an Italian food vocabulary), the second auxiliary course, which is organized in a series of workshops, encourages students to develop intercultural skills necessary to successfully communicate and interact with the local community.

It is our firm belief that study abroad in and of itself does not automatically lead to the development of intercultural understanding and competence. Students who develop adequate language and intercultural communication skills are much better prepared to collaborate with members of the host culture in direct interactions outside the classroom.

These classroom activities are accompanied by an intense series of 'study tours' and 'field experiences' through which students have the opportunity to learn directly from Italian farmers and producers, processors, sales and marketing professionals, and chefs about the challenges of sustainable food and environmental systems. The duration of these special activities are between one and five days.

### **Study Tours and Place-Based Learning**

In order to develop a better understanding of the complexity of food systems and food culture in Italy, students must have direct place-based experiences. Along with the engagement of theoretical concepts that is required by these experiences, the bonds that are formed between students during these study tours create a constructive learning community and enhance the learning experience. Teaching in the field also gives instructors the opportunity to learn more about their students and their ways to view the world, and therefore can help the instructor to better communicate the concepts of the course.<sup>13</sup>

Place based learning experiences such as study tours also allow students to develop a real sense of place in a world that for many of them has become increasingly virtual and accessible only

---

<sup>13</sup> See D. Sobel, *Place-based Education: Connecting Classroom and Community*, retrieved from: [www.antiochne.edu/wp-content/uploads/2012/08/pbexcerpt.pdf](http://www.antiochne.edu/wp-content/uploads/2012/08/pbexcerpt.pdf)

via computer or mobile phone, expecting them to keep permanently connected while at the same time remaining deeply disconnected from the real world.

This is all the more true for study abroad programs, which - in the opinion of the author - should go beyond the clichéd rhetorical notion of creating 'global citizens', i.e. 'people who think and act beyond the boundaries of identity and place' as it has been said, but rather develop a deepened sense of identity based on the experience of a real connection to place, a care for the earth, and of efforts to preserve it in a real confrontation with cultural diversity.<sup>14</sup>

The SFESP Study Tour Program in Fall 2014 started with a full-immersion experience at a Natural Park in Southern Tuscany (the 'Maremma'). For an entire week students had the opportunity to delve into an in-depth understanding of important environmental issues such as protection of biodiversity and sustainable landscape management.

Back in Florence, students participated in culinary walking tours in order to perceive the historical and contemporary relationships between this city and food. They learned about the historical importance of the Arno river to ship food to Florence (grains in particular), about the 'Mercato Vecchio' (today Piazza Repubblica) which for centuries served as the central food distribution place until it was swept away during late 19th century and replaced by the Mercato Centrale. Students' attention was drawn to the names of historical streets and piazzas (squares) which until today reveal their significance for the urban food system, such as Piazza dell'Olio or Piazza del Grano. The program has also included the tasting of typical Florentine 'street food', i.e. Trippa and Lampredotto

Furthermore, students visited an organic farm in the outskirts of Florence ('San Michele a Torri') to learn not only about 'Cinta Senese' (a traditional and rare breed of pigs) and the preservation of biodiversity, but also to develop an understanding about the historical relationships between city and countryside (città e contado).

Outside the region of Tuscany, a study tour was organized to the Emilia Romagna region to explore first-hand the entire supply chain of Parmigiano Reggiano cheese, from production to sale, and to understand the relevance of the EU system of geographical indications and protected designation of origin for fair competition and sustainability. At the University of Bologna students

---

<sup>14</sup> See R. Slimbach, *The Fate of Civilization and the Future of Education Abroad: Lessons From a Kentucky Farmer*, in: *The Forum on Education Abroad, Eighth Annual Conference*, March 21, 2012, Denver Colorado, retrieved from: [https://sty.presswarehouse.com/sites/stylus/resrcs/chapters/1579223478\\_excerpt.pdf](https://sty.presswarehouse.com/sites/stylus/resrcs/chapters/1579223478_excerpt.pdf)

were taught about the 'Nutrient Cycle' related to milk and meat.<sup>15</sup> To develop a comprehension of how and from where the city of Florence is supplied with food, students have visited the Mercatir wholesale produce market in the northern outskirts of the city. Students also took outdoor lessons on how to taste wine and olive oil as well as on how to cook a Tuscan meal.

### **Field Experiences and Experiential Learning**

The Field experiences are the highlights of the SFESP. They also have a duration between one and five days, but unlike the 'Study Tours' these are educational experiences not mediated by an instructor. "Experiential learning sends students out of the classroom into a world that is complex and interconnected, challenging their prevailing world view and their ability to take responsibility for their own learning".<sup>16</sup>

Grounded in the work of John Dewey this innovative approach is based on a central paradigm of the constructivist theory that learning is an active process. Traditional pedagogy views the teacher as the expert and students as passive recipients of that expertise. On the contrary, experiential learning promotes direct involvement in the real world and defines the role of the teacher as a facilitator of learning.

However, it is important to emphasize that direct experiences are not educational in and of themselves. "Activity that is not checked by observation of what follows from it may be temporarily enjoyed. But intellectually it leads nowhere".<sup>17</sup> Experiences must be transformed into knowledge. Students need to be encouraged and assisted to pass all stages of the so-called "learning cycle."

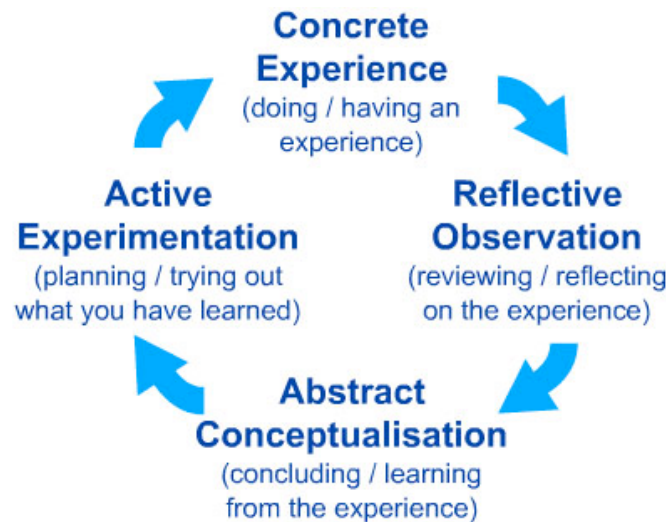
---

<sup>15</sup> In 2013, our group of students has followed a whole meat supply chain (Florentine beefsteak), from a farm in the Mugello over a local slaughterhouse to a butcher's shop inside the Sant' Ambrogio Market. This study tour has finished with the consumption of Bistecca Fiorentina in a known restaurant in Florence.

<sup>16</sup> See L. Montrose, International Study and Experiential Learning: The Academic Context, in: *Frontiers: The International Journal of Study Abroad*, Volume VIII, Winter 2002, pp. 1-15, p. 2, retrieved from: [www.frontiersjournal.com/issues/vol8/vol8-08\\_montrose.pdf](http://www.frontiersjournal.com/issues/vol8/vol8-08_montrose.pdf)

<sup>17</sup> J. Dewey, *Experience and Education*, Touchstone Edition, New York: Simon and Schuster 1997, p. 25





**Figure 2: Kolb's Four Stages of Experiential Learning Cycle**

According to the model of David Kolb<sup>18</sup>, in order to turn experience into knowledge, students must start with “a concrete experience, followed by observation and reflection, which have to be assimilated into the formation of abstract concepts and generalizations, from which implications for actions can be deduced. Finally, these lead to testing implications of concepts in new situations, followed by another concrete experience, which starts the cycle which is meant to be a continuing spiral, anew.”<sup>19</sup>

The key to successfully using experiential learning as a didactic instrument is realizing that it is not the activity itself, but the critical analysis of that activity that transforms the experiential practice into a meaningful academic experience. Understanding the theory and practice of experiential learning is required to support and legitimize academic integration of specific experiences with the rigor and credibility afforded to traditional discipline-based learning.<sup>20</sup>

Experiential education and study abroad are natural partners as they share the common goal of empowering students via providing them with place-based experiences of cultural diversity and endowing them with skills, which presumably lead to improved international relations and global understanding.<sup>21</sup>

Experiential learning is also vital to education for sustainability. Only through direct contact with the real world, can students develop a thorough understanding of the fundamental ecological

<sup>18</sup> See D.A. Kolb (1984), *Experiential Learning: Experience as the Source of Learning and Development*, retrieved from: <http://academic.regis.edu/ed205/kolb.pdf>, access date: February 5, 2015

<sup>19</sup> See L. Montrose, p. 5

<sup>20</sup> Ibid.

<sup>21</sup> See N. Kauffman, et al., *Students Abroad: Strangers at Home*, Yarmouth, ME: Intercultural Press 1992, p. 56

principles. Furthermore, a remarkable growth of students through the improvement of critical thinking together with greater personal efficiency may be experienced.

The Field Experience Program during Fall 2014 included a student participation in the grape harvest at an organic winery (Riecine) in Chianti. There students learned about the principles and techniques of organic farming as well as about the end of the sharecropping system and development of the "Tuscan Wine Revolution" after the end of WWII.<sup>22</sup>

For November 2014 an experiential learning activity was designed around the idea of making Florence a living laboratory for experiential learning and sustainability education. We considered Florence to be a 'Hungry City'<sup>23</sup> and to look more closely at the many ways how urban structure and life has been and is still shaped by the necessities and pleasures surrounding food.

Students have been invited to explore first-hand the central components of Florence's urban food system, from grocery stores to neighborhood restaurants and soup kitchens, as well as from wholesale to retail markets. For an entire week the students, - divided into small groups - worked closely with local operators.

A first group was able to inspect the complex operations of the 'Cooperative Fiorentina Trasporti', a leader in the logistics of food in Tuscany. Another group did a week of volunteer work at local soup kitchen that is run by a catholic Charity organization (Caritas) in the outskirts of Florence, serving 550 meals daily to poor and needy Italians and foreigners. Three students worked for two days at the 'Bottega della Frutta' a traditional mom and pop store in the historical center of Florence, and for three more days in the kitchen and in the dining rooms of three well-known Florentine restaurants: "Buca Lapi", "La Spada" and "Centopoveri".

Finally, a group of five students were placed at the historical Sant'Ambrogio Market in Florence.<sup>24</sup> Traditional markets are remnants of the past (like churches) lodged in the heart of modern cities (unlike supermarkets). Historically, they have taken a major role in provisioning cities and they are still vibrant places that evoke the senses and memories.<sup>25</sup> Food markets are important gateways between the producer and consumer subsystems<sup>26</sup> and they also create a fascinating interface between different people and cultures. Lastly, markets are open systems that

---

<sup>22</sup> In 2013, students had participated in the picking of olives at several organic farms in Tuscany. While in the last year, due to the particular climatic conditions, it was not possible to continue with this activity will be offered again in autumn 2015 this time centered on the study of the plague of the olives and on what can be done.

<sup>23</sup> See: C. Steel, *Hungry City - How Food Shapes Our Lives*, London: Vintage Books 2009

<sup>24</sup> The 'Mercato di Sant'Ambrogio' has been the wholesale fruit and vegetable market until 1955, when the larger Mercatir was built for wholesale in the outskirts of the city.

<sup>25</sup> See: R. Black, *Porta Palazzo: The Anthropology of an Italian Market*, Philadelphia: University of Pennsylvania Press 2012, p. 8

<sup>26</sup> see: Sobel et al, p. 857f.

are in continuous interaction with their environment. In short, markets are multi-layered, multi-dimensional, complex and challenging, and they offer rich opportunities for study abroad students to learn, no matter their disciplinary interests.

Operating a rotational system – the five students worked every morning in a different booth; covering the sales of bread, meat, fish, fruits and vegetables, as well as the in-door restaurant where they were involved in the preparation and serving of typical Tuscan dishes.<sup>27</sup>

At the end of the semester all student groups presented their working experiences for critical analysis and reflection in class. Students agreed that this week of experiential learning right in the center of the Florentine food system has been the most challenging and the most meaningful part of the program.

As one of our students has put it: “Through hands-on experience working in different key areas of the Florentine food system, I quickly became highly educated in the field of Italian food, how the food in Florence travels from the field to my fork, not to mention learning the Italian language. Most importantly, this week helped me to promote valuable relationships with local Florentines that I will remember for a lifetime”.<sup>28</sup>

### **Some Final Thoughts**

Sustainability education has become a focal point for American Universities and it's safe to say that American Study Abroad Programs will soon have to follow this paradigm shift in higher education as well.

The SFESP, now in its 6<sup>th</sup> year, is continuously unfolding. There are still many aspects in how to successfully organize, manage and academically supervise such a new program that we need to understand better.<sup>29</sup> The elements already articulated in this program may serve as a helpful starting point for the development of similar study abroad projects in the future.

Place-based experiential learning as an element of study abroad programs can play a transformative role in addressing food literacy, sustainability education goals, and aid in providing common spaces for developing intercultural competences.

---

<sup>27</sup> <http://video.corrierefiorentino.corriere.it/lezione-cibo-toscano/47163b64-6922-11e4-a194-b375aea153c4>

<sup>28</sup> Jason Pabst, undergraduate student from Pennsylvania State University, who participated in the 2014 edition of the SFESP.

<sup>29</sup> For example: Experiential education requires ongoing evaluation and assessment to ensure that learners are accomplishing their objectives and to continuously improve the overall quality of the educational program. See: A. Lutterman-Aguilar and O. Gingrich, *Experiential Pedagogy for Study Abroad: Educating for Global Citizenship*, in: *Frontiers: The International Journal of Study Abroad*, Volume VIII, Winter 2002, pp.41-82, retrieved from: [http://frontiersjournal.com/issues/vol8/vol8-07\\_luttermanaguilargingerich.pdf](http://frontiersjournal.com/issues/vol8/vol8-07_luttermanaguilargingerich.pdf); p. 23f.

We have received positive, even enthusiastic feedback not only from our students but also to our surprise from our local partners who have provided them with experiential learning opportunities. Both parts have described the intercultural interaction as a most enriching and empowering experience.

Here then, is the lesson for study abroad cities like Florence: Student learning communities need to be further immersed within local host communities in order for both parts to have more opportunities to experience meaningful cultural diversity and exchange. American study abroad students (against their somewhat compromised image) provide precious cultural and social capital to this 'world capital of culture' which needs to be better communicated but also to be further developed in the future. The new bi-annual Tuscan-American Festival, which is going to be for organized for the first time next year, may serve as the perfect arena to address these and other questions.

### **Acknowledgments**

As the Director of the SFESP, I would like to express my gratitude to my colleagues from the University of Connecticut (College of Agriculture), the University of Florence and ISI Florence, who over the last 5 years have formed, together with me, the faculty of this program, as well as to our many partners and collaborators. Simone Siliani from the Regional Government of Tuscany has been a great source of so many important contacts and enthusiasm as the SESP developed.

I am also grateful to the ISI director, assistant directors and staff for their unrelenting help and incessant support. In particular, I would like to thank Irene Schiatti (Special Programs Coordinator) who with impressive professionalism and sovereignty has managed the complex logistical aspects and challenges of the SFESP. It is easy to forget just how much preparation and hard work is required to make such a program work.

Last but not least a special thanks to the seventy seven students who up to today have attended our program and whose hard work, creativity and enthusiasm as well as patience made this program possible.

A short version of this paper has been presented at the conference "Le Università Americane in Toscana" on February 20, 2015 at the headquarter of the Regional Council of Tuscany in Florence.