

Article

A Referential Methodology for Education on Sustainable Tourism Development

Burcin Hatipoglu ^{1,*}, Bengi Ertuna ^{1,†} and Vinod Sasidharan ^{2,†}

¹ Department of Tourism Administration, Bogazici University, Hisar Kampüs, Bebek/Istanbul 34342, Turkey; E-Mail: bengie@boun.edu.tr

² L. Robert Payne School of Hospitality and Tourism Management, San Diego State University, 5500 Campanile Drive, San Diego, CA 92182-4514, USA; E-Mail: vsasidha@mail.sdsu.edu

[†] These authors contributed equally to this work.

* Author to whom correspondence should be addressed; E-Mail: burcin.hatipoglu@boun.edu.tr; Tel.: +90-212-359-6981 (ext. 6981); Fax: +90-212-265-2119.

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Abstract: Sustainable tourism has the potential of contributing to local development while protecting the natural environment and preserving cultural heritage. Implementation of this form of tourism requires human resources that can assume effective leadership in sustainable development. The purpose of the international student program, described in this paper, was to develop and implement an educational methodology to fulfill this need. The study, which was developed and applied by two universities, took place in August 2013, in the study setting of Kastamonu, Turkey. The effectiveness of the program was measured by pre- and post-surveys using the Global Citizenship Scale developed by Morais and Ogden. The findings document a change in intercultural communication, global knowledge and political voice dimensions of the scale.

Keywords: education for sustainable development; sustainable tourism; global citizenship; study abroad

1. Introduction

With the shifting preferences in society towards having a better quality of life (QoL) in a more sustainable world, an education system that embraces the values of sustainability starting from pre-school

and continuing into university education can act as a “a motor for change” [1] for creating sustainable communities. Through their education, students need to gain alternative values, knowledge and skills for integrating sustainability into their daily lives. According to Oxfam [2], the education of young people for global citizenship is of paramount importance for preparing them to meet the social, environmental and economic sustainability challenges of tomorrow. Higher education institutions can play an active role in this transformation as they prepare future citizens and professionals to address the challenges of the 21st century.

Both sustainable development and education for sustainable development (ESD, as it is called by UNESCO) are complex issues. Sustainable development concerns not only the society, but also governments, organizations, educators, as well as many others. The concept of sustainability is not new, yet it means “many different things to many different people” [3,4]. The different interpretations of the term are partially a result of its multidimensionality (economical, ecological and social) and multidisciplinary nature. Education for sustainable development (ESD) is a new and emerging concept. Similar to sustainable development, there are many debates on its definition and correct terminology. Defined in simple terms, it is the process of learning and teaching about how to achieve sustainable development. UNESCO believes better QoL starts with better education. Students that are socially responsible have social concern for others as well as the environment [5].

UNESCO, through its initiative “The Decade for Education for Sustainable Development 2005–2014” (UNDESD), has called all educators into action to: (1) promote and improve quality education; (2) reorient existing education to address sustainable development; (3) build public understanding and awareness; and (4) provide practical training [1]. In the last decade, governments worldwide have adopted UNDESD recommendations to integrate sustainable development into their education programs [6,7]. For example, in Scotland, the Scottish Executive initiated a five-year action plan titled “Learning for our Future” with the aim that “by 2014, people in Scotland have developed the knowledge, understanding, skills and values to live sustainable lives” and later continued with a follow-up program called “Learning for Change” [8]. The Australian government responded to UNDESD through their “Caring for Our Future” program with the use of education and learning tools for change towards sustainability. The Australian Research Institute in Education for Sustainability (ARIES) was established as a research center in order to promote sustainability-oriented change within the higher education sector [9].

Numerous higher education institutions around the globe have developed course content and built partnerships to advance ESD. In the United Kingdom, the Universities of Bradford and Plymouth, respectively, have implemented a structured approach to curriculum development in this area [10]. In Australia, seven universities have partnered with community stakeholders in order to develop course content and design experiential learning experiences [9]. Two universities, in Finland and the United States, have built a collaborative knowledge base via Facebook for teaching sustainable tourism [11]. In the United States, Arizona State University has established a School of Sustainability, which offers both undergraduate and graduate degrees in the field of sustainability studies [4].

Despite the aforementioned examples, the integration of sustainable development principles into higher education programs is reported to be slow [12,13] with no “systematic treatment for learning” [3] and with much more work to be done [14]. Some of the current barriers to ESD, identified by academic scholars, are as follows:

- (1) Lack of motivation and resistance to change for both staff and students [4,10,15,16].
- (2) Mindset change for academicians [17].
- (3) Lack of skills/expertise/confidence of academicians [7].
- (4) Ethos/culture/organizational structure [10].
- (5) Crowded curriculum/time constraints for academicians [18].

Although the debate on how best to integrate sustainability into higher education has been ongoing for some time among scholars, there is growing consensus that classical learning techniques will not be suitable for sustainability teaching and that the multidisciplinary and multidimensional nature of sustainability requires a deep learning approach [10,19]. Many recommend a whole systems change for achieving transformation, rather than “add-on approaches to existing structures and curricula” [20]. A “sustainability literate person” should be able to conceptualize the relationships between the three dimensions of sustainability and make knowledgeable decisions based on the whole system [21]. A curricular architecture for sustainability education that involves all stakeholders, such as academic directors, professors, students and staff [15], is likely to be the most effective in terms of catalyzing sustainability transformations relating to the “educational paradigm, purpose, policy and practice” [20] of institutions. Furthermore, finding the right pedagogical approach for teaching sustainability and conducting “real world” research is as important as deciding on content [13].

The purpose of this paper is to present a real case used in tourism education to equip students with global citizenship and to improve their skills and knowledge in developing sustainable tourism in a global setting. In the following sections, a discussion of recent developments in this field and a detailed description of the design and implementation of the educational program is provided. In order to assess the impact of this educational methodology on the leadership qualities of students for sustainable tourism development, a survey instrument was administered both before and after the program implementation. The Global Citizenship Scale developed by Morais and Ogden [5] was used in this survey instrument. The changes in global citizenship scores of learners along various dimensions of this scale are reported in the Results and Discussions section.

2. Education for Sustainable Tourism Development

Sustainable tourism is widely accepted and advocated by international organizations and practitioners as an effective tool for local community development [22,23]. It has the potential of contributing to local development while protecting the natural environment and preserving cultural heritage. Achieving these multiple goals requires human resources that can assume effective leadership in sustainable tourism development. Canziani *et al.* [24] defines sustainability education in tourism as “any level of education or training related to environmental, socio-cultural, and economic issues in the conduct of tourism enterprise and tourism development”.

A survey of 400 sustainability coordinators, conducted by The International Society of Sustainability Professionals, showed that in the near future, soft skills, like good communication with stakeholders and problem solving, are going to be the differentiating factors for professionals. In addition, it is anticipated that professionals will increasingly deal with climate change and energy issues [25] in the future. Scholars in the tourism field also acknowledge that future tourism professionals will need “different skills, aptitudes and knowledge to succeed” [26]. Despite these assertions, current

literature reveals the lack of a coherent learning system [24] and a lack of resources [27] for sustainability education in tourism; it tends to be applied in an “*ad hoc* way” [18] and the “current narrow vocational style” [20] or “education for jobs and marketability” [4] focus of tourism schools does not fit with the demands of the education for sustainability.

There are a few widely referred to initiatives about education for sustainable tourism. UNESCO had prepared a “Teaching and Learning for a Sustainable Future” program for the 2002 World Summit on Sustainable Development (updated in 2010). Teaching sustainable tourism was among the 27 modules of its education program [28]. In 2000, five European and 6 Latin American universities formed the ACES (the Spanish acronym for Curriculum Greening of Higher Education) network. Utilizing participatory action research the teaching staff and researchers from different backgrounds worked together on pilot projects. As a result, ACES network developed a curriculum greening model applicable to various studies [29].

A more recent and specific initiative was developed by a group of concerned tourism scholars. Eighty educators worked on the initiative between 2007 and 2010 and formed the Tourism Education Futures Initiative (TEFI). TEFI seeks to “fundamentally transform tourism education” and suggests integrating a five-value set (ethics, stewardship, knowledge, professionalism, mutuality) into tourism education programs [26,30]. Global citizenship is seen as essential for addressing the problems of the 21st century by TEFI, and their mission statement states that “TEFI seeks to provide vision, knowledge and a framework for tourism education programs to promote global citizenship and optimism for a better world” [26].

Sustainability and global citizenship share several similar aims and values, such as care and responsibility for the larger community and environment. However, there is a notable lacuna of literature that combines sustainability and global citizenship [31]. Global citizenship is “actions and beliefs that nurture environmentalism, justice and civic obligations” [32]. Global citizens are people who are aware of the wider world [2] and take responsibility for social and environmental issues, both at local and international levels [33].

There are several scales that can be utilized to measure changes in global citizenship. The Global Competence Aptitude Assessment uses the knowledge, skills, attitudes and experiences necessary to become global citizens [34]. The Global Perspective Inventory (GPI) uses cognitive, intrapersonal and interpersonal dimensions for examining holistic global student learning and development [35]. Paige *et al.* [36] use the Global Engagement Survey to examine students’ participation in global engagement activities. Their survey uses five dimensions: civic engagement, knowledge production, philanthropy, social entrepreneurship and voluntary simplicity. Tarrant and Lyons [32] use a seven-item scale developed by Stern [37] to examine environmental citizenship. Among all, Morais and Ogden’s scale uses a more complete definition of global citizenship [5]. They describe global citizenship in terms of three dimensions.

- (1) Social responsibility is the perceived level of interdependence of and social concern for others, society and the environment. The sub-dimensions of social responsibility are listed as *global justice and disparities, altruism and empathy and global interconnectedness and personal responsibility.*

- (2) Global competence is having an open mind while actively seeking to understand others' cultural norms and expectations and leveraging this knowledge to interact, communicate and work effectively outside one's environment. The sub-dimensions of global competence are *self-awareness*, *intercultural communication* and *global knowledge*.
- (3) Global civic engagement is the demonstration of action and/or the predisposition toward recognizing local, state, national and global community issues and responding through actions, such as volunteerism, political activism and community participation. The sub-dimensions of global civic engagement are *involvement in civic organizations' political voice* and *glocal civic activism*.

Many instructional models are being tested by academic institutions around the globe for learning and teaching sustainable development. Some of the alternative models of education suggested for sustainability are action learning [38,39], outdoors and field study [31], project-based learning [40], community-based learning and study-abroad programs [5]. However, study-abroad programs alone may not be enough for teaching sustainable development or improving global citizenry. A study conducted in the U.S. has shown that the greatest benefits are achieved when students study abroad through the experiential/field study method and receive directed instruction in the objectives of the study [41]. Currently, there are only a few empirical studies on the impact of study-abroad programs on sustainability and global citizenship [42]; however, scholars strongly assert that these experiences will provide students "with a greater sense of intercultural understanding, social justice and equity, self-awareness, and environmental literacy" [31] and will guide them in becoming global citizens [5]. Furthermore, international collaboration for education for sustainability will enable parties to exchange information and find solutions to sustainability problems that may be transferable [6] across institutional and international boundaries.

In brief, study-abroad programs are structured educational experiences in which "participants travel to a location as a group with the primary purpose of engaging in a learning experience directly related to that location" [31]. The choice of location is significant for teaching sustainability. A study of American students travelling abroad found that location, as well as gender and first-time travelling experience does influence students' environmental citizenship [32]. According to the Open Doors Report on International Educational Exchange [43], 273,996 American students travelled for study-abroad programs during 2010 to 2011. Such programs have become popular, and they are expected to become more popular in the near future. The main destinations for American students were the United Kingdom and Italy, and less than 1% of the total (2042) studied abroad in Turkey during the time period.

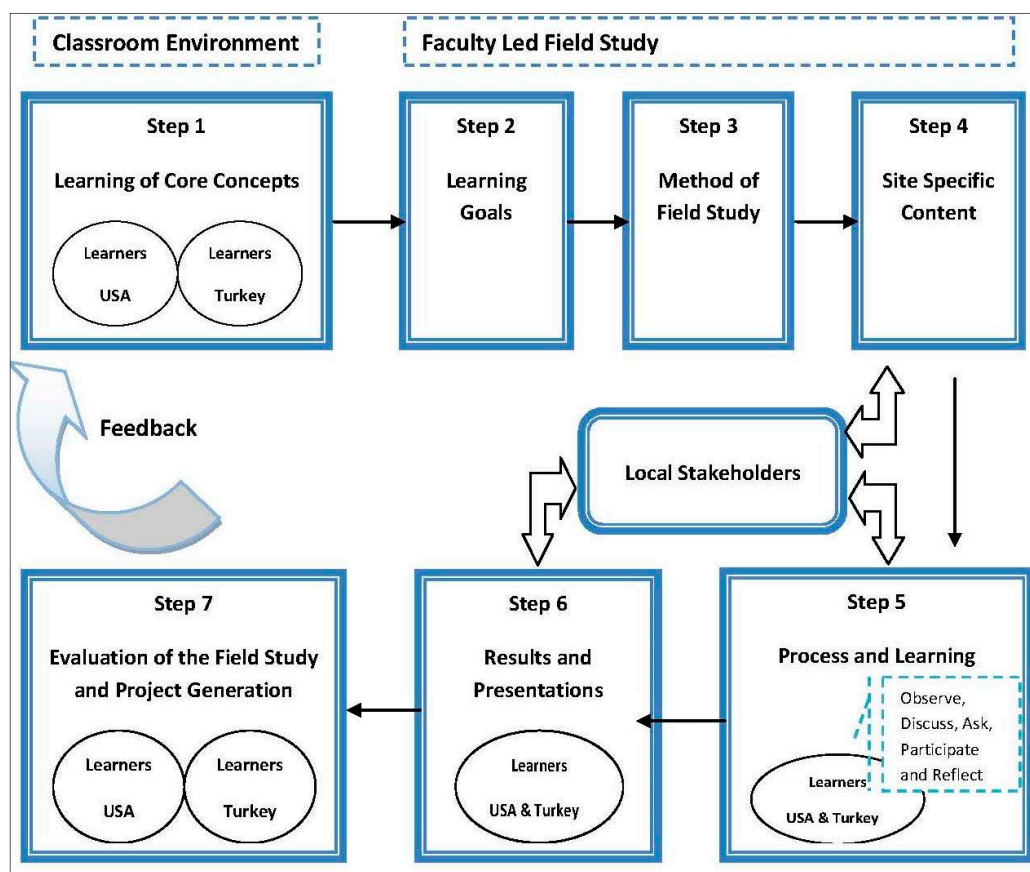
The next section describes the educational design of the study and how structured learning for sustainable tourism development was implemented during the program.

3. Background Information of the Educational Program

The educational program that is presented in this article was specifically developed and implemented by three faculty members to foster learning for sustainable tourism development and improvement in global citizenship behavior in an international setting. Implemented in 2013, it is a joint program of the Department of Tourism Administration at Bogazici University, Turkey, and the

School of Hospitality and Tourism Management at San Diego State University, USA. The educational program has two components (Figure 1). The first component takes place in a classroom setting before and after travelling to the destination. The field-based component, which is part of a study-abroad program, focuses on sustainable tourism development at a single destination. The field study took place over the course of twelve days in August 2013, in the study setting of Kastamonu, Turkey.

Figure 1. A learning methodology for education on sustainable tourism development and global citizenship.



Adopted from [24].

Students from both schools participated in the study; there were 15 American students and 13 Turkish students; 25 of them were at different stages of their four-year undergraduate tourism management education, and three Turkish students had completed their first year in the sustainable tourism management graduate program. Their knowledge regarding sustainable tourism development varied, as they were at different stages of their programs, but they had all taken at least one course that introduced the principles of sustainable tourism development. Twelve students had already travelled abroad for education (study abroad programs for American students, Erasmus program for Turkish students), and the remaining sixteen students had never been abroad.

Study abroad programs are a form of tourism, which dovetails well with the central tenets of sustainability. According to Long, Vogelaar and Hale, some of the ways of mitigating the negative effects can be through changes made to program logistics, curricular and co-curricular design and program mission and assessment. Accordingly, *choice of transportation, destination selection and the*

choice of food and lodging at the destination are key elements of logistics [31]. In our field study program, the logistics were purposefully planned to give the minimum negative effect to the environment and the host communities. For example, while in Istanbul, students were given city bus passes, and the educational tours were conducted using the public bus service or by walking. An intercity bus service was used to travel from Istanbul to the study site of Kastamonu during their stay in the region; all participants either walked or used the bus service in Kastamonu. The group was lodged at a historic Konak (Ottoman-style mansion) in Kastamonu, which gave them a deeper understanding of the old Ottoman lifestyle and cultural values. Furthermore, the group had eaten locally prepared food, both at the hotel and also at the sites visited during their stay. They were exposed to local recipes and traditional ways of cooking, and reciprocally, the participants provided direct monetary benefits to the local people who had prepared the food.

4. Design of the Educational Program

Canziani *et al.* [24] highlight the need for a cohesive learning system for sustainability, as well as appropriate learning content. They also recommend the adoption of existing decision tools in their entirety rather than piecemeal application and concentrate on how to apply these tools to tourism sustainability contexts [24]. A holistic learning system should incorporate global communities of practice (including, educators, practitioners and agencies), inputs from learners, goals, implementation, evaluation of the learning and a feedback loop. Framed on the learning model by Canziani *et al.*, this study has seven consecutive steps. Our model, as illustrated in Figure 1, places stakeholders at the core, which are supported by feedback channels, linking them to the academic team, including students and faculty. The program will be further explained through the seven steps of the learning model.

Step 1 Learning of core concepts: Students had prior exposure to the principles of sustainable tourism development within the context of their individual classroom settings in the United States and Turkey, respectively. Five months prior to their travel to Turkey, a faculty member from Bogazici University had travelled to San Diego State University and provided a presentation about the context of the field trip and described the social, cultural, economic, environmental and political attributes of Turkey. All of the readings, assignments and the assessment criteria were shared with both of the American and Turkish students through an online course site. The readings included academic articles (focusing on measures of happiness and wellbeing), as well as destination-specific economic reports, recent tourism data and strategic tourism plans. In addition Turkish students were given the task of preparing brief reports on the social, cultural, natural and historical values of the Kastamonu area. These reports were also shared at the course site.

Step 2 Learning goals: The program aimed to contribute to students' knowledge, skills and aptitudes, which would enable their transformation into global citizens and future sustainable tourism professionals. The specific goals of the program are:

- (1) Define sustainable tourism,
- (2) Attain cross-cultural understanding and engage in bi-national collaborations,
- (3) Discuss and recommend how sustainable rural tourism development can aid the improvement of QoL at a destination.

Step 3 Method of the field study: The literature emphasizes that concerns for teaching sustainability should be about “what to teach”, as well as “how to teach [10]. Taking this understanding into consideration, three faculty members collaboratively developed the education program content and identified a suitable learning environment for attaining the program goals; the learning components of the program were carefully determined and finalized over a two-year period, prior to implementation in 2013. The applied methodology before starting the program had multiple elements; select students for the program, choose the field study area and sites to be visited, decide on the topic of the group assignment and suggest a measurement scale, integrating stakeholders into the program and suggesting an assignment evaluation methodology.

Student activities were deliberately planned to facilitate intercultural understanding at several levels. Students were asked to work in bi-national groups of four, which enabled them to understand the other nationality’s learning methods and work habits. They were also asked to self-select their group members after spending a day together, which ensured that they felt comfortable working in their groups. Even though the daily trips were conducted with the entire student group, teams were encouraged to prepare their questions beforehand and to interview the stakeholders with their group members.

Sustainable tourism development principles were woven into the group assignment, which included a presentation of findings at the end of the field trip and the conclusion of the field-study. Students were asked to “Examine how sustainable rural tourism development could be achieved in Kastamonu province, through the improvement of the QoL of the region’s residents.” This is consistent with the recent literature that uses QoL within the definitions of sustainability [44]. Students were recommended to employ the indicators suggested by the Seattle Area Happiness Initiative to evaluate QoL improvements in the Kastamonu region.

The Happiness Initiative measures happiness along nine dimensions of wellbeing [45]:

- ecological vitality: quality of local and global environment with access to nature
- governance: confidence in each level of government and freedom from discrimination
- material wellbeing: satisfaction with financial situation and financial future
- psychological wellbeing: issues of self-esteem, autonomy and sense of purpose
- physical health: physical health and experience of disability or long-term illness.
- time and work-life balance: senses of stress, control over their lives and overwork
- social vitality and connection: interpersonal trust, social support and community participation
- education: participation in educational activities, discrimination
- cultural vitality: participation in arts and culture, sport and recreation activities

The next section explains how each site in Kastamonu was selected using the nine dimensions of the initiative.

Step 4 Site specific content: The region of Kastamonu, Turkey, was specifically chosen for the field study, due to its attributes and alignment with the requirements of the educational program—the area is rich in cultural, natural and historical resources and, yet, tourism is underdeveloped. Migration to larger cities for work and education is an ongoing concern, and the development of tourism is seen as a panacea to this problem. Kastamonu is one of the areas designated for tourism development according to the report of “Tourism Strategy of Turkey, 2023” [46].

The daily trips and visits in the Kastamonu area were planned to cover the Seattle Area Happiness Initiative indicators, in line with the contextual characteristics of the city (human, cultural, natural, historical resources). Consultation with the stakeholders started one year prior to the field trip in Kastamonu, and their input was critical in planning the field trip and its components. A typical day included the following events:

- Meet with Tasköprü Chamber of Agriculture and take part in the garlic harvest
- Lunch at a village house with the community
- A visit to the Municipality
- A visit to the archeological site at Pompeipolis, meeting with the archeologists and the site coordinator
- A visit to the Tasköprü Festival area (a local festival held after the garlic harvest)
- Dinner with the excavation team

Each day combined multiple elements of the Seattle Area Happiness Initiative indicators. The program shown above was planned to experience: (1) material wellbeing (garlic harvest as an economic activity); (2) governance (meeting with the municipality); and (3) cultural vitality (thousands of local residents participated in the Tasköprü Festival) in the area.

Upon completion of the daily visits, students obtained a well-rounded view of the QoL of Kastamonu residents and had come into contact with multiple stakeholders involved in tourism activities. The next section summarizes their learning routines.

Step 5: Process and learning: After arriving in Istanbul, students spent two full days with the guidance of the three faculty members involved in the project and two others who had joined from Bogazici University. As a part of the Istanbul portion of the program, students were exposed to cultural pluralism in Turkey, from both historical and contemporary socio-political perspectives. The Istanbul experience established the academic foundation for the students to engage in enriched, meaningful, cross-cultural interactions in preparation for their field study.

On the way from Istanbul to Kastamonu, the group spent half a day in the city of Safranbolu. This visit gave them the opportunity to experience a city that is on the UN World Heritage list that had developed cultural tourism for the last twenty years [8]. Later during the week, students were asked to make comparisons of the tourism development in Safranbolu and Kastamonu.

During the learning for sustainable development, the emphasis should be on “participation, appreciation and self-organization”, rather than “fragmentation, control and manipulation” [20]. Accordingly, after arriving in Kastamonu, students were asked to form their groups and start working together as a team; the faculty observed group interactions and offered guidance only when needed, and; briefings about Kastamonu were provided by the Bogazici University students during site visits. The “Learning for Our Future” program of the Scotland Government has identified (1) *joined up thinking*, (2) *participative working* and (3) *reflective practice* as an essential set of skills for learning for sustainable development [8]. Based on this understanding, groups were provided the flexibility to organize their learning experiences. They decided how they used their afternoon discussion and reflection hours and which kinds of information they needed to collect during their trips.

The types of student learning observed by the faculty were as follows:

- *Observe* local community traditions, food preparation, economic activities, religious practices and arts and folkloric dances
- *Ask* questions of stakeholders and community members
- *Participate* in a local festival and community service
- *Discuss* issues with group members
- *Reflect* alone

The last step of their field trip learning experience was the presentation of their group findings, which is explained in the next section.

Step 6: Results and presentations: Groups were asked to present their findings in an electronic presentation format with the participation of all group members. On the final day of the field trip, all stakeholders involved in the project were invited to listen to and evaluate the presentations based on a clear rubric assessing the quality and relevance of the groups' findings and implications.

Groups were given a total of twenty minutes, which included the presentation in English, a brief summary in Turkish and time for questions and answers. Students were asked to provide the following responses in their presentations:

- (1) A brief overview of what each indicator means and how it connects to sustainability in the Kastamonu community.
- (2) To describe ways in which residents can achieve sustainability through tourism development in the Kastamonu community.
- (3) To list interesting sustainability-related facts in the Kastamonu community.

Stakeholders were asked to evaluate the students on the quality of their presentations with respect to *oral presentations, description of core issues, application to tourism, the group recommendations and the visuals*. During the question and answer phase, feedback was provided to the groups by each stakeholder present at the event. After the completion of presentations, the results of the field study were discussed by the faculty members and stakeholders; the feedback received is expected to aid in the planning of subsequent field study programs in the region.

Step 7: Evaluation of the field study: Upon completion of the study abroad program and returning to their respective universities, students were enrolled in a sustainable tourism course that was instructed by one of the organizing faculty members. The final student deliverables for this course included a detailed discussion of the findings from the field study and concrete recommendations and projects for the region, in terms of improving QoL through sustainable tourism development.

Role of stakeholders: Stern [20] asserts that any educational system should be seen as a sub-system of the wider society. In this regard, our program, which was shaped by the input of community members, has become an institutional part of the Kastamonu community. The field study was covered by the local newspapers widely and has found itself a place on the numerous web pages of the city.

The stakeholders that were involved in the field study included hotel owners and tourism entrepreneurs, Kastamonu Governor's Office, Kastamonu Tourism and Culture Department, the Governor's European Union Project Unit, the Regional Development Agency, the Chamber of Commerce, environmental activists, the Ecotourism Association, local university members and various municipalities. Collaboration will enable the "exchange of information and learning of common

worldviews”, as well as “support a sustainability transition” [3]. In their study, Padurean and Maggi [47] noted that tourism students find that their universities are less involved with the community, which is something of value for the industry and the students. The inclusion of a diverse group of stakeholders in our study and their involvement in the planning, execution and evaluation stages of the field study ensured the creation of a community-based experience for the students.

In double-loop learning, there are positive feedback loops between the system and its environment, and they both attain a new state [20]. In our study, the change was facilitated through interactions with the environment and the stakeholders, and both the learners and stakeholders had significant transformative experiences as a result of exposure to each other (Figure 1, double-sided arrows signify this change).

5. Evaluation of the Educational Program

Stakeholder’s evaluations of students’ presentations, students’ reflections of the program and student surveys were collected to evaluate the effectiveness of the program. In this study, student surveys were used to assess the impact of this educational methodology on the leadership qualities for sustainable tourism development. A pre-post design was used in which students completed a survey instrument on the first day (pre-test) and last day (post-test) of the program in Kastamonu. The Global Citizenship Scale developed by Morais and Ogden [5] was used in this survey instrument. The three dimensions of the scale are social responsibility, global competence and global civic engagement. The nine sub-dimensions of the scale were tested by a total of 43 questions (see the Appendix for a full list of questions).

Surveys were voluntarily completed by all 28 students. Differences in the pre-test and post-test scores were analyzed using a paired samples *t*-test using SPSS (Statistical Package for the Social Sciences)—Version 21. Paired *t*-tests were employed to examine the differences in pre- and post-scores of the learners along all of the dimensions and items of the global citizenship scale. The same tests were repeated for American and Turkish student sub-samples in order to demonstrate the differences between the two groups.

6. Findings and Discussion

The results indicated a change in the global citizenship scores of the students along some dimensions of this scale, as well as their conceptions about sustainable tourism development. Using a significance level set at $p < 0.01$, there were significant changes at two sub-dimensions of the scale. Students felt that after completing the program, they were comfortable expressing their views regarding a pressing global problem in front of a group of people, and they were able to communicate in different ways with people from different cultures (Table 1). One of the learning aims of the program was *to attain cross-cultural understanding and engage in bi-national collaborations*. The results confirm that this aim was achieved through the “process and learning” (Step 5) and “results and presentations” (Step 6) steps of the program. During these steps, students were given plenty of opportunities to interact with the community, as well as to make presentations of their findings in front of the stakeholders.

Using a significance level set at $p < 0.05$ and at $p < 0.1$, some other significant changes were also noted that supported changes in global justice and disparities, involvement in civic organizations and political voice (Table 1). Overall, as a result of the program, the greatest significant change for all of the students was observed in the global competence dimension and, specifically, in the intercultural communication and global knowledge sub-dimensions.

The program made absolutely no change for students in three sub-dimensions. Students felt that after completing the program, they continued not to feel responsible for the world's inequities and problems, they did not plan to get involved with a global humanitarian organization nor did they plan to pay a membership or make a cash donation to a global charity (see the Appendix for the scores). These results underlined the importance of the educational program design in the attainment of the pre-determined learning goals. In our program, the positioning of the stakeholders ensured that students received the confidence needed to effectively communicate with community members and organizations, which is reported to be an essential skill for future tourism professionals [25]. On the other hand, the program had no component for interaction with humanitarian organizations or global charities.

There were certain differences in the change among American and Turkish students. Firstly, only Turkish students have recorded change in the global justice and disparities sub-dimension (Table 1). Turkish students, by travelling to Kastamonu, have witnessed the income disparity in their country, whereas American students have been already expecting to see this in the global context. Secondly, only American students have learned to adapt their communication style with people from different cultures, and become aware of current issues that impact international relationships, because they were exposed to a new culture. Turkish students did not record any change, since they have travelled within their country. Conversely, only Turkish students became more activist regarding global issues. They reported that they plan to do volunteer work and publicly share their opinions. These are not openly encouraged in Turkish society; however, the program has supported students to get engaged in these activities. Lastly, only American students planned to physically display support for global issues, since this type of activity is not very popular/common among students in Turkey.

The dimensions in which the scores of the learners changed significantly match closely with the learning goals adopted and the methodology employed in the design of the educational program. Sustainability principles were embedded within the program through the nine dimensions of the Seattle Area Happiness Initiative. Sites to be visited, stakeholders to be included and activities to be incorporated were determined along these dimensions in the design phase of the program. The results reveal that observed changes correspond to the program design and reflect the importance of the design phase on the effectiveness of the educational programs.

In the program design of this study, there were certain elements that were omitted, but could be added in further studies. Firstly, the design does not include the participation of true local students in the project. American students travelled with students from Istanbul to Kastamonu. Even if not as much as the Americans, Istanbul students are also foreign to the context of the Kastamonu region. We believe the inclusion of students from the Kastamonu University Tourism Management and Hospitality School would further enhance the learning experience of the visiting students. This alteration to the design would also benefit the local community, as the local students would learn and grow from the experience.

Table 1. Changes in the dimensions of global citizenship scores.

	All Students			Turkish Students			American Students		
	Paired Difference Mean	<i>t</i> -score	Significance (2-tailed)	Paired Difference Mean	<i>t</i> -score	Significance (2-tailed)	Paired Difference Mean	<i>t</i> -score	Significance (2-tailed)
<i>Social Responsibility: Global Justice and Disparities</i>									
It is OK if some people in the world have more opportunities than others.	0.250	1.760	0.090	0.385	1.806	0.096	0.133	0.695	0.499
<i>Global Competence: Intercultural Communication</i>									
I often adapt my communication style to other people's cultural background.	-0.393	-2.645	0.013	-0.462	-1.585	0.139	-0.333	-2.646	0.019
I am able to communicate in different ways with people from different cultures.	-0.357	-2.423	0.022	-0.154	-1.477	0.165	-0.667	-2.870	0.012
<i>Global Competence: Global Knowledge</i>									
I am informed of current issues that impact international relationships.	-0.222	-2.280	0.031	0.000	0.000	1.000	-0.429	-3.122	0.008
I feel comfortable expressing my views regarding a pressing global problem in front of a group of people.	-0.593	-3.309	0.003	-0.615	-2.309	0.040	-0.571	-2.280	0.040
<i>Global Civic Engagement: Involvement in Civic Organizations</i>									
Over the next six months, I plan to do volunteer work to help individuals and communities abroad.	-0.357	-2.173	0.039	-0.462	-2.144	0.053	-0.267	-1.075	0.301
<i>Global Civic Engagement: Political Voice</i>									
Over the next six months, I will contact a newspaper or radio to express my concerns about global environmental, social or political problems.	-0.357	-1.987	0.057	-0.462	-2.144	0.053	-0.267	-0.939	0.364
Over the next six months, I will display and/or wear badges/stickers/signs that promote a more just and equitable world.	-0.429	-2.714	0.011	-0.231	-1.148	0.273	-0.600	-2.553	0.023
Over the next six months, I will express my views about international politics on a website, blog or chat room.	-0.250	-1.491	0.148	-0.385	-2.739	0.018	-0.133	-0.459	0.653
Over the next six months, I will sign an e-mail or written petition seeking to help individuals or communities abroad.	-0.071	-0.386	0.702	-0.385	-2.132	0.054	0.200	0.676	0.510

Note: Italicized phrases are the dimensions of the Global Citizenship Scale.

The second design element that this study does not include is measuring and explaining the effect of this program on the local community. The double-sided arrows during Steps 4, 5 and 6 (Figure 1) indicate the changes made in the local community. We suggest conducting one-on-one in-depth interviews with community members before and after the program. Through using this method, it would be possible to address “how open and responsive” the community is for this experience [48]. Their experiences and suggestions would help the educators to increase the benefits of the program for all. The literature suggests the use of more collaborative approaches for ESD.

The results of the study have suggested that the program could do more to improve the intentions for involvement in volunteering and political voice. Therefore, we may suggest adding a more engaging voluntary component to the program that could happen with the participation of a global and a local NGO. It would be necessary to consult with the local stakeholders to understand what kinds of activities would benefit the community the most. For instance if *teenagers' use of free time during summer break* is a problem in the region, then a two-day workshop could be planned for teaching arts and sports activities to teenagers by the visiting students. Or workshops can be offered to teach local students about environmental sustainability (*i.e.*, recycling, reuse, reduce, conserve resources and environmental protection).

7. Conclusions

In search for the right pedagogical approach, this research paper presents the design and implementation of a study-abroad program to foster students' global citizenship and increase their knowledge and skills in sustainable tourism development. Current studies suggest that the hospitality industry requires leaders that are capable of understanding and addressing the challenges of the industry. We believe higher education institutions should play an active role in this transformation and consider implementing principles of ESD.

Framed on the learning model in sustainability education in tourism proposed by Canziani *et al.* [24] the educational program demonstrated positive changes in participating students' global citizenship scores and can contribute to sustainable tourism education by providing a pedagogical model to embrace sustainability in the curriculum. The results of this study also suggest that the design of the educational program needs to be contextual. The educational program presented in this paper incorporated the contextual characteristics of the study area, problems of sustainable development, as well as specific challenges in developing tourism activity in the region. This contributed to the effectiveness of the program by integrating tourism development with sustainability concepts. Consequently, the contextual characteristics of any given study area should be incorporated into the design process of educational programs in other settings.

The significant changes observed in the learners' scores reflect the impact created as a result of the local emphasis integrated within the entire design structure of the program. Accordingly, no significant changes were observed in the global civic engagement dimension of the global citizenship scores of the learners. In future studies, local emphasis can be extended in a way to include a global engagement dimension to improve the effectiveness of the educational methodology. Furthermore, the testing effects of this program in the long term are also needed. This education program was run only once, and we suggest certain improvements to be made before transferring of the method to other contexts.

Acknowledgments

The authors wish to acknowledge the contributions of William Sample and the Fern Sample Stanford Memorial Endowment for the realization of this education program. The authors also wish to thank all of the stakeholders that have taken part in this educational program.

Author Contributions

The co-authors designed the research jointly, performed the research and analyzed the data collectively. All authors contributed to the writing of the paper. They all read and approved the final manuscript.

Appendix

Table A1. Paired samples statistics: pre- and post-program scores.

Statements		Mean	Standard Deviation	Paired Difference Mean	t-score	Significance (2-tailed)																																																																																																										
I think that most people around the world get what they are entitled to have.	pre-	1.86	0.891	0.107	0.682	0.501																																																																																																										
	post-	1.75	0.887				It is OK if some people in the world have more opportunities than others	pre-	2.25	0.752	0.250	1.760	0.090 *	post-	2.00	0.943	I think that people around the world get the rewards and punishments they deserve.	pre-	1.81	0.681	−0.037	−0.214	0.832	post-	1.85	0.770	In times of scarcity, it is sometimes necessary to use force against others to get what you need.	pre-	1.86	0.970	0.214	1.362	0.184	post-	1.64	0.951	The world is generally a fair place.	pre-	1.89	0.567	0.071	0.570	0.573	post-	1.82	0.548	No one country or group of people should dominate and exploit others in the world.	pre-	4.25	1.143	−0.036	−0.126	0.901	post-	4.29	1.013	The needs of the worlds' most fragile people are more pressing than my own.	pre-	3.59	1.010	−0.148	−0.941	0.355	post-	3.74	0.764	I think that many people around the world are poor because they do not work hard enough.	pre-	1.82	0.772	−0.036	−0.328	0.745	post-	1.86	0.803	I respect and am concerned with the rights of all people globally.	pre-	4.30	0.724	0.148	1.072	0.294	post-	4.15	0.718	Developed/Developing nations have the obligation to make incomes around the world as equitable as possible	pre-	3.43	0.879	0.107	0.550	0.587	post-	3.32	1.020	American/Turkish people should emulate the more sustainable and equitable behaviors of other developed/developing countries	pre-	4.11	0.786	−0.107	−0.769	0.449	post-	4.21	0.738	I do not feel responsible for the world's inequities and problems.	pre-	2.64	1.062	0.000	0.000
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	post-	2.64	1.193																																																																																																													

Table A1. Cont.

Statements		Mean	Standard. Deviation	Paired Difference Mean	t-score	Significance (2-tailed)																																																																																																																																																												
I think in terms of giving back to the global society.	pre-	3.71	0.937	−0.036	−0.238	0.813																																																																																																																																																												
	post-	3.75	0.799				I am confident that I can thrive in any culture or country.	pre-	3.61	1.066	−0.214	−0.902	0.375	post-	3.82	0.945	I know how to develop a place to help mitigate a global environmental or social problem.	pre-	3.36	0.731	−0.143	−0.891	0.381	post-	3.50	0.745	I know several ways in which I can make a difference on some of this world's most worrisome problems.	pre-	3.43	0.920	−0.107	−0.682	0.501	post-	3.54	0.793	I am able to get other people to care about global problems that concern me.	pre-	3.75	0.967	−0.250	−1.567	0.129	post-	4.00	0.609	I unconsciously adapt my behavior and mannerisms when I am interacting with people of other cultures.	pre-	3.96	0.744	−0.036	−0.328	0.745	post-	4.00	0.720	I often adapt my communication style to other people's cultural background	pre-	3.71	0.763	−0.393	−2.645	0.013 **	post-	4.11	0.737	I am able to communicate in different ways with people from different cultures.	pre-	3.79	0.630	−0.429	−3.057	0.005 ***	post-	4.21	0.499	I am fluent in more than one language.	pre-	2.71	1.410	−0.179	−1.307	0.202	post-	2.89	1.397	I welcome working with people who have different cultural values from me.	pre-	4.52	0.580	0.148	1.162	0.256	post-	4.37	0.492	I am able to mediate interactions between people of different cultures by helping them understand each other's values and practices.	pre-	3.68	0.670	−0.357	−2.423	0.022 **	post-	4.04	0.508	I am informed of current issues that impact international relationships.	pre-	3.59	0.797	−0.222	−2.280	0.031 **	post-	3.81	0.557	I feel comfortable expressing my views regarding a pressing global problem in front of a group of people.	pre-	3.26	0.764	−0.593	−3.309	0.003 ***	post-	3.85	0.770	I am able to write an opinion letter to a local media source expressing my concerns over global inequalities and issues.	pre-	3.54	0.793	−0.179	−1.000	0.326	post-	3.71	0.810	Over the next 6 months. I plan to do volunteer work to help individuals and communities abroad.	pre-	3.21	1.031	−0.357	−2.173	0.039 **	post-	3.57	0.920	Over the next 6 months. I will participate in a walk, dance, run, or bike ride in support of a global cause.	pre-	3.71	1.117	−0.071	−0.493	0.626	post-	3.79	0.995	Over the next 6 months. I will volunteer my time working to help individuals or communities abroad.	pre-	3.25	0.887	−0.071	−0.420
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	post-	3.82	0.945				I know how to develop a place to help mitigate a global environmental or social problem.	pre-	3.36	0.731	−0.143	−0.891	0.381	post-	3.50	0.745	I know several ways in which I can make a difference on some of this world's most worrisome problems.	pre-	3.43	0.920	−0.107	−0.682	0.501	post-	3.54	0.793	I am able to get other people to care about global problems that concern me.	pre-	3.75	0.967	−0.250	−1.567	0.129	post-	4.00	0.609	I unconsciously adapt my behavior and mannerisms when I am interacting with people of other cultures.	pre-	3.96	0.744	−0.036	−0.328	0.745	post-	4.00	0.720	I often adapt my communication style to other people's cultural background	pre-	3.71	0.763	−0.393	−2.645	0.013 **	post-	4.11	0.737	I am able to communicate in different ways with people from different cultures.	pre-	3.79	0.630	−0.429	−3.057	0.005 ***	post-	4.21	0.499	I am fluent in more than one language.	pre-	2.71	1.410	−0.179	−1.307	0.202	post-	2.89	1.397	I welcome working with people who have different cultural values from me.	pre-	4.52	0.580	0.148	1.162	0.256	post-	4.37	0.492	I am able to mediate interactions between people of different cultures by helping them understand each other's values and practices.	pre-	3.68	0.670	−0.357	−2.423	0.022 **	post-	4.04	0.508	I am informed of current issues that impact international relationships.	pre-	3.59	0.797	−0.222	−2.280	0.031 **	post-	3.81	0.557	I feel comfortable expressing my views regarding a pressing global problem in front of a group of people.	pre-	3.26	0.764	−0.593	−3.309	0.003 ***	post-	3.85	0.770	I am able to write an opinion letter to a local media source expressing my concerns over global inequalities and issues.	pre-	3.54	0.793	−0.179	−1.000	0.326	post-	3.71	0.810	Over the next 6 months. I plan to do volunteer work to help individuals and communities abroad.	pre-	3.21	1.031	−0.357	−2.173	0.039 **	post-	3.57	0.920	Over the next 6 months. I will participate in a walk, dance, run, or bike ride in support of a global cause.	pre-	3.71	1.117	−0.071	−0.493	0.626	post-	3.79	0.995	Over the next 6 months. I will volunteer my time working to help individuals or communities abroad.	pre-	3.25	0.887	−0.071	−0.420	0.678	post-	3.32	0.945						
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Table A1. Cont.

Statements		Mean	Standard. Deviation	Paired Difference Mean	t-score	Significance (2-tailed)
Over the next 6 months. I plan to get involved with a global humanitarian organization or project.	pre-	3.21	0.876	0.000	0.000	1.000
	post-	3.21	0.787			
Over the next 6 months. I plan to help international people who are in difficulty.	pre-	3.54	0.962	0.071	0.465	0.646
	post-	3.46	0.881			
Over the next 6 months. I plan to get involved in a program that addresses the global environmental crisis.	pre-	3.46	0.999	-0.036	-0.238	0.813
	post-	3.50	0.962			
Over the next 6 months. I will work informally with a group toward solving a global humanitarian problem.	pre-	2.93	0.813	-0.286	-1.769	0.088 *
	post-	3.21	0.787			
Over the next 6 months. I will pay a membership or make a cash donation to a global charity.	pre-	3.04	1.105	0.000	0.000	1.000
	post-	3.04	0.999			
Over the next 6 months. I will contact a newspaper or radio to express my concerns about global environmental, social, or political problems.	pre-	2.32	0.819	-0.357	-1.987	0.057 *
	post-	2.68	0.945			
Over the next 6 months. I will express my views about international politics on a website, blog, or chat room.	pre-	3.04	1.105	-0.250	-1.491	0.148
	post-	3.29	0.937			
Over the next 6 months. I will sign an e-mail or written petition seeking to help individuals or communities abroad.	pre-	3.29	1.049	-0.071	-0.386	0.702
	post-	3.36	1.026			
Over the next 6 months. I will contact or visit someone in government to seek public action on global issues and concerns.	pre-	2.43	0.836	-0.143	-1.000	0.326
	post-	2.57	0.790			
Over the next 6 months. I will display and/or wear badges/stickers/signs that promote a more just and equitable world.	pre-	3.14	1.044	-0.429	-2.714	0.011 **
	post-	3.57	0.879			
Over the next 6 months. I will participate in a campus forum. Live music or theater performance or other event where young people express their views about global problems.	pre-	3.57	0.959	-0.036	-0.197	0.846
	post-	3.61	0.832			
If at all possible. I will always buy fair-trade or locally grown products and brands.	pre-	4.07	0.858	-0.036	-0.273	0.787
	post-	4.11	0.737			
I will deliberately buy brands and products that are known to be good stewards of marginalized people and places.	pre-	3.79	0.876	0.071	0.493	0.626
	post-	3.71	0.854			
I will boycott brands or products that are known to harm marginalized global people and places.	pre-	3.71	0.854	0.107	0.648	0.523
	post-	3.61	0.916			

*** denotes $p < 0.01$; ** denotes $p < 0.05$; * denotes $p < 0.1$.

Conflicts of Interest

The authors declare no conflict of interest.

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