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# Environmental Education in Amman

Sara Lyrnn Green  
*SIT Study Abroad*

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## **Environmental Education in Amman**

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## Table of Contents

<b>Abstract</b>	4
<b>I. Introduction</b>	5
Context	5
Question	6
Theory	6
<b>II. Literature Review</b>	7
<b>III. Methodology</b>	10
Interviews	10
Material Culture	12
Other Considerations	13
<b>IV. Findings</b>	14
Interviews	14
Material Culture	21
<b>V. Conclusions</b>	22
<b>VI. Study Limitations</b>	24
<b>VII. Recommendations for Future Study</b>	24
<b>VIII. References</b>	26
<b>IX. Appendices</b>	28
Appendix A: Interview Questions	28
Appendix B: English Consent Form	29
Appendix C: Arabic Consent Form	31

### **Abstract**

This research addresses environmental education in public and private schools in Amman, Jordan and what is being done to expand environmental awareness by both schools and the government. This study's methodology is comprised of interviews with teachers and government employees as well as analysis of material culture. The research finds that environmental education is priority for schools and the government, but that more can be done in expanding environmental awareness. This study points out barriers to environmental education in schools with the hope that these will be addressed and improved.

*Topic Keywords: Environmental Education, Regional Studies: Middle East, Environmental Studies*

## **Introduction**

### **Context**

Jordan is one of the most resource poor countries in the world. As a country that has very limited access to water sources, receives little rain per year, and is under stress from the situations surrounding it, the environment is one of the most important aspects of Jordan. This makes keeping the environment healthy an even more important task for Jordan, a difficult and important task for all countries. Water is an extremely important aspect of Jordanian life. The need to conserve water in such a water deficient country is of high importance. Jordan also must grapple with its surroundings. As a country that is constantly surrounded by uprising and war, more and more refugees pour into Jordan exacerbating their resources and making environmental sustainability an even more important aspect of Jordanian life.

After a stay in Badia, the researcher became interested in the way the people of Jordan interact with their land. A deep respect for the environment is present but this is juxtaposed with the abundance of trash that is carelessly strewn on the ground. It is seen lining the streets and alleys of Amman and other cities around Jordan. As Jordan tries to improve its environmental status, it must also change its citizens' view of the environment.

The environment is an important topic for every country in the world right now as countries assess their environmental impact. For a modernizing country such as Jordan, this is a newer debate. The Ministry of Environment was established relatively recently, in 2003. A natural question arises when looking at the environment in Jordan: How is Jordan teaching its future generations about the importance of keeping the land healthy?

## **Question**

This question leads to the purpose of this study, which is to examine how environmental education is being implemented in schools around Amman. How is environmental education being taught in schools and how may it be improved upon? The research will examine to what extent the environmental education is involved in the curricula for both public and private high schools. The research will further examine how schools are teaching their students about the environment, and how much of a priority it is to do so.

The researcher's hypothesis is that environmental education is not a priority in high schools in Jordan and is not well reflected in the curriculum and the atmospheres of the schools. Another hypothesis is that private schools will have better environmental education built into their curriculum and school culture than public schools.

These questions are important for the community, as effective teaching about the environment is very significant for Jordan's future. Looking at how environmental education is taught in schools, the community can assess what can be improved upon and what should be changed in order to shift Jordanians' attitudes towards the environment. This research is important for both the local community as well as the government and how they implement curriculum.

## **Theory**

This research will be based off of Susan Strife's theory explained in "Reflecting on Environmental Education: Where is our Place in the Green Movement?" In it, she speaks of environmental education being most effective when it is approached through a "human benefits approach" and that environmental education must be taught in a way

that teaches students about the environment for the environment. This means, if looking at curricula, one should not just find facts about the environment alone, but instead what students can do to help the environment and the way they can have an impact on protection, conservation, and cleanliness.

Well-rounded education could take many forms. Not only would facts about the environment and biology be found in books but there would also be examples in lesson books that include Jordan's specific environmental problems. School environmental clubs and field trips are other ways that a school could have a well-rounded environmental education program that focuses on teaching for the environment. This theory is the lens that environmental education in Jordan will be assessed through.

### **Literature Review**

There is a vast body of literature about environmental education and the various ways that it can be taught in schools throughout the world. There are many different studies done on the effectiveness of environmental education and its benefits for populations. This section will look at trends in environmental education and the current debates on how to teach effectively.

Kyburz-Graber, Hofer, and Wolfenberger (2006) explore the socio-ecological approach to environmental education. They argue for an educational system that, "has to promote young people's competencies for critically analysing and reflecting on situations, living conditions and values, and for developing a multi-perspective understanding of the complexity of these issues" (pg. 104). They go on to say that environmental education (EE) should not just be taught as what to avoid doing to the

environment, but as a combination of looking at the issues of the environment in a contextual way. The socio-ecological approach to environmental education can be summed up as, “situation- and issue-oriented, it includes the experiences and perspectives of the people involved, and findings are developed in a cooperative, interactive way” (pg. 104).

This approach is important for any country, and is relevant to Jordan. It is important while teaching to not just relay facts about the environment to the students, but instead to contextualize it in problems facing the country today. For instance, in schools in Jordan when learning about water management it is important to have examples from life. Jordan is one of the most water-poor countries in the world and using examples from Jordan’s own issues with water and how they manage it would put facts about the importance of water into context for students.

In Stern, Powell, and Hill’s “Environmental Education Program Evaluation in the New Millennium What Do We Measure and What Have We Learned?” (2012) they looked at the different approaches to environmental education programs between 1991 and 2010 and empirically evaluated the programs for youth age 18 and younger to evaluate what the best practices for environmental education are. They found that the programs that had active engagement in real-world environmental problems and those that are issue-based have the most success in teaching environmental education. Another major factor was that the teachings take a holistic approach, meaning that the student is able to see the relevance of the problem and step into it completely in order to solve it. This helps them fully immerse themselves in their learning about environmental education.

This viewpoint that the best environmental education practices include relation to real-world problems is also reflected in the findings of Susan Strife (2010) who argues that environmental education must be shifted to a human frame. This includes exposing those learning about environmental education to nature and looking at how environmental issues affect us as humans. Strife argues that environmental education needs to be reoriented to teaching students how to approach EE in a more socially critical manner that empowers individuals to become environmentally responsible citizens.

This is a very important approach for schools in Jordan, as the goal of environmental education needs to be to create environmentally responsible citizens. This is where the importance of environmental education stems from, as creating a strong foundation will create problem-conscious adults who are good at problem solving and knowing their impact on the environment.

A great debate in the literature that arose many times is the difference between “environmental education” and “education for sustainable development.” There is much debate by scholars over whether these two things are the same or the not. Kanbar (2012) argues that education for sustainable development (ESD) finds its roots in environmental education but goes further to encompass all aspects of sustainable development “including social, environmental, culture, and economic” (pg. 43). McKeown and Hopkins outline the differences and similarities between EE and ESD. They look at the original documents describing EE and ESD. The main difference between these two are that EE is focused on the environment while ESD encompasses the environment, society, and the economy. Therefore, there is some debate over whether EE is the umbrella over ESD or if ESD is the umbrella over EE. McKeown and Hopkins argue that this is based

on the perspective one uses to look at environmental education and education for sustainable development. Those looking at EE from an ESD perspective see it as one subject of ESD. Those looking at ESD from an EE perspective will see sustainability as one area of study about the environment. Overall, McKeown and Hopkins come to the conclusions that ESD and EE are separate things that complement one another and that both are important.

For the purposes of this study, the phrase environmental education was used, seeing sustainable development as a facet of environmental education, which is reflected in literature as well. It was also used for clarity during the interview process.

### **Methodology**

The overall research experience was very erratic. Coordination of interviews with schools took time and patience. Getting into schools was difficult. Of the five schools that I contacted, only two were able to give me access to interviews with teachers. This was the most difficult part of the research. Unfortunately, I was unable to visit and interview teachers from public schools. Efforts made to contact public schools did not work and the time constraint was an issue. Material culture was found through Internet research and the Ministry of Environment provided me with educational books and brochures.

### **Interviews**

This section will be split into two parts: interviews with teachers from schools and interviews with employees from the ministries.

For the interviews with teachers from schools, I wanted to get a better picture of what environmental education really looks like in the school environment. In order to

gain interviews, my advisor introduced me to a University of Jordan student whose mother worked at a private school in Amman. Although they were unable to provide me with interviews, I was able to gain contacts from their school, which led me to other schools that did grant me interviews. I went to two schools: Al-Saada School and Bishop's School. Both are in Amman and both are private. Al-Saada School is preparing to become an international school next year while Bishop's School uses the International Baccalaureate (IB) curriculum. When interviewing these teachers I wanted to get a look at how environmental education is not only taught, but how it reflects into the culture of the schools. My questions were about the environmental education in their books, but also about environment clubs and the attitudes of the students towards learning about the environment.

The teachers that I interviewed were from different grade levels and subjects. Although I was looking at environmental education in Amman high schools, the schools I visited were K-12. Currently, as Al-Saada is preparing to become an international school their grades 9-12 are learning English and grades 6-8 are learning Science. Because of this, the teachers I interviewed were teachers from grades 1-5 and 5-8 who were teaching science courses. However, the teachers gave me great insight to the environmental club and the struggles they had teaching about the environment in their school. This still granted me a picture of the state of environmental education in the school. At the Bishop's School, I spoke to the head of the science department as well as an English teacher. This gave me the perspective of both sciences as well as how environmental education is represented in other classes.

A great obstacle of interviewing teachers was gaining permission from the schools' principals as well as finding schools. I went to two schools and interviewed four teachers in total. They were all very helpful and willing to talk about environmental education in their schools.

The other half of my interviews came from the ministries. I was able to visit the Ministry of Education, Ministry of Environment, and a ministry that works closely with education. In order to obtain these interviews, I went to the ministries with a letter explaining what I was doing. I brought a translator to these interviews. Once I explained what I was doing, the representative from the ministry would grant me a meeting with the person who it seemed like closely matched what I was studying. I received three interviews from the ministries.

The main obstacle from the ministry was the language barrier as well as finding the proper people to interview who would answer the questions that I had. Those that I interviewed were chosen by who was free to speak to me at the time.

Another consideration was the protection of identity. Although environmental education is not a particularly contentious topic, it still is important to maintain confidentiality if asked for. Per the request of one interviewee, the name and the ministry they worked for was kept anonymous. Per the request of another interviewee, their name was kept anonymous.

### **Material Culture**

For material culture, I received brochures and pamphlets that are handed out in schools in Jordan from the Ministry of Environment. I was also given books that are given to younger students to teach them about the environment and the importance of

keeping it healthy. This was an insight to the ways that the Ministry of Environment spreads awareness of the environment in schools. The final aspects of material culture are articles from newspapers in Jordan that are related to the environment.

### **Other Considerations**

My plans for data collection changed from my original plans. I had at first planned to collect surveys from University of Jordan students about their views about the environment and their level of environmental awareness. However, it would have been difficult to find students who exclusively went to schools in Amman. Then, I had decided to distribute surveys to teachers of environmental education in Amman. However, it became clear that getting into enough schools to distribute surveys and collect a meaningful amount of data would be difficult in the time restraint. It was difficult to make connections into the schools. Also, I was unable to get interviews with teachers from public schools. This may cause some discrepancies in data; however, I tried to make up for this fact with my ministries interviews because they set the curriculum for every school in Jordan and were able to give me a broader picture of all public schools, not just specific ones. I would have liked to get access to more schools to interview as well, but unfortunately many could not allow me into the schools. Some of this was because of their school policies; other reasons include finals as well as timing issues.

The results received from the data collection painted a good picture of the state of environmental education in schools in Amman. The good work the schools and ministries have done was addressed, but those interviewed also seemed honest about what the barriers are to environmental education.

## **Findings**

### **Interviews**

The results from the interviews with the teachers will be discussed first, followed by the ministry interviews.

Of the teachers that were interviewed, the running sentiment was that environmental education is very important. All of the teachers knew the importance of teaching about the environment and thought that it was a valuable aspect of education.

Teachers from both schools reported having environmental clubs and recycling programs as well as posters on their walls. However, there were differences in the ways environmental education is taught in the schools.

In Al-Saada School, the teachers individually plan lessons on the environment. They run activities and have the children read articles about the environment. An issue they are running into repeatedly is getting through to the children to keep their own school environment clean (L. Haddad, Personal Communication, November 25, 2014). Although the schools had no field trips related to the environment this year, they have had trips in years past. A recent trip included taking the children to a nearby city to observe a project on treating sewage water. The teachers also reported that there would be field trips in the future.

Although the teachers were teaching science in grades 1-8, they did give insight to the overall attitudes and activities about the environment in the school. They spoke of outside class activities, such as the environmental club. The club is responsible for cleaning up the school; they learn how to clean water, and do other projects related to the

environment in their school and their country (H. Baqaeen, Personal Communication, November 25, 2014). The school also runs competitions related to the environment. Last year, the students learned how to reuse waste and had a competition to recycle waste into usable items such as chairs, pots that they used to grow plants in, plastic pockets that collect water, and oil drums to collect water.

Barriers to teaching environmental education in Al-Saada School were also described. One teacher described the struggle of getting the students actively engaged into the problems of the environment. She described how it was hard to get the children to understand the concept of pollution and they could not understand the difference between a healthy environment and a polluted environment (H. Baqaeen, Personal Communication, November 25, 2014). As for the school curriculum itself, the main problem derives from the fact that the books are in English, from a British publisher. Therefore, they are written without additions of examples that are from Jordan itself. It was explained that the books written by the government know how important the environment is to Jordan, so the examples are in the books speak about Jordan specifically (L. Haddad, Personal Communication, November 25, 2014). Therefore, if a teacher wants to talk about the environment specific to Jordan they must add it into their lessons themselves.

The Bishop's School had some similarities to the Al-Saada case, but there were differences as well. For one, the set up of the Bishop's School was a bit different. Bishop's School is a private school with an IB curriculum. Students at the end of grade 10 decide if they will follow Tawjeehi curriculum or the IB curriculum (H. Dababneh, Personal Communication, December 2, 2014).

As an English teacher, Ms. Dababneh does not teach about the environment directly in her classes, but there are still activities related to the environment in her lessons. In her classes, they will have reading composition about topics such as pollution, deforestation, global warming. The students will receive articles about the environment to have discussions about in class as well (H. Dababneh, Personal Communication, December 2, 2014). As for science classes in the school, for grades 9-12 there is specific science classes and environmental education is included in all of them. Students also have to write a research paper about the environment during the year, collecting data from the Internet (M. Kakish, Personal Communication, December 2, 2014). It was stressed that teachers must include lessons and articles about the environment during their classes, regardless of the specific subject they teach.

Both teachers also described how the students learn about the environment outside of class. There are several field trips during the year. Science teachers write proposals for trips that they would like to take students on. Examples of these include trips to museums, universities, and going to nature reserves. The school also has an environmental club that goes on their own field trips. Like Al-Saada, the club is responsible for recycling in the school. The club is made up of mainly grades 6-10, as students in grades 11 and 12 have too much work during these years to be very involved. They also plant trees around the schools and are working on designing a greenhouse for the school (H. Dababneh, Personal Communication, December 2, 2014). There are posters around the school related to the environment that are changed out every few months to reflect upcoming tasks the school is undertaking relating to the environment. For example, the school uses a Global Calendar and therefore celebrates Water Day, Tree

Day, and Ozone Day. There is also a science fair every year that includes presentations and interviews (M. Kakish, Personal Communication, December 2, 2014).

Barriers to environmental education at the Bishop's School are along a similar vein to Al-Saada School. They use books from London that are in English and therefore do not have examples tied directly to Jordan. However, the teachers combat this with outside articles and relating the lessons to Jordan directly. One teacher also expressed the want to partner with NGOs, saying that the school wants to become a "Green School" and wants to bring in an NGO to help them achieve this (M. Kakish, Personal Communication, December 2, 2014). Overall though the school seems to be doing great work in environmental education, and it seems to be a central theme with the teachers knowing its importance. This goes against the part of the hypothesis that EE is not a priority in Amman high schools. For both schools, they knew the importance of EE.

For the interviews with the ministries, they gave a good background about what the government was doing to spread environmental awareness.

The Ministry of Environment is doing work to spread environmental awareness across schools in Jordan. They have training courses for students and teachers that teach how to manage school environments, cleaning the environment, how to manage electricity, and reduce water use (Anonymous, Personal Communication, November 27, 2014). These courses are at all levels from schools to universities. The goal of this department of the ministry is to spread environmental concepts all around the Jordanian Kingdom, and make the residents aware of their impact on the environment and what they can do. This goes well with the concept of teaching about the environment for the environment, and not just about the environment.

There are various ways the Ministry of Environment is trying to achieve this. One is through environmental clubs in schools. Right now, there are around three thousand environmental clubs in schools, most are in Amman, but one of the goals of the project is to spread them in every school in Jordan (Anonymous, Personal Communication, November 27, 2014.) They also are partnering with the Ministry of Education in order to increase awareness of the environment and increase the amount of environment clubs in schools. The clubs are set up to get students involved in the environment around them through projects to do things such as plant trees, clean the school, and visit places in Jordan that relate to the environment. Another joint project with the Department of Education and private and public schools is the “Green School” competition. This is done between schools to see who can reduce electricity use and save water, as well as other factors. These are measured and around the end of December the winner is named and a “Green School” certificate is given to the winner who possesses all environmentally aware factors that the ministries are looking for. In the past, all of the winners have been private schools and one of the goals of the Ministry is to get a public school to win the title (Anonymous, Personal Communication, November 27, 2014).

There is also a new department in the Ministry of Environment to be made by 2015 that is specific to environmental teaching and curriculum. The section of the department will introduce concepts into the curriculum in schools and work with the Department of Education’s curriculum departments in implementing more environmental education (Anonymous, Personal Communication, November 27, 2014). This will help reach more schools and improve environmental education throughout Jordan.

The employee of the Ministry of Environment was also upfront with the barriers that make it hard to spread EE in schools and around Jordan. According to this employee, one of the barriers to spreading environmental awareness is the collaboration with the Ministry of Education. They are a large ministry and can be slow to make decisions as there is a long protocol and therefore it takes a long time to get things done.

Additionally it is difficult for the Ministry of Environment employees to follow up on environmental education efforts in schools across Jordan because the ministry does not provide the officials with the means to visit sites. The employees often use their own cars to visit schools because other projects in the ministry take precedent over EE and get the access to transportation.

The Department of Environmental Activities within the Ministry of Education works with the Ministry of Environment and various NGOs to regulate projects in schools. They partner with NGOs to spread environmental awareness in schools. The NGOs give the department their plans of what they would like to do—this may be a project about various aspects of the environment, such as solar power or water purifying—and if the project is not against the vision of the ministry they give permission to the NGO to implement their plan. This is both in public and private schools in Jordan. NGOs in schools run many activities related to the environment. One that is in many schools is a science competition every year in which three students win and one of the winning projects should be about the environment in whatever form, such as pollution or nature reserves. Some international NGOs send teachers to schools to teach about the environment (F. Kutaba, Personal Communication, November 27, 2014).

In each school, there is an environmental club, however it is sometimes difficult for schools to secure funding for a teacher to supervise a club. This is a large barrier to spreading environmental awareness within schools. It puts pressure on the budgets of the schools, as they need to pay the teacher to run the club. Teachers also may not have time to do this. Another issue is transportation. There may be a workshop about the environment in the north of Jordan and students in the south may not be able to secure the transportation to attend (F. Kutaba, Personal Communication, November 27, 2014).

As for setting the actual environmental education curriculum in the schools, there is a strategic plan for the curriculum and one of the points in it is Environmental Awareness. The curriculum is then decided on and set by the government and the books that the students will study and the teacher guides are distributed including environmental education. EE is in every grade level with two types: direct EE and indirect EE. The direct environmental education is in science books. This includes direct facts about the environment. Indirectly, environmental education is woven into other subjects in paragraphs about examples in Jordan. For example, there might be a paragraph about water problems facing Jordan in a history book or an English book. This keeps EE in many different subjects, giving students a well rounded picture of the environment in Jordan and how they relate to it. The private schools curriculum is the same as the public schools in that a private school is able to teach more if they would like, but the main base of the curriculum should be the same. This means that EE should be taught in every school in Jordan (Anonymous, Personal Communication, November 27, 2014).

The Ministry of Education works with the Ministry of Environment on many levels for projects on bringing environmental education into the schools. They work with

NGOs as well, for example an NGO is currently training teachers about teaching about using medicinal herbs. They will then be able to teach their students what they are learning.

One of the barriers for spreading EE curriculum is the situation around Jordan with the influx of refugees who are creating issues with resources in Jordan (Anonymous, Personal Communication, November 27, 2014). With all of the refugees flooding into Jordan, the importance of the environment is increased and the pressure is increased on keeping the environment healthy but it is difficult with all of the people. Another one of the biggest barriers for spreading EE curriculum is funding. Additionally the Ministry of Environment is a very new and small ministry and no doubt faces issues with addressing all of Jordan's environmental problems, in addition to environmental education.

In relation to the proposed hypotheses, speaking to the ministry employees made it clear that EE is a definite priority for schools in Jordan. However, there are serious barriers to teaching about the environment in schools, but the interest and importance is well known at all levels, in schools and in the government.

### **Material Culture**

The material culture shows brochures and books relating to environmental education that are in schools. The brochures describe how to recycle and how to keep water clean. The books are for children and utilize pictures to make learning about the environment more fun. This would keep a child's attention better than drier methods. One of the books describes global warming and shows a cartoon picture of the earth that is getting too warm because of the actions of the people.

These books are good at describing environmental education in a way that relates to Jordan. The other book shows a sheep that would like to live in a healthy environment. Students would be able to relate this to their own lives.

However, this also leads to the other material culture, which are two articles. One is a study done in 2012 using Facebook to gauge how interested youths under eighteen are in the environment. It found that only 18% of youths who answered the survey were interested in the environment and biodiversity. This is a very low figure. The other article is from November 2014 and describes the issue of littering in Amman citing that littering offenses has grown in number.

There is an obvious disconnect in Jordan between learning about the environment and respecting it and then how the environment is actually being treated. Although the ministries and schools are doing a lot of work and partnering with NGOs to spread environmental awareness, more needs to be done.

### **Conclusion**

Overall, the results paint a portrait of what is being done to implement environmental awareness and education in schools. As per the theory, which states that environmental education should be taught *for* the environment in a “human benefits approach,” the schools and ministries do a good job at keeping the environmental awareness well rounded. Most schools in Amman, public and private, have environmental clubs, which can engage students outside of the classroom, and the curriculum does include EE in both a direct and indirect manner. This is goes against one of the researcher’s hypotheses that environmental education was not a priority in Jordanian schools. It is acknowledged as an important part to schools.

However, the amount that it is a priority does have room to grow. The ministries spoke of barriers into getting environmental awareness into schools that include things such as money as well as the Ministry of Education and the Ministry of Environment not being able to effectively work with one another, for various reasons.

Another part of the hypothesis was that private schools would have better environmental education than public schools, however the findings show that this is both true and also not true. Although a private school has always won “Green School” competitions and a public schools has not, there were barriers to EE in private schools that perhaps public school do not grapple with. Teachers made it clear that the books they used in their private schools were in English and from London publishers. This meant that there were no examples specific to Jordan as there are in the books the government produces for public schools. This is a unique issue for private schools, as they must then actively try to include EE into their lessons. This can turn into a time management issue for teachers who are trying to include EE in their lessons. This means that the hypothesis that all private schools would be better at teaching EE is not inherently true.

The material culture showed the ways that the Ministry of Environment is spreading awareness, but the newspaper articles show that Jordan still has a long way to go in terms of environmental awareness. The importance of environmental education in schools is high because as more and more refugees come into Jordan and as a resource poor nation, the environment is one of Jordan’s most important challenges.

Environmental education is a priority in schools in Amman, but the Ministry of Environment also spoke of the trouble with spreading awareness to all parts of Jordan.

Environmental education has grown in Jordan and hopefully will continue to grow and expand.

### **Study Limitations**

The largest study limitation was time. If more time had been available, the researcher would have been able to visit more schools and acquired more data. Also, teachers could have been surveyed. Another limitation was the fact that the researcher was not able to directly interview any teachers from public schools. Although the ministries were able to give insight into program in public schools and the curriculum used by public schools, it would have benefitted the study to be able to speak directly with teachers from public schools to hear their thoughts and experiences with EE in their schools. This would have given more insight to the way environmental awareness and education is being spread in their schools.

Another study limitation was that the researcher is an outsider in the community. This made it difficult to secure interviews in schools. Although everyone that the researcher spoke to was very accommodating, it was hard to find contacts to speak to directly. This limited the study because although the researcher had contacted five schools, only three were able to meet with the researcher and only two were able to grant interviews. This also relates back to the problem with time, as more time had would have given schools more of a warning as some schools could not grant interviews until after the ISP period was over.

### **Further Studies**

There are many recommendations for further study that could be made from this research. One is looking at the work that NGOs are doing with students in schools and outside of schools to enhance environmental education. Another could be looking at the

Jordanian youth's awareness and interest in environmental issues. Does Jordanian youth care about the environment? Another study could look at the knowledge of the teachers who teach about environmental education, giving them surveys and seeing how environmentally aware they are. Outside of students, another study could look at the older generation and their knowledge of the environment and what NGOs and the government are doing to reach them about environmental awareness. All of these could be done to further the study of the relationship between Jordan and the environment.

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## Appendices

### Appendix A

#### Interview Questions for Teachers:

- 1.) What is your name? What subjects and grades do you teach?
- 2.) How does environmental education factor into the curriculum in your school?
- 3.) Does your school have an environmental club? Field trips?
- 4.) Does your school partner with any NGOs about environmental education?
- 5.) What are the barriers to teaching environmental education?

#### Interview Questions for Ministries:

1. What is your name/position in the ministry?
2. Can you tell me a bit of background on how the curriculum is set here?
3. What does the environmental education look like in public school curriculum? Is it in the books? What subjects/grades?
4. Would you say the environmental education that students receive is well rounded? Do they use real life examples from Jordan? Is it more just facts about the environment, or is it tied to examples?
5. Does your ministry ever work with other ministries or NGOs in spreading environmental awareness?
6. What do you think the biggest barriers to teaching environmental education is in public schools?
7. Is there any dialogue with private schools about what they teach or are they

## Appendix B: English Consent Form

### CONSENT FORM

#### ENVIRONMENTAL EDUCATION IN AMMAN SARA GREEN, GEORGE WASHINGTON UNIVERSITY

School for International Training – Jordan: Modernization and Social Change

**Instructions:**

*Please read the following statements carefully and mark your preferences where indicated. Signing below indicates your agreement with all statements and your voluntary participation in the project. Please ask the researcher if you have any questions regarding this consent form.*

I am aware that this interview is conducted by an independent undergraduate researcher with the goal of producing a descriptive case study focusing on the way that environmental education is taught in schools in Amman.

I am aware that the information I provide is for research purposes only.

I am aware that I have the right to full anonymity upon request, and that upon request the researcher will omit all identifying information from both notes and drafts.

I am aware that I have the right to refuse to answer any question and to terminate my participation at any time, and that the researcher will answer any questions I have about the study.

I am aware of and take full responsibility for any risk, physical, psychological, legal, or social, associated with participation in this study.

I am aware that I will not receive monetary compensation for participation in this study, but a copy of the final study will be made available to me upon request.

I [ do / do not ] give the researcher permission to use my name and position in the final study.

I [ do / do not ] give the researcher permission to use my organizational affiliation in the final study.

I [ do / do not ] give the researcher permission to use data collected in this interview in a later study.

**Date**

**Participant's Signature**

---



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**Researcher's Signature**

**Participant's Printed Name**

---



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***Thank you for participating!***

*Questions, comments, complaints, and requests for the final written study can be directed to:*

Dr. Raed Al-Tabini, Mokhtar Bouba, SIT Jordan Academic Director

Telephone (962) 0785422478

Email: ashraf.alqudah@sit.edu

## Appendix C: Arabic Consent Form

### دراسة بحثية

أنت مدعو للمشاركة في بحث حول Environmental Education

**Sara Green**

**الباحث:**

### الإجراءات:

إذا تمت الموافقة على المشاركة في هذه الدراسة سأقوم بمقابلتك وسؤالك بعض الأسئلة المتعلقة بموضوع الدراسة.

### السرية:

سأبقي على سرية جميع المعلومات التي سأحصل عليها أثناء المقابلة. غير أنه سيكون من الأكثر فائدة للدراسة إذا كنت أستطيع ذكر إسمك ومؤسستك و بعض الإقتباسات.

يرجى إختيار واحد مما يلي:

\_\_\_ أود أن تكون هذه المقابلة من غير مسمى  
\_\_\_ أسمح للباحث إستخدام إسمي في هذا البحث

### للإتصال والأسئلة:

الرجاء عدم التردد في الإتصال بالباحث في أي وقت. يمكنك السؤال الآن أو في أي وقت بعد المقابلة على البريد الإلكتروني:

يمكنك أيضا الإتصال ب:

مجلس البحوث المؤسسي مع جمعية التعلم العالمية  
د. رائد التبيني ، الممثل والمدير الأكاديمي لجمعية التعلم العالمية

هاتف: 0785422478

البريد الإلكتروني: ashraf.alqudah@sit.edu

فاكس:

### بيان الموافقة:

لقد قرأت المعلومات المذكورة أعلاه، وأوافق على المشاركة في هذه الدراسة.

التوقيع \_\_\_\_\_ توقيع الباحث \_\_\_\_\_

التاريخ \_\_\_\_\_ التاريخ \_\_\_\_\_

شكرا لتعاونكم

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## [Consent to Use of Independent Study Project \(ISP\)](#)

(To be included with the electronic version of the paper and in the file of any World Learning/SIT Study Abroad archive.)

Student Name: Sara Green

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Title of ISP: Environmental Education in Amman

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Program and Term: Modernization and Social Change, Fall 2014

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1. When you submit your ISP to your academic director, World Learning/SIT Study Abroad would like to include and archive it in the permanent library collection at the SIT Study Abroad program office in the country where you studied and/or at any World Learning office. Please indicate below whether you grant us the permission to do so.
  
2. In some cases, individuals, organizations, or libraries in the host country may request a copy of the ISP for inclusion in their own national, regional, or local collections for enrichment and use of host country nationals and other library patrons. Please indicate below whether SIT/World Learning may release your ISP to host country individuals, organizations, or libraries for educational purposes as determined by SIT.
  
3. In addition, World Learning/SIT Study Abroad seeks to include your ISP paper in our digital online collection housed on World Learning's public website. Granting World Learning/SIT Study Abroad the permission to publish your ISP on its website, and to reproduce and/or transmit your ISP electronically will enable us to share your ISP with interested members of the World Learning community and the broader public who will be able to access it through ordinary Internet searches. Please sign the permission form below in order to grant us the permission to digitize and publish your ISP on our website and publicly available digital collection.

Please indicate your permission by checking the corresponding boxes below:

<input checked="" type="checkbox"/>	I hereby grant permission for World Learning to include my ISP in its permanent library collection.
<input checked="" type="checkbox"/>	I hereby grant permission for World Learning to release my ISP in any format to individuals, organizations, or libraries in the host country for educational purposes as determined by SIT.
<input checked="" type="checkbox"/>	I hereby grant permission for World Learning to publish my ISP on its websites and in any of its digital/electronic collections, and to reproduce and transmit my ISP electronically. I understand that World Learning's websites and digital collections are publicly available via the Internet. I agree that World Learning is NOT responsible for any unauthorized use of my ISP by any third party who might access it on the Internet or otherwise.

Student Signature: \_\_\_\_\_ Sara Green \_\_\_\_\_ Date: \_December 6, 2014

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## Statement of Ethics

(Adapted from the American Anthropological Association)

In the course of field study, complex relationships, misunderstandings, conflicts, and the need to make choices among apparently incompatible values are constantly generated. The fundamental responsibility of students is to anticipate such difficulties to the best of their ability and to resolve them in ways that are compatible with the principles stated here. If a student feels such resolution is impossible, or is unsure how to proceed, s/he should consult as immediately as possible with the Academic Director (AD) and/or Independent Study Project (ISP) Advisor and discontinue the field study until some resolution has been achieved. Failure to consult in cases which, in the opinion of the AD and ISP Advisor, could clearly have been anticipated, can result in disciplinary action as delineated in the “failure to comply” section of this document.

Students must respect, protect, and promote the rights and the welfare of all those affected by their work. The following general principles and guidelines are fundamental to ethical field study:

### **I. Responsibility to people whose lives and cultures are studied**

Students' first responsibility is to those whose lives and cultures they study. Should conflicts of interest arise, the interests of these people take precedence over other considerations, including the success of the Independent Study Project (ISP) itself. Students must do everything in their power to protect the dignity and privacy of the people with whom they conduct field study.

The rights, interests, safety, and sensitivities of those who entrust information to students must be safeguarded. The right of those providing information to students either to remain anonymous or to receive recognition is to be respected and defended. It is the responsibility of students to make every effort to determine the preferences of those providing information and to comply with their wishes. It should be made clear to anyone providing information that despite the students' best intentions and efforts, anonymity may be compromised or recognition fail to materialize. Students should not reveal the identity of groups or persons whose anonymity is protected through the use of pseudonyms.

Students must be candid from the outset in the communities where they work that they are students. The aims of their Independent Study Projects should be clearly communicated to those among whom they work.

Students must acknowledge the help and services they receive. They must recognize their obligation to reciprocate in appropriate ways. To the best of their ability, students have an obligation to assess both the positive and negative consequences of their field study. They

should inform individuals and groups likely to be affected of any possible consequences relevant to them that they anticipate.

Students must take into account and, where relevant and to the best of their ability, make explicit the extent to which their own personal and cultural values affect their field study. Students must not represent as their own work, either in speaking or writing, materials or ideas directly taken from other sources. They must give full credit in speaking or writing to all those who have contributed to their work.

## **II. Responsibilities to Hosts**

Students should be honest and candid in all dealings with their own institutions and with host institutions. They should ascertain that they will not be required to compromise either their responsibilities or ethics as a condition of permission to engage in field study. They will return a copy of their study to the institution sponsoring them and to the community that hosted them at the discretion of the institution(s) and/or community involved.

## **III. Failure to comply**

When SIT Study Abroad determines that a student has violated SIT's statement of ethics, the student will be subject to disciplinary action, up to and including dismissal from the program.

I, Sara Green, have read the above Statement of Ethics  
(Printed Name)

And agree to make every effort to comply with its provisions.

Student Signature: Sara Green

Date: November 4, 2014

# SIT Study Abroad

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Human Subjects Review

## LRB/IRB ACTION FORM

<p>Name of Student: Sara Green</p> <p>ISP Title: Assessing Environmental Education in Amman</p> <p>Date Submitted: November 3, 2014</p> <p>Program: JOR Fall 2014</p> <p>Type of review:</p> <p>Exempt <input type="checkbox"/></p> <p>Expedited <input checked="" type="checkbox"/></p> <p>Full <input type="checkbox"/></p>	<p>Institution: World Learning Inc. IRB organization number: IORG0004408 IRB registration number: IRB00005219 Expires: 22 December 2014</p> <p>LRB members (print names): Dr. Ashraf F. Alqudah, Ph. D. (Chair) Dr. Ismael Abu Amoud, Ph. D. Dr. Badr Al Madi, Ph. D.</p> <p><b>LRB REVIEW BOARD ACTION:</b></p> <p>Approved as submitted</p> <p>LRB Chair Signature:</p>  <p>Date: Nov. 11, 2014</p>
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### Form below for IRB Vermont use only:

#### Research requiring full IRB review. ACTION TAKEN:

\_\_\_ approved as submitted \_\_\_ approved pending submission or revisions \_\_\_ disapproved

\_\_\_\_\_  
IRB Chairperson's Signature

\_\_\_\_\_  
Date