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Degree of Master of Science

Ecopedagogy Congruence: Field Trips During the First Year of Study for The Masters of Science, Policy, and Management in Lesvos and Hungary

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Author's declaration

No portion of the work referred to in this thesis has been submitted in support of an application for another degree or qualification of this or any other university or other institute of learning.

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ABSTRACT OF THESIS submitted by: Elizabeth LOUDON for the degree of Master of Science and entitled: *Ecopedagogy Congruence: Field Trips During the First Year of Study for The Masters of Science, Policy, and Management in Lesvos and Hungary*

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Many fields within environmental studies are identified as crisis disciplines, which recognize the need to act to enable adaptation and mitigation of environmental threats. Due to the pressure of confronting impacts from climate change, students may eventually find themselves feeling uninspired and unempowered. The ecopedagogy approach to education offers practices that empower students and teachers to care for and act to create a better world. The Erasmus Masters in Environmental Science, Policy, and Management offers students the challenge of exploring contemporary issues in a multicultural cohort composed of students from diverse countries and a variety of academic backgrounds. In the first year of the program, students participate in experiential learning field trips in Hungary and Lesvos that supplement classes by allowing students to gain experience while interacting in nature. The educational approach of ecopedagogy is a lens that is used to evaluate the stakeholders' perceptions of trips from 2016-2017 academic year. The interdisciplinary project of this research unites environmental and education disciplines to analyze field trips and identify findings addressing trip emphasis, the sensory experience, emotions and ethics, and participants' roles. The research concludes with recommendations for how all stakeholders can modify the field trip experience to connect more with the ecopedagogy movement.

Keywords: *experiential learning*, *ecopedagogy*, *environment*, *field trip*, *ethics*, *student centered learning*, *empowerment*, *activities*, *curriculum*, *multicultural*

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List of Abbreviations

AMSEM Assessment, Modelling, and Scenarios for Ecosystem Management

BC Biodiversity and Conservation

BO Balaton Orientation

CEU Central European University

EM Environmental Monitoring

ESP Environmental Science and Policy

GFAOG Global Food and Agriculture + Organic Gardening

IDM Introduction to Disaster Management

LALMS Lesvos Agriculture and Land Management Systems

LBD Lesvos Biodiversity

LIWW Lesvos Industry, Waste, and Water

LPP Lesvos Power Plant

MESPOM Masters of Environmental Science, Policy, and Management

NHB Non-Human Biosphere

OG Organic Gardening

SDGT Sustainable Development and Global Transitions

SES Sustainable Energy Solutions

SMWM Solid Municipal Waste Management

WQ Water Quality

1. Introduction

Climate change and environmental degradation can be considered threats that necessitate action (Cox 2007). Unfortunately, accomplishing this goal is "a task we are ill-equipped to navigate" (Fowler 2013). Students who study environment must face challenging realities that leave them feeling uninspired and unempowered, so "focusing on hope about the global future should be a vital part" of environmental education (Ojala 2015). The pressure of confronting impacts from climate change forces a post-political apocalyptic framing of environmental issues that presents "a liberal capitalist order for which there seems to be no alternative" (Swyngedouw 2010). If there is to be any hope for humanity and the environment, we need to "re-calibrate, re-engage, and re-enchant our relationship with a transformed natural world and imagine alternative futures" (Fowler 2013). How can universities, educators, and students proceed if they want to work towards accomplishing this mission?

"Faced with the possibility of planetary extermination, the Earth Charter presents alternatives based on a culture of peace and sustainability" (Antunes and Gadotti 2006). The ecopedagogy approach, a movement in environmental education based on the Earth Charter, offers one option for change. Ecopedagogy is a constantly evolving field that involves "ongoing dialogue and political action that is attempting to develop ecopedagogical praxis in relation to the needs of particular place, groups and time periods" (Omiyefa *et al.* 2015). Approaches like ecopedagogy connect to broader views about how education can respond to the environmental challenges of modern human-environment relations. The praxis principle of the Ecopedagogy Charter declares that "ecopedagogical learning is not complete until action is taken" (Omiyefa *et al.* 2015). Action is not a side-effect or objective of ecopedagogy, but a consequence that may even be accomplished

through learning. The balance of theory and action could increase student empowerment, allowing debate and skills to develop that oppose this apocalyptic frame discussed by Swyngedouw (2010).

1.1 Context

Central European University (CEU) was founded in 1991 with the mission of inspiring "socially and morally responsible intellectual inquiry," while valuing "self-reflective critical thinking" (CEU 2013). The assumption that guides the university goals is that engaging in learning opportunities that are designed intentionally to facilitate learning through shared experiences can empower students to succeed in rigorous educational and professional environments. The international education model offered by CEU has an emphasis on "regional roots, global perspective" that suggests a value for a planetary citizenship that balances with local concern (2013). The Masters of Environmental Science, Policy, and Management (MESPOM) program, which begins at CEU, offers students the challenge of exploring contemporary issues in a multicultural cohort composed of students from many countries and a variety of academic backgrounds (MESPOM 2017).

1.2 Problem Statement

"We have lost intimate daily connection with nature, resulting in the extinction of experience (Pyle 1998 quotes in Sampson 2012, 23-24) and the atrophying of our knowledge and sensory capacities for connecting with and understanding the natural world" (Fowler 2013). Since field trips and retreats represent the experiential opportunities offered to students, these nonclassroom activities lend themselves to an ecopedagogy approach that attempts to rediscover connectedness to nature and sensory exploration. Although applications of ecopedagogy were studied in the context of youth and adult education initiatives in Brazil (Antunes and Gadotti 2006),

no research examines elements of ecopedagogy in use to shape short field experiences. Additionally, prior research does not comment on the ecopedagogy approach to field trip and retreat curriculum in graduate studies programs. Since graduate students in the environmental science field are preparing to do work that will confront environmental problems, they require an education that offers useful knowledge and prepares them to act.

Consistent with this understanding of learners' needs that may be compatible with ecopedagogy, the MESPOM webpage advertises that the program "prepares students for identifying and implementing solutions to complex environmental challenges, especially in an international context" (MESPOM 2017). Research shows that sustainability is best achieved when it is ingrained into the student learning experience (Palmer 1998). The vision of "transformative learning on the part of the individual and community, and also relevance and practical ability to both" can be integrated into curriculum (Sterling 2016). These goals for redefining education using an ecopedagogy approach are pertinent to the missions of MESPOM and CEU, so understanding how the field trips and retreats are intended and experienced during the first year of the MESPOM program provides insight on opportunities for integrating this approach more effectively.

1.3 Aim

The courses the MESPOM students complete during their first year include field trips and retreats that supplement classes by allowing students to gain experience while interacting in nature. The educational approach of ecopedagogy is a lens that can be used to evaluate the perceptions of participants on the 2016-2017 trips. The interdisciplinary project of this research unites environmental and education disciplines to analyze field trips and retreats, suggesting ways for all stakeholders to connect more with the ecopedagogy movement.

1.4 Objectives

1. Identify the goals/purpose of non-classroom activities by gathering information about how each activity was intended and received.
2. Apply the ecopedagogy lens to gain insight on the experience of field trips and retreats by examining teaching philosophies, the student role, trip activities, alumni feedback, learning objectives, and field notes.
3. Use findings from this analysis to make recommendations for how field trips and retreats can be made more ecopedagogical. If a professor wants to organize a non-classroom activity that suits this approach, the research can result in recommendations for how to accomplish this.

2. Literature Review

2.1 From Environmental Education to Ecopedagogy

Environmental education is a movement within the discipline of education that, considered most broadly, focuses on improving student knowledge and awareness of environmental issues. The definition provided at the 1970 IUCN/UNESCO meeting described this approach as "the process of recognizing values and clarifying concepts in order to develop skills and attitudes necessary to understand and appreciate the interrelatedness among man, his culture, and his biophysical surroundings" (Palmer 1998). This articulation of environmental education conceptualizes nature as "biophysical surroundings" that are separate from and owned by humans. Although humans are central, environmental education embraces the more progressive concept that culture "situates us within the world" and "makes the world meaningful to us" (Milton 2006). The view as applied to non-classroom activities educates students about the environment in the field. Environmental education facilitated the transition in teaching from "show-and-tell

techniques in the early 1970s to teaching through experiential field-work and values education" (Palmer 1998). This interest in experiential field-work acknowledges that learning should sometimes take place outside the classroom. The initial aim to help students value nature and take action are present in this approach, but are peripheral to the goals of developing understanding/appreciation. The assumption inherent in this approach is that environmental ethics and behavior change will follow from understanding.

The "importance of the concept of sustainable development is the hallmark of EE in the 1990s," which influenced the emergence of the education for sustainable development approach (Palmer 1998). In contrast to environmental education, education for sustainable development is more oriented towards recognizing human habits/behavior and making change. The global environmental discourse has shifted, and "the concern to protect the environment through human responsibility is a central guiding principal" (Milton 2006). Education for sustainable development begins to ask: how do we create the world we want? This transition towards taking responsibility allows this approach to "open a horizon of the shared destiny of humans and nature" (Martin 2016). Centralizing behavior change and responsibility instead of understanding/appreciation allows for confronting the problems of the ever-accelerating capitalist system detailed in Moore's work (2015).

Education for sustainable development is not in opposition to economic growth, but incorporates environmental justice by advocating the sustainable use of resources. The approach increases recognition of the interrelated multidisciplinary factors influencing environmental issues, and connects them to unsustainable practices that should be altered (Sterling 2016). "The struggle for environmental justice is not just about distributing environmental risks equally (ie distributive environmental justice) but about preventing them from being produced in the first

place" (Faber and McCarthy 2003). The idea of distributive environmental justice informs education for sustainable development, and illustrates how global inequality and future generations are made top priority. Also, consistent with the environmental justice goal of enabling greater participatory justice, education for sustainable development should be "owned and affected by participating stakeholders and learners" (Sterling 2016; Schlosberg 2013). If this does occur, agency is maximized and the approach is less likely to reinforce harmful projects like those of the World Bank. Education for sustainable development is the approach that has the highest risk for institutionalizing the teaching of suspect "green knowledge" (Goldman 2001).

Ecopedagogy critiques environmental education and education for sustainable development, further centralizing environmental justice aims and expanding the activist component involved in teaching. "Sustainable/development needs ecopedagogical learning and analysis to question whose development is at stake, and how it is balanced with environmental wellbeing" (Misiaszek 2016). Unlike prior approaches, ecopedagogy is a relatively new movement that "emerged from educators in central and South America including Paulo Freire, Moacir Gaddotti, and Leonardo Boff" (Omiyefa *et al.* 2015). Since Ecopedagogy is a movement that was developed in the Global South, its very existence contributes to its aim to further consider "the voices of those who are most impacted by our current injustices" (Gutierrez and Prado 1999). By comparison to aforementioned approaches, ecopedagogy finally answers Palmer's call for a "global environmental consciousness through education" (1998). "A reform in education that would support cultural diversity, social and ecological justice, and explore the intersections among them would lead us to a critical or transformative education" (Love 2011). As a movement within the genre of transformative education, ecopedagogy embraces an expansion of environmental justice as it "moves beyond local environmental conditions" (Schlosberg 2013).

Integrating local and global issues is at the core of the ecopedagogical mission, which includes a planetary citizenship that departs from "our anthropocentric vision" and urges us to "globalize our sense of community" (Omiyefa *et al.* 2015). Although some critics may say that ecopedagogy homogenizes learners, planetary citizenship is more like a "cultural perspective" as described by Milton because it can be widely held without replacing cultures (2006). Planetary citizenship is often used as a synonym of global citizenship, but implies a greater inclusivity of non-human beings too (Misiaszek 2016; Kahn 2010). Recognition of the linkage between humans and nature departs from the artificial dichotomy supporting the exploitation of nature, which remains within other approaches. The community feeling supported by planetary citizenship comes closest to the multispecies kinship concept advocated by Haraway (2015). Ecopedagogy stands apart from other critical and transformative educational models because it includes the ability to cultivate care ethics by considering Freire's Pedagogy of the Oppressed to "include the non-human world as oppressed as well" (Omiyefa *et al.* 2015). This tendency is current with the environmental justice transition that recognizes human and non-human communities, finally going "beyond human" (Schlosberg 2013).

Ecopedagogy questions models that do not consider the student holistically. Pedagogy that is innovative "needs to support (in addition to rational thought) other forms of perception and knowledge as being equally valid and productive" (Gutierrez and Prado 1999). An emphasis on learners' emotional, sensory, physical, and creative capabilities differentiates ecopedagogy from its predecessors because the hierarchy prioritizing intellect is abolished. Education is also recognized as life-centered and student-centered, following the popular education approach in which students "transform their lived experiences into knowledge" (Freire 1970). In this respect,

the ecopedagogy approach is easily compatible with experiential learning opportunities like field trips.

2.2 Experiential Learning and Field Trips

Learning through experience in the field, often with a mentor or guide, is not a revolutionary approach to education. For our ancestors, it was likely the only education they ever received (Quay and Seaman 2013). The value of experiential learning is associated with research that suggests "we learn most through direct experience, we learn faster, the learnings are retained longer, and the appreciation is greater" (Sharp 1948). "In general the term experiential learning refers to students applying concepts and/or skills to real world situations within or outside of the classroom context" (O'Neill 2015). One type of learning experience that occurs outside the classroom is a field trip, which involves the class making a planned visit together. According to one definition, a field trip is "any journey taken under the auspices of the school for educational purposes" (Sorrentino and Bell 1970). One general interpretation of the purpose of field trips states, "these activities are designed to reinforce concepts, skills, and values through direct experiences in local contexts and to actively engage students so that they are motivated to learn and retain what is required in the curriculum" (Quay and Seaman 2013).

3. Research Methodology

The aim to determine how the field trips and retreats were perceived by the attendees involved requires multiple methods. The research included: semi-structured interviews with faculty and coordinators, semi-structured interviews with MESPOM students, an open-ended MESPOM alumni questionnaire, field notes from participant observation on select field trips, and document analysis.

3.1 Interviews with Faculty and Coordinators

This research project included a total of 21 interviews, 8 of which were from professors and 2 of which were from coordinators. The list of CEU professors that were invited to interview for the research was compiled by reviewing the semester schedules and the course information provided in the Department of Environmental Science and Policy Description of Study Programmes Academic Year 2016-2017 documents available on the Moodle 2.8 E-Learning site. Professors who taught courses with at least one field trip were selected. Additionally, two professors without field trips were added because they were involved in the Balaton Orientation Retreat. Interviews with students revealed that this method resulted in the exclusion of two names that belonged on the list. These two respondents were contacted as well. The original interview invitation included a short explanation of the research project, a description of the researcher's interests, and suggested other data sources (Appendix A).

Interviews lasted between 36 and 52 minutes. The interviewer aimed to allow maximum participation, so interviewees were allowed to make choices about location and timing. Four interviews were conducted at CEU in person, while one was conducted via Skype. Two professors, and 2 coordinators provided interviews in Lesvos, Greece. Three of those interviews were conducted in person, and one was replaced with a response in writing.

The researcher was present in Lesvos during three of the four field trips from the collaboratively taught course entitled "Assessment, Modelling, and Scenarios for Ecosystems Management." Contact information for University of The Aegean faculty and coordinators involved in planning and hosting field trips in Lesvos was obtained from current MESPOM students. Six MESPOM faculty and coordinators were invited to participate using an invitation that was sent on June 12th (Appendix B).

The same set of questions displayed in table 1 were used to guide interviews with faculty and coordinators from CEU and University of the Aegean. Question seven was omitted in cases where the interviewee was not responsible for teaching a class connected to the trip. This occurred during coordinator interviews, and interviews with professors who were participants at the Balaton Orientation Retreat. Interviews always began with the first question, but all other questions could be asked in any order. The interviewer decided to pose these questions when other discussions and clarifications were ended, or when the new subjects that emerged matched the main idea of the question selected to follow. All interviews differed because diverse follow up questions were asked to gain more information and deepen understanding of the interviewees' perspectives.

Table 1. Faculty and coordinator interview design

	Questions for Faculty/Coordinator Interviews
1.	Could you tell me about the field trips that you plan? What is the purpose of these trips?
2.	What is your role during a field trip?
3.	What is the students' role during the trip?
4.	How do you create a space/experience so students can accomplish the role you expect from them?
5.	What do you get out of the field trip?
6.	What should students get out of the field trip?
7.	How does the field trip serve/connect with your class?
8.	How would you describe your teaching style?
9.	Did anything change with trips this year, compared to prior years? If so, how did you judge what to change?
10.	Have you ever heard from a student that something you did or planned really impacted? Please explain what they said about what they experienced.

Consistent with research ethics guidelines, the researcher gained informed consent to use faculty and coordinators' names by providing participants with a consent form (Appendix C). Participants either received this form by email or were given a paper copy. They had the option of signing the form, or responding verbally in the interview recording. All faculty and coordinators consented that their names and titles can be connected to their interview responses. The names of faculty who did not interview have been omitted from this research. Anonymity for faculty/coordinator interviewees would limit the researcher's ability to use interview content because quoting the interviews would likely reveal the identities of the interviewees. Some participants requested to receive a draft of this thesis to review prior to final submission.

3.2. Interviews with MESPOM Students

All current MESPOM students who were enrolled in the first year of their study at CEU and University of the Aegean were asked to participate in anonymous interviews. The researcher attempted to conduct as many student interviews as possible before her departure on June 19th. Out of the class totaling 21 students, a total of 11 interviews were recorded. Interviews varied from 15 minutes long to nearly 50 minutes long. Each interview was recorded using voice memos on an Iphone 4s while the researcher wrote notes or transcribed on a laptop.

Students' identities were more concealable than faculty/coordinators' because all students attended more than one field trip. Anonymity improved the results because students could speak freely and offer criticism without concern that their grades or relationships would be compromised. To further protect their identities, their home countries have been omitted from applicable quotes. Facebook messenger, the "CEU Environmental Sciences and Policy 2016-2017" Facebook page, and the Whatsapp "MESPOM" group chat were utilized to send invitations and reminders. Students were also reminded about participation opportunities in person on multiple occasions.

Interviews with students included all the questions in the interview design displayed in table 2, but ordering was flexible except for the first question. When students mentioned multiple trips, they had some choice about addressing them together or separately. In questions five and six, interviewees were only asked the questions in parenthesis if they requested clarification. The semi-structured interview methodology allowed the interviewer freedom to follow up on responses needing further elaboration. The settings for interviews varied, and interviewees were sometimes multitasking. Interviews were considered finished when the participant announced they had other obligations, the interviewer finished the questions, or the participant demonstrated fatigue and/or decreased ability to focus.

Table 2. Student interview design

	Questions for MESPOM Student Interviews
1.	When you think about the departmental field trips and retreats that you did in the last year while studying at CEU and in Lesvos, what sticks in your mind?
2.	What was the purpose of the trip?
3.	What did you get out of it?
4.	What activities helped you learn the most and why?
5.	What did you see as your role in these programs? (What did you do?)
6.	What was the role of the teacher (or teachers) during the trip? (What did they do?)

3.3 Coding Interview Responses

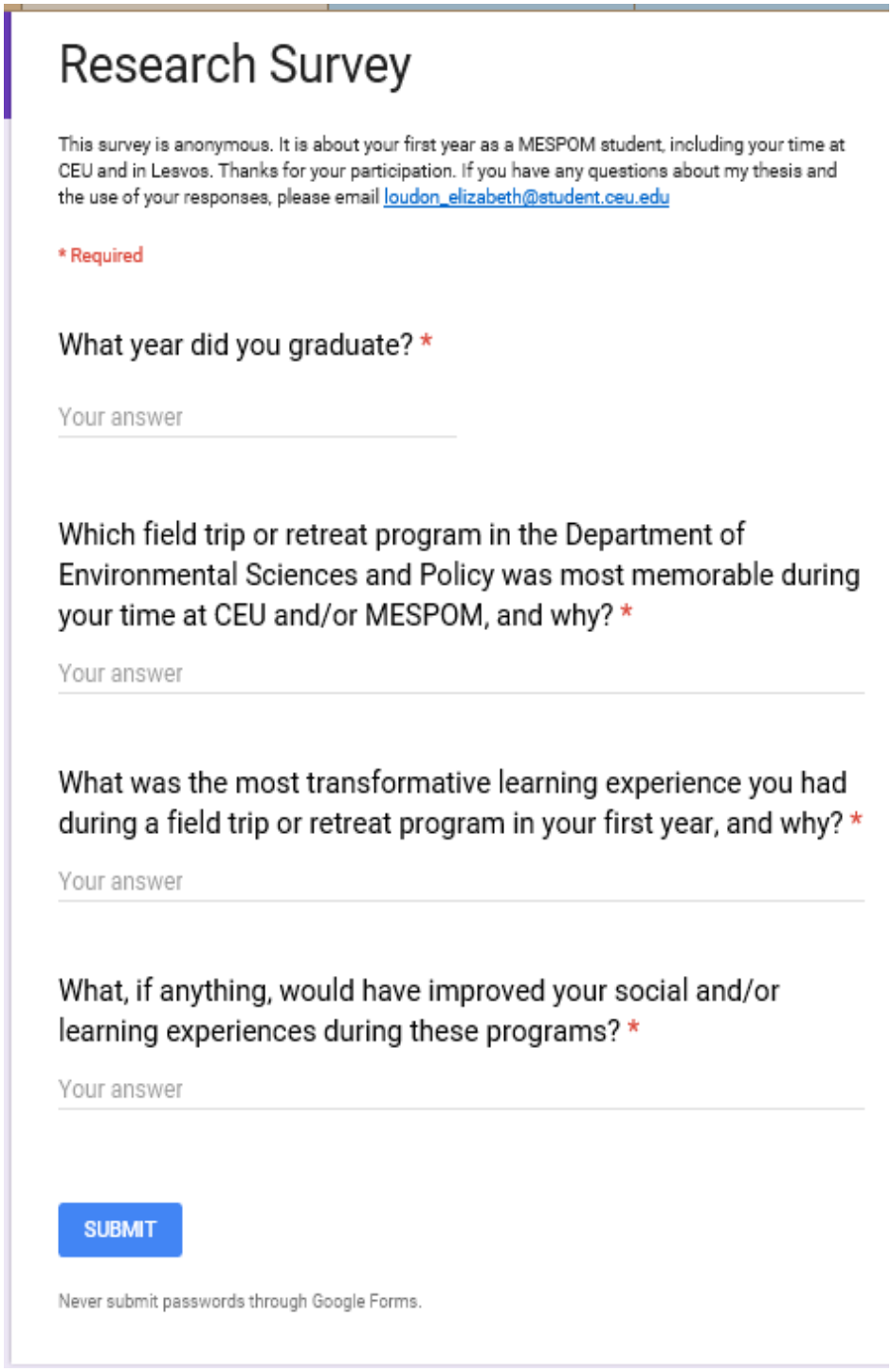
Coding as described by Corbin and Strauss (1998) was selected as a tool for making sense of the data because finding codes within the interview prevents the researcher from applying pre-

ordained categories. This advantage ensures that the data can reveal a greater variety of themes. The interviews provided the greatest source of data for the research, so they became a major source for the codes that would connect the other data sources. The coding process began with completing partial transcriptions for each interview. Nearly all interview responses were written down, but some words were abbreviated or condensed. Each interview was played back a minimum of two times before this step was completed. Then, the researcher read through all the interview transcripts. A first set of codes were identified and assigned colors in all student interviews, then faculty/coordinator interviews, then all interviews considered together. The process of condensing and combining codes went through two repetitions before yielding the final categories. These codes did not dictate the system used to assess other data sources, but were applicable for uniting these components for consideration in the discussion and analysis.

3.4 Open-ended MESPOM Alumni Questionnaire

The alumni questionnaire was hosted on Google Forms, and distributed via three Facebook groups. Facebook was selected as the most suitable tool for recruiting respondents based on the advice of a CEU Environmental Science and Policy Departmental Coordinator. No alumni email list could be obtained, but the following Facebook groups are active: MESPOM: Alumni, Students & Friends; and 2014-2016 MESPOM Students. Participants were self-selected volunteers who saw the opportunity to participate in the research on one of four Facebook posts. Responses could be as long or as short as the participants desired, but could not be edited after submission. The form was launched on June 7th and the final day to collect responses was July 3rd. During this time, a total of 10 completed surveys were submitted by alumni who graduated between 2007 and 2017. These responses to the form displayed in fig. 1 were mostly two sentences per question or less in length. All submissions were printed and coded using the same colors and themes applied to the

interview transcripts. The codes developed from the interviews were applicable, with no new codes emerging from the analysis of alumni responses.



Research Survey

This survey is anonymous. It is about your first year as a MESPOM student, including your time at CEU and in Lesvos. Thanks for your participation. If you have any questions about my thesis and the use of your responses, please email loudon_elizabeth@student.ceu.edu

* Required

What year did you graduate? *

Your answer

Which field trip or retreat program in the Department of Environmental Sciences and Policy was most memorable during your time at CEU and/or MESPOM, and why? *

Your answer

What was the most transformative learning experience you had during a field trip or retreat program in your first year, and why? *

Your answer

What, if anything, would have improved your social and/or learning experiences during these programs? *

Your answer

SUBMIT

Never submit passwords through Google Forms.

Fig. 1. Short alumni research survey
Source: Google Forms 2017

3.5 Field Notes from Participant Observation

The researcher attended a total of nine trips where MESPOM students were present. The Non-Human Biosphere and Waste Management trips occurred during the first semester in Hungary. Global Food and Agriculture, Biodiversity and Conservation, Environmental Monitoring, and Sustainable Development included trips that the researcher could observe during the second semester. The field notes from trips conducted later in the year differ from prior field notes because the researcher completed them during or shortly after trips, whereas notes about field trips from the first semester were generated from long-term memory. Finally, the researcher visited Greece to observe three of the four trips included in "Assessment, Modelling, and Scenarios for Ecosystems Management." The researcher took especially detailed field notes on trips that followed the articulation of the research topic. Notes were analyzed for relevant contributions using the same coding themes and process developed from the interviews.

3.6 Document Analysis

A variety of documents were collected to provide more information about the field trips and retreats that took place during the 2016-2017 academic year. All documents were printed and coded using the same colors and themes applied to the interview transcripts. The codes developed from the interviews were applicable, with no new codes emerging from the analysis. Course descriptions from the Department of Environmental Science and Policy Description of Study Programmes Academic Year 2016-2017 document that is available on the Moodle 2.8 E-Learning site were analyzed using interview codes and connected to field trip objectives where applicable. Field trip agendas, pre-readings, worksheets, feedback from course evaluation, and handouts were gathered and added to the research to support the discussion section.

3.7 Insider and Outsider Roles

The researcher conducted this research from shifting vantage points as an insider of the CEU community, but an outsider of the University of the Aegean. In Hungary, the researcher attended many field trips as a course participant and one as a guest. She had a different role on field trips hosted by the University of the Aegean, where she was never a student. On these trips, participants knew that she was present to participate first as a researcher and secondarily as a student. She could participate as an outside observer in Lesvos, but was still perceived as an insider by the MESPOM students. To the professors and coordinators interviewed in Lesvos, she occupied the student role but was simultaneously a researcher. The shifting roles of the researcher resulted generally in formality while conducting interviews with professors and coordinators, whereas the student interviews were informal.

"Proximity may make it easier to gain access to research respondents and achieve deeper levels of trust" (Hanson 2013). This benefit of the insider position allows for privileged information to emerge from shorter interviews that would normally require more time to build trust. Another advantage of the insider position is familiarity, which minimizes interview related anxiety and nervousness for the interviewer and the interviewee. On field trips the researcher blends in with all other students, which may make the researcher less intimidating than an outside observer. The drive to change behavior on field trips and perform differently is possibly reduced in the presence of an internal student researcher as opposed to an external evaluator. Lastly, the researcher has a stronger motivation to conduct ethical research and preserve anonymity because she is personally invested in the project and protecting participants' best interests.

The first challenge of being an insider that is affiliated with the students being studied "is the need to distance from the project, the participants, and indeed even the process of studying

one's own people" (Kanuha 2000). While the insider position is beneficial for interviews because many students are willing to offer their honest opinions, the role of the researcher as a friend of the participants presents additional challenges. Many interviewees may agree to interview because of their loyalty feelings for the researcher. On the other hand, those who have negative feelings towards the researcher may avoid participating in the research. Interviewees could also change their responses to reflect what they believe the researcher wants to hear. In some cases, interviewees may omit information that they assume the researcher already knows (Hanson 2013). Also, the researcher has the challenge of choosing which interview comments should be mentioned in the results. This selection should not be influenced by her personal relationships with interviewees.

The researcher must constantly question her assumptions, tendencies, and subconscious biases. When interviewees are also close friends, the temptation arises to host the interview like a conversation. This creates the problem of avoiding biasing participants' input by offering one's own opinions, or allowing feelings and judgments to influence the follow-up questions being asked. This style "may result in the interview becoming more like an everyday conversation in which the researcher either refrains from probing too deeply" (Hanson 2013). Before and after interviews, the researcher must contain her excitement and avoid talking about findings around potential interviewees to prevent altering the results.

As a student who has yet to submit her thesis in the Environmental Science and Policy (ESP) One-Year Master's Program, the researcher must navigate the conflict of presenting a perspective that is critical of certain trips or practices. Portraying any participants' words or actions in a way that is received poorly could damage the researcher's relationships with friends, peers, colleagues, teachers, etc. Additionally, Kanuha describes how the problem of generalizations being

made from insider research can be taken to represent the perspectives of everyone in the community that the researcher is part of (2000). The researcher strives to present student perspectives justly as conflicting and diverse, which prevents her research and perspective as a student from being interpreted as "the student perspective."

3.8 Limitations

Many of the research articles found on ecopedagogy were in Spanish or Portuguese, but the researcher's skills, funds, and time prevented consideration of research that is not in English. Field trips are a part of a whole course, so studying them in isolation from classroom activities provides an incomplete picture of the participant experience. The researcher could not be present on all trips, which resulted in missing field note data for some trips. Many nonclassroom activities provide field experience, but were considered beyond the scope of this research because they could be categorized as ongoing structured field experience and not field trips. Individualized field trips and nonclassroom activities like Environmental Practicum and external research projects students planned independently were too diverse and therefore not considered. While the "Sustainable Tourism" course consists of a field experience, it was not included because it occurs during the thesis writing period and the final week of the MESPOM Semester 2B. Time constraints and low participant interest prevented the researcher from conducting interviews with ten students from the MESPOM Class of 2018, coordinators at CEU, and three CEU professors who hosted field trips. The coding process for interviews may have revealed more themes if a software was used, or the coding process was repeated by more than one researcher. Concentrating on perceptions of experiences from the 2016-2017 limits the applicability of the research because trip participants and programs vary from one year to another. The alumni survey was only made available to alumni in the Facebook groups, a small portion of the total MESPOM alumni.

4. Trips Studied

The field trips in table 3 occurred during the 2016-2017 academic year, and are the subject of this research. Data about the experiences, activities, and locations were gleaned from diverse sources: departmental and individual trip schedules, interview content, field notes, personal experience, and documents distributed to student participants. It is important to note that Dr. Watt was not a main organizer for this year's Balaton Orientation Retreat, but had experience as a participant and planner in prior years. Although one coordinator was present on all Lesvos trips, he is not included in table 3 because of his role (Gkiouzepas pers. comm.). The abbreviations in parenthesis after each field trip name are used throughout further references in chapters that follow. The locations and activities included in table 3 provide a sampling, but are not comprehensive.

Table 3. Descriptions of field trips

Field trip / Class	Professors	Dates 2016-2017	# of attendees	Locations	Activities
Balaton Orientation Retreat (BO)	Dr. Watt Dr. Antypas 1 organzier not interviewed	Sept.12-13	60	Balatonfured, Tihany, Hegyestu Geological Site, Balaton Uplands Park	Team building activities, hiking tour, swimming
The Non-Human Biosphere (NHB)	Dr. Anthony	Sept. 22	40	Solymar	Taking an HEV train, hiking, nature observation, visiting the professor's home, touring a castle
Solid Municipal Waste Management (SMWM)	Professor not interviewed	Dec. 7	40	Rakospalota Municipal Incinerator, Pusztazamor Municipal Landfill Site	Tours and lectures

Biodiversity and Conservation (BC)	Dr. Anthony	Jan. 20	20	Budapest Zoo	Tour and lecture
Water Quality (WQ)	Professor not interviewed	Feb. 27	20	Csepel Water Treatment Plant, Central Sewage Water Treatment Plant	Tours and lectures
Introduction to Disaster Management (IDM)	Professor not interviewed	Mar. 10	15	Overnight trip in Hajduszobozslo purpose based training facility near Debrecen	training workshop MAGOR Association for Disaster Response, building a dike, Fire Station and bunker tours, drone demo, dog training demo, Red Cross lecture, "earthquake demo house"
Global Food and Agriculture With Organic Gardening (GFAOG)	Dr. Aistara Logan Strenchock	Mar. 17	30	Zsámbok Organic Farm	Tour of the greenhouse and farm. Practice: planting, harvesting, mixing soil, composting, etc.
Sustainable Development and Global Transition: From Theory to Practice (SDGT)	Dr. Pinter + T.A. not interviewed	Mar. 24-26	25	Gyűrűfű Ecovillage	Hiking, campfire building, participatory planning lecture and activity, village tour, mud brick building, feedback exercise, goat farm tour, sleeping in yurts, freetime program inc. archery and horse riding.
Environmental Monitoring (EM)	Dr. Anthony + Professor not interviewed	Mar. 29-31	20	Pillis Hills Day Trip, Bubanat Valley Ponds with an Overnight in Esztergom	Visual Encounter Surveys, data collection using observation/tools, practicing the Road Call Count Method (listening to frogs)

Organic Gardening Practicum (OG)	Dr. Aistara Logan Strenchock	April 21	10	Zsámbok Biokert Organic Farm	Practicing gardening skills
Sustainable Energy Solutions (SES)	Professor not interviewed	May 15	10	CEU Neighborhood	Walking tour
ASEM Trip-Lesvos Biodiversity (LBD)	Professor not interviewed	May 29	20	Mesa Wetland, Pine Woodland in Polichnitos Olive / Chesnut Groves Agiasos	Bird watching
ASEM Trip-Lesvos Power plant (LPP)	Professor not interviewed	May 30	20	Lesvos Power plant	Tour and lecture
ASEM Trip-Lesvos Agriculture and Land Management Systems (LALMS)	Dr. Kizos	June 1	20	Asomatos Village, Agioi Anargyroi Agiosos Village and Pappados Olive Mill Museum	Walking through Asomatos, trying local pastries, Hiking tour/ flora and fauna information, cemetery visit, museum tour with olive oil tasting
ASEM Trip-Lesvos industry Waste and Water (LIWW)	Dirk Schaelicke + Professor not interviewed	June 7	20	Kokkinoforos Olive Mill, pumice extraction plant in Dipi, YDATA water spring, Aeolikos-Ververi Feta Cheese Factory, Agia Paraskevi village	Tours and lectures, cheese tasting, trying water from the spring

Source: personal communications with students, Karagianni pers. comm., field notes 2016-2017

5. Results and Discussion

5.1 Trip Emphasis

5.1.1 Life Powerpoint Trips

Life powerpoint is a term created from a student interview that describes a type of field trip that includes touring facilities and sites, but lacks the participation element of performing tasks. The student coined the term in the following quote: "We just went and listened to some lectures, and we saw some instruments and processes, and then we went back. So it's a powerpoint, life powerpoint presentation like thing" (pers. comm.). Later in the interview the student was asked to elaborate on what was meant by this term. The student replied, "In other field trips we see with our eyes. In the sustainable development trip, we did with our hands" (pers. comm.). Limits like safety concerns often prevent practice, as one student acknowledged: "there's a hands-on component you can't do in these facilities" (pers. comm.). The field trip that is a life powerpoint can enhance knowledge and illustrate theory, but generally does not result in building practical skills. A coordinator described the field trips in Lesvos as, "more like visits… I would say they are more informational, not like practical in the sense of students actually doing something" (Gkiouzepas pers. comm.). The trips referred to in the quote could be considered life powerpoints.

Many life powerpoint trips educate students about how a process works by allowing them to see it taking place. A student suggested that the SMWM Trip improved her student conference presentation because her topic was on waste management, and it gave her "images of how it looks" (pers. comm.). Another student reinforced the value of tours for learning, "even the wastewater treatment one. They showed us the different machines, and you would have to see them to know how they work" (pers. comm.). Being part of the MESPOM program gives students access to

places that are closed to the public, and would otherwise be inaccessible (Gkiouzepas pers. comm.). A student on the LPP trip commented that the trip offered "a unique opportunity we couldn't see otherwise" (Field Notes 30 May 2017). In multiple interviews, the theme of first experiences was linked with enjoyment and positive feedback. For example, one alumni stated that "seeing a water treatment plant from the inside gave me physical experience…which was both educational and motivational" (alumni questionnaire).

Fig. 2. Kokkinoforos Olive Mill machinery and processing waste products respectively.

When understanding a process is the intention of the field trip, the experience can be improved when the machines are observed in operation (Schaelicke pers.comm.). Dirk Schaelicke lamented that the LIWW trip had to take place after the olive processing was over for the season, believing that the experience would be improved if the machines could be observed while working. He described the experience relating to the centrifuge (fig. 2) from the modern olive oil plant: "it's not operating, but then it's better than nothing…it's just like standing there and trying to imagine

what's happening there" (Schaelicke pers. comm.). Although the facility was not working, students could still imagine and use their senses to interact with a display of the products (fig. 2) that result from olive oil making (Field Notes 7 June 2017).

While life powerpoint trips have a clear educational purpose, some students expressed negativity about trips that were primarily tour based. One student complained that she generally liked the LIWW trip, but said "going to the pummice factory to me was like just getting inside, standing, seeing them, and going outside…to me it was like a waste of time" (pers.comm.). Similarly, a student claimed that she did not know why this stop was included in the trip (pers. comm). Another student criticized this part of the LIWW trip because "none of the workers engaged with us" (pers. comm.). This suggests that one possible technique for making life powerpoint trips more valuable includes making time for employees to be interviewed by students. According to one ecopedagogical goal, education is improved when "one learns about socio-environmental perspectives and traditions that are different from [their] own" (Misiaszek 2015). Student interviews described their conversations with trip hosts as enjoyable and offering different perspectives. For example, one student suggested that she gained from interacting with an expert trip host on the SD Trip because the host "is completely an outsider, so she has some other exposure to her life, which I do not have" (pers.comm.). Even alumni mentioned their interest in engaging with trip hosts by "having chats with people about their work rather than how the operation functions" (alumni questionnaire).

The student role on trips in Lesvos includes taking the opportunity to "make a connection with the people working in this area" (Gkiouzepas pers. comm.). Life powerpoint trips can enhance learning by enabling dialogues that help students see "real world versions of debates that they have read about in the classroom. Understanding the complexity of the issues is easier to do in a real-

life setting, when you have a real person telling you something or showing you something, than it is by reading something…it can serve to either reinforce or challenge certain things in the readings" (Aistara pers. comm.). This experience of connecting theory with practice through making connections to people can be foundational for transformative learning, discussed later in in chapter 5.4.

5.1.2 Hands-on

The language used to talk about field trip activities as "hands-on" refers to the tactile sensory nature of the experience, and the "practice" theme. A recurring theme that was coded in every interview was the complementarity of theory and practice. Class time was associated with teaching theory, and field trips were often seen as a chance to at least see theory applied. According to one trip host for the Zsámbok trips, "the theoretical knowledge is enriched as well by seeing the agricultural activity in person" (Strenchock pers. comm.). Hands-on trips utilize the "experiential" ecopedagogical method by allowing students to engage in "participatory involvement in everyday experiences" (Norat *et al.* 2016). Hands-on trips differ from life powerpoints because the experience prioritizes sensing and often includes participation through doing. The NHB trip intended to offer a hands-on experience and included observation and data collection as practice. The professor said, "I want students to learn on their own. Not me saying this is this tree and this is that because then it is more like a guided tour. But I want students to be looking for themselves, and it doesn't matter whether they know the name of the tree or they know the soil type…I don't want it to be like this ecological guided tour" (Anthony pers. comm.). This description explains how a hands-on trip can be like a life powerpoint trip, but is differentiated by the student role and the participatory approach of the professor.

During the coding process, “hands-on” was often connected to comments about being “active,” the action of “doing,” acquiring “skills,” and having opportunities to “apply” knowledge. When possible, some students expressed they would like to participate by getting involved. For a student who preferred hands-on experience, she had “been ignoring trips in Greece” because she had a “bad sense they are something like going to a power plant or fire station” (pers.comm.). By contrast, this student offered positive feedback about the hands-on portion of the IDM trip. The IDM trip included participation in training and practice, as depicted in figure 3. Another student described that practice was his preference because “I feel like there’s a relevance to it, and it adds up to something more on the macro level” (pers. comm.). This student feedback about the OG trip to Zsámbok Farm can be connected to the conception of ecopedgagogy as “linking doing and learning” (Nakagawa 2017). The Zsámbok trips provide examples of occasions when students learn through practice, allowing them to improve some skills. “You don’t go in one field trip and become and expert gardener, but it’s a step in the right direction” (Strenchock pers. comm.).

Fig. 3. IDM student during a simulation at Hajduszobozslo purpose based training facility. Source: photo taken by an anonymous trip participant and reproduced with permission.

5.1.3 Projects

Both life powerpoint and hands-on trips can include projects that contribute to the trip emphasis. Collective projects as ecopedagogical practice are "aimed at solving real problems" (Norat *et al.* 2016). MESPOM students complete some of these projects connected to field trips in the first year, including the EM project in Hungary. According to Dr. Anthony, "I think it's also important for students to know that the data they're collecting is actually contributing to the National Biodiversity Monitoring Scheme in Hungary. So it's not just for their sake and for their reports, but that this data is also fed into a larger monitoring project…" (Anthony pers. comm.). From this linkage, the student experience may become more ecopedagogical because the educative process may gain greater "personal meaning" (Gutierrez and Prado 1999). Connecting student work to the National Biodiversity Monitoring Scheme also satisfies the ecopedagogical practice of creating "networks" that utilize "collaborative partnerships with local and international institutions" (Norat *et al.* 2016). One alumni reinforced that this practice was desirable by suggesting MESPOM "have more focused workshops where students could produce practical projects, maybe in cooperation with local organizations" (alumni questionnaire).

Projects also contribute to skill development and readiness to take action (Norat *et al.* 2016). One alumni praised the EM trip saying, "I felt that the project developed real skills that could be directly applicable after MESPOM" (alumni questionnaire). Even if the results of a project are not contributing to solving a problem, students can practice skills by simulating being part of a consulting team. Dirk Schaelicke who mentors the Waste and Industry group for the AMSEM project said, "I try to tell my group always, just imagine you would be a group of specialists, and you were handed over by the authorities here, 'we were having this problem and please study on this problem,' so it should give you the feeling that you are doing something

actually useful…it's not like a project, but it's also a case study. It's really happening." (Schaelicke pers. comm.). The activity of imagining oneself as a professional could be interpreted as engaging students' creativity, which is critical part of the ecopedagogical approach (Gutierrez and Prado 1999). The practice of "creative visualization" in ecopedagogy occurs when students use their imaginations (Norat *et al.* 2016), which they can engage deeper by taking their Schaelicke's suggestion seriously and simulating problem solver roles.

The AMSEM projects positively influenced some students' behavior during field trips in Lesvos, resulting in self-reported engagement from students who were working on the topic that related to the LPP field trip (pers. comm.). The AMSEM project also connects to the island of Lesvos, which satisfies the ecopedagogical practice of "connecting experiences with place" (Norat *et al.* 2016). Students who had projects associated with the LALMS trip asked multiple questions, shared information from their background research with others, and spent breaks with the professor to discuss the project further (Field Notes 1 June 2017). On the other hand, the project was considered less beneficial for the engagement of the Biodiversity Group. According to one participant, "the project didn't change my approach to the trip because I didn't know yet what I was doing" (pers. comm.). Another participant hypothesized that she was less prepared because the "trip was too early on in the course" (pers. comm.). The conflicting feedback from students in different groups suggests that the ecopedagogical practice of having a collective project influences the field trip experience differently depending on the pacing of the project deadline and the students' team approaches.

5.2 Senses

An ecopedagogy approach regards education as "a process of exchange and interactive communication between the educand, her/his surroundings and the educator" (Gutierrez and Prado

1999). An essential ecopedagogical method for interacting with others and the environment utilizes sensory experience, letting "the senses permeate the practices of everyday life" (Norat *et al.* 2016). In levels of sensing during an ecopedagogical experience, the senses of touch and taste are the most direct because they are "exclusive to an experience with an object" (Nakagawa 2017). Direct experience enhances learning because it is associated with improved retention (Sharp 1948). A coordinator said that some trips are "not only about the technical aspects. It would also include formally tasting olive oil or food, spending a little bit of time having a coffee. It's pretty common here in Greece" (Gkiouzepas pers. comm.). The quote suggests that taste is a way to learn about the culture of a place. The ritual of having a coffee or trying foods at a factory can enhance the learning experience by giving trip participants more than new energy, contributing to the ecopedagogical goal of "impregnating daily practices with meaning" (Gutierrez and Prado 1999). The field notes from the LALMS trip affirmed attainment of this goal, as I wrote about how enjoying a Greek coffee with Dr. Kizos gave me the opportunity to try a Greek cultural practice, ask questions, reflect on the hike, and try nerántzi pictured in fig.4. (Field Notes 1 July 2017)

Fig. 4. Greek nerántzi, coffee, and feta tasting.

Dr. Aistara commented on the value of utilizing one's senses during farm trips: "if they can taste the food that comes from a place…see, smell, and taste what the pickling process is like on a traditional farm, that is also eye opening for them, for me…I hadn't done that myself either" (Aistara pers. comm.) This quote illustrates the connection between the coded themes of first experiences, place, and senses. Also, teachers and students can share direct experiences that help them to engage in the ecopedagogical practice of "connecting experiences with place" (Norat *et al.* 2016). Many interviewees also connected smells with field trip experiences. The mentor for the waste group expressed a strong interest in offering a sensory experience that "makes you feel like you are inside the production line," by contributing the smells of the dairy unit. (Schaelicke pers. comm.). The LIWW trip also included an opportunity to use taste at the dairy unit, as students were offered fresh feta cheese pictured in fig.4 (Field Notes 7 June 2017).

Another theme that is associated with sensing and was present across all interviews was connecting class learning to "real life." One student commented on how the LBD trip complimented learning about bird species during class: "before we had a lecture on black storks, white storks…during the field trip very luckily we saw them, so it's a more vivid image in my mind rather than before on the powerpoints" (pers.comm.). This quote illustrates how seeing something in person in the environment differs from the experience of learning about it in a classroom. Another student commented on how using her senses of sight and hearing on the EM trip improved her ability to remember: "I learned so much more than if he had just showed us, 'these are the pictures and now we have a multiple choice about which latin name is for which species.' Now I know it by heart and I will not forget for a very long time that BOBO sounds like blowing over a bottle and BUBU has strings as eggs" (pers. comm.). This student also commented

that she felt inspired to continue her learning independently after the field trip by listening to frogs (Field Notes 31 March 2017).

According to Dr. Pinter, sensory experience is essential for the SDGT trip: "we have to be there physically, you know, to smell the air, to walk the path, to talk to the, you know, to shake the hands of the person and to lift, to make the mud brick, and then it becomes a holistic experience. It becomes real." (Pinter pers. comm.). This quote emphasizes how the sensory experience contributes to making subjects that were understood on a theoretical level more "real" and lived. One simple exercise that Dr. Pinter used on the SDGT trip to demonstrate that changing one's habits is difficult was praised in a student interview because using touch and physically trying to change the way he moved helped him to understand the point (pers. comm.). In this exercise, students were asked to cross and uncross their arms a few times to feel what direction came naturally to them (Field Notes 25 March 2017). This exercise could be interpreted as ecopedagogical because it goes beyond sensing to encouraging students to reflect on themselves and the world, enabling transformative education through "the great journey of each individual to his or her inner universe and to the universe that surrounds him or her" (Gadotti 2011).

5.2.1 Physical Discomfort

"In a more practical sense, if we've spent the whole semester talking about organic agriculture practices, well what does it feel like as an embodied experience? To have a sore back and have dirt under your fingernails, and to be swatting at bugs with your dirty hand, and to somehow feel the discomfort that's associated with farm work" (Aistara pers. comm.). This emphasis on the physical and sensory part of doing work on a farm promotes an ecopedagogy of sensing, which has been studied in the WWOOF farming context (Nakagawa 2016). The OG trip was challenging, but in a way that reinforced the lessons from the trip. One student claimed she

"didn't like that field trip at all…my muscles were sore for the next two or three days" (pers. comm.). This student described unpleasant sensory experience that she felt physically, but claimed to be satisfied because "the purpose of the trip was very clear and obvious since the beginning...I think that was the perfect example of how field trips should be…" (pers. comm.). This quote suggests that student enjoyment, while often co-occurring with positive feedback, is not required for a student to believe the trip was exemplary. Another student who reflected positively on the Zsámbok trips said, "now I know the pain which farmers go through…If you don't feel the pinch, you won't understand." (pers. comm.) According to a trip cohost, "it's not about having a really hard work day, so they feel like 'oh this is super hard.' It's to give them a more accurate picture of the reality for agriculturalists" (Strenchock pers. comm.).

Dr. Anthony described allowing students to experience discomfort on the EM trip because he wanted them to understand the challenges of field work so "when they read reports of monitoring in the field…they have at least experienced those first hand" (Anthony pers. comm.). This type of challenge benefits students because they gain a more realistic sense of monitoring in practice. A student discussing this trip acknowledged being challenged and believed the experience valuable enough that it "could have been mandatory for all students" (pers. comm.). Sheltering students from unpleasant experiences could deprive them of transformative sensory learning opportunities that ecopedagogues strive to foster. The cold temperatures that students suffered during the SDGT field trip were uncomfortable, but resulted in group bonding because nearly all slept in the crowded guesthouse on the second night of the trip. A dozen students also huddled together for warmth during the lecture on goat cheese, and this resulted in group discussion about the subject of the session (Field Notes 26 May 2017). From these examples, one can infer that moderate physical discomfort can enhance the ecopedagogical experience.

Dr. Anthony mentioned "there are usually not a lot of difficulties in the field because we hopefully prepared students enough" (Anthony pers. comm.). This quote emphasizes the power of preparation for minimizing physical discomfort. The interviews in which students recall being hot/cold, tired, and/or disappointed discuss disturbances that could likely be reduced with proper equipment or simple adjustments during the trip. By checking the weather and making a student preparation list, coordinators reduce discomfort (Karagianni pers. comm.). Most physical discomfort is preventable when students have clear expectations, and their basic needs are considered in the preparation/execution of the trip. For example, the LALMS trip included hiking and was conducted on a hot day, but students did not mention physical discomfort preventing them from learning. From observing students during the trip, I hypothesize that the heat was less noticeable because all students had enough water, and Dr. Kizos would not stop the group to lecture unless all students were standing in the shade. In the field notes, I counted several incidences when Dr. Kizos stopped himself mid-sentence to move everyone to a cooler location before continuing (Field Notes 1 June 2017). The attention paid to students' need to stay out of direct sun requires no resources, but can be effective in making the field trip more enjoyable and productive.

In one interpretation of the ecopedagogy approach, "educators have 'the responsibility for providing an environment' (Dewey, 1997, p. 45) for learners to enhance their educative experience" (Nakagawa 2017). While certain types of physical discomfort create teachable moments, others interrupt or obstruct learning. Satisfying hunger enables the learning process because concentration is reduced when students are hungry (Slavin 2011), so for some students having the sensory experience of trying foods could primarily serve the purpose of nourishing their bodies. One student generalized that his experience on field trips was often staying "on the side, falling asleep and thinking when will I get a chance to eat" (pers. comm.). This student's

experience could be productive for learning if his tiredness and hunger was induced by participating in physical labor that teaches him about an embodied experience, but possibly unproductive if he has a lecture to focus on and cannot. The environment is difficult to predict and control, so sometimes ecopedagogical practice can involve "dynamic, spontaneous, intuitive" methods that are categorized as "emergent" because they respond to the context of learning (Norat *et al.* 2016).

Some students described that when they felt too physically uncomfortable, they could not be attentive and mentally present on trips. During the LIWW trip, a student commented "my brain doesn't function in these heats. Like I literally zone out. I can't focus." (Field Notes 7 June 2017). This reduced mental functioning is an obstacle to learning in the traditional education model that "considers rational thought the most important form of knowledge" (Gutierrez and Prado 1999). This is not necessarily true for ecopedagogy, which may include an experience that values the 'affective' method to have students reflect on their physical and emotional senses (Norat *et al.* 2016). The student could also engage the ecopedagogical practices of "mindful meditation" or "connecting experiences with place" to respond to their discomfort more meaningfully (Norat *et al.* 2016).

A clear limit to the value of discomfort is presented in situations where compromised safety interferes with learning. Field notes of the LPP trip include an alarming student quote saying, "Oh, I didn't hear that. I don't care. I cannot even breathe." This quote was recorded during a safety instructions lecture, which was held in a room that smelled heavily of cigarette smoke. The student asked the researcher a question because he missed something that was already covered by the power plant employee (Field Notes 29 May 2017) In this case, the environment may provide discomfort great enough to inhibit learning and pose a health hazard.

5.3 Emotions and Ethics

Ecopedagogy "seeks to re-educate 'planetary citizens' to care for, respect, and take action for all life" (Gutierrez and Prado 1999). A commitment to developing learners who have a global community sense and advanced multispecies empathy is at the core of the ecopedagogy approach (Kahn 2010). Many of the educators who teach in the MESPOM program express that they intend to cultivate these environmental ethics through the field trips. In reference to the NHB trip, Dr. Anthony describes biophilia as "basically the love of life and the love of the natural world. It's an affinity with it. A friendship. Not just that they like the fact there's nature out there, but they are immersed in nature and there's a psychological effect, and perhaps spiritual as well for some people. That spending time in nature has physiological effects. It can be aesthetically pleasing. It can give you courage. It can inspire you. Hopefully it involves a greater concern and care for the natural world." The experience of being is nature is viewed as a source of comfort, consistent with the ecopedagogical "affective" practice that "promotes sensibility, affection and connection with our environment" (Norat *et al.* 2016).

In the ecopedagogy approach, connecting with nature and people endows students with emotional tools as part of an education "that can encourage people to face what is happening" (Gutierrez and Prado 1999). Logan Strenchock, a co-host of the GFAOG trip, expressed that his perception of the purpose of education is "to have a greater ability to interact with society around you and society at large, in a way that you want to. In a way that makes you feel good" (Strenchock pers. comm.) The linking of the local and the global society suggests a planetary citizenship notion, while improving learners' abilities to interact responds to the ecopedagogy call to "as citizens of the planet, participate in the creation of a world that we want" (Gutierrez and Prado 1999). Feelings of "constructive hope" that support action would enable this ecopedagogical mission because this

emotion is "positively associated with engagement" (Ojala 2015). Another professor expressed that he wanted future BO Retreats to help students to feel inspired, believing "of course, we can make things a million times better, and it's realistic to think so" (Antypas pers. comm.).

While no student interviews specifically mentioned ethics, interviews reveal that some students have deep connections with nature that are consistent with the environmental ethics that teachers are attempting to cultivate. A student described the SES trip as "a journey through history…it was like a flow of the river. We are starting from the source. The source is the utility sector. Then we are moving with the water flow from Astoria…" (pers. comm.). This quote provides insight into the student's way of seeing a connection between human technological history and environmental metaphor, possibly indicating that she recognizes "interconnectivity" in her "ecological consciousness" (Norat *et al.* 2016). Her view of history is also in agreement with the planetary citizenship understanding that "this planet as a living organism has a history. Our history is part of it. We are not in the world; we are part of it" (Gadotti 2011). In another interview, the experience of group work on the EM trip was praised because it "felt really organic…felt good because we all were invested in the work…" (pers. comm.). This student quote contains an environmental metaphor for how his community sense emerged through collective action, possibly indicating growth in his environmental and planetary citizenship ethics.

A student clarified her reflections on her values after the SDGT trip by saying, "I think people should develop…I mean pollution, environment is also really really important. I really do care about Mother Earth. That's why I'm studying this…It's a marriage between humans and nature. So we have to compromise…both of you. Nature has to compromise something. We have to compromise something. The way we live… So we have to live like a husband wife lives…I truly believe this" (pers. comm.) The metaphor of marriage used within the student's description

places nature and humanity in equal positions of importance, indicating non-anthropocentrism. The student also demonstrates that she has an ecopedagogical "ethic of compassion and care" for the planet (Norat *et al.* 2016). Although this student's perspective demonstrates that she values collaboration with nature, it is unclear if her environmental ethics were influenced by field trips. This lack of feedback to judge how students' ethics are developed from field trip experiences presents an opportunity for further research.

5.3.1 Connection to Hosts

The importance of the connection to trip hosts was coded in every professor/coordinator interview, and most student interviews. One student described this intimate experience on the SDGT trip as "we were really close to those people who are living there. We spent 48 hours of our life with them. Living very closely. Eating with them. Not sleeping with them, but yeah nearly sleeping with them…" (pers. comm.). The environment of closeness described by the student could aid in the ecopedagogical vision of "construction of shared meanings through dialogue and the collective experience" (Norat *et al.* 2016). The evidence from the interviews suggests that having these opportunities to connect during structured and unstructured time creates memorable experiences. Planning for unstructured time on the SDGT trip creates a situation where "the discussions get more informal and you have a better chance to have one on one conversations or small group conversations, which are unstructured and open" (Pinter pers. comm.). These moments offer an opportunity for students and hosts to explore their interests, including asking questions and having conversations.

The connection between students and hosts provides an exchange for all trip participants, which trip organizers often say is interesting for trip hosts (Strenchock, Pinter, Aistara, Anthony, Gkiouzepas pers. comm.). Reflecting on BC Trip, Dr. Anthony said the co-host "is always amazed

that there are so many students from all over the world, and he doesn't get to meet people from all different countries to hear about how zoos are working in their countries…so I think it's a good learning experience for him as well" (Anthony pers. comm.). This statement highlights that the students' diversity contributes to the learning experience for the host, providing stronger evidence that student-host interactions could contribute to the development of the human connectedness part of planetary citizenship. On a farm trip from a prior year, "for a woman who was doing a traditional cabbage making, making sauerkraut in the wood barrels and giving it to offer to people to take by the fingerful and taste…it was fascinating to have all these international students in her little processing room…for all the farmers that we visit it's also interesting to see and meet people from different places" (Aistara pers. comm.). This perspective on the influence of student interaction on hosts suggests that food can be part of cultural exchange, and the development of planetary citizenship via sharing tradition could be associated with collective experience on field trips.

"Both education and the investigation to support it must be sympathetic activities…that is, they must consist of communication and of the common experience" (Freire 1970). One student described how her experience on the IDM Trip helped her to connect to a trip host via communication that overcame a language barrier. "At night we all sat together and had food. They cooked us good pies. So it was really nice…There was a person, a lady…she did not speak English. So I literally love this type of conversation, when two different people are talking to each other and do not understand each other… Me and that old lady literally talked. She told me how she made that food" (pers. comm.). The student's ability to engage in conversation without language is a skill that improves her competence as a planetary citizen, potentially helping her to see herself and others as "all inhabitants of a single house, of a single home, of a single nation" (Gadotti 2011). This interaction could potentially have the same effect for the host's planetary citizenship.

5.3.2 Connection to Peers

Interviews and the alumni questionnaire revealed that care for and connection with peers was directly developed by the field trip experience. The trip most often linked with connection to peers was the BO Retreat because the main purpose of the BO Retreat is "to try and get the group of students together, to help them to bond with each other, and to learn a bit about each other in an informal setting" (Watt pers. comm.). Dr. Antypas described his view that "developing some caring for each other is another, I think, really important objective because I think that, you know, there's a model of being a student of my grades, my career, my learning…I don't think it's very effective in the world" (Antypas pers. comm.). An attitude of individualism is discouraged by an ecopedagogical approach, which emphasizes "communities that serve everyone" (Gutierrez and Prado 1999).

Building a care ethic in the ecopedagogy approach is also expected to help students "prioritize the social over the individual" (Gutierrez and Prado 1999). Every student interview and alumni questionnaire was coded for the theme of connecting to peers, allowing the inference that social interaction is an important part of field trips. One interview provided some insight to suggest that the sleeping arrangements during the SDGT trip provided conditions for students to bond with each other, which she thought was a valuable experience. She said, "I think it's much more close to nature when you sleep in a yurt because you are having a very traditional way of life there. So sleeping with 15 people in one single small yurt. I think it's good" (pers.comm.). From the student's words, it is unclear if she means that the rustic accommodation was something she thought brought her closer to human nature, "nature" in the environmental sense, or both. Her reference to the small size of the yurt and the large number of people supports that students were experiencing uncommon physical closeness because they were sharing space. The field notes from

the SDGT Trip confirm that physical closeness increased on the second night of the trip when students all moved to the guesthouse, and some students shared blankets during this experience (Field Notes 26 March 2017).

According to one goal of ecopedagogy, "introducing a culture of sustainability and peace into school communities is essential so that these communities can be more cooperative and less competitive" (Gadotti 2011). One student's feedback suggested that his group mates demonstrated this team spirit on the EM Trip by allowing him to try a new role and "letting him be a leader" (pers. comm.). The ability to work together is a skill that could be considered an ecopedagogical goal enabling "communication, co-participation, co-production, and co-understanding" (Gutierrez and Prado 1999). The BO Retreat was intended to begin the development of these skills and "infuse the group with that spirit towards each other…people can help each other, this is about learning together and ultimately going out into the world and collaborating to make things better" (Antypas pers. comm.) This spirit contributes to the overall ecopedagogical purpose of enhancing solidarity and developing ethics (Norat *et al.* 2016).

5.4 Transformative Learning

Ecopedagogical experiences should challenge learners to reflect on their views and behaviors, engaging in the ecopedagogical practice of "socio-affective dynamics" (Norat *et al.* 2016). One student interview supported that the student engaged in this process on the BC trip when he said, "the zoo completely changed my perception, and allowed me to see the other side" (pers. comm.). For the student to have and resolve this ethical challenge, he needed to be willing to reexamine his beliefs held internally and relate them to his new evaluation of the subject of his judgment. After this process, he expressed that he wanted more similar experiences because "doing something completely different, out of my comfort zone…That's something that I think should be

emulated by more field trips" (pers. comm.) This perspective and positive feedback for the BC trip indicates that using field trips to explore being outside one's comfort zone is welcomed by some students.

Fig. 5. Hippopotamus in an enclosure at the Budapest Zoo.

Source: photo taken by an anonymous trip participant and reproduced with permission.

Many students feel zoos treat animals poorly because they envision unnatural and constricting environments like the one pictured in fig. 5. Visiting a zoo presents an opportunity for students to engage with an expert and ask questions, clarifying their views and understanding the local context (Field Notes 20 January 2017). Zoos are a site of contention that provide an

environment where students can engage in dialogue that is ecopedagogical because students can "lay out current socio-environmental realities and possible realities in order to consider potential changes" (Misiaszek 2015). According to the professor, "a lot of students that I've noticed have a lot of preconceptions about zoos, and tend to be more negative about the role of zoos in conservation…" (pers. comm. Anthony). This perception is confirmed by one student interview, in which the student responded to a question about the zoo by saying "I wouldn't have gone because my principals and ethics are against zoos. I don't favor them" (pers. comm.). The differences in student attitudes towards the zoo trip illustrate how some students will use interviews with experts and hosts to challenge their perceptions, while others prefer to opt out of certain field trips. This attitude that prevents students from attending trips that they deem undesirable lacks openness, and could arguably present a barrier to the realization of transformative learning.

Taking advantage of direct sensing opportunities on field trips requires an ecopedagogical approach from participants that includes "the attitude of learning when one is open, receptive, and searching for learning" (Gutierrez and Prado 1999). Some experiences on field trips encourage students to challenge themselves to try new things, possibly overcoming fears or apprehensions. For example, a challenge of the NHB trip is that "some students have no idea that there's really nothing to fear in the hills. They don't know that there's no dangerous animals" (Anthony pers. comm.). If a student had negative experiences interacting with animals, studying them up close might cause anxiety. The EM Trip offers a similar chance to be close to amphibians, which one student described as "scary" (Field Notes 29 March 2017). For a student who feels this way, overcoming fear might transform how she views frogs in the future. Especially in the case that she has a first experience, if she is like students mentioned by Dr. Anthony who "never touched a frog

in their lives until the monitoring trip…for them it's actually a highlight that they held a frog in their hands" (Anthony pers. comm.).

"Direct experiences have a stronger influence on people's behavior than indirect experiences. In other words, indirect experiences, such as learning about an environmental problem in school as opposed to directly experiencing it (e.g. seeing dead fish in the river) will lead to weaker correlation between attitude and behavior" (Kollmuss and Agyeman 2002). Direct experiences like those mentioned in the chapter 5.2 involve physical senses including sight and smell that students gain from encounters with machinery like the garbage collector in fig. 6. After the SMWM trip a student changed her habits by putting recycling bins in her room. She became more conscious "because it was shocking to see all this garbage and how they're dealing with it" (pers. comm.). The explanation for her shift in consciousness involving her emotional response is consistent with the trend that behavior change comes from affect (Kollmuss and Agyeman 2002)

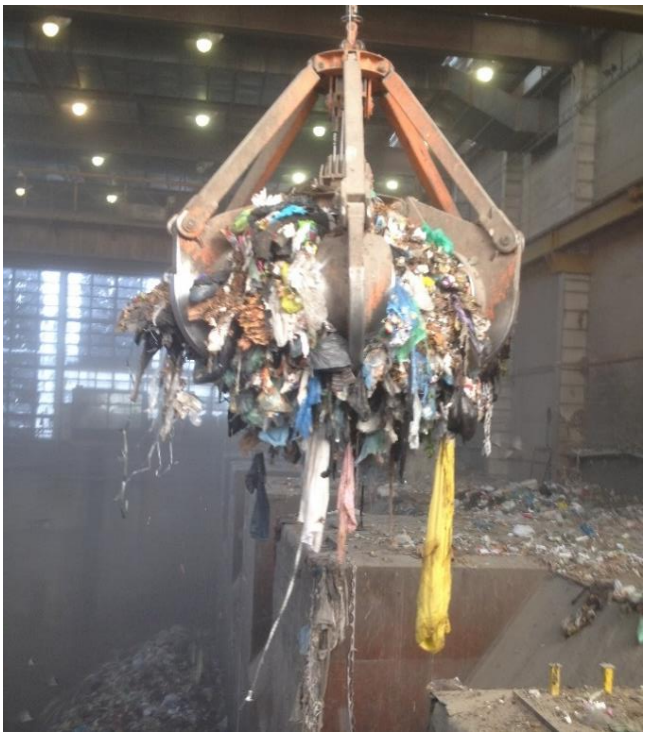


Fig. 6. Garbage claw crane at the Rakospalota Municipal Incinerator.

Transformative education via the ecopedagogical approach is "lifelong" learning enabled through "integration of the information into the process of personal self-organization and self-construction" (Norat *et al.* 2016). This area of ecopedagogy is foundational because it permits questioning of the current world system and propels the movement to "change current human, social, and environmental relationships" (Antunes and Gadotti 2006). Since time is needed to reveal what lessons and skills students gained from field trips and which were transformative, it is difficult to predict and document which activities were impactful. One professor explained this time gap: "I get to talk to students quite a bit after the field trip, weeks, or even months, and sometimes even years, and when someone I talked to brings this up, they say 'that was really interesting, and there was something that really caught my attention, and it was valuable, and it wasn't clear at the time of the field trip,' and it shows that certain ideas need maturing" (Pinter pers. comm.). Further research after years of reflection could reveal other insights. For this reason, even alumni responses offer limited insight into the transformative learning offered by field trips.

5.5 Roles

5.5.1 Teacher role

While interviews included diverse answers about the roles of teachers, all participants likened these roles to others that minimize the power disparity between teachers and students (pers. comm.). The results present a teacher role that is likened to mentor, guide, or facilitator, which is like the transformative education role of "teacher as mediator" (Love 2011). This could indicate that the teacher role on field trips attempts this, or that participants see this reduced power disparity as ideal. A source of confusion that resulted in interviewees often requesting clarification involving whether the teacher and student role questions were seeking answers regarding ideal roles or actual

roles. While some participants differentiated between ideal and actual, others may have described only one of the two.

On field trips, some teachers express that primary roles are nontraditional in that they act as guides of facilitators for connections with hosts, discussed in chapter 5.3.1. “I’m there more to facilitate a connection between the farmer and the student, rather than demonstrate anything myself” (Aistara pers. comm.). In expanding on this role the professor said: “I see myself as a facilitator of student learning, and of a connection between a text and an idea and a concept and the student’s own experiences, rather than somehow an imparter of knowledge” (Aistara pers. comm.). This emphasis on connecting students own experiences demonstrates a commitment to an element of ecopedagogy through life-centeredness (Shankar-Brown 2013). The decentering of the traditional teacher role as a “sage” that gifts knowledge to students goes against the classroom model where teachers lead and students absorb knowledge (Drew 2001). According to Dr. Kizos’ belief, “you can’t teach, they learn by themselves. You provide guidance” (Kizos pers. comm.). This understanding of the teacher role that positions teachers as guides agrees with the model of students as travelers. This model imagines students as learners who are open, have many roles, and learn in all classroom and nonclassroom spaces that they travel through (Drew 2001).

The ecopedagogy approach “implies that the educator, without letting go of her or his role as ‘student’, concern her/himself with meaningful learning aimed towards the formation of environmental citizenship and a planetary society” (Gutierrez and Prado 1999). All teacher interviews mentioned learning from trip hosts, which is evidence that teachers maintained their roles as students. For example one teacher said, “I also learn a ton when I go on field trips. Whether it’s going to visit 3 organic farms or going to a seed exchange here…it’s always a treat when I get to go visit these places as well, and interact with people” (Aistara pers. comm.). The quote also

highlights the role of interacting and participating, which can reduce the power dynamics in the teacher-student relationship (Drew 2001). A student commented on the SMWM trip: "I think for most of the field trips they are also more like a friend. For example, professor ------ always makes the atmosphere super happy and brings us palinka" (pers. comm.). Another student described a teacher role on the IDM trip that was consistent with the student-teacher equality of the ecopedagogy approach in that "the role of the teacher was not strong and there didn't need it to be. He was just more like another participant" (pers. comm.).

The ecopedagogue intends for learning to lead to action (Gutierrez and Prado 1999). Dr. Pinter's explanation of his role embodies this, "in a certain way I consider myself a change agent…how we help people realize their own role in sustainability, so that's my mission, and if I see that this helps students recognize they also are on a mission, for me that's very important." This approach involves providing students a space to develop, not indoctrinating them for a certain cause. "Critical pedagogies aim to end oppressions through deeper holistic understanding of these oppressions; however, this does not mean that education is prescriptive as to what and how to think" (Misiaszek 2015). One student spoke about the success of Dr. Pinter's approach: "He encouraged people a lot…He will never ever force you to do something…he will give you that freedom so that you can think in your own way…He will present his own idea and then he will let you explain your own idea… You can openly discuss…" (pers. comm.) In one other interview, a professor described a similar change-agent role by saying "Even if you're teaching on a subject where results are mixed and there's a lot of negativity like in the environment, you know, if you end up conveying or nourishing the notion that not much can be done or what can I do anyway? Or anything like that, I think that you absolutely failed educationally, and you've also failed in the role of mentor to young people. And it's also absolutely manifestly wrong from my perspective"

(Antypas pers. comm.). This concept of the teacher role includes the responsibility of inspiring students and instilling hope for a better world, which is part of the ecopedagogical approach (Antunes and Gadotti 2006).

5.5.2 Student role

A typical response about the student role from all interviewees was students should "come prepared, having done the course readings" and included engaging in "active participation by going in with good questions" (Strenchock pers. comm.). A student communicated that she saw herself as having a similar role: "I'm a participant. I participate in the activities they have. I join the lecture…I contribute to discuss with my fellows, with my professors, to contribute what I know and to have questions from my own academic background and experience" (pers. comm.). This student role responds to a teacher that may do some lecturing, but emphasizes participation in dialogue. The primary responsibility presented in this explanation of the student role involves sharing one's own experience. "In ecopedagogical spaces, students are not treated as blank slates, but their knowledges are respected and dialogue is central" (Misiaszek 2015). If this model is utilized on field trips, participants of the trip often experience crossover in their roles.

A cross coding of all interviewees descriptions of student and teacher roles indicates the goals/actions displayed in table 4 are believed to be part of each role. With an ecopedagogy approach, trip participants can be both teachers and learners as they shift between roles and travel through different spaces (Drew 2001; Gutierrez and Prado 1999). Reflecting on my experience during all the field trips caused me to realize the power that I had to tailor the experience to be more meaningful for me. As a student and trip participant, I injected ecopedagogical practices and adopted this approach subconsciously by challenging myself. For example, I initiated conversations on inequality and social justice during the SMWM trip by conducting my research

on environmental privilege for the Student Conference (Field Notes 7 December 2017). The activity that I had my peers complete was ecopedagogical because it caused them to "consider their own behaviour, and that of others, in relation of issues of justice/injustice; right/wrong; rights/obligations; and sustainability/unsustainability; as they engage with issues" (Huckle and Wals 2015).

Table 4. Roles summary

Student Role	**Shared roles**	**Teacher Role**
Doing pre-readings	Learning	Selecting activities/program
Collecting data/pictures	Being prepared	Communicating prep. needs
Taking notes	Paying attention/observing	Arranging/doing translation
Doing projects	Interacting/participating	Designing projects/materials
Connecting to peers	Sharing ideas/experiences	Connecting trip to the course
Interviewing hosts	Being open and flexible	Speaking about academic content
Active listening	Building relationships with hosts	Pointing out connections to theory
Keeping up with others	Asking/answering questions	Sparking student interest
Trying new things	Reflection	Mentoring and/or giving feedback
Following instructions	Being mindful of safety	Solving unexpected issues
Making it personal	Enjoying	Planning budget/resources

Source: pers. comm.

6. Tools

Ecopedagogy is a flexible and evolving approach that is defined by those who engage it, resulting in multiple interpretations and "*ecopedagogies*" (Nakagawa 2017). The freedom to shape an experience using ecopedagogical goals and practices that appeal to trip participants allows more agency for everyone involved. The process of learning through ecopedagogy is envisioned as a course that allows participants to "make the road by walking" (Gutierrez and Prado 1999). The

two compass tools in fig. 7 and fig. 8 were designed using the results of this research to help field trip participants guide themselves toward ecopedagogy. These compasses that can aid learners are not exclusively for "teachers" or "students." Both teachers and students have an opportunity to make their field trips more ecopedagogical by understanding themselves as travelers (Drew 2001), asking themselves questions, and mapping their journeys to accomplish their learning objectives.

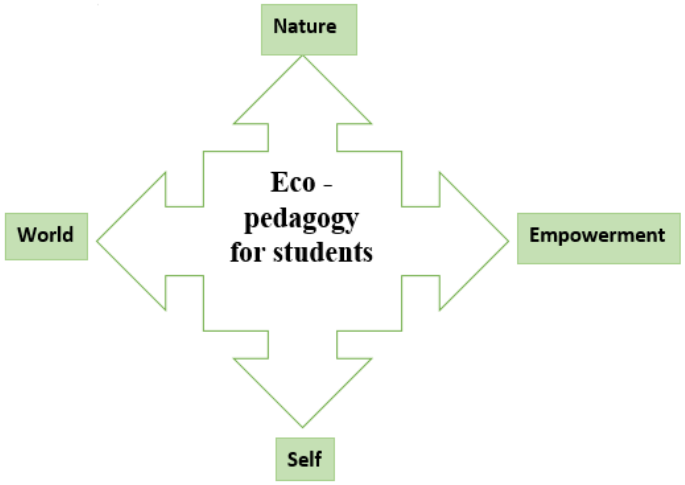


Fig. 7. Ecopedagogy compass tool for students

The compass tools include words that employ the first letters of the cardinal directions as a mnemonic device. The initials in the student model at the top of fig. 7 stand for the following words and associated questions:

- Nature: How do I feel about nature? How can/will I connect to nature? What are my environmental ethics and how could this experience influence my views?
- Empowerment: How can I empower myself to learn the most from this trip? Am I prepared? How can I share my thoughts, feelings, and experiences?
- Self: Which of my values/interests/hobbies can I use to connect with trip content? What do I want to learn? What information/skills do I have that might come in handy?
- World: What am I learning that I can use to change the world? How do I see this trip connecting to global/local contexts?

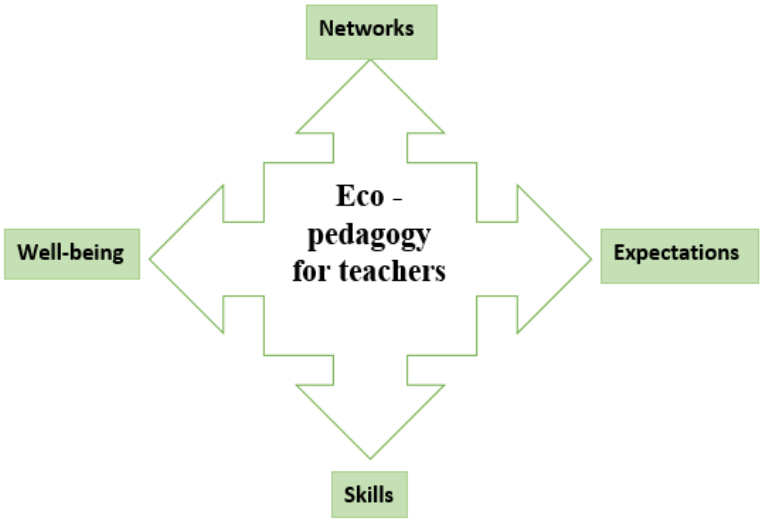


Fig. 8. Ecopedagogy compass tool for teachers

The initials in the teacher model in fig. 8 stand for the following words and associated questions:

- Networks: Does this trip use opportunities to connect students to hosts in a way that benefits both? Do students build networks/connections between themselves, their peers, and the world? How are they connecting and sharing knowledge?
- Expectations: What do I expect? Do students know what to expect and what I expect from them? How can I contribute to making sure they are prepared?
- Skills: How can I identify and incorporate practice to help students build skills? Is there a way to add skills connected to information and communication technologies?
- Well-being: Are there any creative opportunities on this field trip? Do I create time and space for students to feel comfortable to express their emotions? Are student's physical basic needs met?

7. Conclusion/Recommendations

This research answers the research objectives by providing insight about the activities and locations visited during the field trips in chapter 4, participants' experiences of the 2016-2017 field trips analyzed using an ecopedagogical lens in chapter 5, and provides tools in chapter 6 to partially satisfy the third research objective. The following recommendations complete the final objective.

7.1 Careers

Emphasizing careers is ecopedagogical because it empowers students to translate their notions of planetary citizenship and universal responsibility into action, and connects to their interests. "Ecopedagogical teaching is centered on helping learners to address, develop, and expand their curiosities" (Misiaszek 2015). A student perspective on the BO Retreat included the criticism: "I would have liked to hear more about the job opportunities…maybe some people coming in to actually explain what the masters could be beneficial for, especially when it comes to your future career" (pers. comm.). Field trips showcasing careers may inspire students to envision fulfilling work opportunities that enthuse them about a future in which they make a meaningful difference through their work. A student commenting on the SDGT trip described how her ambitions have always included environmental work, but the trip helped her to shift her focus from rural to urban areas. She said: "Til I crossed 18 or 19, I literally had a dream of having a small house and a sheep farm in the lap of Himalaya. I would spend the rest of my life there… I still want to have that, but for my summer vacation" (pers. comm.).

Student interviews highlighted guest lecturers and field trip co-hosts who made them think about what they wanted to do in the future. One student said and a guest on the SDGT Trip influenced her because "she was a landscape designer…I never knew that there could be a landscape architect. I never had that idea" (pers. comm.). Another student reported increased self-knowledge pertaining to her future career, stating: "I gathered that from the field trips that, if there's something I can see myself working on, it's something related to field work" (pers. comm.). A student expressed that longer trips could help with career education: "I think if they are, you know, 2 or 3 days in hand experience with those companies. That would be very very helpful.it's like a workshop. You can go there and work with them…I mean field trips are very good, but you

can elongate for 2-3 days so people can really see what is happening inside" (pers. comm.). The Earth Charter emphasizes that "every individual, family, organization, and community has a vital role to play" and calls upon academic disciplines as well as "government, civil society, and business" to provide "The Way Forward" (The Earth Charter 2001). Incorporating career exploration into field trips is one way to answer this call.

7.2. Technology

One student spoke of improved learning through "sharing stories on social media for others who ask questions, not just MESPOM but the world" (pers. comm.) In this case, the student taught himself more after the trip by communicating knowledge to curious peers with the help of social media. For the ecopedagogy movement, "the emergent cybercultures can be seen as a discursive and political location in which students, teachers, and citizens can all intervene, engaging in discussion groups and collaborative research projects, creating websites, producing culture-jamming multimedia for cultural dissemination, and cultivating novel modes of social interaction and learning that can increase community in an often isolating world" (Kahn 2010). This quote illustrates the power and possibility involved in using technology and networks for making trips more ecopedagogical.

The ecopedagogoical practice of "integration of information and communication technologies" empowers students because these tools assist in taking action and doing citizen science (Norat *et al.* 2016). While trips like the SDGT trip represent a special case because students learn by disconnecting from internet and cell phones, other trips might be improved if social media and phones could be incorporated into the experience. For example, Dr. Anthony introduced students to a biodiversity application called "Map of Life" that could be used on cell phones during the NHB Trip. While the use of technology during trips could be abused to distract students from

having sensory experiences or paying attention to presenters, technology used properly for documentation and reflection aids learning.

7.3 Sharing and Reflection

An interest in sharing and reflection was echoed in both student and professor interviews. A student commented with regards to the LIWW trip that "it would have been so helpful if we actually did kind of a group gathering, maybe informal one, to just share and reflections we had because I had a lot of things which I wanted to tell everyone about" (pers. comm.). Sharing also contributes to a greater sense of connection between the people involved, and compliments the ecopedagogical approach of including dialogue (Kahn 2010, Friere 1970). Providing all participants with opportunities to share experiences and reflections, both during and after trips, could aid in helping students remember and integrating field trips with classes. Dr. Aistara said, "Zsámbok we only talked about it on the bus, which I don't actually consider good pedagogical practice. I actually think it's better to have people sit down and discuss it and think about it more thoroughly" (Aistara pers. comm). The LALMS trip did not include the reflection that was planned. The professor commented that "ideally the field trip would have to end in a place where I could have ten minutes with the participants to discuss what has been going on…that's the most challenging part of the field trips. How you end them, because people tend to get tired and hungry and their attention is no longer with you" (Kizos pers. comm.). Students and teachers can include more sharing and reflection on trips by thinking about the tools and questions in chapter 6.

7.4 Mentorship and Smaller Groups

An EM student said that receiving positive feedback from a mentor in the field was powerful because it "made us feel like we were professional…like I want to keep on doing this"

(pers. comm.). Student and teacher interviews revealed a strong value for learning from mentors and peers. Suggesting his perceived importance of mentorship, Logan envisioned that an "ideal situation would have a supervisor to mentor every 2 to 3 people" (Strenchock pers. comm.). Mentorship can be a relationship between professors or professionals and students, or possibly even a short-term relationship between students and other students. Students with applicable experience could be seen helping and teaching others during the GFAOG and EM field trips (Field Notes 17 and 31 March 2017). Perhaps developing and facilitating more mentoring relationships (formal or informal) could help students to practice collaboration and communication.

Nearly half of the student and teacher interviews suggested that the field trip experience is improved when participant groups are less than 20 (pers. comm.). As one student said, "[I] don't normally ask questions because the group is too big and it's not important to anyone, so I ask later" (pers. comm.). Professor Anthony expressed understanding for that statement, nothing that: "Some people don't like to ask questions in large groups, especially if it's a sensitive or negative question" (Anthony pers. comm.). The results suggest that larger groups reduce the amount of individual attention that students receive, reduce the chance that all students can interact with the hosts, and pose other safety and logistical challenges. A student also brought up the conflict of having insufficient resources to accommodate large groups: "Salt pans were lost on me because you couldn't get up close to birds…There were 30 people and one telescope" (pers. comm.).

7.5 Longer Trips

According to five student interviews, one of the burdens of field trips is travelling to locations that require many hours on a bus (pers.comm.) For some day trips, total bus time exceeds two hours. At the end of the trip, students may have been too physically drained to fully participate in dialogue and reflection. Having overnight trips could reduce student stress and provide time for

students to experience the field trip location more fully. One student described the benefit of time during the SDGT trip: "you learn as you spend time in this ecovillage, and you get out what you get out of it…it was more the experience of it" (pers. comm.). A student praised the EM trip because "spending the night makes it completely different" (pers. comm.). In the case of this trip, the overnight helped students to connect with nature by giving them a change to observe the temporal variations around the pond. Dr. Anthony explained that he intends for students to "experience the rhythms of nature because we go to the same place during different times of day" (Anthony pers. comm.). For a participant in the IDM trip, staying in a rustic bungalow was one of the most challenging and positive parts of the experience. She said, "I think overnight trips are pretty important…let's stay there for a while" (pers. comm.).

7.6 Creative Opportunities

Ecopedagogy emphasizes artistic expression, imagination, and creativity. "Creative expression enables the establishment of an environment that gives psychological security and helps to develop creative talent" (Gutierrez and Prado 1999). The BO Retreat included a creative opportunity to perform a skit, and this activity was mentioned in every student interview that discussed the trip (pers. comm.). Aside from this team-building at the beginning of the school year, no interviews included mention of using one's creativity as part of a structured activity. Two interviewees expressed that they would like more chances to do creative work that is connected to their courses (pers. comm.). Teachers and students can initiate/design projects that incorporate the ecopedagogical practice of "artistic expression" (Norat *et al.* 2016).

I obtained permission to participate on the GFAOG trip by recording content for my podcast called "Human as Hummus" (Field Notes 17 March 2017). I accomplished the following ecopedagogical objectives through this project: expressing myself artistically, learning to use new

and innovative technology, completing my own self-designed collective project, and initiating conversations on plant communication designed to "promote critical analysis of our individual collective values and the personal and the personal and social practices" (Norat *et al.* 2016). I believe that I gained transformative learning, developed my sense of biophilia, and had a meaningful first experience by using my hearing to focus on plants. Another student had a self-initiated project for which he used collecting plant samples as a creative and independent method for building a sense of place and remembering each trip. The student attempted to: "Get a piece of that memory" by "keeping it and writing the date and place." He felt this helped him "remember field work as something more than just academically interesting…[and] make it more personal" (pers. comm.). The student injected ecopedagogy into his experience by reflecting frequently and using collecting to literally create an "account of the information found in the street" (Gutierrez and Prado 1999). Fig. 8 displays this student's creative product, which provides an example of a self-initiated project that other future students could duplicate.

Fig. 9. Pressed plant record book produced by a student interviewee

7.7 Overwhelm and Time to Grow

"The world as it seems to appear in the present can be overwhelming, especially for people who don't yet have an established role in that world as adults, who are really still in the preparation stage" (Antypas pers. comm.).The international nature of the MESPOM program provides an additional challenge of adjusting to unfamiliar surroundings in countries where many students are not natives, and in a language (English) which is not native to most students (MESPOM 2017). Students expressed a belief that their everyday experiences living in Budapest and the CEU community contributed significantly to their education. As one student said, "Being involved in the CEU community work…I have to say if I've grown as a person in the last year it's because of all of that outside class than anything else" (pers. comm.). Student sentiments about their growth in adapting to CEU's international environment, and cultivating valuable connections with their peers, also provide a case for mindfulness in adapting classwork to facilitate and enable students' independent endeavors. Considering students' schedules to allow for "a life" beyond the classroom might reduce overwhelm and increase the overall value of the students' environmental education.

I remember discussing with zoo trip participants that we regretted having an assignment due because we could not stay afterwards, although we really wanted to take advantage of the free zoo ticket (Field Notes 20 January 2017). In extreme cases, students decided to skip field trips because they had conflicting obligations associated with other classes. One student explained that she skipped the SDGT trip because she had too many assignments (pers. comm.). Not all students felt their overwhelm was solely attributable to academic concerns. One student mentioned she attended a trip and felt most students regretted it because they were "all overworked and moving to a different country in 2 days…last place my mind was" (pers.comm.). Of course coordinating a trip to be convenient for all participants is challenging, but an approach that prioritizes

collaboration between teachers before scheduling could increase the value of each field experience by reducing overwhelm.

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Appendix A: CEU Professor/Coordinator Interview Recruiting Email

Subject: Interviewing You
Hello,

I hope you are enjoying your summer. I am writing to you because I am working on my thesis, and would like to interview you.

My project has evolved to include a study of all field trips and retreats (for masters students) that have taken place in our department. I will attempt to assess these for congruence with the educational approach of ecopedagogy. I am interested in your planning process, educational goals, and reflections. My analysis will also incorporate information gleaned from course materials designed to accompany these trips, like agendas and pre-readings.

I understand that you are busy, so I am especially grateful for your consideration. I am requesting from 45 min. to one hour of your time. I will attempt to be as efficient as possible, and am emailing now to allow for maximum flexibility to accommodate your schedule. The interview can take place in person (at any Budapest location) or via Skype, so please let me know what is most convenient for you. The best window for me is between June 9th and 23rd, although I am available earlier if you would prefer. My research will be improved if I have your participation.

Thanks so much for assisting me. Please respond to this email with the time, date, and method (Skype or in-person) that works best for you. If you will not be able to participate, I would also appreciate your reply.

I look forward to speaking with you.

Best,

Elizabeth Loudon
ESP Masters Student

Appendix B: Lesvos Professor/Coordinator Interview Recruiting Email

Subject: Research on Field Trips
Hello,

I am a CEU student in the Environmental Sciences and Policy Department, currently completing research on field trips and nonclassroom learning. I am reaching out to you because I feel that my research would be greatly improved if I could interview you about designing these experiences for the MESPOM students to complete during their time in Greece. My interest involves the knowledge and connections that students gain from these opportunities. I have been fortunate enough to interview about half of the MESPOM students, and their input was rich.

If you have time to interview, I am available at your convenience. I depart on the 19th for Budapest, but otherwise have mostly a flexible schedule. Interviews could be completed in person, or via Skype. The interview would require about 45 minutes of your time. We would discuss planning, how these trips have evolved since you began offering them, and how trips enhance learning for students.

Thanks for considering helping me with my research.

Elizabeth Loudon
CEU ESP 1 year Class of 2017

Appendix C: Interview Information and Consent Form

Title: Eco-Pedagogy Congruence: First Year Non-classroom Activities in the Erasmus Mundus Masters of Environmental Science, Policy, and Management at Central European University and University of the Aegean

Name: Elizabeth Loudon
Information: Central European University, Budapest, Department of Environmental Sciences and Policy; Masters in Environmental Sciences and Policy Contact: loudon_elizabeth@student.ceu.edu

522 Kerepesi 87 H-1106 Budapest, Hungary

+36705647790

Supervisor: Tamara Steger Stegert@ceu.edu

Summary of the project:

This research aims to identify how the field trips in the first year of the MESPOM program, including those in Hungary and Greece, utilize teaching techniques such as ecopedagogy to influence the student experience. We are interested in the roles of professors, students, and coordinators throughout non-classroom learning opportunities.

Methods and Consent:

In order to obtain this information, we will conduct semi-structured interviews with professors, students, and coordinators involved in the MESPOM program.

The interviews will be recorded and transcribed, and this material will be handled by the researcher and the supervisor only. The materials will be used for the masters thesis of the researcher.

The interviews can be made anonymous so that responses cannot be tied back to individuals, unless they give consent to use their names on this form.

The interviewee can refuse to answer any question and stop the interview at any point.

Please indicate your choice regarding anonymity below:

I allow the researcher to use my name in her work.

I do not allow the researcher to use my name in her work.

Date and Signature _____

Appendix D: Personal Communications

Central European University

Dr. Guntra Aistara Assistant Professor and Host for GFAOG and OG Trips

Dr. Brandon P. Anthony Associate Professor and Host for NHB, BC, and EM Trips

Dr. Alexios Antypas Associate Professor and participant at the Balaton Orientation

Dr. László Pintér Professor and Host for the SDGT Trip

Dr. Alan Watt Assistant Professor and participant at the Balaton Orientation

Logan Strenchock CEU Environmental and Sustainability Officer and Host for the GFAOG and OG Trips

University of the Aegean

Dr. Thanassis Kizos Lecturer and Host for the LALMS Trip

Dirk Schaelicke Researcher and Host for the LIWW Trip

Coordinators

Hrisa Karagianni Primary Coordinator

Giorgos Gkiouzepas Coordinator and co-host for all AMSEM Lesvos trips