

THE PERCEIVED IMPACT OF A UNIVERSITY OUTDOOR EDUCATION PROGRAM ON STUDENTS' ENVIRONMENTAL BEHAVIORS

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Abstract.—Outdoor educators often seek to design programs that influence participants' daily lifestyles, especially environmental behaviors. Research on the impact of outdoor education programs on environmental behaviors has typically focused on schoolchildren and teenagers. The purpose of this study was to investigate the perceived impact of a university outdoor education program on the environmental behaviors of program participants. In-depth interviews were conducted with six university students 6 months after they completed a 14-day summer outdoor education course that covered "social, organizational, technical, environmental and educational topics associated with group living, ecology and summer camping skills." Almost all participants reported that the course had some impact on their environmental behaviors. Increased participation in outdoor activities, participation in communal environmental action, and environmental behavior transference to daily life were the most frequently mentioned changed behaviors.

1.0 INTRODUCTION

The impact of outdoor education programs is of interest to experiential educators, recreation practitioners, and leisure researchers. Although outdoor education has many different objectives, outdoor educators often seek to design programs that influence an individual's daily lifestyle and especially environmental behaviors.

The study presented in this paper was part of a larger study that investigated the perceived impact of a university outdoor education course on six university students' environmental attitudes, knowledge, and behaviors. This paper focuses on the impact of the course on the students' environmental behaviors.

Kollmuss and Agyeman (2002) define pro-environmental behavior as behavior "that consciously seeks to minimize the negative impact of one's actions on the natural and built world" (p. 240). Research on the effects of outdoor education programs on environmental behaviors has tended to involve schoolchildren and teenagers. For example, Bogner (1998) found that for 6-months after a 5-day outdoor ecology education program, secondary school students were more willing to engage in environmentally sensitive behaviors. However, Palmberg and Kuru (2000) found that participation in outdoor education activities by elementary school children in Finland did not always lead to environmental actions. These 11- and 12-year-old children most frequently mentioned concrete, local actions such as stopping littering and picking up litter. An Australian study of primary and secondary school environmental education programs found that some students demonstrated behavioral change outside of the learning environment (Ballantyne et al. 2001). Haluza-Delay (2001) discovered that teenage participants in a 12-day Canadian wilderness program expressed concern about the environment but stated that this concern did not translate into action at home. In a study more related to this current study, Freeman et al. (2005) examined a university outdoor education course and observed that the course changed some environmental behavior.

2.0 METHODS

This study investigated the perceived impact of a second-year outdoor education course offered by a Canadian university during the summer of 2007. The bilingual (French and English) course was 14 days long and included a 3-hour indoor session to prepare the students for the trip portion of the course. According to the description, the course was designed to cover "social, organizational, technical, environmental and educational topics associated with group living, ecology and summer camping skills."

A qualitative research design was used because of the small class size (20 students) and the research focus on the perceived course impacts. An email was sent to all students enrolled in the course inviting them to participate in the study. Eleven students requested more information; six students agreed to participate in the research. The sample size was limited because students were unavailable for interviews after the course and because the researcher was a unilingual Anglophone. Some of the Francophone students may have been more likely to participate if they could have been interviewed in French.

The participants were interviewed 6 months after they had completed the outdoor education course. An interview script was used to ask participants to reflect on whether the course influenced their environmental behaviors. Follow-up probe questions were asked to determine the relationships between specific course experiences and environmental behaviors (e.g., What, if any, aspects of the course positively changed your behavior in relation to the environment?). The interviews were audio-recorded and transcribed. Data analysis used the constant comparison technique (Glaser and Strauss 1967). This form of analysis involved reading, rereading, and coding the transcripts, and then comparing and grouping the coded material into themes and sub-themes. To ensure that the interpretation of data was valid, the researcher had her academic supervisor review the transcripts to confirm the themes.

2.1 Participants

Four of the six participants were female and two were male. Only two interviewees, one male and one female, had previously participated in an outdoor education program (Table 1). The female had gone on several short outdoor trips during one academic year for high school physical education credit and the male had completed a 6-day outdoor course. One student was Francophone while the other five were Anglophone. The participants are identified in this paper with pseudonyms.

3.0 RESULTS

In terms of the perceived impact of the course on environmental attitudes, all participants stated that

Table 1.—Characteristics of participants

Participants	Age	Gender	Language	Previous Outdoor Ed. Experience
Abby	21	Female	English	No
Brianne	22	Female	English	No
Colin	27	Male	French	Yes
Dave	22	Male	English	No
Erin	22	Female	English	Yes
Faye	21	Female	English	No

their attitude towards the environment became *more* positive following the course. Even those who already had a positive attitude before the course reported an improvement in their environmental attitude. In particular, the 48-hour “solo” on the 11th and 12th nights of the course and the peacefulness that the students experienced in nature influenced changes in their environmental attitudes. Most knowledge gain was in the areas of personal survival skills (e.g., fire building, navigation) and self-knowledge (e.g., confidence).

Qualitative data analysis of the interviews for this study found that almost all participants reported that the course had some influence on their environmental behaviors. Increased participation in outdoor activities, participation in communal environmental action, and environmental behavior transference to daily life were the main themes observed in the data.

3.1 Increased Participation in Outdoor Activities

After completing the outdoor education course, several participants indicated that they had become more active outdoors through increased participation in activities such as whitewater rafting, kayaking, running, and canoeing. For instance, when asked about the long-term impacts of the course, Colin said:

I’m going outdoors more than I did usually and I just bought my first pair of hiking boots and each weekend

I go into the woods for like 2 hours just to calm down and everything, because you know in the city you have to go very fast.

Similarly, Faye stated:

I have started taking up more outdoor sports, like by the water. I started doing white water rafting... And I have just been running a lot outdoors and it [the course] has just had a very positive effect on what I do.

In general, participants reflected on their course experience and expressed a desire to engage in nature-based activities in order to enjoy a stress-free environment.

3.2 Participation in Communal Environmental Action

Nearly all the participants mentioned taking part in a shoreline clean-up that one student from the class organized about a month after the outdoor education course. Most said that they would participate in such an effort again. The following is a description of the clean-up by Brianne:

About a month after we did our trip, we did a shoreline clean-up. We went and we did a whitewater section of the ... River. Like I would definitely whitewater raft, like I've done it before I went on this trip, but it just, it meant a lot more to me to be cleaning up the environment and like getting rid of waste. I was like, "Sure, I'll go pick up the garbage for a day" and it ended up being a great day and I'll do it again.

Erin also mentioned the shoreline clean-up when asked about the long-term impact of the outdoor education course:

I am more involved in like, protection and stuff. Like a bunch of us from the course did a shoreline clean-up about 4 weeks after the course ended and we actually went out whitewater rafting and cleaned up all the pathways that the whitewater rafters used and they left a lot of garbage. So I think that people like that, in a commercialized kind of sport, really need to be conscious of what they're leaving behind because it really adds up. We found a lot.

While taking the course influenced the students' participation in the clean-up, most said they would not have participated unless someone in the group had shown initiative. When asked if he would have participated in the cleanup had he not taken the course, Dave responded, "Absolutely not." Erin added to this response by stating, "No, just because it was organized by people on the trip and I wouldn't have heard about it. So it is a collective attitude that really gets you involved." Thus, the communal nature of this environmental action was an important reason for their participation in it.

3.3 Transference to Daily Life

Participants explained that many of the behaviors learned during the course were easily applied when they returned to the city. Examples included the transferring "Leave No Trace" and "Reduce, Reuse, and Recycle" behaviors, as well as adopting environmentally friendly transportation habits.

3.3.1 Transference of *Leave No Trace*

The most common responses related to the transference of the *Leave No Trace* camping behaviors they learned during the course. For example, Abby stated, "My behaviors changed in general, as I mentioned, no littering and pollution. You can't leave anything behind." Likewise, Faye commented:

Maybe things like picking up after yourself, like if you go to a park, like little things, not to litter. Very, very tiny things that I am a little bit more picky on now because I know that eventually if one person does it, then everyone is going to do it and then you just sort of create this downfall.

3.3.2 Three R's

Other behavior changes that were mentioned included the "three R's"—recycling, reducing, and reusing items; composting waste; using biodegradable items; and limiting water and electricity use. Abby noted:

It [the course] changed me enough to know that things need to be done and that you really have to take care in what you do and try to use more recyclables, sort of things like the Tupperware

containers, instead of plastic bags, as they're bad for the birds.

Brianne made many lifestyle changes after completing the outdoor education course:

I find that I am a label reader and I'm trying to compost and I'm just being a little bit more environmentally friendly. I bought biodegradable dog-poo bags. I have noticed that I've tried to make a little bit of a difference in my habits that I didn't really appreciate before.

Illustrative of the course's long-term impact on Brianne's environmental behaviors, she was able not only to maintain her own behaviors but also to improve those at her workplace:

Like at work, actually, I work at a restaurant and we never recycled and it drove me nuts, and so I remembered being like, "Do you understand what you're doing to the environment?" I talked to the boss and now we recycle.

3.3.3 Transportation Habits

A third area of transference to daily life was in transportation habits. Participants changed their behaviors in relation to carpooling, taking public transit, and relying on their legs (walking, bicycling). For example, Dave explained his commitment to these behavior changes:

Not driving my car as much and taking public transportation, although I've kind of always taken the bus, but like I walk to the bus now instead of taking the car, and park and ride. But it's like a 15-minute walk, so even on a cold day, it's not that bad, and sometimes I just run it, so it's like 5 minutes.

4.0 DISCUSSION AND CONCLUSION

In this study, the participants reported at least minor changes in their environmental behaviors after the outdoor education course. These results are consistent with Ballantyne et al. (2001), who found that behavior

changes occurred outside of the learning environment, and Bogner (1998), who found that students were more willing to engage in environmentally sensitive behaviors after participation in ecology education programs. However, this finding is not consistent with Haluza-Delay's (2001) result that concern about the environment on an adventure trip did not translate into action at home. Explanations for differences in the findings could be a function of differences in the age of participants (participants in Haluza-Delay's study were teenagers) and the types of programs. Haluza-Delay studied a 12-day adventure wilderness trip, not a university outdoor education course.

The findings of the current study appear to support transfer-of-learning theory, especially in relation to the themes of increased outdoor activity participation and the transference of "Leave No Trace" and "three R's" behaviors. This theory refers to "the application of knowledge learned in one setting for one purpose to another setting and/or purpose" (Leberman and Martin 2004, p. 173). The finding concerning the importance of communal environmental action is consistent with findings from studies of expeditions and trips that demonstrate developing social networks positively influences subsequent social activism (McGehee 2002).

Behavioral changes were reported to be greatest in the area of increased outdoor activity participation. One possible explanation is that all the students in this course were Human Kinetics students, who were studying physical activity and therefore would be expected to have an interest in outdoor activity participation. Increased outdoor activity participation is also consistent with another portion of the study not reported in detail in this paper on the impact of the course on environmental knowledge. The course had a limited impact on the participants' environmental knowledge but a higher effect on knowledge of personal survival skills and self-knowledge (e.g., reducing stress). While the description of the course stated that the course was to cover "group living, ecology and summer camping skills," the emphasis appeared to be on group living and camping rather than ecology and the environment. These

observations are consistent with several participants' comments about how the course could be changed:

I believe we could have learned more...I don't believe that anybody did a presentation on sort of environmental things, like the way we treat the environment. (Dave)

It's basically survival. (Abby)

Increase the things taught about the environment. Basically, just to see if one person does this and look at the change it can do. And if you know how certain patterns work in the environment, maybe you can work with them instead of against them. (Faye)

It appears that although the environmental content of the course was minimal, the students learned about and adopted increased environmentally friendly behaviors in their everyday lives. While the course seemed to bring about changes in environmental behaviors, it is important to remember that these changes were based on participants' self-reports. Reports of increased pro-environmental behaviors possibly could be the result of providing socially desirable answers.

As a qualitative study, the results cannot be generalized to other outdoor education programs. Additional research is being conducted using the same methodology with participants in this course during the summer of 2008. Plans are also underway to interview students in a similar third-year outdoor education course which is offered during the winter. Although these courses have been offered for several decades, they are being reviewed to determine whether they will continue to be offered. The results of these studies may provide helpful background information in the review of these courses.

5.0 CITATIONS

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